# Anonymity, Individuality and Commonality in  Writing in British Periodicals — 1830 to 1890:

# A Computational Stylistics Approach.

**by**

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**B.A. (Hons) (Newcastle)**

**A thesis submitted for the degree of**

**Doctor of Philosophy in English**

**at the University of Newcastle, NSW, Australia**

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Alexis Antonia

# Preface and Acknowledgements

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M. Mounier, "a man of talents and of virtue," according to the great anti-revolutionary writer of this country, the antagonist of Mirabeau, and the popular president of the first National Assembly, is well entitled to be heard upon the causes of the French revolution. He was not only a witness, but an actor, in those scenes, of the origin of which he is treating; and must therefore have felt in himself, or observed in others, the influence of every principle that really contributed to their production. His testimony, it may also be observed, is now given, after ten years of exile may be presumed to have detached him from the factions of his country, and made him independent of the gratitude or resentment of its rulers.

With all these claims to our attention, M. Mounier cannot, however, expect that his authority should be taken for decisive upon so vast and complicated a question. In an affair of this nature, it is not enough to have had a good opportunity for observation. Where so many interests are concerned, and so many motives put in action, a man cannot always give an account of every thing he sees, or even of every thing he has contributed to do. His associates may have acted upon principles very different from his; and he may have been the dupe of his opponents, even while he was most zealous in his resistance. It will be remembered, too, that M. Mounier, after co-operating in a revolution that was to consummate the felicity of his country, was obliged to leave it to the mercy of an unprincipled faction; and it may perhaps be conjectured, that he who was disappointed in the issue of these transactions, has also been mistaken as to their cause. M. Mounier, finally, is a man of letters, and is entitled to feel for philosophers some of the partialities of a brother. In denying that they had any share in the French revolution, he vindicates them from a charge that sounds heavy in the ears of mankind; and

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# Abstract

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I begin by taking a broad view of the field: first allowing the articles to 'speak for themselves' and to exhibit their commonalities and individual differences; then exploring the significance of both the intra-generic focus of the article – the stance taken in a particular article – and the author's own idiosyncratic preferences in determining the incidence of function words in these articles. The interplay between these two factors provided an explanation as to why the articles of some authors invariably grouped together while those of other authors displayed marked variability. The use of lists of authorial 'marker words' – those words used relatively more or relatively less frequently by individual authors – showed that one can think of this large group of mostly anonymous periodical articles as a set of authorial *oeuvres*.

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# Prologue

Victorian periodical articles were mostly published anonymously and readers often remarked on how uniform in style they were. In the light of such uniformity, it becomes a question of considerable interest to ask whether the notion of authorship has any relevance in such a context. With the *Saturday Review* 'Modern Women' articles, we have a neat test case for this question. We can ask whether authorial styles do pervade this type of non-fiction prose, which was published within a strictly defined form under the banner of anonymity. If so, we can see whether these authorial styles can be distinguished merely on the basis of word counts of the most common words.

## *The Saturday Review and What was Said of Modern Women*

In 1868 New York publisher, J.S. Bedfield, published a collection of articles which "were originally published in the columns of the London *Saturday Review*" under the title *Modern Women and What is Said of Them*. The 'Advertisement' which forms the frontispiece of the book spoke of the excitement and interest with which the articles had been read, but it continued to guard the identity of the authors in this fashion:

> The authorship of these papers has been attributed to different individuals, male and female; but it is more than probable that the writers whose names have been mentioned in this connection are precisely those who have had nothing whatever to do with them. (frontispiece)

The thirty-seven articles in question were all 'middles'[1] published in the *Saturday* between 1866 and 1868, and all of them deal with what was known as the 'Woman Question'. Mrs. Lucia Gilbert Calhoun makes this the subject of her introduction to the book where she identifies the London *Saturday Review* as an "unexpected ally" to the women's cause. Mrs. Calhoun acknowledges the fact that the *Saturday* articles have come "in the form of

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[1] "The typical middle essay on social and moral subjects, which throughout the sixties was as distinctive a feature of the *Saturday Review* as were its hard-hitting reviews, was slow in evolving; it can be seen taking shape in the second half of 1858 and gradually increasing in cleverness and incisiveness thereafter" (Bevington 24-25).

diatribe and denunciation" but claims that the mere airing of the debate, in this case, "to the good society of English drawing rooms" (13) has been beneficial to the cause.

Fifteen years later (1883) a London publisher, Richard Bentley & Son, published Eliza Lynn Linton's *The Girl of the Period and other Social Essays* in two volumes. Ten of the articles in this book (including the notorious "The Girl of the Period" article) were among those previously included in *Modern Women and What is Said of Them*. Linton's "Girl of the Period" article certainly caught the attention of readers. "The essay indicts the modern English girl as a fast, slang-talking thing who apes the demimonde in costume and manners, and then wonders why she does not please men" (Bevington 110-111). "The furore aroused by this article" says Bevington, "was extraordinary" (111). Linton remarked in the preface to the 1883 volumes that she was "grateful to the authorities of the *Saturday Review* for their present permission to republish them" under her own name, claiming that she had been twice introduced to the "writer of 'The Girl of the Period'" (one a clergyman and the other a society matron) (vii) and that she was "glad to be able at last to assume the full responsibility" of her own work (viii).

Another ten of the *Modern Women and What is Said of Them* articles have been attributed to John Richard Green, a historian and clergyman who was writing articles for the *Saturday Review* at the time in question (Bevington 349). The uniformity of tone (generally misogynistic and anti-feminist) and common subject matter of all the articles is striking, especially in light of the revelation that ten are known to be written by a woman and ten by a man. Indeed, much of the literature on Linton is concerned with trying to reconcile the "the discrepancies between Linton's emancipated lifestyle and the restricted one she advocated for other women" in these articles (Broomfield 267).

# MODERN WOMEN

and

## WHAT IS SAID OF THEM

A REPRINT OF

A SERIES OF ARTICLES IN THE

## SATURDAY REVIEW

WITH AN INTRODUCTION BY

Mrs. LUCIA GILBERT CALHOUN

NEW YORK
J. S. REDFIELD, PUBLISHER
140 FULTON STREET
1868

Scan of Microfilm Copy of Cover of 1868 publication *Modern Women and What is Said of Them*

In their book *Gender and the Victorian Periodical*, Hilary Fraser, Stephanie Green and Judith Johnston suggest that journals like the *Saturday* "which discouraged the personal and idiosyncratic in favour of a 'house style' might have affected how journalism was gendered" (11). As an example of this "assimilationist aesthetic" at work, they cite the fact that Eliza Lynn Linton's "contributions to the *Saturday "Review's* series on 'Modern Women' are not always easily distinguishable from those penned by John Richard Green" (11). In speaking of the *Saturday's* staff of writers, Merle Bevington said that "it presented the paradox of men of marked independence and individuality merged into a unity and consistency of tone and point of view so remarkable that it is possible to refer to what the *Saturday* said rather than to what a particular writer said in the *Saturday*" (14).

Since the identity of two of the authors of the *Saturday Review* 'Modern Women' articles is now known, it is possible to use these articles as a test case for the methods of computational stylistics[2]. One of the standard tests can be applied using the most common function words[3] as variables and combining the data through Cluster Analysis. In this test, the samples bearing most resemblance unite earliest, while those which are least alike, unite last.

*Linton and Green*

Notwithstanding the perceived similarities of the *Saturday Review* 'Modern Women' series articles now attributed to Linton and Green[4], there are evidently deep underlying differences which reveal themselves with a straightforward combinatory technique. This result is seen expressed as a dendrogram (tree diagram) in Figure P.1 below.

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[2] These methods will be described in Chapter 2.

[3] Words can be classified as 'function' words or as 'lexical' words. A discussion of function words and their importance can be found in Chapter 2.

[4] See Appendix P.1 for a list of the articles used in this Figure and Appendix 2.2 for complete publication details of all *Saturday Review* articles.

Figure P.1: Cluster Analysis test



20 Saturday Review articles appearing in Modern Women (1868)
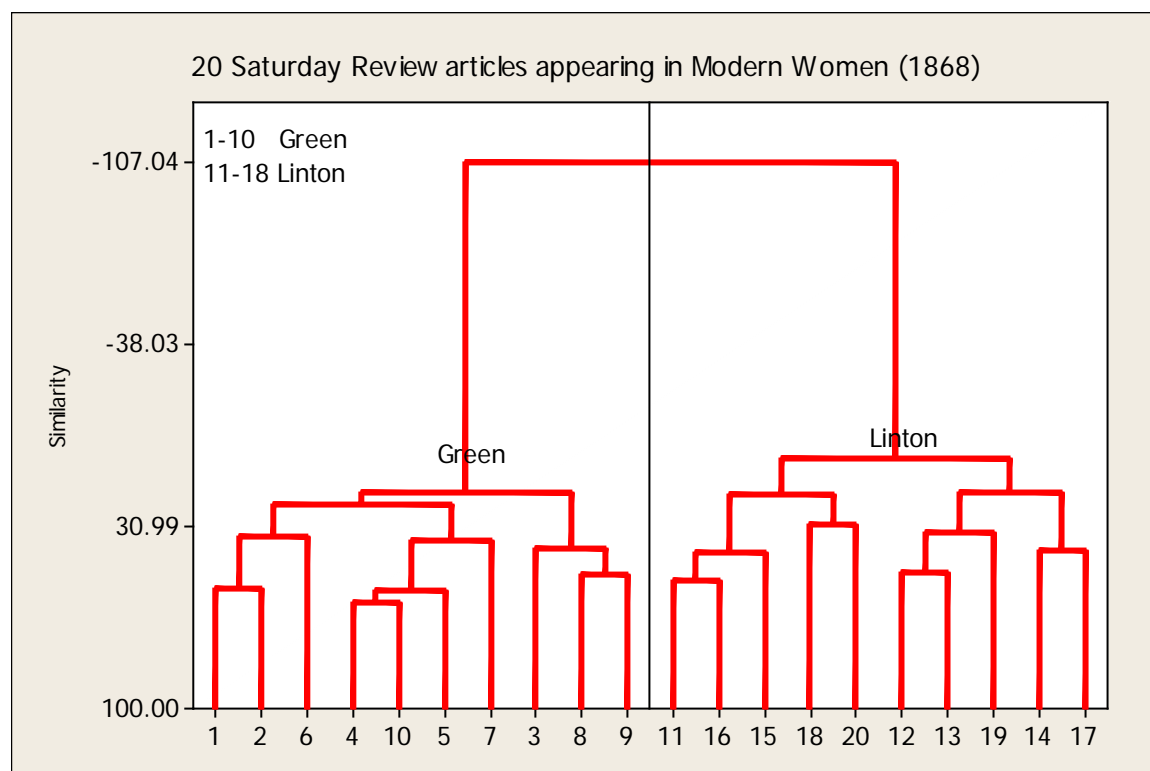
Figure P.1 demonstrates a complete separation of the ten texts of each author into the two major branches of the tree diagram. The result is impressive, since the texts separated simply on the basis of each author's usage of the unselected set of the top 150 function words of the Victorian periodical text collection[5]. Such a pronounced result suggests that further exploration of the differences between the authors could be fruitful. The next step was to generalize to a wider Linton and Green set and to look more closely at individual variables. The t-test[6] provides a way of sorting the word-variables into two consolidated lists of what might be called Linton 'markers' and Green 'markers'. The function word list was increased to 200 for the running of the test and out of these words there were ninety which emerged as being used significantly differently by the two authors. (Table P.1).

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[5] See Appendix 2.3 for a list of the top 200 function words of the periodical text collection.

[6] These Linton versus Green 'marker words' were obtained by running a distribution test of the 200 most common function words of my Victorian Periodical Corpus, on a wider set of known Linton and Green articles (27 articles each). Words with a t-value greater than + or – 2 were considered to show sufficient significant difference between the two groups of texts. A more complete discussion of this method will be found in Chapter 2.

Table P.1: Results of Linton-Green discrimination test

| Linton uses relatively more often | Green uses relatively more often |
|---|---|
| **Articles/Impersonal pronouns** | **Articles/Impersonal pronouns** |
| something anything everything | the it its |
| **1<sup>st</sup> and 2<sup>nd</sup> person  Pronouns** | **1<sup>st</sup> and 2<sup>nd</sup> person Pronouns** |
| you your | we our us |
| **3<sup>rd</sup> person Pronouns** | **3<sup>rd</sup> person  Pronouns** |
| she herself they their them themselves | his he himself |
| **Relative Pronouns** | **Relative Pronouns** |
| who | which |
| **Function Verbs & Modals** | **Function Verbs & Modals** |
| be are have will would can do does shall | was |
| cannot having ought | |
| **Conjunctions** | **Conjunctions** |
| and as or if than because while though <u>for</u> | after before however |
| **Prepositions** | **Prepositions** |
| <u>for</u> by out like among beyond instead | of in on from at upon over within |
| | around beneath throughout |
| **Quantifiers/qualifiers** | **Quantifiers/qualifiers** |
| only most much many | every |
| **Adverbs** | **Adverbs** |
| all what when how too where well also | there |
| always rather often almost quite | |
| hence | |
| **Negative forms** | **Negative forms** |
| not never nothing cannot nor neither | |

A closer examination of the words in table P.1 highlights a number of differences between the two authors. The first obvious difference is that there are more than twice as many words on Linton's side. There were sixty-three words which she used relatively more often than Green, while there were only twenty-seven words which he used relatively more often than her. This means that Green is more marked by the words which he tends to avoid or use less often than he is by the words he prefers, and that he is more heavily reliant on a smaller set of preferred words than is Linton. The differences seen in the grammatical categories are striking, indicating decided preferences in each author's writing style. These might be summarised under the following categories:

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| she herself they their them themselves | his he himself |
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1. Sentence and phrase starters: Green makes more use of the impersonal pronoun, *it,* and *there* in its pronominal use, while Linton makes more use of personal pronouns and a greater variety of conjunctions.

2. Verbal/modal usage: Linton's more frequent use of auxiliaries and modals  shows a preference for complex verb phrases, while Green's less frequent use of them shows a preference for simpler verb forms.

3. 'Wh' word usage: Linton uses *who, what, when, where* and *how* more often than Green.

4. Negative forms usage: Linton uses *not, never, nothing, neither, nor* and *cannot* more often than Green.

5. Adverbial/qualifier usage: Linton's preferred usage of these forms is much greater than Green's.

Some differences of preferred usage between the two authors are illustrated in the personal and impersonal pronouns. Table P.2 below provides a comparison of the two authors' overall relative usages: a system of personal preferences which ranges from one author's regular and consistently higher usage, through to a more sporadic and only somewhat higher usage than the other author.

Table P.2: Comparison of two authors' preferred usage of pronouns

| Linton prefers | t-value | Linton's score | Green's score | Green prefers | t-value | Green's score | Linton's score |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| you | -2.6 | 0.15 | 0.03 | it | 8.3 | 1.32 | 0.79 |
| your | -2.24 | 0.06 | 0.01 | its | 3.79 | 0.37 | 0.13 |
| she | -2.15 | 1.33 | 0.74 | we | 2.38 | 0.59 | 0.39 |
| herself | -2.39 | 0.16 | 0.08 | our | 2.62 | 0.22 | 0.11 |
| they | -6.06 | 0.91 | 0.28 | us | 3.97 | 0.2 | 0.07 |
| them | -4.4 | 0.33 | 0.16 | he | 3.35 | 0.59 | 0.27 |
| their | -2.98 | 0.68 | 0.42 | his | 3.07 | 0.78 | 0.42 |
| themselves | -3.97 | 0.13 | 0.04 | himself | 2.01 | 0.08 | 0.04 |

The most remarkable difference is seen in Linton's score for the usage of *you*, which is five times that of Green. The relatively low t-value however, reflects

the fact that Linton is sporadic in her high use of the second person pronoun. Some articles (for example, "Feminine Affectations"[7] with 17 instances of *you* and 5 of *your*) rate highly, while others use it sparingly, as does Green. More significant in terms of stylistic contrast are some of the words with a high t-value, such as Linton's *they*, *them* and *themselves* and Green's *it* and *its*. Both authors have resort to the use of the editorial *we,* but Green has more frequent resort, and in consequence, his usage of the other first person plural pronouns (*us* and *our*) is considerably greater than Linton's. Both authors use the masculine and feminine third person singular pronouns – Linton using the feminine ones somewhat more than Green and Green using the masculine ones somewhat more than Linton.

Looking at the words in context helps some of the stylistic contrast become clear. For example, contrasting with Green's preference for beginning his sentences with the impersonal pronouns and *there*, Linton shows a decided preference for objectifying the subjects of her discourse by making frequent use of the third person plural pronouns.

The following passage from "Feminine Affectations" shows how she uses her preferred pronouns to subject the particular specimen she has under her microscope to scrutiny (the words of interest are coloured):

> The main characteristic of these women is self-consciousness.  They live before a moral mirror, and pass their time in attitudinizing to what they think the best advantage. They can do nothing simply, nothing spontaneously and without the fullest consciousness as to how they do it, and how they look while they are doing it.  In every action of their lives they see themselves as pictures, as characters in a novel, as impersonations of poetic images or thoughts.  (75)

This way of presenting subjects contrasts strongly with Green's habit of using *there* and *it* as sentence starters.

> There are, it must be owned, few things on earth of less interest at first sight than a girl in her teens. ("Man and his Master" 215)

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[7] Complete bibliographical details for all *Saturday Review* articles can be found in Appendix 2.2.

> It is, we suppose, necessary that woman should have her philosopher, but it must be owned that she has made an odd choice in Plato. ("Platonic Woman" 207)

Two further passages highlight some of the habitual stylistic tendencies of the two authors which contribute to the differing frequency of usage patterns of Table P.1 and the different text locations in Figure P.2. The first passage, the opening of Green's "Woman in Orders", again shows his frequent recourse to *there* and *it* as sentence starters, as well as his heavy use of the definite article, his liking of the relative *which* and his occasional use of the editorial *we* or *our*. His tendency to use simple verb phrases (forms of main verb *be* (*is* and *was*) or verbs without auxiliaries and modals) can be seen throughout the passage.

> There is, no doubt, something extremely flattering to our insular conceit in the mystery which hangs about the institutions which we prize as specially national… It was time, we felt, to abandon these mere outposts of the unintelligible to the aggressions of an impertinent curiosity, and to retire to the citadel. (243)

The second passage is the final paragraph from Linton's "La Femme Passée" and it is a nice illustration of some of the differences between the two authors.

> Bad as the girl of the period often is, this horrible travesty of her vices in the modern matron is even worse.  Indeed, were it not for her, the girls would never have gone to such lengths as those to which they have gone; for elder women have naturally immense influence over younger ones, and if mothers were to set their faces resolutely against the follies of the day, daughters would and must give in…  Were it not for those who still remain faithful, women who regard themselves as appointed by God the trustees for humanity and virtue, the world would go to ruin forthwith; but so long as the five righteous are left we have hope, and a certain amount of security for the future, when the present disgraceful madness of society shall have subsided. (354)

Here we see Linton inviting the reader to place some of the blame for the behaviour of the girl of the period on the bad example of the *femme passée*, using the third person pronouns (singular and plural) to refer to her subjects.

Towards the end of the passage when she wishes to refer to another sort of woman – one who would set a good example to younger females – she uses the relative pronoun *who*. We see her using some of her preferred conjunctions (*and, as, if* and *for*) to create her comparisons and propositions. We see the usage of her highly preferred negative *not* in two examples of the phrase "were it not for" and there are several examples of complex verb phrases using auxiliary and modal verb forms.

It is apparent that there are marked and consistent differences in the way the two authors use some of the function words. This allowed us to look for authorial patterns that are otherwise invisible and to put our intuitions about the distinctiveness of these authors' styles on a more objective basis. The samples of non-fiction prose just considered were generically similar articles published anonymously as part of the *Saturday Review*'s 'Modern Women' series, and the question posed was whether it was possible to distinguish authorial styles merely on the basis of word counts. The unequivocally positive answer affirms the foundational assumption of computational stylistics that each author's work carries traces of an individual style. An exploration of what the methods of computational stylistics can contribute to a better understanding of the 'literary periodicals' in nineteenth-century Britain follows.

# Part 1

## Chapter 1: Introduction and Survey of the Literature

i       Victorian periodicals

ii      Computational stylistics

### (i) Victorian Periodicals

*A Significant Genre*

Amidst the enormous output from Victorian Britain's periodical press, we find hundreds of reviews, magazines and weeklies which contain articles of lasting importance and interest. Laurel Brake testifies to the fact that the periodicals provide "a corpus of Victorian literary criticism of quality and range" and quotes George Saintsbury's 1895 recognition of the importance and significance of the periodicals: "Perhaps there is no single feature of the English literary history of the nineteenth century … which is so distinctive and characteristic as the development in it of periodical literature" (Brake, "Literary" 92). The notable scholars Walter Houghton ("British" 554) and John Mason (282) both speak of the nineteenth century as 'the golden age' of the review and magazine, particularly, says Houghton, from 1825 to 1900.

From "over 25,000 journals of all kinds" (Houghton, "Periodical" 3), for the purposes of this thesis, I have confined my attention to articles published in journals which were considered to be of a high literary standard. These "literary periodicals" were "directed to the better-educated, more intellectual reader" (Vann and VanArsdel, 3). The range of subjects addressed reflected the extraordinary growth of knowledge during the nineteenth century. There were many new fields of learning in this age of science, new ideas, exploration and travel. Even more impressive than the range and volume of periodical literature output, was the striking list of contributors. As Houghton remarks, it would be unthinkable today to have so many of the top ranking intellectuals and political leaders contributing articles to the periodical press. Table 1.1 below gives some indication of the range within the group of periodicals I have chosen for this thesis.

Table 1.1: Victorian periodical journals contributors, professions, topics and fields (adapted from Houghton, "Periodical" 3-4)

| | Some well-known contributors | |
|---|---|---|
| Gladstone | Sir Charles Lyell | Sir Walter Scott |
| Disraeli | Lord Robert Cecil | Matthew Arnold |
| J.H. Newman | T.H. Huxley | Walter Pater |
| Cardinal Manning | Macaulay | George Eliot |
| both the Mills | Carlyle | Sir Leslie Stephen |
| | | |
| | Some contributors' professions | |
| historians | army and navy generals | bishops |
| economists | famous explorers and travelers | diplomats |
| major literary figures | leading politicians | judges |
| | | |
| | Some Topics of interest | |
| Benthamism | catholic emancipation | poor laws |
| Puseyism | woman question | corn laws |
| positivism | condition of England | factory acts |
| evolution | home rule | chartism |
| phrenology | spiritualism | the Crimea |
| | | |
| | Some fields of learning | |
| geology | anthropology | philosophy |
| political economy | sociology | history |
| science | biblical criticsm and theology | art |

A number of works help provide an insight into the spirit and character of the age and the hopes and fears of its people[8], while other scholars attempt to portray the age through specimens of its writings and literature[9]. And indeed, it is through an examination of contemporary writing, that we see that the Victorians themselves regarded their age as one of transition. Houghton found a large number of instances where the words 'transition' or 'transitional' were used by Victorian writers, and quotes John Stuart Mill's 1831 remark that "mankind have outgrown old institutions and old doctrines, and have not yet acquired new ones" ("Victorian" 1). Transition implies change, and it was this feeling among contemporaries, that the age was "one of overwhelming change" that is often offered as an explanation for the emergence and dominance of the periodical essay in the nineteenth century "as the vehicle for presenting ideas and information" (Fraser 7-8).

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[8] For example, Houghton "The Victorian", Chapman, Chesterton, Turner's Introduction, and also collections of essays, such as, Bullen.
[9] For example, Guy, Levine.

*Variety within the Genre*

Even a cursory examination of some of the articles in these reviews reveals a great deal of variety within the genre. Was there any consensus of opinion in Victorian Britain about what a review article should be like? Oscar Maurer tells us that the debate about whether articles should be signed or anonymous "led to a frequent re-examination of the reviewer's function by reviewers themselves and by their victims or beneficiaries; as a chapter in literary history it dealt necessarily with the complex relations between author, critic and public" (1). On the one hand we find the notion of the review writer taking on the "role of instructor and guide to the reader" (Liddle, 33). Such a writer "inhabiting the British Journal's trademark pronoun *we* … spoke from the centre of society and embodied the wisdom of the entire culture" (Liddle, 39) providing intellectual leadership for the masses. Walter Bagehot's 1855 remarks exemplify this notion: "It is indeed a peculiarity of our times, that we must instruct so many persons. On politics, on religion, on all less important topics still more, every one thinks himself competent to think, –  in some casual manner does think, –  to the best of our means must be taught to think rightly" ("First Edinburgh Reviewers" 311). On the other hand we find G.H. Lewes arguing in an early issue of the *Fortnightly Review* that many of the defects of the reviewing process would disappear if the reviewer "would relinquish the authoritative position of a judge putting forth absolute verdicts, to assume the position of a reporter who is giving his own personal opinion" (Maurer 21). Whether judge or reporter, "these critics as a group may be said to represent the best thought of the age", and, generally speaking, "the average level of serious writing was remarkably good" (Houghton, "Periodical" 9-10).

In 1855, just over fifty years after the *Edinburgh* began publication, Walter Bagehot was able to comment on the fact that the "system" of "essay-like criticism", the presentation of "large topics of suitable views for sensible persons" begun by the *Edinburgh Review* had come to replace the more scholarly writings of the past with their systematic arguments, regular discussion and completeness ("The First Edinburgh Reviewers" 313). Bagehot believed that review writing exemplified "the casual character" of the

literature of his day, with everything about it "temporary and fragmentary" (310). These readers were a different breed from the "student of former ages" with his "few books of 'Aristotle and his Philosophy'" (310-311). People these days, Bagehot observed, "take their literature in morsels, as they take sandwiches on a journey" (310). They do not want the completeness of profound analysis, discussion and argument on very few topics; rather they want the lighter touch found in the essay-like reviews, "the facility of changing the subject, of selecting points to attack, of exposing only the best corner for defence" and the avowal "of necessary incompleteness" (312).

Once begun, the genre was adopted by other Quarterlies, and was then taken up as the century progressed, by the "new generation of quality monthlies" which often carried articles of "equivalent intellectual caliber" (Kent, "Introduction" xvii). By the last decades of the nineteenth century monthly reviews were "the most popular serious periodical journals of the day" (Mason 281). Yet early the next century "periodical literature as it had been practised in the nineteenth century" no longer existed. Sullivan cites Denys Thompson's naming the year 1914 as marking the end of the old style of review. The editor's task was no longer to educate and stimulate his readers or to provide an organ for the dissemination of higher culture, but simply to keep up the circulation (part 4, xvi).

Bagehot tells us that it was Hazlitt who first raised the question "whether it would not be as well to review works which did not appear" ("First Edinburgh Reviewers" 309), and, before the general acceptance of the idea that Reviews might publish expository articles, we find writers simply using the book (supposedly under review) as a starting point from which to expound their own ideas. Houghton notes that Mill and Roebuck had determined the new *London Review* (1831) should discard the "lie of pretending that all articles are *reviews*, when more than half of them are not" ("Periodical" 6). The development of this phenomenon was observed by Bagehot, who describes the emergence of the "essay-like review" and the "review-like essay" ("The First Edinburgh Reviewers" 312). In the former, the focus is shifted "from the book itself to what the book suggested", whilst the latter purported to be a

review of books which were "not so much as mentioned" (Houghton "Periodical" 6) within the body of the essay. As Houghton says, the stand alone essay was the obvious next step. The emergence of these differing text-types within the review genre did not mean there was no longer a place for the true review, and "reviews in the strict sense of the term, continued to appear throughout the period, especially of abstruse publications like *The Origin of the Species* which demanded exposition and argument" (Houghton, "Periodical" 7).

This hybrid genre was suited to an age where generalized knowledge and writing held sway over the more specialized writing we know today in our profession-specific journals. Leslie Howsam observes that "beginning in the 1860s, and continuing into the '70s and '80s, a group of self-identified 'scientific' historians insisted that England needed 'a purely historical review.'"[10] Nevertheless, Howsam says, there was nothing much wrong with the reviews of historical works which appeared in the periodical magazines "designed as they were for a wide general educated audience" (2). This "breadth of interest" and "medley of activity" by periodical writers also incorporated English literature, which at that time had not been established "as a subject for study in British schools and universities" (Brake, "Literary" 93-4).  As far as literary reviews were concerned, there was a growing awareness in the latter part of the century, of the overlap between the essay-review and *bona fide* literary criticism. It was this awareness that led Leslie Stephen to adopt the term 'aesthetic criticism' to distinguish literary criticism from "'criticism' concerning history or science" (Brake, "Literary" 93). Similarly, there was a growing awareness of the need to defend "professionalism in writing rather than in subject" and "general over specialist knowledge" (Brake, "Literary" 94). Inevitably, as the twentieth century proceeded, specialization won out and the generalist periodical disappeared.

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[10] The *English Historical Review* was founded in 1886.

*Views in the literature on the periodical texts*

The periodicals have been recognized as having been the source of "half the most valuable books of the age in some departments, and a considerable minority of the most valuable in others" (Saintsbury, Brake "Literary" 92); as providing a corpus of quality Victorian literary criticism (Brake "Literary" 92); as containing "a rich mine of information on the deepest thoughts and fears of the educated élite" (Mason 282); as an "immensely readable and fascinating" body of literature (Levine 15); and as being "the amusement, as well as the instruction, of a large majority of the intelligent public" (Houghton "Periodical" 17). The immensity of the field has allowed scholars like Peter Morgan to perceive "the process of literary involvement in the broader culture, not only as it occurs at one moment, but also as it develops over a period of time" (x). Morgan, and the scholars he cites (Hayden, Clive, Nesbitt and Marchand), attempted to "identify the ethos" of particular journals by undertaking in-depth chronological studies of them (xi). George Levine and William Madden suggest that it might reasonably be claimed that the prose non-fiction of Victorian literature "surpasses its poetry, not only in bulk but in artistic achievement" (vi). This is high praise indeed for a genre of literature which was frequently perceived by writers of the time as impermanent and transitory.

> Magazines and reviews are not meant to last. The articles in them may be excellent in their kind, but they must address the sentiments, or passions, or interests, which happen to predominate at the time; and how transient these passions and interests are we may satisfy ourselves by turning back over the files of old newspapers or old volumes of the quarterlies. Articles once fresh on every lip, which delighted and electrified society, are now weary, flat, and unprofitable. (Froude, "Copyright Commission" 340-1)

Both contemporary and modern commentators speak of house-style as a natural or necessary feature of the genre. Walter Bagehot uses it as an analogy for the way a nation's character changes imperceptibly over time: "Most men catch the words that are in the air, and the rhythm which comes to them they do not know

from whence; an unconscious imitation determines their words…." He adds however, that "a writer" who "tries to write in a journal in which the style is uncongenial or impossible to him" will soon be weeded out. ("Physics and Politics: The Preliminary Age" 24-25). Leslie Stephen likens the process to that of "some inferior organism" taking on "the colour of [its] environment" (Kent, "Higher" 192). Laurel Brake speaks of writers' ability to pitch an article "to the style, tone and taste of the periodical for which it was intended" ("Literary" 104), while Walter Houghton talks of the ways "writers had to shape their work to the requirements of periodical publication" ("Periodical" 21).

A number of commentators speak of the aptness of periodical literature for the age. Hilary Fraser notes "that there was controversy throughout the century as to whether the essay simply expressed the spirit of the time or was responsible for it" (12). Other commentators speak of the surprising cohesiveness of the Victorian intellectual élite where "scientists rubbed shoulders with poets, philosophers with politicians" (Bullen 4) and where "the humanist and the scientist still spoke a common language" (Postlethwaite, xi). The Victorian circle of writers whose works are analysed by Diana Postlethwaite was "drawn from a diverse range of intellectual vocations … respected scholars and inflamed ideologues, novelists and philosophers of science; men of letters, renegade industrialists, and bluestockings" (xi), all believing "in a *via media*" (xiii), all united by the same powerful urge "toward the synthesis of opposing tendencies" (xiv). Two women are numbered among this group of writers.

The question of gender and the Victorian periodicals has been the subject of a number of recent works which look at how women authors managed to compete and construct an authorial identity in the generally masculine crowd of nineteenth-century writers. Alexis Easley focused on the "history of gender and authorship during the Victorian period," ("First Person" 1) while Hilary Fraser, Stephanie Green and Judith Johnston aimed "to address the role played by the periodical press in the formulation and circulation of gender ideologies in

Victorian Britain, and to examine the contribution of women … to their dissemination" (2). Laurel Brake, Bill Bell and David Finkelstein bring together a number of essays on the ways identity was constructed in the nineteenth-century media, while Nicola Thompson's work offers a collection of essays highlighting 'The Woman Question.' Solveig Robinson's edition, *A Serious Occupation: Literary Criticism by Victorian Women Writers*, is helpful in bringing together a number of women writers' periodical essays on literary criticism. Although the writing it deals with is "the nineteenth-century novel" and "a number of autobiographies of working women" (1), Julia Swindells' book explores the development of "*literary* professionalism in the nineteenth century" (3) and its effect on current gender and class inequities.

Since the mid-1970s there has been an increased interest "in the relationship between language, gender and power." This has led to a "debate on whether men and women use language differently (and what it means if they do)" (Cameron, frontispiece). Much of the scholarship in this field, including Janet Holmes' and Robin Lakoff's classic works, has been concerned with the spoken language and the question of when and why men and women speak differently: Holmes examining "potential sociolinguistic universals" (125); and Lakoff looking at "the language used by and about women" (1).  While Deborah Cameron "treats the relationship between language and gender primarily as a political issue" (1), other scholars, such as Jennifer Coates, attempt to provide a sociolinguistic account of gender differences in language. Current gender and language study is a large multi-disciplinary field, having crossed "the boundaries of Linguistics into, *inter alia*, Women's Studies, Queer Studies, Literature, Philosophy, Psychology, Cultural and Media Studies, Politics, History, Religious Studies and Education" (Sunderland, 55-56). My interest in this question is restricted to the written language and whether or not any difference in men's and women's writing can be discerned in the Victorian periodicals.

In *The Art of Victorian Prose* Levine and Madden addressed themselves to what they called "the problem of seeing non-fiction as art" (ix) where "the essayist, the biographer, the social critic, [and] the philosopher" are regarded "as second-class citizens" (xi) in the rarefied world of literary criticism. Reviews, they point out, by their very nature, are supposed to be 'parasitical' and dependent "upon the works on which they feed" (viii).  They are assumed to be at their best when they mediate "truth without calling attention to the author" (viii).  What then are we to make of the genre created by the *Edinburgh*? Something that was called a 'review' was, even from the start, more than a review. It was a review where the bulk of the interest was to come from the so-called reviewer's own input – his "large and original views of all the important questions to which these works might relate" (*Wellesley* introduction to *Edinburgh Review*). It seems ironical, then, that though the authorial contribution had become all-important to the success of the genre, the policy of anonymity worked at merging authorial individuality with the editorial voice and house-style of the journal.

Anonymity in reviewing was an inheritance from the eighteenth century which the major quarterlies adopted without question in the first decades of the nineteenth century. Oscar Maurer Jr.'s classic 1948 article "Anonymity VS. Signature in Victorian Reviewing" describes "the course of the change from the anonymity of the thirties to the personalized and signed reviewing of the eighties and nineties" (10). Maurer identifies the eighteen-sixties as "the turning point in the movement toward signature" with *Macmillans* (1859) presenting some signed articles without proclaiming signature as a policy, and the *Fortnightly Review* (1865) announcing that "Each contribution will have the gravity of an avowed responsibility" (4). The contemporary arguments for and against signature, assembled by Maurer, and discussed by other researchers (Liddle, Kent, Brake …) show that this question, and the controversy surrounding it, was an integral part of the 'hybrid genre' created by the *Edinburgh*. The issue is intimately connected with the question of the relationship between authorial individuality and editorial responsibility and whether the journal's or the author's name is more

important. Maurer quotes Saintsbury's 1896 expression of regret at the passing of anonymity:

> Signed criticism diminishes both the responsibility and the authority of the editor; it adds either an unhealthy stimulus or an unhealthy gag to the tongue and pen of the contributor; it lessens the general weight of the verdict; and it provokes the worst fault of criticism, the aim at showing off the critic's cleverness rather than at exhibiting the real value and character of the thing criticised. And perhaps some may think the most serious objection of all to be that it encourages the employment of critics, and the reception of what they say, rather for their names than for their competence. (18)

Dallas Liddle identifies "three important schools of thought" (32) in mid-Victorian England as underlying the signature debate – the mentoring model of discourse; the literary marketplace; and the playing fields of Eton and Rugby where personal responsibility is paramount. It is the mentoring model that supports the notion of anonymity, where "men of intellect and education" – invested with the corporate authority of the journal – engage in "the very peculiar task of forming and regulating public opinion" (Liddle 60). Christopher Kent makes the further point that the rapid expansion of the serious periodical press "between 1850 and 1875, coincided with the reform and expansion of the ancient English universities" and that "the universities were an obvious source of contributors of the intellectual calibre required by higher journalism" (181). Liddle quotes Susan Drain's encapsulation of the main points of the controversy. The arguments she assembles for anonymity are: that it lent the authority of the whole journal to its individual writers; that it allowed writers to contribute to a variety of journals and helped unknowns and an increasing number of women to get into print; and that it allowed outsiders from other callings, who did not want their contributions acknowledged, to submit articles (34). These arguments suggest that the body of Victorian periodical literature bequeathed to us would, in all probability, have been much poorer had the system of anonymity not been in place during the formative years of the 'higher' journals.

Whereas the proponents of anonymity were supported by the ideological notion of 'mentoring', the advocates of signature had the choice of advancing the ideological notion of personal responsibility for what one wrote or the economic fact of the literary marketplace. Both these arguments seemed to gather strength as the century progressed. It would appear that by the time signature was in place, the nature of periodical literature had undergone a change, and "the voice of the mentor had passed into silence." "The model of the journalist as teacher and guide, once unchallenged, was by the early twentieth century strange to the new conditions of periodical publication" (Liddle 63).

The fact that the system of anonymity was in place for so many of the 'golden years' of the periodical journal means that modern scholars, who wished to avail themselves of the articles, faced an enormous problem of attribution. Houghton estimates that "perhaps only three percent of the articles in the whole period are signed, and before 1870, closer to one per cent, if that many" ("British" 561). "The scholarly importance of this material created an imperative to provide indexes through which it could be accessed" (on-line *Wellesley* guide). Between 1966 and 1986 the massive project of creating the multi-volume *Wellesley Index* was undertaken. The *Index* is now on-line and provides scholars with attributions for forty-five monthly and quarterly journals. The realization that the *Index* contained a number of errors has led to the ongoing work of the *Curran Index*, which seeks to identify and correct any misattributions.

Levine and Madden argue that "finding appropriate ways of dealing with this body of non-fiction" is both problematic and urgent (vi). They also point out that in spite of the "large body of existing scholarship" in the field, "relatively little attention has been given to the structure and style of these works" (vi). They offer the collection of essays in their volume in the hope that the questions they raise would lead to "more extensive studies of Victorian prose and to a more detailed and coherent poetics of the art of non-fiction" (xx). One of these essays, Louis Milic's "The Computer Approach to Style," suggests that the computer may well

offer a fruitful solution to some of the problems identified by Levine and Madden, since it should be more successful in identifying some of the more basic (and less visible) characteristics of a writer's style than the traditional methods of stylistic analysis. While much work remains to be done in a great many areas, I believe the Victorian periodicals possess a number of characteristics which make them particularly suited for a broad stylistic study using the methods of computational stylistics. Such a study might also focus on certain specific questions raised in the literature, such as house style, authorship and gender, and provide some illumination on them. The field of computational stylistics will be described in the following section.

## (ii) Computational Stylistics

### *Description of field*

Computational stylistics uses the enormous capacity of computers for detecting some of the patterns in language which are formed when information is linguistically encoded. To this end "computers serve most immediately as instruments of observation and memory" (Burrows, "Computers" 170), which can scan a text and count instances of any given phenomenon with accuracy and speed. As well as performing statistical calculations quickly and accurately, the computer "surpasses our capacity for carrying out those forms of classification in which membership of a class is defined by the presence, the absence, or the markedly different incidence of certain explicit features" (170). Continuing advances in computer technology have greatly increased our ability to carry out rigorous and in depth analyses of style.

The field of computational stylistics (sometimes called 'stylometry') belongs within the more general area of "Computing and the Humanities". This appellation pays tribute to the pioneering work of those earlier researchers who were convinced that the computer could assist their endeavours and who were forced to spend a great deal of time convincing the skeptics that their results were both worthwhile and legitimate. The label also covers the current situation

where it can not only be taken for granted that computers *do* belong in the humanities, but be a matter of surprise to the younger generation that they ever did not. Nevertheless, there are still many fields in the humanities which "mistrust the application of statistical and computing techniques to literature and the analysis of texts" (Holmes "Evolution" 116). John Burrows, a pioneer of the field, has repeatedly stated that computational stylistics presents no threat to traditional scholarship, and should be "assessed upon its merits, like any other application of inductive logic" ("Not Unless" 91). Speaking of the use of the methods for authorship attribution, David Holmes explains that stylometry "does not seek to overturn traditional scholarship by literary experts and historians, rather it seeks to complement their work by providing an alternative means of investigating works of doubtful provenance" ("Evolution" 111).

One of the best surveys of the field is to be found in Holmes' "The Evolution of Stylometry in Humanities Scholarship". Holmes' historical review starts with the earliest applications of statistical methods to the analysis of literary style and concludes with the exciting prospect of being able to move from "lexically based stylometric techniques" to "syntactically based ones" (116) with the availability of tagged corpora and the advances in automatic parsing. Holmes' survey is also valuable in its treatment of the interaction of stylometry with more traditional literary scholarship, the area of most interest to me. Holmes, quoting Bailey, lists the general properties of quantifiable features of a text which can be measured or counted in the attempt to discover the stylistic characteristics of individual authors. These features he says, "should be salient, structural, frequent and easily quantifiable, and relatively immune from conscious control" (111).

Burrows' "Computers and the Study of Literature" provides a good general discussion of the countable features of literary texts. He describes texts as "repositories of meaning" where the meaning "lies in patterns discernible amidst the circumambient noise" (167). He proceeds to describe the patterns which literary scholars might examine and compare; these might be: "sets of taxonomic

differentiae", "signs of individual authorship", "large thematic patterns", juxtaposed characters, or "modulations of narrative. They might be: "sequences of images", "sets of tropes", "poetic rhythms", "shifts of semantic register" or even "the frequency patterns of very common words" (168). Burrows insists that any act of counting or pattern analysis remains just that until it is transformed by the judgment of interpretation. The linguistic features of most interest to me are the function words of the particular text set being studied. Holmes mentions the successful study by Ellegard (1962) who used the frequency of occurrence of function words to study the authorship of the *Junius Letters*.  Building on Ellegard's work, Mosteller and Wallace worked on the *Federalist Papers* problem and provided the first really "convincing demonstration of stylometry's potential" (112). Holmes concludes that the work of Mosteller and Wallace opened "the way to the modern computerized age of stylometry" (112).

Computational stylistics can be used for either stylistic or authorship studies, or for both. Hugh Craig calls the two types of study "siblings", explaining the difference this way. "Stylistic analysis is open-ended and exploratory. It aims to bring to light patterns in style which influence readers' perceptions and relate to the disciplinary concerns of literary and linguistic interpretation. Authorship studies aim at "yes or no" resolutions to existing problems" ("Stylistic" 273). Granted these differences, stylistic analysis still needs to be rigorous and repeatable like its sibling, while the measures of authorship studies will be more compelling if they are explained in stylistic terms. Craig's article on the plays of Thomas Middleton shows how the two techniques (of authorial attribution and descriptive stylistics) can be "mutually supportive" ("Authorial" 103). Although the computational stylistics study described in the Prologue was not an attribution study as such (since the authors of the articles are now known), nevertheless it was a good demonstration of the interaction between stylistics and attribution. Knowing the stylistic characteristics which separate two authors is a good first step for further authorship studies.

*Use of common or function words*

Burrows' early work on Jane Austen's literary vocabulary with hand-counting and index cards revealed such interesting patterns of word usage that in 1979 he "began making machine-readable versions of Jane Austen's novels" ("Questions" 6). Burrows' discovery that the incidence of the very common words of English varies significantly between texts by different authors while remaining comparatively constant within a single author's work was at the heart of all his early work and led to the development of what is usually known as the 'Burrows' method'. Holmes says of the discovery: Burrows "achieved remarkable results, indicating that the way in which authors use large sets of common function words … appears to be distinctive" ("Evolution" 114). The method allows researchers to see authorial patterns which are usually invisible and to describe the distinctiveness of a writer's style in more empirical terms.  It also allows them to estimate systematically the criss-crossing relations of authorial style and other commonalities such as genre, gender, period, and educational and social background.

Burrows' early work relied on the most common words of a corpus where the words were allowed "to choose themselves." He argued that "such procedures involve the least possible intrusion by the investigator and they offer the most transparently intelligible results" ("Textual" 7). In his first major computational stylistics publication *Computation into Criticism* (1987) Burrows argued his case for the stylistic importance of the common words saying:

> … in most discussions of works of English fiction, we proceed as if a third, two-fifths, a half of our material were not really *there*. For Jane Austen, that third, two fifths, or half comprises the twenty, thirty, or fifty most common words of her literary vocabulary. The identity of these words scarcely changes from novel to novel over the twenty years of her mature career. (1)

Burrows and Craig made use of these common words in a series of papers[11] which explored a wide variety of issues. They applied the method to different authors, to different genres, to nationality, to gender, and to one particular genre 'the history' over a period of three centuries. Their work encompassed both stylistic and authorship studies. Holmes observed in his survey of the evolution of stylometry that "the Burrows 'method' has now become the standard first port-of-call for attributional problems in stylometry; in a simple sense, it seems to 'work'" ("Evolution" 114).

Why does it work? Burrows and Craig suggest that it is because the common words are mostly those "whose frequency owes least to context." Hence, "their use reflects a 'structural' dimension of style, marking syntactic and deictic habits rather than thematic preoccupations" ("Lyrical" 64). Holmes, in line with Bailey's idea that the features being counted should be "relatively immune from conscious control," spells out the assumption underlying the techniques of computational stylistics: namely, "that authors have an unconscious aspect to their style … which possesses features which are quantifiable and which may be distinctive" ("Evolution" 111). David Hoover also notes this assumption in relation to the use of common words, saying "Stylometric techniques assume that word frequencies are largely outside the author's conscious control because they result from habits that are stable enough to create a verbal fingerprint" ("Corpus" 175). In fact, most writers including Hoover ("Frequent Word" 158) agree that the results of the technique, though invariably impressive, and uniquely distinctive, fall somewhat short of the certitude implied by terms such as 'verbal fingerprint,' 'word print' or 'voice-print.' In 1992, Burrows observed that no-one had yet identified "a stylistic attribute as idiosyncratic or as durable as human fingerprints," and predicted that "nothing in the nature of the case suggests that anyone will ever do so" ("Not Unless" 91).

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[11] Burrows and Craig ("Lyrical Drama") "Our own work, for example, shows that it is possible to distinguish clearly between texts according to author, genre, era, gender and even nationality" (Burrows, 1992, 1993; Craig 1991, 1992).

*Multivariate techniques*

Burrows and Craig point out that another of the advantages of using common words is that they are readily countable features which "yield enough instances to allow multivariate techniques to be used" ("Lyrical" 64) both in inter and intra-textual situations. Burrows says of multivariate statistical methods that they "are designed to portray interrelationships of resemblance and difference across a whole set of specimens. The outcome makes it possible to form explanatory inferences bearing, for example, on the likely authorship of a given specimen" ("The Englishing" 679). Holmes notes that "the trend towards usage of multivariate statistical methods is now so established in stylometry that it is unusual to find papers which do not use them" ("Evolution" 114). He argues that the "shift to multivariate methodologies has not only made statisticians feel more comfortable with their analyses but has pushed forward the frontiers of stylometry" and "has been particularly beneficial as regards stylometry's standing within humanities scholarship" ("Evolution" 114). Burrows agrees that "multivariate statistical procedures are currently in the ascendant," that "the various methods are being employed with increasing rigour" and that the "results are becoming increasingly accurate and reliable[12]" ("A Reply" 220). The two techniques of multivariate analysis most frequently employed are principal component analysis and cluster analysis. Both methods will be described in detail in Chapter 2.

*Criticisms of Stylometry*

Willard McCarty in his 2002 overview of the field of humanities computing suggests that the failures in the field are an inevitable consequence of an inability to explain "how we know what we know" (103). He provides a thought provoking description of what happens "when humanities research is computerized" and locates humanities computing as living and dealing with the gap that exists

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[12] He cites two extensive trials which tested the tests: Burrows, "Delta" and Hoover, "Testing".

"between human knowledge and mechanical demonstration" (104). McCarty's preferred term for this activity is 'modelling,' the present participial form of the word capturing the ongoing and contingent nature of the work. Models, he insists, are meant to fail thus driving research forward "by suggesting improvements or pointing to the need for further investigation" (105).

Holmes says the reason stylometry has failed to gain general acceptance in the humanities is because there is no single generally accepted methodology which works for every case. "Practitioners search for the 'holy grail' of stylometry, a technique beyond reproach which may be applied successfully to all genres, languages, and eras" ("Evolution" 111). That such a technique has not been found does not seem surprising to researchers in the area who are aware of the complexity of language and who know that they are only dealing in propensities towards a usual linguistic practice which may be abandoned at an author's whim. Such researchers accept the fact that "a methodology successful for one attributional problem does not necessarily 'work' for another" ("Evolution" 111). Against the charge that there is no single method available for use in attributional studies, Burrows observes that "to the extent … that the language is systematic, different approaches should yield complementary results" ("Computers" 181). He suggests that the fact that varying degrees of success have been achieved "by such a diversity of procedures points once more to the profoundly systematic nature of the language" ("Computers" 182). Holmes agrees with Burrows that there is no reason to believe "that any single set of variables is guaranteed to work for every problem" ("Authorship" 104) and noted that "to date, no stylometrist has managed to establish a methodology which is better able to capture the style of a text than that based on lexical items," ("Authorship" 87) and predicted that the future would lie "in the development of connectionist approaches" ("Authorship" 104).

Harold Love makes the observation that "after four decades of energetic experimentation one would expect" non-traditional authorial attribution study "to

enjoy general acceptance" (151). He sees the problems of the more recent computational field of study as being shared by "the field as a whole", suggesting that since "easy solutions to easy problems hold little interest" researchers in the field have tried to push their methods to the limits and to examine "challenging and intractable" problems (152). Some workers enter the field with a specific problem to solve and have no interest in understanding the wider issues involved, while careless work and dogmatic proclamation of results have laid the field open to justified criticism[13].

Joseph Rudman's 1998 survey of the state of authorship attribution studies and its problems was offered in the hope that practitioners in the field would "invest the time and effort to conduct valid experiments" which exhibit a high "standard of competency and completeness" (361-2). To this end he exposed what he considered to be common problems in non-traditional attribution studies and "highlights some solutions" (351). Some of the problems Rudman lists are due to the fact that the field is of necessity inter-disciplinary and one which attracts "'one problem' practitioners with no long range commitment" (353). This inter-disciplinarity has also meant that there is no cohesive group of journals overseeing the field since results "have been published in well over 76 journals representing 11 major fields" (353). Rudman's other problems relate to "flawed research" plans:  where studies are governed by expediency; where there is incomplete bibliographical research; where the technique takes precedence over the problem; where the primary data are inadequate; where allied expertise is needed but not sought and where errors are not treated or reported (353-361). The solutions to these problems, he suggests, should be self evident. He also reminds would-be entrants to the field that non-traditional attribution studies should only be undertaken when all the traditional studies have been completed (359).

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[13] See for example, the criticisms of Rudman and Potter below.

In her retrospective review, Roseanne Potter reports that the nine philosophical essays she reviewed all "warn against the same danger" and "call for the same remedy" (402-3). According to these writers there is a definite need for "more theory to guide empirical studies" since computer assisted literary criticism invariably runs the risk of becoming more concerned with doing what the computer can do than with doing what one's conceptual model might demand. Potter's final section includes a set of precepts which she offers to help those engaged in computer assisted literary criticism avoid the all too human tendency "to succumb to the trivial details as a way of avoiding the big questions" (427). These precepts encompass the need to understand the linguistic facts of language, to learn the logic of discourse analysis, to build on theory and to define how quantification can test theory. The computer should only be used sparingly when a scientific plan has been formulated and the technical description should be so clear that the work can be easily replicated (427-8).

Burrows' survey of the field of "computer-assisted literary criticism" begins with a defence of "the quantitative analysis of literary texts" ("Computers" 182) against the criticisms of Fish (1980) and Van Peer (1989)[14].  He provides counter-arguments against Fish's claim of circularity and defends the practice (which Van Peer criticizes) of temporarily extracting words from their context and setting them among their "semantic or grammatical kinsfolk" ("Computers" 183). In the survey which follows Burrows shows how the computer has assisted work in prosody and phonology; in the analysis of authors' revisions from version to version; in the treatment of sequences; in the analysis of thematic features; in textual close reading; in studies of chronology; and in his own study of first person narrative fictional histories which demonstrates a clear change in the language of literature across three centuries.

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[14] In a note to his 1996 paper ("Numbering"), Burrows says: "Fish 1980, firmly and effectively rebutted in Milic 1985; Peer 1989, to which I offer a rejoinder in Burrows 1992" ("Computers").

Many of these criticisms have been welcomed by most practitioners of computational stylistics, especially the criticisms that condemn hasty and careless methodologies and inadequate or flawed research plans. Burrows agrees that "it is both necessary and desirable that competent statisticians … should examine the ways in which quantitative methods are being used" ("Numbering" 1). Holmes and Burrows have provided compelling answers to those who demand a single, fail-proof method, and both of them have described successful studies which provide something of a benchmark or model of best practice in the field. The inter-disciplinary nature of the field, and the need for practitioners to gain expertise in a variety of areas, represents one of the challenges and part of the interest of the field. The observation by a number of critics (cited by Potter) that a good deal of work in the field would benefit from the guidance of more theory is also one which is welcome. It ties in with McCarty's comment that practitioners often find it hard to explain 'how they know what they know'. If we accept McCarty's notion of "the ongoing and contingent nature of the work" (103-105) we might think of the theoretical underpinning of ongoing work as being subject to change and development in the light of the empirical results.

## *Theories of style*

Louis Milic begins his 1991 paper "Progress in Stylistics: Theory, Statistics, Computers" with a discussion of a theory of style. He suggests that a successful theory of style should shed light on such important questions as:

> Is there such a thing as style and where is it located?
> Does an individual have a unique style which is different from that of others?
> Is this acquired by practice, by will, or by some other circumstance?
> If it is unique does it stay that way or does is change?
> What makes a style good or bad? and
> How do we recognize an individual's style? A period style? That of a genre? (393)

Milic identifies the "basic" or "individualist" theory as the theory which "is the essential underpinning of any investigation of style" ("Progress" 394). According to this theory, an individual's style "reflects the person to whom it belongs, and sometimes the person's environment (class, nation, religion …)" ("Progress" 393). Since computational stylistics depends on the notion that a writer's style is both individual and generally stable it is per force dependent on the basic theory. Milic observes that some computational stylistic studies – notably those looking for changes in a writer's style – are moving away from the shelter afforded them by the basic theory. David Hoover also notes this anomaly saying "style variation within an author's work seems to threaten" the validity of the assumption that authors' habitual usages of word frequencies are relatively stable ("Corpus" 175). He suggests by way of a solution to the problem that apparently 'different styles' of an author would probably appear quite similar when compared with the styles of other authors. Hoover's earlier paper "Multivariate Analysis and the Study of Style Variation" addresses this problem which he suggests "is more apparent, rather than real" (342), further arguing that "the consistency in style required for successful authorship attribution" is "compatible with style variation within a text or within an author's works". This question of stylistic variation within an author's texts set is one of the issues I will explore in Chapter 4.

Burrows, in analyzing one of Milic's studies (1967), notes that he (Milic) has taken advantage of "probabilistic rules" of grammar which "lie in the realm of fuzzy logic." Here "it is sufficient to show" that an author (in Milic's case, Swift) is "more or less given to the use of certain forms of expression" ("Computers" 172). Burrows defends the use of such methods provided there are "proper constraints" in place. He warns against potential sources of error such as poor choice of control texts, low word frequencies yielded by shorter texts and failure to admit the possibility of an unknown hand. Burrows explains: "For all its complexity, the language is still a fuzzy system in which high probabilities do not amount to certainties" ("Numbering" 3). He believes that the inter-dependence of a number of the variables in language allows the researcher to assess the likely

membership of a 'target text' within the population of the experimental set of 'training texts' on the basis of "compliance with a set of fuzzy and possibly interdependent rules" ("Numbering" 5). This concept would also allow "for the marked but not absolute differences" which occur when an author "moves from one genre to another" ("Numbering" 5). Looking to the future, he suggested that a 'grammar of probabilities' showing "a range of concomitant variations of frequency between such word-types in such texts" would "make for subtler and more accurate statistical analyses of our texts" ("Numbering" 5).

### *Computational stylistics and the Victorian periodicals*

Computational stylistics has been successfully applied to novels, plays and poems,[15] that is to say works of imagination and creation, works generally considered as 'art.' The method has not yet (as far as I know) been applied to addressing broad stylistic questions about a large body of prose non-fiction, such as the nineteenth-century periodicals. Computational stylistic studies on non-fiction prose have generally been focused on more specific authorial questions, such as the seminal study of Mosteller and Wallace[16] on the "Federalist Papers," or the recent study by Anstey and Burrows on the disputed authorship of two medical essays. The flowering and fading of the periodical has for more than half a century been of interest to both literary critics and historians, and serious attempts have been made to understand the role of the periodical in the intellectual and social life of its period. Nevertheless, in spite of prodigious scholarly effort, certain questions about the genre and its practitioners remain unexplored, primarily because scholarly techniques appropriate to such investigations have not been devised. It is the aim of this thesis to apply techniques that have already proved their worth in other literary studies of other genres in other periods to some of the questions that have proved intransigent in the face of more traditional methods. The genre is particularly suited to a

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[15] Studies on Novels include Burrows "Computation"; Burrows and Hassall; Hoover "Multivariate"; Hoover "Corpus"; McKenna, Burrows and Antonia. Studies on Plays include Burrows and Craig "Lyrical"; Craig "Authorial"; Craig "Contrast"; Craig "Common". Studies on Poems include Burrows and Craig "Lucy"; Burrows and Love.

[16] This study is described in Holmes "Evolution" 112 and Kenny 8-9.

computational stylistics study for a number of reasons. The articles are readily available in a well-defined genre (essay-like reviews or review-like essays appearing in the literary periodical journals); there are an enormous number of them; and the articles of the genre cover a considerable time span (first appearing in 1802 when the *Edinburgh Review* commenced the system and gradually disappearing around the end of the century). With such a large number of like-genre texts available, it is possible to build a genuinely representative text collection covering a chosen period.

The recognition of "the inseparability of what is said from the way in which it is said" (Levine and Madden, xiv) is one of the insights of modern literary criticism which provides an important role for the methods of computational stylistics. Louis Milic spells this out in his article "The Computer Approach to Style." Writers, he says, must make choices from the "variety of expressive possibilities" which language places at their disposal. "This kind of choice is the basis of style. … Everyone has an individual mode of expression, a style. …The student of style has as his task the finding of peculiarity" (343). And it is here that the computer becomes important, since the elements of style which are most visible are often not the most important. In writing, Milic argues, most of the conscious attention is focused on the meanings being selected while "the generation of appropriate sentence forms" for expressing these meanings seems to be carried out at a largely subconscious level (345). For this reason, Milic believes that the computer should be more successful in "uncovering the writer's basic style" than more traditional methods of stylistic analysis (346). Although he does not present a computer based analysis here, Milic uses three studies of Victorian prose, Logan Persall Smith on Carlyle, G.S. Fraser on Macaulay, and Hugh Sykes Davies on Trollope, to show how traditional critics of style are often theoretically vague and tending to render their verdicts impressionistically.

There are a number of questions of interest and importance which a computational stylistics analysis of the nineteenth-century periodicals might

address. These articles offer: both uniformity (in the genre) and variety (in the subject matter and presentation) and authorial individuality (in the personal opinions offered) submerged in corporate house-style identity (editorial 'we'). They come from both semi-partisan and open-forum quarterlies and monthlies. They were written by both professional writers and those, in other callings, who turned their hand to writing for the journals; and, in spite of the nineteenth-century assumption that journalism was a male domain, there are a number of women who wrote for the periodicals. Each of these issues is examined in detail in the chapters that follow.

Chapter 2 presents a detailed description of how the database used in the thesis was compiled and of the statistical methods which were used for analysing it. In Chapter 3 the texts of the collection are allowed to 'speak for themselves,' by showing how each of them is placed in relation to all the others simply on the basis of its relative use of the 100 most common function words of the text collection. This bird's eye view of the texts allows me to make some generalizations about the uniformity and variety seen in the genre. Authorial identity and its relationship with house-style is the subject of Chapters 4 and 5. In Chapter 4, I explore the question of the importance of authors and discover whether, despite the anonymity of most of the articles when they were first published, we should nevertheless see this undifferentiated mass of periodical essays as a set of authorial *oeuvres*. The concept of 'house-style' has generally been regarded as crucially important to any discussion of the Victorian periodical articles. Chapter 5 examines this notion, and assesses the importance of the political affiliations of the major quarterlies. It tries to see exactly what 'house-style' is and what it implies for the assumptions of authorship and authorial style underpinning most computational stylistic analyses.

In Chapter 6 I explore the question of whether the men and women of my text collection write differently from each other, and relate my results to other studies

of the gender-linked language effect. My exploration confirms the findings of these studies that, while such an 'effect can be found, it is by no means absolute. Chapter 7 explores the writings of George Eliot, a periodical writer who might be expected to stand out from the crowd. I examine the writing style of Eliot as a novelist, seeing in what respects she differs from other writers of Victorian fiction, and seeing which stylistic characteristics have carried over from her journalism. The relative frequency of use of common words is an empirical form of 'internal' evidence, which can be used to good effect for checking suspected authorial misattributions. Chapter 8 presents a case study using computational stylistics to identify stylistic differences between two writers (John Stuart Blackie and John Hill Burton) and to add the weight of its findings to the question of whether or not a number of articles assigned to each of these authors had been correctly attributed.

*The Saturday Review of Politics, Literature, Science and Art* was one of the most successful journals of the second half of the nineteenth century with "a well deserved reputation for antifeminism" (Bevington 114). Although most historical accounts of the English Women's Movement quote from some of the *Saturday*'s critical and satirical articles attacking the fledgling Women's Movement, almost nothing is known about the authors. Chapter 9 looks at thirteen articles, published in the *Saturday Review* between 1856 and 1858, and subjects them to a series of attribution tests using the methods of computational stylistics in an attempt to shed light on this question.

## Conclusion

The research project described in this thesis involved building a text collection of Victorian periodicals which was substantial enough to be considered as representative of the genre and large enough to avoid such hazards as inadequate sampling, "poor choice of control texts" and the "lower word

frequencies yielded by shorter texts" (Burrows, "Numbering" 3). The periodical texts possess many of the characteristics needed for the database of a successful computational stylistics study: there are literally thousands of them; they are generally well written; they belong to a single (if hybrid) genre and to a well-defined time period; they are all of a suitable length for statistical analysis; they allow authorial study, since most of them have now been firmly attributed; and their variety invites textual comparison and analysis. Finally, the high literary standard of many of the articles and the calibre of many of the authors means that the periodicals constitute a body of non-fiction prose of special interest. Each phase of this project uses methods which are subject to transparency and repeatability. Chapter 2 outlines in detail the methods, the texts and the variables used throughout the thesis.

# Chapter 2:

## Methods, Texts and Variables for Computational Stylistics

### Methods

As I noted in the last chapter, Computational Stylistics covers both stylistic analysis and authorial attribution, with stylistic analysis being "open-ended and exploratory" and authorship studies aiming "at 'yes or no' resolutions to existing problems" (Craig "Stylistic" 273). The research work undertaken in this thesis involves both stylistic analysis and authorial attribution. Hence, techniques were needed for both open-ended exploration and specific problem solving.

The methodology employed for this thesis is based on a number of techniques and procedures which have been developed in the Centre for Literary and Linguistic Computing (CLLC) at the University of Newcastle, Australia, over the past twenty or thirty years. Much of the work is based on the discovery, by John Burrows, "that the frequency-patterns of all the most common words, whatever they may be, are so distinctive, stable, and closely interlocked that they reveal more when they are examined together than when any of them is examined in isolation" (CLLC Sketch of Research). Burrows believes that it is always useful to begin an investigation with as few preconceptions as possible and to allow the texts the possibility of 'declaring themselves'. "Such procedures" he says "involve the least possible intrusion by the investigator and they yield the most transparently intelligible results" ("Questions" 7). It is in the middle and later stages of the investigation that the precise nature of the problem should be allowed to dictate the most suitable method for the analysis.

This study makes most use of statistical tests known as cluster analysis and principal component analysis The variables used in the tests are usually either: the most common words of the total text collection (for example the top 100); the most common 'function' words (omitting any subject specific lexical words); or selected discriminating or 'marker' words (those used relatively more and

relatively less often by the authors under testing). Cluster analysis is good in exploratory trials, in yielding corroborative evidence and in testing affinities between samples; however, the advantage of its simple binary presentation of results can be outweighed by an occasional separation of two quite similar specimens (Craig "Is the Author"). Principal component analysis has become the standard "first port of call in computer-assisted studies of authorship" (Holmes, "Evolution" 114) and has been put to good use in a number of "other studies by a growing number of scholars" (Burrows, "Questions" 8). Its versatility is due to the fact that it is primarily a test of comparative resemblance and with careful selection of test specimens "can yield extremely accurate inferences" (8).

Recent work in the CLLC has involved the development of techniques which make use of the less common words: zeta, making use of words used consistently by the target author, but only sporadically by others; and iota, making use of words used sporadically by the target author, and hardly at all by others[17]. These tests provide an independent means of corroboration or refutation, since they are based on an entirely different set of word variables. An automated version of this technique (zeta prime) works by finding 'marker' words for base and counter sets of texts and offers an impressive means of separating two groups of texts based on the appearance versus the non-appearance of less common words[18].

*Computer Programs and Statistical* Packages
'Intelligent Archive' is a custom designed program which was developed in the CLLC in response to the problem of the 'ever-expanding archive' and the 'always out of date' word list. This program archives texts and allows them to be grouped into any number of text sets and automatically updates its word counts. It produces word lists for the chosen text sets according to the user's instructions allowing results to be collected as either raw scores or as normalized

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[17]  See Burrows' article "All the Way Through" for a detailed description.
[18] See Craig and Kinney 15-39 for a detailed description

proportions. The program has a number of other features including the ability to organize groups of texts for the running of various tests, such as zeta prime.

The spread-sheet and statistical capability of Excel has been utilized in the creation and manipulation of word frequency tables. Output from Intelligent Archive can be collected in Excel worksheets, and these in turn serve as input for use in standard statistical packages. Two of these packages, Minitab and SPSS[19], are regularly used for various tests. Minitab 14/15 (with a number of custom written macros) is used for running multivariate cluster analysis, principal component analysis and distribution tests. SPSS is used for various statistical purposes including correlation, data reduction, factor analysis and comparison of means. It is particularly helpful for factor analysis tests where a large number of variables is involved.

Detailed description of Test Methods used in Thesis
*Multivariate analysis*
Multivariate analysis was used in the Prologue, and as I noted earlier, an increasing number of practitioners of Computational Stylistics are turning to multivariate analysis as the most suitable technique for the analysis of linguistic variables. The data for multivariate analysis "consist of observations on several different variables for a number of individuals or objects" (Chatfield and Collins 3). In his discussion of one of the univariate statistical methods used by the Claremont McKenna College Shakespeare Clinic in establishing Shakespeare's "twenty-nine play baseline or core canon", Thomas Merriam points to an "unavoidable drawback of univariate statistics," namely, its tacit assumption that individual tests are statistically independent (3). He suggests that multivariate statistics, such as principal component analysis, offer a way of overcoming the problem since this method "takes into consideration interdata dependence" (4).

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[19] The most recent version (17) of SPSS is known as PASW. All of the tests in the thesis used an earlier SPSS version.

Part of the reason for the success of multivariate techniques rests on the realisation that in language the "patterns of occurrence and word-frequency patterns are far more systematic than it has hitherto been possible to demonstrate" (Burrows, "Numbering" 2). Two observable types of systematic effect in language are co-occurrences and interrelationships of frequency. The former effect is present "whenever the occurrence of any one word-type in a given text creates a better or worse than random likelihood that some other word-type will also be used there", while the latter is present "whenever there are concomitant variations, across a range of texts, in the frequencies of two or more word-types" (Burrows, "Numbering" 2). Such systematic effects mean that the variables being tested are to a certain extent inter-dependent, revealing "more when they are examined together than when any of them is examined in isolation" (CLLC sketch of research) and accordingly more suited to multivariate analysis.

*Principal Component Analysis*

The origins of principal component analysis are found around the beginning of the twentieth-century "in some work by Karl Pearson" which was "further developed in the 1930s by Harold Hotelling and other workers" (Chatfield and Collins 57). The method "is appropriate when the variables arise 'on an equal footing'" as is the case with frequency counts of function words. It is used to transform an original set of correlated variables "to a new set of uncorrelated variables called *principal components*". If the first few components "account for most of the variation in the original data" (as is expected), they ought to be "intuitively meaningful" and help an experienced researcher "understand the data better" (Chatfield and Collins 57). Holmes has spoken of principal component analysis as being "a standard technique in multivariate statistical data analysis" ("Evolution" 113). I have found it the most flexible and useful of the tests for both exploratory stylistic analysis and authorship attribution analysis, and have used it throughout the thesis.

One of the main advantages of principal component analysis testing is that it can be used to yield two related scatter plots (a word plot and a text plot), each one of which helps the researcher interpret the results seen in the other. The first step in this process is to convert the table of word-score percentages to proportions of row totals. The word-score percentages ensure that longer texts have no advantage over shorter ones, while the row proportions ensure that the more common words at the top of the list have no advantage over those lower down. The next step involves producing a matrix of correlations of the rows, which now represent the word variables. Principal Components are then found for each matrix of correlations. These are plotted to produce the word plot. Finally, by multiplying the matrix of row-total proportions by the eigenvector matrix, coordinates for the columns of text samples can be found and plotted. By using the two plots in conjunction, the researcher is able to see which combination of words (used relatively more or relatively less often) has been responsible for the placement of the texts. In other words, "PCA is a technique that provides not only a summary of the information … but also a visual representation that is faithful to the data" (Binongo and Smith 447). Moreover, it does this "without losing important information and without distorting the relationships between the original variables" (Binongo and Smith 447).

Burrows has observed that the value of using a set of common or function words as the variables for the multivariate statistical comparison is that they "constitute the underlying fabric of a text, a barely visible web that gives shape to whatever is being said" ("Textual" 323). He uses the analogy of differently patterned or coloured hand-woven rugs, where "the principal point of interest is neither a single stitch, a single thread, nor even a single colour but the overall effect" ("Textual" 324). It is a particular author's use of one particular combination of words in the word set relatively more often than other authors and another particular combination of words relatively less often than the other authors that constitutes his distinctive use of language. Burrows adds that experience has taught him that "a wealth of variables, many of which may be weak

discriminators, almost always offer more tenable results than a smaller number of strong ones" ("The Englishing" 679). This ties in with the idea that it is the comparison of different overall effects that is of more interest than isolated instances of difference.

Burrows and Craig offer an explanation of why the method works as well as it does.

> The fact that mere frequency-counts of common words can shed real light on the resemblances and differences between works of literature rests upon the logical principle of concomitant variation. The same principle lies at the heart of principal component analysis. ("Lucy" 263)

Principal component analysis finds "in order of importance the sets of weightings for the variables that account for the most significant variations in the data" (Craig "Authorial" 200). It highlights the most important likenesses and differences among the specimens. The first two or three of these components contain most of the information, and can be plotted against each other in a scatter plot to show the relationships between the variables in the data. Burrows and Craig point out that "the complexity of such relationships means that the outcome of principal component analysis is *always* subject to interpretation."  For this reason, they say, it is prudent "to begin an inquiry with exploratory tests in which the data are allowed to speak for themselves" ("Lucy" 264).  Only after these initial tests have been carried out, can more precise hypotheses be made and tested.

In the light of the popularity of principal component analysis as an investigative tool for computational stylistics, José Nilo Binongo and M.W.A. Smith wrote a paper outlining "the mathematical nature of the theory that underpins the method" 445). They demonstrated the utility of the method as a stylometric tool, showing how the dimensional reduction technique of PCA, rather than losing information, actually serves to highlight it. Understanding how and why the method works, they suggest, should allow practitioners to use the method with more confidence.

Among the many computational stylistic studies which have used the technique of principal component analysis are: Anstey and Burrows; Burrows and Craig "Lyrical"; Burrows and Craig "Lucy"; Craig "Authorial"; Holmes, Robertson and Paez.

*Cluster Analysis*

"The basic aim of cluster analysis is to find the 'natural groupings', if any, of a set of individuals" (Chatfield and Collins 212). Such groupings could take the form of mutually exclusive groups where the individuals in one group are similar while those in another are dissimilar, or it could take the form of a hierarchical structure, which can be successively partitioned into groups (212). This type of testing has been found to be very useful both for initial exploratory work and for later specific detailed testing and is used on occasion throughout the thesis. The main advantage of the method is that its results can be presented in a tree-diagram (dendrogram) format, which is easy to interpret. The samples bearing most resemblance unite earliest, while the most different samples or groups unite last of all. This simplicity of presentation is offset by a lack of transparency as to what underlies the pairings or separations. It is for this reason that practitioners must exercise caution when using the method. Chatfield and Collins quote Cormack's warning about "the tendency to regard cluster analysis as a satisfactory alternative to clear thinking" (214).

David Hoover carried out a series of studies of the effectiveness of cluster analysis as a tool for "distinguishing texts by different authors and grouping texts by a single author" ("Frequent Word" 157), using different variables (frequent words, frequent word sequences and frequent word collocations). By using the method in "simulated authorship attribution scenarios" (Frequent Collocations" 261) where the authors were known, he was able to show its strengths and weaknesses. Hugh Craig uses a form of cluster analysis to show that authorship in Shakespearean drama "is objectively detectable" in spite of the existence of texts by authors "which are not easily assimilable to the larger clusterings of their

works" ("Is the Author" 119). I used it in the Prologue to show how readily the 'Modern Women' texts of Linton and Green separated, simply on the basis of their relative frequency of use of the top 150 function words of the text collection.

Minitab and SPSS both provide a convenient path for the running of the test. In Minitab the columns of word frequencies are entered and transposed; the Multivariate Cluster Observations section of the statistics menu is invoked and the column numbers containing the transposed word variables are entered. Experience has shown that the choice of 'Squared Euclidean' for distance measure and 'Ward' for linkage method yield the best results. A request for Minitab to 'standardize the variables' and 'show the dendrogram' produces the required test plot. The SPPS Hierarchical Cluster Analysis procedure is used to produce a dendrogram and also provides the option of producing a proximity matrix which allows a detailed exploration of the closest matches for each text. This procedure (proximity matrix) is used in Chapter 5 to test the relative importance of authorship and journal type across a number of texts.

*Correlation Testing*

"The relationship between the values of one variable and the values of another variable is known as their *correlation*" (Kenny 75). Once it has been established that some relationship between variables does exist, the next step is to "establish the precise nature of that relationship" and to "use it to predict values of one variable that would correspond to any given values of the other" (Rowntree 157). It is always possible of course, that "the relationship is a coincidence" and that there is "no sensible logical connection between the two variables" (Rowntree 172). Usually however, correlation is used to provide support for explanations which can be justified on other grounds. It provides its strongest support for explanations which "anticipate the correlation" before the data is collected (172). Correlations vary in direction (positive or negative) and also in strength, where the strongest possible relationship is labelled 'perfect'. Since perfect correlations are not to be expected between literary variables, it is helpful to make use of

statistical packages which offer the means of measuring the degree or strength of correlations (such as Pearson's product-moment coefficient). I used SPSS Pearson correlation for the correlation tests in this thesis with significance flagged at the 0.01 (2-tailed) and 0.05 (2-tailed) levels. Correlation tests were used for testing the possible significance of the effect of various factors (such as publication date, journal type, authorial gender, article length and so on) on the frequency of use of the variables. In Chapter 5 for example, the relative weight of each of these factors was tested in turn in the interests of ensuring that extraneous factors were not having an undue influence on the current tests. Whenever relevant, the results of such testing are reported.

*Distribution Testing – t-tests*

*Marker Words*

In both authorship attribution studies and in stylistic analyses of particular authors, the use of marker words has become one of the most significant and valuable techniques used by Burrows and his colleagues at the CLLC. The technique is generally employed at a later stage of the project, after the unselected variables have allowed the texts to 'speak for themselves'. Both these types of variable were used in the Prologue. The words are isolated by means of a distribution test. "William Gossett, who published under the pen-name of 'Student'" (Rowntree 139), developed Student's t-test when he noted that the use of the sample standard deviation was inaccurate for measuring the standard deviation of small populations. Distribution testing such as Student's t-test, estimates whether the difference in mean between two groups of observations reflects a genuine, consistent difference or merely a chance effect arising from fluctuating counts. Each t-value has associated with it a probability that the two groups of observations derive from the same parent population and "do *not* differ from each other" (Burrows, "Not Unless" 97). A high t-score (positive or negative) for a variable (in my tests, the frequencies of a given word), thus means that one of the two groups has consistently higher counts across its constituent texts. A low t-score means that that word showed little variation across both groups of

texts. The polarity of the t-value simply indicates the tendency of one of the groups to use the marker word in question relatively more or relatively less often; positive scores are allocated to the first group and negative to the second.

Because the t-test is a test of comparison of means, it involves the possibility of sampling error. For this reason, I follow the practice of using as many text entries as possible for the purposes of running the test. For example, longer texts are divided into 1500 or 2000 word sections (with any remainders added to the last section). These text sections (sometimes called the 'training' texts) should not include the 'target' or 'mystery' texts under investigation. I then use the 200 most common function words of the text collection as variables in the test. Kenny observes that "in literary contexts the comparative cheapness of sampling means that the investigator will rarely be working with samples of less than 30 of the items he has selected for study" (126) and this means "the probabilities associated with t" (125) can be used with more confidence.

Both Minitab and SPSS provide a method of running distribution tests for the purposes of selecting 'marker' words[20]. Words which exceed a chosen level of significance can then be used in the later stages of testing where a more detailed and specific type of analysis is being undertaken. Words which are able to separate known members of the two groups, are helpful in showing if a newly introduced text has affinities with either group. Identification of 'marker' words is also extremely helpful in the stylistic analysis of texts and authors, as I showed in the Prologue where they were used to differentiate some of the stylistic characteristics of Eliza Lynn Linton and John Richard Green.

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[20] In SPSS the test is run with the Analyse, Compare Means, Independent-samples, T-test commands, with the 200 function words entered as Test variables and the author variable entered as the Grouping variable. In Minitab a customised macro produces a battery of results (including a T-test of difference, a T-value, a P-value and a DF score) for each successive column of a table representing the 200 word variables.

*Zeta Prime*

As I mentioned earlier in this chapter, recent work in the CLLC has involved the development of techniques which make use of the less common words. John Burrows' paper "All the Way Through: Testing for Authorship in different Frequency Strata" describes these tests and the way they can complement work with the more common words. Zeta prime is a modified version of Burrows' 'zeta' which can be run from within the Intelligent Archive program. A good demonstration of the method is seen in Chapter 2 of Craig and Kinney where 500 relatively uncommon words like *gentle,* which are "unusually common" in Shakespeare and 500 words like *brave* which are much more common in the plays of his peers, are able to separate the two sets of plays successfully. Two plays - one by Shakespeare and one by another playwright - were held back from the initial tests and took no part in the word selection; when these were added, each assumed a position within the appropriate group, thus confirming the ability of the method to "assign a Shakespeare segment to Shakespeare … with considerable confidence" (23).

The method works best with large numbers of text segments and relies on the fact that most writers show a consistent pattern of preference and neglect for certain lexical words, which in turn offers the foundation for some useful authorial discrimination. Zeta prime works by taking account of two quantities: the proportion of set one segments where a word appears and the proportion of non-set segments where it does not. One appearance is sufficient, since the distinction is between one or some instances and no instances. It then counts up all the set one segments containing the word and divides this count by the total number of set one segments. It then finds the number of non-set one segments where the word does not appear and divides that by the total of non-set one segments. By adding these two proportions it obtains a score which reflects the degree to which a given word is more common in set one than in non-set one. The highest possible score is two, for words which appear in every segment of set one and in none of the segments of non-set one. The lowest possible score is

zero, for words which never appear in set one and which occur in every one of the segments of non-set one. Intelligent Archive is then able to choose the 500 words with the highest scores on this formula. The same sequence of operations is then carried out in reverse, seeking the words which often appear in non-set one but only rarely in set one. (Craig and Kinney 226-7) In Chapter 5, I use zeta prime to compare the distinctiveness of the vocabulary of the *Saturday Review* with that of a group of articles appearing in Monthly periodicals.

## Text Collections

### Victorian periodical text collection

In assembling my Victorian[21] periodical text collection, I wanted to ensure that I had a sufficient number of articles to feel confident that I had a good representation of the repertoire of discursive prose as it stood at that time. The notion of a 'repertoire' was Burrows' suggestion for moving computational stylistics away from the problem of adequate sampling. He says "in the analysis of such profoundly systematic objects as literary texts, it may be sufficient to think in terms of specimens from a repertoire and not of samples from a population" ("Numbering" 5). In terms of Ferdinand Saussure's distinction between the 'langue' (language-system) and the 'parole' (language-behaviour) of language[22], the repertoire would comprise "une grande parole Saussurienne" – a large collection of utterances, representative of the underlying language-system, from which and against which individual specimens may be taken and tested. The advantage of this concept, according to Burrows, is that "membership of a repertoire might be assessed by compliance with a set of fuzzy and possibly interdependent rules" which fits better "with the systematic qualities of the language" ("Numbering" 5). I refrained from calling my text collection a 'corpus', since that appellation suggests a totality which the enormous number of periodical articles seemed to put beyond reach.

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[21] I use the term 'Victorian' to encompass the entire period from which the texts in my collection are drawn, viz. 1829-1890, although strictly speaking it begins and ends a little later.
[22] For a description of the Saussurean distinction see Lyons "Introduction" 51-2; Lyons "Language" 10-11.

My texts were all published in periodical journals during the sixty year period from 1830, when the three major quarterlies were dominating the scene, through the 50s 60s and 70s, when the monthlies came into their own and challenged the quarterlies for reader loyalty, through to 1890, after which both began to decline in popularity. The period encompasses what have been called 'the golden years' of periodical writing[23] and avoids the earlier years (from 1802 to 1830) when partisanship was more in evidence. Houghton says that by the 1830s, some intellectuals were beginning to "find the sectarian voice of the periodicals unacceptable" ("Periodical", 12). These were also the years during which the great anonymity versus signature debate was enacted. Anonymity was the norm at the beginning of this period, but signature was more in evidence towards the end of it. Houghton estimated that "about 97 percent before 1870, and well over 90 per cent for the entire period" of articles were anonymous ("Reflections", 192). Though most of the articles in my text collection were anonymous at the time of publication[24], they all appear to have been reliably attributed and a number of them subsequently republished in authorial collections of essays and writings. I have made a great deal of use of the attribution information provided by the online version of the *Wellesley Index*.

The articles in my Victorian periodical text collection were taken from five major quarterlies and six well-regarded monthlies. (Table 2.1) There are ninety-nine quarterly articles and 101 from the monthlies. The articles and their original periodical publication details are listed in Appendix 2.1, as are the article codes, which have been used throughout the thesis.  Wherever an article quotation has been taken from a republished work, this work is listed in the bibliography. Though articles in the quarterlies tended in general to be longer than those in the monthlies, the length difference between them is not significant; there are some short articles in the quarterlies and some long ones in the monthlies.

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[23] Houghton wrote "The nineteenth century, especially from 1825 to 1900, was the golden age of the magazine and the review" ("British" 554).

[24] See Appendix 2.1 annotated list of articles for any which carried a form of identification in the periodical publication.

Table 2.1: Reviews and Magazines used for Victorian periodical text collection

| Quarterlies | Monthlies |
|---|---|
| The Edinburgh Review | Blackwood's Edinburgh Magazine |
| The Quarterly Review | Cornhill Magazine |
| The Westminster Review | The Fortnightly Review (which became monthly) |
| Bentley's Quarterly Review | Fraser's Magazine for Town and Country |
| The National Review | Macmillan's Magazine |
| | Tait's Edinburgh Magazine |

The 200 texts of the collection, comprising just under two million words[25], were written by twenty-two authors, eight women and fourteen men. This gender imbalance reflects the fact that many more men than women were writing for the journals. In spite of the general acceptance of the idea that women were excluded from the public domain and therefore from journalism, a good number of women were in fact able to take advantage of the system of anonymity and to write for the journals. These authors are listed in Table 2.2.

Table 2.2: Twenty-two Authors of Victorian periodicals

| Men | Women |
|---|---|
| Walter Bagehot (1826-1877) | Frances Power Cobbe (1822-1904) |
| John Stuart Blackie (1809-1895) | George Eliot (1819-1880) |
| John Hill Burton (1809-1881) | Christian Johnstone (1781-1857) |
| Thomas Carlyle (1795-1881) | Eliza Lynn Linton (1822-1898) |
| Lord Robert Cecil (1830-1903) | Harriet Martineau (1802-1876) |
| John Wilson Croker (1780-1857) | Anne Mozley (1809-1891) |
| James Anthony Froude (1819-1894) | Margaret Oliphant (1828-1897) |
| William Rathbone Greg (1809-1881) | Elizabeth Lady Eastlake née Rigby |
| Abraham Hayward (1801-1884) | (1809-1893) |
| Thomas Henry Huxley (1825-1895) | |
| Charles Kingsley (1819-1875) | |
| George Henry Lewes (1817-1878) | |
| Thomas Babington Macaulay (1800-1859) | |
| Sir Leslie Stephen (1832-1904) | |

Each author in the collection is represented by at least five texts and up to as many as fourteen. The texts range in length from 2215 words (Eliot's "Maud" in

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[25] The word count for the 200 texts is 1,922,702.

the *Westminster Review*) to 33315 words (Macaulay's "Barère's Memoirs" in the *Edinburgh Review*). The two oldest authors were John Wilson Croker (1780) and Christian Johnstone (1781) while the two youngest were Sir Leslie Stephen (1832) and Lord Robert Cecil (1830). The authors represent a good spectrum of the variety of writers contributing to the journals at the time: from those who considered themselves primarily as journalists; to those who contributed articles as a sideline; from those who wrote from economic necessity; to those who combined journalism with other forms of writing. Table 2.3 offers a summary of the number of articles written by each author and a date span for the articles.

Table 2.3: Twenty-two Authors of Victorian periodical articles, number of articles, and date span during which the articles were written.

| Author | Articles | Years | Author | Articles | Years |
|--------|----------|-------|--------|----------|-------|
| Bagehot | 7 | 1855-72 | Huxley | 5 | 1857-69 |
| Blackie | 11 | 1837-73 | Johnstone | 7 | 1832-35 |
| Burton | 13 | 1833-60 | Kingsley | 9 | 1849-69 |
| Carlyle | 9 | 1829-67 | Lewes | 11 | 1840-66 |
| Cecil | 6 | 1860-73 | Linton | 7 | 1857-90 |
| Cobbe | 8 | 1861-74 | Macaulay | 7 | 1830-44 |
| Croker | 6 | 1833-56 | Martineau | 10 | 1832-65 |
| Eliot | 13 | 1851-65 | Mozley | 9 | 1859-70 |
| Froude | 11 | 1851-83 | Oliphant | 14 | 1854-79 |
| Greg | 10 | 1844-72 | Rigby | 11 | 1844-81 |
| Hayward | 7 | 1843-74 | Stephen | 9 | 1873-81 |

*Saturday Review text collection*

The *Saturday Review* text collection is not as extensive or as representative as the Victorian periodical repertoire of quarterly and monthly texts, since it was compiled for the specific purpose of carrying out a number of attribution tests on various anonymous articles. There are 159 articles written between 1855 and 1868 totalling 325,327 words. Table 2.4 below provides a summary of the numbers of attributed and unattributed articles and the years during which they were written. Appendix 2.2 provides a complete list of articles and publication dates.

Table 2.4: Attributed and Unattributed *Saturday Review* articles

| Author | Articles | Reviews | Middles | Leaders | Years |
|---|---|---|---|---|---|
| Anonymous | 46 | 15 | 31 | 0 | 1855-68 |
| Lord Robert Cecil | 39 | 14 | 23 | 2 | 1857-64 |
| George Eliot | 4 | 4 | 0 | 0 | 1856 |
| John Richard Green | 27 | 7 | 20 | 0 | 1867-68 |
| Eliza Lynn Linton | 27 | 2 | 25 | 0 | 1867-68 |
| Anne Mozley | 16 | 0 | 16 | 0 | 1861-64 |
| Total | 159 | 42 | 115 | 2 | |

The attributions for the articles of three authors came from Merle Bevington's Appendix to his *The Saturday Review 1855-1868 Representative Educated Opinion in Victorian England.* Bevington's information for Green, relied on an appendix in a published book of Green's Letters, while his information for Linton and Mozley relied on subsequent publications of *Saturday* articles. The information for Cecil came from Michael Pinto-Duschinsky's *The political thought of Lord Salisbury, 1854-1868*, where he was able to draw on information published by Dr. J.F.A. Mason, the Librarian of Christ Church, who had access to Lady Gwendolen Cecil's handwritten 'List of the articles written by Lord Salisbury for the *Saturday Review.*' The information for George Eliot's articles was taken from "Appendix A George Eliot's Periodical Essays and Reviews" in Thomas Pinney's edition of the *Essays of George Eliot.* I used the attribution information to obtain a good many of the articles from a microfilm copy of *The Saturday Review* while using the published works to obtain scanned copies of some of the articles.

The remainder of the *Saturday Review* articles in the collection are 'anonymous' – that is to say, with either no attribution at all or no firm attribution. The *Saturday* therefore remains, in the words of Harold Love, a "largely unmapped *terra incognita* of attribution studies" (2). The articles in the collection are mainly a mixture of reviews and middles and range in length from George Eliot's review of Heine's Songs (944 words) to Anne Mozley's middle entitled "Journals" (3852

words). Of all the periodical journals, the *Saturday* is the one which gloried in a reputation for its "consistency of tone and point of view", a tone variously characterised by its critics as "cynical, sceptical, hypercritical, malicious and destructive" earning it the title of "the *Saturday Reviler*" (Bevington 43-44). This "great similarity of tone, and the substantial uniformity of standard thought, and language, which mark the general criticism of events, of men, and of books" (Bevington 53), makes the *Saturday* a particularly good subject for the study of the question of house-style and its effect on authorial style.

*Acquisition of electronic texts*

A variety of methods was used to obtain the electronic texts of Victorian periodical text collection. A number of the articles were transcribed onto the computer from a photocopy of the journal article. Other articles were sourced from public domain electronic texts available in online collections: the first of these was the Gutenberg site which allowed the downloading of text in editable form; the second was the Internet Library of Early Journals (ILEJ Bodley, Oxford) site for *Blackwood's* which provided photo image copies of texts which could be printed for subsequent digitizing or transcribing into editable electronic text form. Newcastle University has a number of Victorian periodical journals (*Westminster, Edinburgh, Frasers, Tait's* and an incomplete *Macmillan's)* available on microfilm. Microfilm printouts were obtained from these for many articles; most of these were transcribed onto the computer; occasionally a microfilm printout was considered clear enough to permit digitizing by OCR scanning. Where published editions of periodical articles existed in authorial collections of writings, these were photocopied and digitized. Sometimes, if the photocopy was not suitable for OCR scanning, the article was transcribed. For journals, such as the *Quarterly Review* and the *Fortnightly,* which the Newcastle Library doesn't hold, Inter-Library loan requests obtained the file in TIFF format. These articles were printed and either transcribed or digitized depending on the quality of the copy.

*Editing of the electronic texts in preparation for counting*

For anyone engaged in corpus based stylistic study, an important part of the process is acquiring machine readable texts and preparing them for counting. Good electronic text preparation is vital to the success of any computational stylistics project and must be done with thoroughness and exactitude. Once a group of texts is chosen for analysis, 'copy-texts' are identified and obtained: these are the printed copy of the texts against which the electronic texts are proof read. Generally the earliest version or best editorial version is preferred. These days some electronic texts are available in electronic libraries and can be acquired by downloading while good printed versions of other texts allow scanning. However, keyboarding is still used when the only available hard copy version is unsuitable for OCR scanning; this was often the case for this project where many of the texts could only be sourced from microfilm copies of the journal pages. The e-texts are then proof-read since both keyboarding and OCR scanning can produce unexpected errors.

The next step is to prepare the electronic texts for counting. Burrows was very aware of the potential problems of machine counting and set high standards and various protocols for ensuring that when the counting took place, the machine was able to count only what it was supposed to count. In the introduction to his book, *Computation into Criticism*, Burrows says "There is no unequivocal measure of the number of words in a novel" (8). The problem is greatly compounded in earlier English texts with variant typographical practices, old and variant spellings, "irregular contractions and unfamiliar printer's marks" (Craig and Whipp 1). Although the nineteenth-century periodicals present few of these problems, I nevertheless performed a number of editorial operations on each of the texts before adding them to the Intelligent Archive text collection for counting. My practice for ensuring consistency throughout the Victorian periodical and the *Saturday Review* text collections was to use the angled bracket notation of the

Text Encoded Initiative (TEI) protocol[26] for all exclusions and changes (listed below), so that these would remain obvious and recoverable.

All extraneous material (page numbers, titles, chapter headings …) was enclosed in angled brackets and thereby excluded from the count. Quotations, that is to say, text included in the article which does not belong to the author, were identified and removed from the count. TEI <quotation> </quotation> markers were used to identify the location of the quotation. Foreign phrases which were longer than a single word or phrase and which were not part of the syntax of the sentence were identified and removed from the count. Once again TEI notation <foreign lang="latin"> </foreign> was used to indicate the location of these words. Words which are used by some authors as a single compound and by others as two separate words were identified and united using TEI format (for example, <reg orig="can not"> cannot </reg>). The various compounds of *any, some, every*, and *no* with *one, thing, how, where* … were united in this fashion. Negative forms such as *don't* and *can't* (which are not common in Victorian writing anyway) were left untouched. Occasionally an article included tables of statistics and so on. These were generally omitted.

Portions of text where an author assumes a persona for illustrative or dramatic purposes, or where he or she feels obliged to use inverted commas to signal his adoption for the moment of a special way of phrasing something, were identified but left in the count. Some authors use such personas quite often, while other authors never do so. Although I made no use of the distinction in this study, its presence provides the opportunity of exploring the use of such devices in the future.

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[26] The Text Encoding Initiative (TEI) consortium website provides a variety of supporting resources for anyone wanting to use the system.

## Word Lists

The main idea behind corpus based stylistics is that the larger the text collection, the more robust the resultant word list is likely to be. Once a set of texts has been assembled, the word counting programs can provide a frequency list of any length – say the 100, 200, 300 most common words of the particular text set. It is normal practice not to include the texts one is testing in the text set from which the word frequency list is derived. A decision may be made to omit proper nouns which happen to be common enough to appear in the list. Alternatively, a decision may be made to use only function words so that any lexical words which appear in the chosen length list may be omitted. Since the boundary between lexical and function words is sometimes fuzzy, it can be necessary to declare and defend a set of function words, which the program can then arrange in the order of frequency for the relevant text collection. For this project, a decision was made to use only function words[27], and time was spent on the researching and writing of the section of this chapter entitled "The Search for a Defensible Set of function words."

The list of word variables thus derived can then be counted in the texts or text units or text blocks as the experimental design requires. The resultant table of numbers is usually standardized – that is, divided by the number of words in the text and multiplied by 100. This procedure allows texts of different lengths to be compared without the smaller text being disadvantaged. The tables of numbers are read into a comprehensive statistics package such as Mintab or SPSS and a variety of tests are run, on an experimental design which is perforce specific to each particular problem, and informed by subject-area expertise about the likely sources of variation. Appropriate comparisons take into account date and genre and other factors such as the gender and educational and regional background of the various writers involved.

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[27] The zeta prime test of Chapter 5 is an exception to the general use of function words throughout the thesis.

## The search for a defensible set of function words.

It seemed appropriate to begin this section of the chapter with a quotation by a well known Victorian periodical writer. Fries (65) quotes John Stuart Mill's 1867 observation that "The distinctions between the various parts of speech … are distinctions in thought, not merely in words."

### *What the Grammarians have to say*

I examined a number of grammar books to compare the way they treat word classes and to see if there is any consensus about what might constitute a defensible set of 'function words.' Anyone who studies the grammar of English and its words quickly learns that "parts of speech tend to be rather heterogeneous" (Quirk and Greenbaum 20). Not only can "the 'same' word … act as several different parts of speech in several different sentences" (Bernard 11), but at times it is difficult to decide whether a word belongs to one part of speech or another since it shares some of the properties of both. David Crystal uses the idea of 'gradience' to describe this phenomenon. He suggests that whilst "each class has a core of words that behave identically, … at the 'edges' of a class are the more irregular words, some of which may behave like words from other classes" (92).

### *Aristotle and the Traditional Grammarians*

Most traditional grammarians, following Joseph Priestley[28], recognized eight parts of speech (noun, pronoun, adjective, verb, adverb, conjunction, preposition, interjection), whilst some added another two (article and participle). One criticism of the traditional parts of speech was the fact that (for the most part) the terms had been defined by grammarians well versed in the classical languages who may have been guilty of forcing the English language into a framework to which it was not entirely suited. The assignation to these traditional parts of speech has

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[28] Fries (66) quotes from Priestley's 1769 *Rudiments of English Grammar* which "adopts the usual distribution of words into eight classes" but substitutes the adjective for the participle "as more evidently a part of speech."

been criticized for being circular and for employing differing and inconsistent criteria. Many other labels and groupings have been proposed over the years by various linguists. The following spring to mind: -  substantives, determiners, particles, quantifiers intensifiers and qualifiers. These labels, like the use of the more general terminology (nominal, verbal, adjectival, adverbial, prepositional …) have been helpful in allowing the distributional principle to take precedence over the notional. Ultimately, however, as John Lyons observes, "from the point of view of  'formal' grammar, any label is as good as any other; and the traditional terms … are neither more nor less satisfactory for the purpose than any other terms would be" ("Introduction" 147).

Grammarians have long recognized that there was a fundamental distinction between differing groups of words. The distinction between 'lexical' and 'grammatical' meaning in words is in fact Aristotelian (Lyons, "Introduction" 435). This view held that the major parts of speech (nouns, verbs, adjectives and adverbs) were fully meaningful, while the other parts of speech contributed to the overall meaning by imposing grammatical form. There is a lot of truth in this observation; however, it falls short of the mark in several respects. For my purposes, a number of what I would want to call 'function' words fall into the adverb and verb class.

The idea that some groups of words carry more meaning than others has led to grammarians speaking of a distinction between 'lexical' and 'non-lexical' words. This distinction, though helpful, is not foolproof since every word carries some sort of lexical import, however slight. Otto Jespersen captures the difference between these two sorts of words saying of the latter that "they are less descriptive than other words", that "they hint more than they denote exactly," and that "their full import … can only be grasped from the … context" (68).

*Fries*

In the 1950s Charles Fries decided to try to approach English word classes objectively by doing away with any preconceived names and concepts and by seeing what words fitted into what structures in a corpus of over 250,000 words of the spoken standard English of 300 different speakers. Amazingly, or indeed, not at all surprisingly, what he found reflects the Aristotelian distinction between classes of words which carry lexical import (belonging to an open set) and words which carry grammatical meaning (confined to a closed system). He labels the former Classes 1-4 and the latter Groups A-O. What I find of interest in Fries' work is the fact that he was able to provide a statistical demonstration that there is a difference between the two groups - the four classes of 'open' set words and the fifteen groups of 'closed' system words.

Fries's Classes 1-4 account for a large part of the vocabulary items of his corpus (67% of the total word token instances, but 93% of the word types represented in the corpus.) Apart from their readily identifiable lexical content, words from these four classes have a variety of formal markers to aid recognition. Finally, Fries found that these four classes "account for practically all the positions in … the sentence frames used for testing" (88).

The fifteen groups of what he calls 'function words' have certain characteristics in common which make them different from the four 'lexical' classes. The words are few in number (Fries identifies 154 of them), but occur very frequently making around a third of the total word tokens of a corpus. They cannot occur as single free utterances as do members of the four lexical classes. It is difficult to indicate a lexical meaning for members of the fifteen function word groups, apart from the structural meaning they carry. These vocabulary items must be learned as separate items which signal particular meanings.

*Post 1960 Grammarians*

Many of the 'generative era' grammarians continued to make use of the distinction between 'open' set word classes and 'closed' system word classes which overlaps with the idea that some words carry more lexical information than others. As the names suggest, "we can and regularly do add new words" (Fromkin et al., 115) to the 'open' set classes, but we do not usually add to the number of closed system items.

Randolph Quirk and Sidney Greenbaum give a good description of the difference between 'open' class items and 'closed' system items.  They use the terms 'class' and 'system' to help explain the difference between the two groups of words. Items in the closed system are, they say, "reciprocally exclusive" and "reciprocally defining". That is to say "the decision to use one item in a given structure excludes the possibility of using any other" and "it is less easy to state the meaning of any individual item than to define it in relation to the rest of the system" (19).  On the other hand, in any given structure it is possible to replace one open class member with another of the same class without changing the structural and grammatical meaning. Having made this distinction which, they say, holds good for the most part, Quirk and Greenbaum remind us not to "exaggerate the ease with which we create new words" in the 'open' classes nor to exaggerate the extent to which the 'closed' system is closed (20).

In English the 'open' word classes make up the largest part of the vocabulary – there are far more of them; 'closed' system words, on the other hand are, for the most part, 'high frequency' words, so that we see a lot of them, even though they represent a far smaller proportion of the vocabulary. Lyons adds his authority to the use of the 'open' versus 'closed' sets as a useful method of tackling the distinction between lexical and grammatical items.

> Various criteria have been proposed for the distinction of grammatical and lexical items. The most satisfactory … has been formulated by Martinet, Halliday and

others in terms of paradigmatic opposition within either *closed* or *open* sets of alternatives. … In terms of this distinction we can say that grammatical items belong to closed sets, and lexical items to open sets. ("Introduction" 435-6)

Lyons' interest in the distinction moves into semantic theory and he asks "whether there is any difference, in principle, between the meaning of grammatical and lexical items" ("Introduction" 436). One difference he refers to is that "Lexical items are traditionally said to have both 'lexical' (material) and 'grammatical' (formal) meaning" while "Grammatical items are generally described as having only 'grammatical' meaning" (438). Lyons attempts to make a generalization about what might constitute this grammatical meaning and suggests that it has to do with choices about "notions of spatial and temporal reference, causation, process, individuation and so on" (438). He reminds us however, that there are no absolutes as far as language is concerned, and that a language may sometimes lexicalize a notion that is usually grammaticalised.

Victoria Fromkin et al. claim that "the separation between 'open' and 'closed' classes of words has psychological and neurological validity" (116).

> Certain groups of brain-damaged patients have greater difficulty in using or understanding or reading closed-class words than they do open-class words. Some even interpret a word like *in* to mean *inn,* or a word like *which* to mean *witch* when they are asked to read and use such words in sentences…. The distinction between function or grammatical morphemes and lexical or content words is very evident from the errors made by some groups of aphasia patients. Some aphasics will simply delete or leave out all of the 'little' function words like *the, a, was, it* in both speech and reading aloud. (365)

It has also been noted that some dyslexics have difficulty with function words, perhaps because they "are abstract and hard to visualize" (Ellis 46). However, since "the errors made to function words usually involve substituting another

function word" it would appear that these readers seem "to know at some level what sort of word" (46) is required.

It seems that everyone who thinks about this issue agrees that there *is* a genuine difference between lexical and function words. Equally however, they all recognise that some of the boundaries between the two groups of words are hard to maintain,[29] and indeed some words cross the boundaries. Dwight Bolinger and D. Sears conclude that "given the haziness of the line, we can only make certain *relative* statements about function words" (69).

> They are used relatively more often than lexical words to point to elements in language or to the roles of speakers and hearers, and less often to point to things and events in the real world. They are relatively fewer than lexical words. They belong to classes that are relatively closed … and they can be listed with relative assurance.

The difficulty of the task however, should not preclude the possibility of declaring a set of function words and providing ostensible definitions for the groupings and a defensible rationale for the word choices.

### *A Set of Common Words*

In selecting the word list for the initial stages of this project, I could simply have used the most common words of the corpus, many (or even most) of which would have turned out to be function words. In his 1987 book *Computation into Criticism* John Burrows advocated the principle of allowing the texts themselves to declare the words;[30] that way, he argued, the outcome could be free of input prejudices. Provided the corpus was large enough, a lot could be said for the

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[29] I am indebted to Peter Peterson who pointed out that (i) the open/closed nature of the preposition set is fuzzy (ii) the boundaries of the modal verbs are fuzzy and (iii) the borders between adjective/preposition and preposition/adverb are fuzzy.

[30] In this seminal work Burrows showed that "*From no other evidence* than a statistical analysis of the relative frequencies of the very common words, it is possible to differentiate sharply and appropriately among the idiolects of Jane Austen's characters and even to trace the ways in which an idiolect can develop in the course of a novel" [emphasis in original] (4).

policy of using its most common words for the textual analysis. Now, however, that the methods of computational stylistic analysis have gained wider acceptance, I believe the time is right for undertaking studies based on more deliberately selected word lists, in this case lists consisting solely of function words. Inevitably, frequency lists of common words are dominated by function words, since many of them *are* the most common words of the language.

Encouraged by the widespread belief that there is a genuine difference between lexical and function words, I want to declare a set of function words which would be independent of any particular corpus,[31] but which could be tailored to each corpus by use of a corpus specific frequency list. In dealing with frequency lists of the most common words of different text collections, I observed differences in the identity and placement on the list of the earliest lexical words. Whereas with Burrows' list of the 50 most common words of the Jane Austen corpus, all the words were 'function' words, one of my text collections (comprising 1,320,131 words) had lexical words appearing as early as thirty-fourth on the list. Apparently, even a relatively large corpus can be marked by the early appearance of a few corpus-distinctive lexical words. It also occurred to me that, although a good many of the very common function words almost always 'made the team', others missed out. I wondered if some of the less common function words would be as effective as the most common in revealing differences among texts. If indeed function words are genuinely different from lexical words, it would make sense to use these for primary analyses of texts, and it would be interesting to allow some of the less common of these to play a role. Since these words are mostly closed system items, it is possible they could be useful for diachronic study, where such changes as there are, are very gradual. Whilst it may not be possible to observe the entry of a new function word, it might be possible to witness changes over time in the relative frequency of usage of various items.

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[31] With such a word list, it should not matter if a corpus is relatively small, or if it is dominated by some particular subject matter.

## A Closer Look at Function Words

A closer look at the function words indicates that there are problems associated with them that require resolution. A number of the function words have more than one grammatical function. Jespersen describes this phenomenon thus: "This faculty of using one and the same form with different values, while the context shows in most cases unmistakably what part of speech is meant, is one of the most characteristic traits of English, and is found to a similar extent in no other European language. We may term such words 'grammatical homophones'" (73). In his early work Burrows marked the homographs of the common words to allow the computer to count the different forms as separate words. This was an extremely labour intensive task, and as the size of the text collections and the number of people using the method grew, it had to be asked whether the gain was worth the effort involved. I believe that for many analyses it is not worth marking homographs at all. If a decision is made to mark homographs I think it should be restricted to those cases where the distinction between the two forms of the word is likely to underlie differing authorial usage.[32]

The length of the list of English 'function words' puts it "into the class of *analytic* languages" which "tend to analyse out the grammatical functions and put them in separate words rather than incorporating them as affixes within lexical words" (Bolinger and Sears 70). English does however contain some grammatical inflections and these have to be taken into account when making word lists. For example, a decision has to be made whether to spell out contracted words so that their component parts count as full words: *don't* becoming *do not, I'm* becoming *I am* and so on, or whether they should be left to be counted alongside their non-contracted counterparts. With a word like *cannot,* which often appears

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[32] For example, although infinitive **'to'** started life as a preposition, I believe it has become so nearly a pure grammatical marker that it is now distinct from the prepositional form. I also believe the conjunctive use of **'so' 'for'** and **'that'** is perhaps worthy of separation from the words' other uses. Other homographic questions are likely to present themselves once a set of function words has been declared, since there are some function words which have a lexical meaning as well as a grammatical one; for example possessive pronoun *mine* has another less common substantive meaning.

as a word in its own right, a decision has to be made - in the interests of uniformity across the corpus - whether to leave or to separate it. As I mentioned earlier, I decided to consider 'cannot' as a single word and to leave the relatively few contractions in their original contracted form.

### *Choosing the list: Exclusions*

The first difficulty is the fact that the four major classes of lexical words (noun, verb, adjective and adverb) are not entirely straightforward categories, especially the adverb and verb categories. Fries' four classes at first glance look like noun, verb, adjective, and adverb and he admits many of the words in each of the classes would be so called. However, he insists that "the two sets of names … do not coincide in either what is included or what is excluded" (87). Lyons says of adverbs, "In traditional grammar, adverbs constitute a very heterogeneous class; and it is doubtful whether any general theory of syntax would bring together as members of the same syntactic class all the forms that are traditionally described as 'adverbs'" ('Introduction" 326).  Bolinger and Sears declare "the class of adverbs is a dumping ground," which includes words which modify only other modifiers, words which modify only verbs, and words which modify only sentences, as well as words which combine these functions (84-5). Quirk et al. say "the adverb class is the least satisfactory of the traditional parts of speech. Indeed, it is tempting to say simply that the adverb is an item that does not fit the definitions for other parts of speech" (267).  A good many adverbs are formed by the addition of the suffix "ly" to the corresponding adjective. These "derivational adverbs" make obvious candidates for inclusion in the open class lexical group. Many of the remaining adverbs would be regarded as function words. The verb class is complicated by the fact that a number of the most common verbs of the language need to be counted as function words: - *be, do, have* and the modal auxiliaries. With provision made for these factors, I was able to exclude all nouns, all adjectives, all verbs except for the verbs *be, do* and *have* and the modal auxiliaries, and all derivational ("ly") adverbs. I also decided to exclude interjections, since these are generally more stylized representations of emotive

language and seem more prone to fashion and personal usage than other function words. Finally, I excluded the numerals (except for *one*) since I feel that even though they represent a closed set, their nominal (for cardinals) and adjectival (for ordinals) status is primary. This should make them more comfortable companions of the major 'open' classes.

*Rationale*

Table 2.5 lists the words I have selected, grouped using both the terminology of traditional grammar and more recent terminology where this seemed helpful. I spent some time comparing the word class groupings of a number of linguists and grammarians; in particular I looked at the listings of those which made the distinction between open and closed classes.[33] It soon became clear that whilst it was easy to it make a comprehensive list for pronouns, auxiliaries and articles it was rather more difficult to do so for other categories, especially those containing grammatical homographs.  The conjunction class, for example, overlaps with the adverb class, as Bolinger and Sears recognised in their trio of categories: 'co-ordinating conjunctions'; 'adverbial conjunctions' and 'conjunctive adverbs' (69-70). Listing the prepositions has been the biggest challenge since every time I thought I had them all, I seemed to find a new one. I made use of Quirk et al.'s 'comprehensive list' of simple prepositions (301) to complete my list. In addition to simple (one word) prepositions there seem to be numerous complex prepositional phrases – *in front of, with reference to, except for, in comparison with, by means of, at the hands of* …. I decided to exclude these since they seem to cross over into open class infinitude and to include only the simple prepositions and those prepositions where the two elements have definitely become one (for example, *inside, into, throughout, within*).  I also decided to exclude those few words which create the fuzzy boundary between prepositions and adjectives (words such as *near, save* and *worth*). At the boundary of the modal auxiliaries we find the words *dare* and *need* which are generally called 'marginal modal auxiliaries'. Quirk et al. say of them that their modal usage "is

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[33] See lists of 'closed classes': Fromkin et al (115); Bolinger & Sears (69-70); Quirk et al. (45).

restricted to non-assertive contexts … whereas the lexical verb construction can always be used and is in fact more common" (83). I have excluded these two words. Negative contracted verbs are reasonably uncommon in Victorian periodical literature; those that do occur have been left in their contracted form.

*Inclusions*

Table 2.5:  Function word set

| Articles | Main verb | Pronouns | Pronouns | Prepositions | Conjunctions | Adverbs |
|---|---|---|---|---|---|---|
| a/an | **auxiliaries** | **personal** | **reflexive** | about | **co-ordinating** | again |
| the | be | I | myself | above | and | almost |
| | being | me | yourself | across | but | already |
| **Determiners** | been | you | himself | after | or | also |
| **Quantifiers** | am | he | herself | against | nor | always |
| all | is | him | itself | along | **Conjunctions** | away |
| another | are | she | ourselves | amid | **co-relative** | besides |
| any | was | her | yourselves | amidst | both/and | even |
| both | were | we | themselves | among | either/or | ever |
| each | have | us | | amongst | neither/nor | hence |
| either | having | they | **Pronouns** | around | **Conjunctions** | here |
| enough | has | them | **relative** | at | **subordinating** | instead |
| every | had | | **interrogative** | before | after | just |
| few | do | **Pronouns** | who | behind | although | never |
| least | doing | **impersonal** | whom | below | as | never- |
| less | done | **place holder** | whose | beneath | because | theless |
| many | does | it | which | beside | before | not |
| more | did | there | that | between | for | nothing |
| most | | | how | beyond | if | often |
| much | **Modal verb** | | what | by | since | only |
| neither | **auxiliaries** | **Pronouns** | when | down | so | perhaps |
| no | can | **possessive** | where | during | than | quite |
| none | could | my | why | for | that | rather |
| one | may | your | however | from | though | somewhat |
| other | might | his | whatever | in | till | soon |
| same | shall | her | whenever | inside | unless | still |
| several | should | its | wherever | into | until | then |
| some | will | our | | like | whether | there |
| such | would | their | **Infinitive** | of | while | therefore |
| that | must | mine | **particle** | off | whilst | thus |
| these | cannot | yours | to | on | yet | very |
| this | ought | hers | | onto | | well |
| those | used | ours | | opposite | | yet |
| | | theirs | | out | | |

| Negative compound contractions | Negative compound contractions | Pronouns indefinite compounds | Prepositions outside over | Prepositions under underneath | Conjunctions subordinating WH words | Conjunctions subordinating WH words compounds |
|---|---|---|---|---|---|---|
| isn't | didn't | every- | past | up | how | however |
| aren't | can't | some- | round | upon | what | whatever |
| wasn't | couldn't | any- | through | with | when | whenever |
| weren't | mightn't | no- | throughout | within | where | wherever |
| haven't | won't | -one | to | without | who | |
| hasn't | wouldn't | -body | towards | | why | |
| hadn't | shouldn't | -thing | | | | |
| don't | mustn't | -how | | | | |
| doesn't | | -where | | | | |

Words which are grammatical homographs have been coloured green in the table and appear more than once, while those words with lexical homographs have been coloured red. The 251 function words listed in Table 2.5 were sorted into a frequency list according to their relative usage in the Victorian periodical text collection. The 200 most common of them (or a selection of these) were then used as the variables for the computational stylistics tests described in the Prologue and in the chapters that follow. The list of these 200 most common function words can be seen in Appendix 2.3.

## Conclusion to Part 1

Part 1 of this thesis offers a sample of computational stylistic work in Victorian periodicals, reviews previous work on the style of Victorian periodicals, and in computational stylistics, and describes the methods, texts and variables used in this study. In order to avoid the pitfalls that sometimes mar work in the field, considerable time was spent in building a large and representative text collection and in selecting a defensible set of function word variables. Part 2 of the thesis will make use of these function words in a series of computational tests designed to explore the uniformity and variety found within the texts of the genre and the reality of the notion of authorship in the face of anonymity and house style. Part 3 of the thesis will make use of the findings of Part 2 to address a number of questions relating to the gender of authors, particular authors and questions of attribution in particular periodicals.

# Part 2

## Chapter 3:

## Computational Stylistics Study of 200 periodical texts

*A bird's eye view*

*Principal component analysis test*

The tests described in this chapter were designed to allow the 200 texts of the text collection to 'declare themselves' and to allow me to see the various factors that might affect style in texts where the existence of anonymity and house-style was likely to reduce the amount of stylistic variation. The advantage of the data reduction technique of principal component analysis is that it can take as its input all 200 texts (1,922,702 words) and, using the 100 most common function words of the text collection, isolate the main differentiae. Normally, most of the available information is contained in the first few components which can be plotted to show the relationships between the variables in a way that "will be intuitively meaningful" (Chatfield and Collins 57). The first question of interest was to find which of the 200 texts are the most different from each other on each of the first two principal components (PC1 and PC2). The method allows me to show the placements of the texts according to these two components in a scatter plot, with PC1 shown on the east-west vector and PC2 on the north-south vector. The texts of interest (the most different) will be those furthest removed from each other on each axis. A second plot of the 100 function word variables shows which words made the greatest contribution to the text differentiations.

Of the 200 texts in the corpus, Abraham Hayward's "Venice: Its Rise Decline and Fall" (Ha7) and James Anthony Froude's "Spinoza" (F9) proved the most different from each other on the horizontal axis, while Lord Robert Cecil's "Conservative Surrender" (Ce3) and Eliza Lynn Linton's "Alfred de Musset" (Li7)

differed most on the vertical axis. By highlighting these four texts and their relative location to each other and to the remaining texts (Figure 3.1), a stylistic map begins to emerge and it becomes possible with the help of the accompanying word plot (Figure 3.2) to offer explanations as to why these particular texts are the outliers and why some texts group together, while others assume opposing positions.  Figure 3.1 shows the location of each of the 200 texts of the corpus with the four outlying texts highlighted. I have used red and blue to colour the PC1 outliers and talk of these texts as representing the ends of the first, or, west to east principal component analysis continuum. The PC2 outlying texts are coloured green and purple and represent the ends of the second, or, north to south principal component analysis continuum.

PC1 difference – west/east - coded red/blue

PC2 difference – north/south - coded green/purple

Figure 3.1: Principal component analysis text plot

Figure 3.2 shows the words underlying these locations. Ten of the words Hayward and Froude each used relatively more and relatively less often than each other in their outlying texts and ten of those used relatively more and relatively less often than each other by Cecil and Linton in their outlying texts have been highlighted in Figure 3.2. The first person plural pronouns (which fall just outside the top ten words) have also been highlighted.

Figure 3.2: Principal component analysis word plot



*PC1 outliers*

Both the Hayward and Froude articles appeared in quarterlies and both are reviews of foreign works. Hayward's article was a review of Charles Yriarte's work on Venice (in French), while Froude's was a review of a German author, Edward Boehmer's Latin work on Spinoza. Both articles could be considered as examples of the same sub-genre – the 'essay-like review' where the focus moves from the book under review to the considerations it provokes so that the reviewer's own observations become "woven into an essay that is illustrated,

here and there, by reference to the text" (Houghton, "Periodical" 6). With so many shared features it may seem surprising that these two texts should be the most different.

An examination of some of the words which Hayward and Froude generally used relatively more and relatively less often than each other in their outlying texts suggests an explanation. Texts at Hayward's *Venice* end of the PCA continuum make frequent use of the definite article (*the*), past tense verbs (*was had were could*) and time adverbials (*after when at on*) and very little use of the words at Froude's *Spinoza* end – the present tense verbs and modals (*is can are do may does*), impersonal pronoun (*it*) and negative (*not*).

A closer examination of each of these articles reveals that a different intent lies behind the preferred word usages of each author. Hayward begins with a description of M. Yriarte's *modus operandi,* which was to use the patrician Marc Antonio Barbaro as a peg on which to hang a description of the laws, customs, manners and policy of Venice in the sixteenth century.  He declares Yriarte's book successful in terms of learning, acuteness and research but sadly wanting in "life, light, colour, and illustration" (416). He proposes then "with M. Yriarte's aid" (417) to give his own account of the history of Venice and the social and political problems of her institutions. The following passage describing the early history of the election of the doges shows some of these preferred word usages, particularly the definite article and the past tense verb forms *was* and *were*. Some words of interest are coloured, here and in subsequent passages.

> The first choice fell on Paolo Luca Anabesto. It was made by twelve electors, the
> founders of what were thenceforth termed the electoral families.  The Doge was
> appointed for life: he named his own counsellors: took charge of all public business; had
> the rank of prince, and decided all questions of peace and war.  The peculiar title was
> meant to imply a limited sovereignty, and the Venetians uniformly repudiated, as a
> disgrace, the bare notion of their having ever submitted to a monarch.  (418)

What we have here is a particularized historical account of Venice, which Hayward hopes will contain more of the "romance, poetry, mystery, dramatic or melodramatic interest, traditionally blended with Venetian annals" (416) than he found in M. Yriarte's pages.

Froude's starting point is not too dissimilar from Hayward's. He considers M. Boehmer's book on Spinoza and quickly dismisses it, claiming that the "actual merit of the book itself is little or nothing" (224), evidence only of the industry of the then German Spinoza fan-club. Adopting the editorial *we,* Froude eschews any wish of offending anyone's convictions. Rather, he says "it is our business to relate what he [Spinoza] was, and leave others to form their own conclusions" (225). He begins by outlining Spinoza's search for self-evident metaphysical truths and concludes: "The opinion of this Review on reasonings of such a kind has been too often expressed to require us now to say how insecure they appear to us" (230).

The remainder of the essay contains a careful and thoughtful examination of the various aspects of Spinoza's philosophical system. Although Froude continues to use *we* in his exposition, after the first few pages it seems less an editorial usage than an identification of his own thoughts and reactions with those of his fellow mankind. In Figure 3.2 it can be seen that the first person plural pronouns are located very close to the words which were highlighted as being used more frequently by texts at Froude's *Spinoza* end of PC1.

Froude points to Spinoza's denial of free will and argues "if these notions are as false as he supposes them, and we have no power to be anything but what we are, there neither is nor can be such a thing as moral evil" (244); and towards the end of his exegesis, he sums up in this way: "Such are the principal features of a philosophy, the influence of which upon Europe, direct and indirect, it is not easy to over-estimate" (266). Along with a tendency to use the first person plural pronouns, the article shows frequent use of the impersonal pronoun with the

discussion cast, for the most part, in the present tense. To Froude, this exposition of Spinozan philosophy is still of current concern and whilst acknowledging its virtues, he wishes to persuade people of its dangers.

Here are two essay-like reviews each providing its own account of the subject of the review – Venice and Spinoza: in the one case, however, that account is historical; in the other it is polemical. This then appears to be the most significant difference between the texts and provides the first continuum of reference for a stylistics map.

### PC2 outliers

The Cecil and Linton texts which show the greatest difference on the vertical dimension are also examples of reviews with a considerable amount of authorial input. Cecil's article is more of a 'review-like essay' where the three parliamentary speeches mentioned at the head of the article are "not so much as mentioned" (Houghton, "Periodical" 6) within the body of the essay. The article was written in the aftermath of the passing of the second Reform Bill (1867) and is a personal analysis of the current political situation, "a considered estimate" of the significance of events "in the general movement of politics and society" (Smith 7). As Pinto-Duschinsky points out, "Salisbury was writing at the time when the issue of Reform drew together the activities of political theorizing and of political activity" (52). The following extracts show him using several of the words (seen in Figure 3.2) which feature largely in texts located in the top portion of the plot (Figure 3.1): - *the they them their to if be been would have.*

He speaks of the role of the Conservatives, observing that:

> If the Conservatives had come into power as they did in 1852, through the mere weakness of their opponents, or as in 1858 by an accidental victory on a passing issue, they would have been free to deal with the question of Reform unfettered by their own previous action. (260)

Of politicians he says:

> They live in an atmosphere of illusion, and can seldom be persuaded that any political principle is worth the sacrifice of their own careers. If momentous changes are at hand, it will be no comfort to those to whom our present institutions are dear that such changes have received their first impulse from men who will be the foremost and greatest sufferers. (290)

Cecil's final appeal to the propertied classes to shake off their apathy is eloquent:

> The time is one in which the classes who value the priceless blessings they have hitherto enjoyed under English institutions must bestir themselves, if they would see those blessings continued. To their own vigilance and their own exertions they must trust for their security, and to nothing else. (290-1)

The object of interest in this writing is largely impersonal: – collective entities such as society, political parties, institutions and social classes are referred to by third person plural pronouns. This impersonal reference is also seen in phrases such as "those to whom" "men who" and "classes who".  The frequency of the definite article goes some way towards pinning some of the "them" down: *the* Conservatives, *the* question of Reform and *the* [propertied] classes. Nevertheless the overall focus is very much on external entities. Cecil's application of logic to the likely outcome of events is seen throughout the article in his frequent use of structures containing the conditional particle "if".

"Alfred de Musset" is one of Linton's early articles, written for *Frasers* in 1857, roughly a decade before the "Girl of the Period" article appeared in the *Saturday Review* in 1868. Linton's biographers note the changes that had taken place in her writing and opinions during this decade. Herbert Van Thal says that "Her attitudes had completely altered from those of the young and fiery republican and advanced thinker" (72), while Nancy Fix Anderson observes that Linton had now taken on "the role of critic of women" and that "the once-impassioned defender of women's rights became its most ardent opponent" (*DNB*). The "Alfred de Musset" article belongs to the earlier period when she was "learning the unwritten rules of her chosen field" (Broomfield 268). It is both a review of de Musset's poetry and

an obituary on his relatively short and tragic life. The focus of this writing is extremely personal and individualized: - the spotlight of this article is fixed firmly on de Musset - mind, heart, soul and body - and his poetic output. Two extracts suffice to show this focus and its use of some of the words which helped make it one of the outliers of the second dimension. The third person masculine pronouns are of course clearly evident in the references to de Musset, but the presence of the author is also quite marked. The descriptions seem more like judgments than impartial observations, helped perhaps by frequent use of little words like the quantifier *all* and adverbials *too* and *yet*.

> But before his powers had reached their highest and while his mind had still all the dangerous plasticity of early youth, the great sorrow of his life passed over him. His initiation into the dark mysteries of human suffering was made too early; it weakened rather than strengthened him; it overcame rather than nerved him. (106)
>
> After all he needed to have passed through the baptism of suffering before he could have written that beautiful sermon on forgiveness of injury and pity for wrong. When young, he was unmerciful, like all the young - unsoftened yet by experience. (112)

This second pair of outlying texts appear to be separated by a difference between a collective authorial focus and an individual one: both authors make pronouncements; but one of them is looking at the big picture while the other is looking at a particular individual. This then is the second referential continuum for a stylistics map.

A survey of the collection of periodical texts through the lens of computational stylistics suggests that the styles of the Victorian periodicals might be described as reflecting differential authorial foci: on one dimension ranging from a purely historical focus through to a more persuasive polemical authorial focus; on the second dimension ranging from a collective through to an individual focus.

<div style="text-align:center"><span style="color:green">Collective focus</span></div>

<span style="color:red">Historical focus</span>　　　　　　　　　　　　　　　<span style="color:blue">Polemical focus</span>

<div style="text-align:center"><span style="color:purple">Individual focus</span></div>
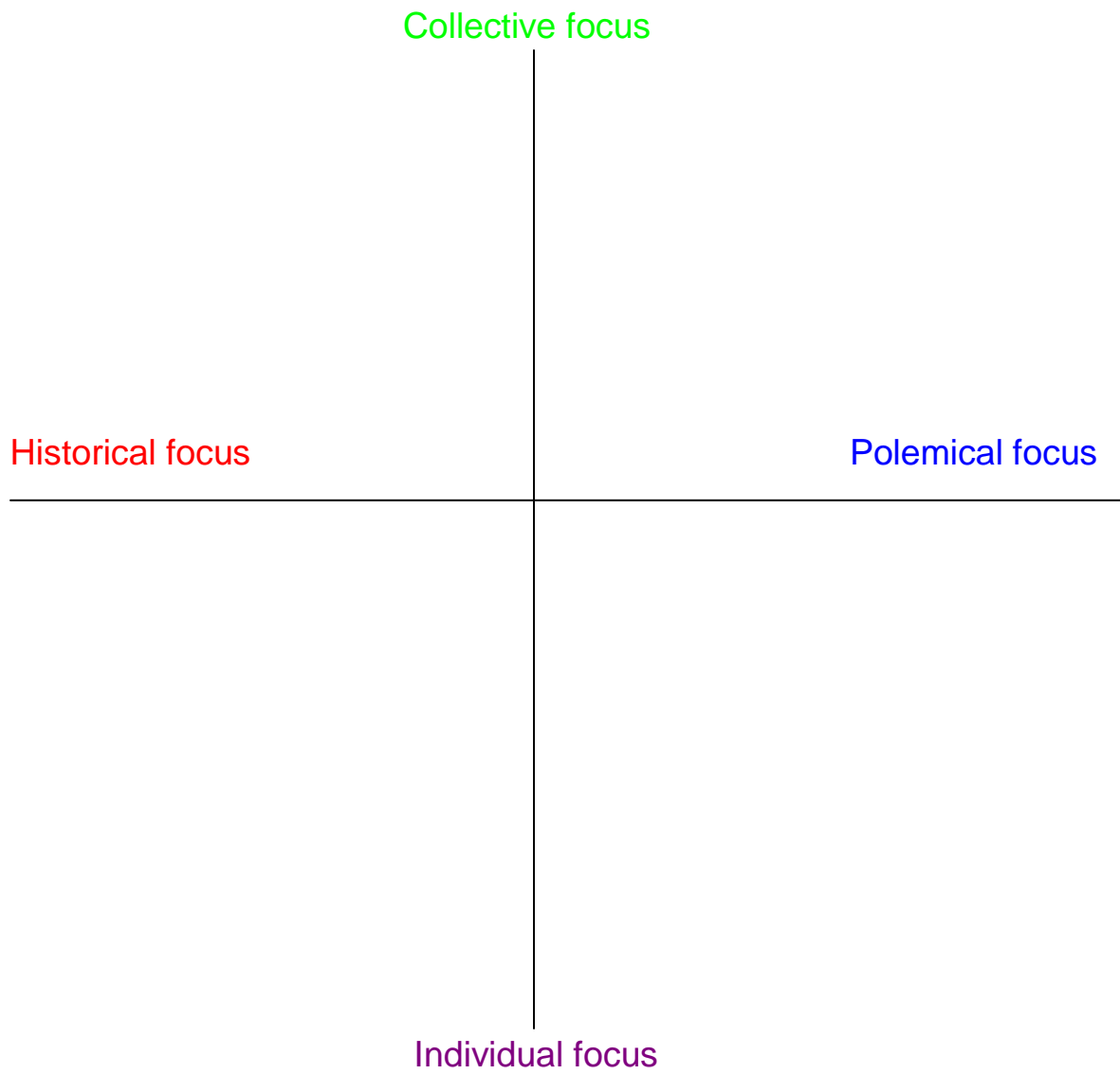
*Moving inwards*

If the characteristics of the PC1 and PC2 dimensions have any value as a method of mapping the periodicals, they should apply in similar fashion to the texts closest to the outliers. Tables 3.1 and 3.2 below rank the five texts at each end of the two dimensions. A brief summary of each set of texts should make it possible to see if they share the outliers' distinguishing features. At this stage I

am only interested in the features of individual texts. Authorial considerations will be explored in Chapter 4.

Table 3.1: Five highest ranked articles at each end of PC1

| Code | PC1 rank | Title | Author |
|---|---|---|---|
| Ha7 | 1 | The Republic of Venice: its rise decline, and fall | Hayward |
| F10 | 2 | Saint Teresa | Froude |
| Li1 | 3 | The characteristics of English women (Part I) | Linton |
| Bu4 | 4 | History of Venice | Burton |
| Bu13 | 5 | Witchcraft in Scotland | Burton |
| F9 | 200=1 | Spinoza | Froude |
| O8 | 199=2 | The laws concerning women | Oliphant |
| R5 | 198=3 | Governess' Benevolent Institution - Report for 1847 | Rigby |
| Ca8 | 197=4 | Signs of the Times | Carlyle |
| Ca2 | 196=5 | Corn-Law Rhymes | Carlyle |

Table 3.2: Five highest ranked articles at each end of PC2

| Code | PC2 rank | Title | Author |
|---|---|---|---|
| Li7 | 1 | Alfred de Musset | Linton |
| O5 | 2 | The epic of Arthur | Oliphant |
| O4 | 3 | Englishmen and Frenchmen | Oliphant |
| O1 | 4 | Mr. Browning's Balaustion | Oliphant |
| O2 | 5 | Charles Dickens | Oliphant |
| Ce3 | 200=1 | The Conservative surrender | Cecil |
| F11 | 199=2 | The South Africa problem | Froude |
| F8 | 198=3 | South Africa once more | Froude |
| Ce2 | 197=4 | The change of ministry | Cecil |
| Ce6 | 196=5 | The programme of the Radicals | Cecil |

*Set one – historical focus: PC1 rank 1-5*

Like Hayward's "Venice" (Ha7) each of the texts in the first set could be described as having a historical focus. Although the beginning and end of the second text in this set, Froude's "St Teresa" (F10), briefly sketch a present day context, the bulk of the article presents a detailed historical account of Castilian Spain in the sixteenth century and the life and sanctification of Teresa de Cepeda. The third text in the set, Linton's "Characteristics of English Women I" (Li1), is an account of "the predominant characteristics of English women for all time" (245). It outlines a series of portraits of strong-minded and courageous women throughout the ages: – termagants, vixens, scolds and women of a shrewish, warlike political or oratorical bent. The fourth text, "History of Venice"

(Bu4), is another historical account of Venice, Burton's opening remarks indicating that its intent is the same as Hayward's: to provide an account of her rise, decline and fall.

> It is instructive to observe her origin and progress, her prosperity and decline; marking the circumstances which promoted her grandeur, and the seeds of those social evils which ensured her degradation and decay. (38)

The fifth text, "Witchcraft in Scotland" (Bu13), describes the witch trials covered in the book "Pitcairn's Trials." Rather than reviewing the book, Burton presents the subjects of the trials and their stories: - "a brief account of some of the most remarkable and picturesque trials for witchcraft in Scotland" (17).

As well as having a definite historical focus, each of these texts is devoted to providing particularized detailed examples intended to give their historical accounts more colour, detail and interest for contemporary readers. An additional common feature emerged from this brief summary of the five texts: each of them has reason to make more frequent use of the feminine personal pronouns than was usual in histories: Froude in referring to St. Teresa, Linton to her English women, Burton to his witches and both Hayward and Burton in referring to Venice – the queen of the Adriatic.

*Set two – polemical focus: PC1 rank 200-196*
Froude's "Spinoza" (F9) was characterized by its conviction that the subject matter was of current concern. The other four texts in this set exhibit a similar belief. The second text in the set, Oliphant's "Laws Concerning Women" (O8) is concerned with the ongoing discussion and debate about laws concerning married women. The issue was an emotional one and advocates on both sides of the cause argued their case with passion. Oliphant exclaims: "This idea, that the two portions of humankind are natural antagonists to each other, is, to our thinking, at the very outset, a monstrous and unnatural idea" (379).

The third text in the set, Rigby's "*Governesses' Benevolent Institution* – Report for 1847" (R5) is an impassioned plea on behalf of governesses. This text about the plight of governesses, loosely tied to the 1847 Report for the *Governesses' Benevolent Institution* is actually the third section of Rigby's article reviewing "Vanity Fair" and "Jane Eyre", the connection being that Becky and Jane were governesses. Because of its total difference from the first two sections, it was separated and treated as an individual text. It outlines the anomalies and indignities of the governess' position, arguing that no-one "at the present time, more deserves and demands an earnest and judicious befriending" (176). The fourth and fifth texts, "Signs of the Times" (Ca8) and "Corn Law Rhymes" (Ca2), are both examples of early Carlyle, whose style of writing can hardly be separated from the man himself or his creed. Variously characterized as prophet, preacher, philosopher, poet, madman, this visionary author's voice was always distinctive, always persuasive, always polemical. For example, Stephens says "Carlyle … must be judged as a poet, and not as a dealer in philosophic systems; as a seer or a prophet, not as a theorist or a man of calculations." Stephens adds "every line he [Carlyle] wrote has the stamp of his idiosyncrasies" ("Carlyle" 281).

Each of the five texts in this set is characterized by the unmistakeable presence of an author who has strong feelings about the subject of discourse. All of them make frequent use of the impersonal pronoun *it*, the present tense verbs (*is are has do does*) and modals (*can may will*) and the negative form *not*. Although some of them make considerable use of the first person plural pronouns to express their case, the usage seems to come across as personal rather than editorial.

*Set three – individual focus: PC2 rank 1-5*
Linton's text, "Alfred de Musset" (Li7), is joined by four Oliphant texts (O5, O4, O1, O2) in this set. Although each of these texts more closely approaches what might be termed an actual 'review,' since the author makes frequent reference to the text and writer under consideration, nevertheless a good deal of the interest

of these articles comes from the particular 'spin' the periodical writer chooses to put on them.

Oliphant begins her review of Tennyson's Arthurian work (O5) by comparing his achievement with that of a great painter. She continues:

> Thus has Mr. Tennyson dealt with the mass of curious literature which is connected with the legend of Arthur.  He has taken it in hand with all its endless episodes and those innumerable details which confuse the picture, and has cleared for us a central group, and lit up with an intense common meaning the wonderful crowd that fills the scene. (502)

She concludes her review of two books "Englishmen and Frenchmen" (O4) one a story of an Englishman, the other the story of a group of Frenchmen, in this way:

> And there is one point at least in which they all resemble each other, which we note gratefully, widely diverse as are their ways of working. All these men worked in their different paths for God and man, with a sense of duty, responsibility, high honour, and fine meaning such as it is good to see. In this respect there is no monopoly on either side of the Channel, nor in any special creed or opinion; which is a most consoling doctrine to all who have at heart the broader interests of our common race. (237)

She locates the interest of Browning's work, "Balaustion" (O1) as its bringing together the past and the present:

> Mr. Browning's object is no longer simply to tell his story, for that has been already done in the noblest way; but to exhibit in contact and contrast the two worlds of ancient and of modern thought. (223)

Her review of Dickens (O2) begins with a discussion of 'class' and she places his work within that system:

> … he is, notwithstanding, perhaps more distinctly than any other author of the time, a *class* writer, the historian and representative of one circle in the many ranks of our social scale. Despite their descents into the lowest class, and their occasional flights into the less familiar ground of fashion, it is the air and the breath of middle-class respectability which fills the books of Mr Dickens. (451)

These five texts then are all characterized by the very individualized focus the authors have placed upon the particular writers and texts under scrutiny. Since the writers and the subjects of the texts under review all happen to be masculine, the frequent use of the third person masculine pronouns seems natural. It is however, the frequent use of the conjunction *and* both in phrasal and clausal pairings, the repetition of prepositions such as *with* (O5) and *into* (O2) and quantifier *all* (O4) which is of more interest in characterizing this style of writing.

### *Set four – collective focus: PC2 rank 200-196*

The five texts in this set were written by two authors: - Cecil (Ce3, Ce2 and Ce6) and Froude (F11 and F8). Froude's two texts, "The South Africa Problem" (F11) and "South Africa Once More" (F8), are both written in the light of the ongoing problems the British faced in South Africa. Froude offers background details, explanations and descriptions of the problems. His vantage point is (like Cecil's in "Conservative Surrender") sufficiently distant for him to look at the wider picture. His frequent use of the third person plural pronouns encompasses collective entities such as Great Britain, the British government, the Imperial government, the Dutch States, Cape Colony, Natal, the colonial office, the native tribes, the Zulus, the British public, able men … and so on. His analysis of the situation involves frequent use of the conditional particle *if* and the verbal phrases *would have …* and *would have been.*

Cecil's texts, "Change of Ministry" (Ce2) and "The Programme of the Radicals" (Ce6), are similar to "Conservative Surrender" (Ce3): – responses to events of current political interest – the change of ministry in the wake of Gladstone's defeat (1866) and the probable moves of the radical elements of the government (1873). The following extract from Ce2 shows how he assesses the situation (looking at "them" from a distance) and hypothesizes (with the use of the conditional particle, *if*) likely outcomes.

> If they could replace it by something which they liked better there would be nothing unreasonable in their giving effect to their objections. From their own point of view they

would be acting logically and consistently, if they could replace a Conservative Government by a moderate Liberal Government, free from the reproach of any democratic leanings. (251)

All five texts in this last set have a similar 'collective' focus with their authors standing back and looking at a complex situation of current interest. Both authors consider the available options and assess the likely results "if" this or that were done.

*200 texts - main differentiae*
*Moving further in and spreading out*

An examination of the four outlying texts in Figure 3.1 and some of the words favoured by the authors of these articles has shown that the main difference in each instance appears to be related to the kind of article the author was writing and the particular focus the author chose to adopt. These foci (historical, polemical, collective and individual) exhibited by the outlying texts and the stylistic traits they encompass were proposed as labels for each end of the two principal component continua. The four texts which were closest to each of the four outlying texts were then examined to see if they shared the same focus and stylistic characteristics as the outlying text. All five texts of each of the four groups displayed remarkable similarity, thus confirming the value of the differentiae as corpus descriptors. The notion of stylistic variation along two axes of differentiation allows the mapping of any number of texts across a wide range of stylistic possibilities.

A brief consideration of the next five texts along each end of the two continua demonstrates something of this range and variation in the characteristics of texts. The new texts are located at some distance from the ends of the continua and even, in some cases, at a midpoint between two different continua. It can be seen in the tables that two texts (marked by an asterisk), Carlyle's "Corn Law Rhymes" and Froude's "English Policy in South Africa," are ranked among the top ten in both a PC1 and a PC2 set. (Tables 3.3 and 3.4)

Table 3.3: Ten highest ranked articles at each end of PC1

| Code | PC1 rank | Article title | Author |
|---|---|---|---|
| Ha6 | 1 | The Republic of Venice: its rise decline, and fall | Hayward |
| F11 | 2 | Saint Teresa | Froude |
| Li5 | 3 | The characteristics of English women (Part I) | Linton |
| Bu3 | 4 | History of Venice | Burton |
| Bu4 | 5 | Witchcraft in Scotland | Burton |
| F8 | 6 | English Policy in South Africa * | Froude |
| Li2 | 7 | Daniele Manin | Linton |
| Ha7 | 8 | Harriet Martineau's Autobiography | Hayward |
| J5 | 9 | Sir James Mackintosh's History of the Revolution of 1688 | Johnstone |
| Bu1 | 10 | Robert Pitcairn's Criminal Trials in Scotland | Burton |

| Code | PC1 rank | Article title | Author |
|---|---|---|---|
| F6 | 200=1 | Spinoza | Froude |
| O5 | 199=2 | The laws concerning women | Oliphant |
| R3 | 198=3 | Governess' Benevolent Institution - Report for 1847 | Rigby |
| Ca1 | 197=4 | Signs of the Times | Carlyle |
| Ca4 | 196=5 | Corn-Law Rhymes * | Carlyle |
| R1 | 195=6 | Children's Books | Rigby |
| Ca2 | 194=7 | Thoughts on History | Carlyle |
| Ca3 | 193=8 | Characteristics | Carlyle |
| Ba4 | 192=9 | Physics and politics (Part III): nation making | Bagehot |
| S3 | 191=10 | An agnostic's apology | Stephen |

Table 3.4: Ten highest ranked articles at each end of PC2

| Code | PC2 rank | Article title | Author |
|---|---|---|---|
| Li1 | 1 | Alfred de Musset | Linton |
| O10 | 2 | The epic of Arthur | Oliphant |
| O12 | 3 | Englishmen and Frenchmen | Oliphant |
| O11 | 4 | Mr. Browning's Balaustion | Oliphant |
| O2 | 5 | Charles Dickens | Oliphant |
| Ca6 | 6 | Memoirs of Mirabeau | Carlyle |
| O1 | 7 | Evelyn and Pepys | Oliphant |
| O13 | 8 | Hamlet | Oliphant |
| Ca4 | 9 | Corn-Law Rhymes * | Carlyle |
| J8 | 10 | Light reading for June | Johnstone |

| Code | PC2 rank | Article title | Author |
|---|---|---|---|
| Ce5 | 200=1 | The Conservative surrender | Cecil |
| F7 | 199=2 | The South Africa problem | Froude |
| F10 | 198=3 | South Africa once more | Froude |
| Ce4 | 197=4 | The change of ministry | Cecil |
| Ce6 | 196=5 | The programme of the Radicals | Cecil |
| Ma8 | 195=6 | The negro race in America | Martineau |
| F8 | 194=7 | English Policy in South Africa * | Froude |
| F9 | 193=8 | The Copyright Commission | Froude |
| Bu6 | 192=9 | The Church of Scotland and Veto question | Burton |
| Bu9 | 191=10 | Language and structure of the statutes | Burton |

Figure 3.3 highlights the location of the thirty-eight texts of Tables 3.3 and 3.4 in the PCA text plot now divided into eight sections to facilitate the discussion.

Figure 3.3:  Principal component analysis text plot
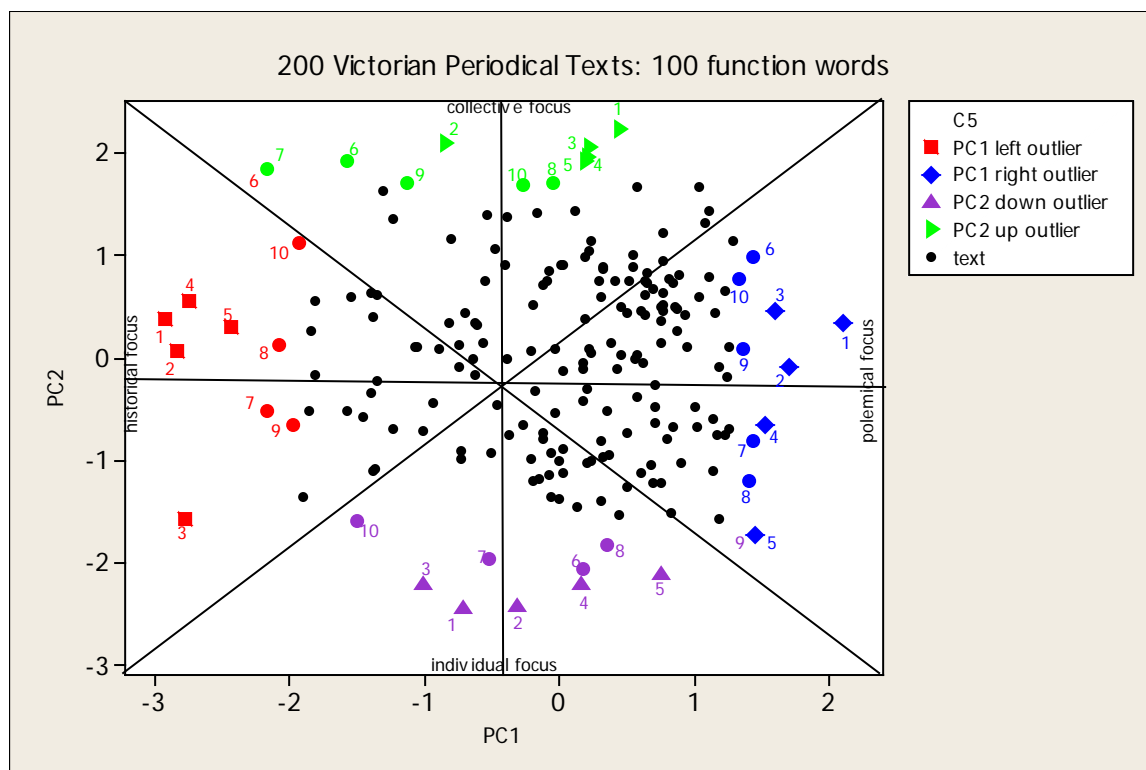


The diagonal lines of Figure 3.3 clearly illustrate the idea of the continuum effect of each of the axes. A particular focus which is very clear at the end of a continuum, might be expected to lessen for texts closer to the centre, or to merge with the effects of the adjacent continuum for texts located near the diagonal lines. Carlyle's "Corn Law Rhymes" ranks five on the polemical end of the horizontal axis and nine on the individual focus end of the vertical axis, while Froude's "English Policy in South Africa" ranks six on the historical end of the horizontal axis and seven on the collective focus end of the vertical axis. These texts show a relatively higher usage of some favoured words from two focus sets

and a relatively lower usage of other words from the same two sets.[34] (See Table 3.5 below for a listing of the ten highest ranking words from each end of the PC1 and PC2 axes).

Table 3.5:  PC1 and PC2: 10 highest ranking words

| historical | polemical | individual | collective |
|---|---|---|---|
| was | is | him | they |
| had | can | with | be |
| were | are | his | their |
| the | it | himself | have |
| after | do | into | to |
| at | not | all | the |
| could | may | yet | would |
| when | does | and | been |
| on | has | he | them |
| she | will | too | if |

Although polemical in intent, "Corn Law Rhymes" also shares some of the characteristics of the texts characterized by their individual focus. After announcing the end of poetry - "Poetry having ceased to be read, or published, or written, how can it continue to be reviewed?" - Carlyle finds praise for an individual rhymer: "The Works of this Corn-Law Rhymer we might liken rather to some little fraction of a rainbow: hues of joy and harmony, painted out of troublous tears" (139). Froude's "English Policy in South Africa" is the earliest of his three articles on South Africa which rank in the top ten of what I have called a collective focus set. While sharing a collective focus with the other articles, it devotes more of its space to outlining some of the history of the colonial settlement.

> Each colony has its own history, by which its political characteristics are determined. …
> The history of the Settlement was the history of all settlements of civilized men in a
> country inhabited by savages. (106)

---

[34] In a simple ranking of the top 10 texts' relative usage of the top 10 words in each of the 2 sectors: Carlyle's "Corn Law Rhymes" rates highly on *not, will, has, do, may,* and *does* in the polemical focus sector and on *into, yet, too, with, himself, and,* and *all* in the individual focus sector, and lowly on the other words of these two sets. Froude's "English Policy in South Africa" rates highly on historical focus *the, had, at, could, were* and *was* and on collective focus t*he, to, been, would* and *them*, and lowly on the other words of these two sets.

A brief survey of the additional five texts in each of the focus groups serves to demonstrate the continuing relevance of the differentiae, along with expected variation and added complexity.

*PC1 continuum: Historical – Polemical*

The texts at each end of the historical-polemical continuum have been seen to differ most in the manner of the subject matter presentation. In one case the subject matter is presented historically while in the other it is presented persuasively; in one case the subject matter belongs in the past, in the other it is a matter of current interest. These foci can also be seen in the additional texts under scrutiny.

As I mentioned earlier, the first of the additional texts in the historical focus group, Froude's "English Policy in South Africa," combines both collective and historical foci, making more frequent use of some of the words favoured by both groups. "Daniele Manin" is Linton's historical account of the life and death of the ill-fated president of the Venetian republic, while Hayward's review of "Harriet Martineau's Autobiography" provides a historical account of her life from "her infantine impressions" (487) to her death "on the 27th of June, 1876" (525). The remaining texts in the group are reviews of the historical works of Mackintosh and Pitcairn.

Each of the additional texts in the polemical focus group show an author intent on presenting an argument for personally held beliefs in a persuasive fashion. A further two Carlyle texts, "On History" and "Characteristics," sit naturally in the polemical focus group, as does Rigby's "Children's Books," which contains a rational and heart-felt argument on suitable literature for children:

> The attention of our readers has already been called to a subject, to which, the more it is considered the more importance must be attached - we mean that of children's books, which, no less in quality than in quantity, constitute one of the most peculiar literary features of the present day. (1)

Stephen concludes his apology of agnosticism by admitting "that man knows nothing of the Infinite and Absolute; and that, knowing nothing, he had better not be dogmatic about his ignorance" (41) while Bagehot concludes the first of his two articles on nation-making in this fashion: "And, as I believe, it is in this simple but not quite obvious way, that the process of progress and of degradation may generally be seen to run" (81).

*PC2 continuum: Individual – Collective*

The presentation of texts at each end of the individual-collective continuum seemed to differ most in the scale or scope of the viewpoint taken, rather like photos taken with a zoom or a wide-angled lens. In the one case the interest was narrowly focused and individualized while in the other, it was the broad picture that was of interest. This difference in focus can be seen in the two groups of additional texts. The tendency of this continuum to divide along gender lines (seen in the first five texts of each group) is halted by the presence of Carlyle in the individual focus set and Martineau in the collective.

Like the first five texts in the individual focus group, the second five texts also approach the notion of a true 'review' article with the writer and work under discussion clearly in evidence. This accounts for the more individualized focus; nevertheless, the authors, Carlyle, Oliphant and Johnstone, all create their own distinctive framework for 'reviewing'. Johnstone, for example, blames the current glut of light reading on the political situation:

> … there is a great accumulation of light works at the end of the present season, each waiting until the excitement and bustle of change of officials, canvassing, and elections, are over. (407)

Each of the additional texts in the collective focus group can be seen to be dealing with large topics: - English policy in South Africa; the question of Copyright; issues of interest to the Church of Scotland; and the slavery question.

Martineau's approach to the topic of slavery and her ability to assume a collective focus is seen in the extract quoted below.

> If it is talking politics to assume that slavery is drawing to an end in the United States, then we must be political to that extent; but, as there is probably no one in Europe, and as there are certainly few in America, who believe that the peculiar institution can ever be again what it was in the Slave States before the war, we incur no charge of political partisanship in assuming that negro slavery in America has received its death-sentence. (203-4)

### *Generic range*

In the Introduction to her book, *Genre*, Heather Dubrow suggests that genre "functions much like a code of behavior established between the author and his reader" (2). "Generic prescriptions" she adds "may in fact be neglected, though seldom lightly or unthinkingly" (3). It would appear that writers of articles for the literary Victorian periodicals had access to a number of contemporary conventions for the kind of article being written, and that it was this tacit understanding of what constituted a 'suitable' approach for various types of article that helped create the 'intra-generic' range along the two axes of differentiation that I have described in this chapter.

The finding that a large collection of Victorian periodical texts can be mapped across two continua of differentiation is not inconsistent with the findings of Biber and Finegan in their much broader study of three written genres across a number of centuries. Though their dimensions describe effects relating to a generic range (from academic prose through to conversation), they do not appear to contradict this result. The "three empirically defined dimensions" (487) Biber and Finegan use in their study are:

>Informational versus Involved Production;
>Elaborated versus Situation-Dependent Reference; and
>Abstract versus Nonabstract Style.

The system's value lies in its ability to relate observation and interpretation. Biber and Finegan assume that "a co-occurrence pattern indicates an underlying communicative function shared by the co-occuring features" (490). Additionally they stress the importance of considering "the likely reasons for the complementary distribution between positive and negative feature sets" (490), a consideration which mirrors the placements of the periodical texts in Figure 3.1 according to their relative use or non-use of the related function words in Figure 3.2. For example, they speak of the sometimes "informational" and sometimes "argumentative or persuasive purpose" of essays (495). This ties in with their informational/involved production range and my historical/polemical range.

It is also possible to see how Biber and Finegan's second and third dimensions might relate at some level to my second dimension. They identify differences between 'context-independent' and 'situation-dependent' reference and between 'abstract' and 'concrete' entities. Cecil's referents (political parties, social classes …) certainly display signs of Biber and Finegan's "elaborated identification of referents" (492) which Linton's referent (de Musset) does not. Cecil's collective focus entails his frequent use of passive constructions (displaying more of Biber and Finegan's abstractness) while Linton's personal focus precludes these (displaying more of Biber and Finegan's concreteness).

Although my survey of the Victorian periodicals is much more limited in scope than Biber and Finegan's multidimensional, multi-genre study across four centuries, it is reassuring to find that this preliminary sketch of the stylistic characteristics of the periodical text collection outliers is not at odds with their broader findings.

## Conclusion

The tests described in this chapter have suggested that a miscellaneous body of 200 Victorian periodicals can be mapped according to intra-generic stance: whether the author chose to regard the subject matter as: one of historical

interest requiring detailed explication; or one of current interest requiring some 'barrow-pushing'; or a current political or national issue requiring expert exegesis and analysis; or a current publication and writer requiring suitable contextual placement and assessment. I am suggesting that within the genre ('essay-like review' or 'review-like essay') there existed certain intra-generic conventions which allowed individual authors to adopt a position on a stylistic map according to what was considered suitable for a particular type of article, but also what suited them as individual authors. By moving from a consideration of the stylistic characteristics of the four outlying texts, to a consideration of the next nine texts at each end of the two continua, I have shown how the notion of stylistic variation along two axes of differentiation allows the mapping of a greater range of textual individuality and authorial choice. In combination with the ability of computational stylistics to isolate the distinctive characteristics of each author's individual style, this intra-generic mapping offers a means of exploring the question of why all the texts of one author group gather together while those of another assume many and varied locations. Potentially it offers a means of addressing the apparent paradox "that the same methods that successfully attribute texts to their authors should be used in investigations of differences within or among the texts of a single author" (Hoover, "Multivariate" 341). This question will be addressed in the next chapter.

# Chapter 4: Analysis of authors

In the debate about the importance of authorship in the understanding of literary texts, there seems little doubt that the prolific output of the nineteenth-century periodical press would constitute a body of texts whose origins could be said to be located in the nature of the discourse itself rather than in the experience of any particular author or authors. Alexis Easley, for example, says: "The anonymity of periodical journalism challenged the notion of an individually authored literary text and singularized authorial voice. ("First-person" 6) The aim of this chapter is to discover whether, despite the anonymity of most of the articles when they were first published, we should nevertheless see the articles published in periodicals as a set of authorial *oeuvres*. As part of this exploration, I will look at the consistency or otherwise of authors generally, by examining the interplay between authorial groups and individual texts and will seek an explanation for the differences between authors.

## *22 authorial groups of texts*

In order to study authorial consistency across a number of texts, I ran a series of principal component analyses on the same 200 periodical articles which were used in Chapter 3, but this time viewed as twenty-two authorial groups. These groups were created by uniting all the texts in the collection now known to be written by a particular author into a single group. The 100 most common function words of the text set were again used as variables. Although the size of the authorial groups (see Table 4.1 below) ranged from around 30,000 to just over 145,000 words, my standard practice of normalizing the word counts for each word (dividing by the text total and multiplying by 100) allowed comparable testing.

Table 4.1 Twenty-two authors combined texts word counts

| Author | Texts | Words | Author | Texts | Words |
|--------|-------|-------|--------|-------|-------|
| Bagehot | 7 | 62022 | Huxley | 5 | 43657 |
| Blackie | 11 | 72795 | Johnstone | 7 | 30843 |
| Burton | 13 | 91223 | Kingsley | 9 | 64278 |
| Carlyle | 9 | 110337 | Lewes | 11 | 80479 |
| Cecil | 6 | 92215 | Linton | 7 | 38084 |
| Cobbe | 8 | 79072 | Macaulay | 7 | 98351 |
| Croker | 6 | 96903 | Martineau | 10 | 105217 |
| Eliot | 13 | 93767 | Mozley | 9 | 79857 |
| Froude | 11 | 138905 | Oliphant | 14 | 145255 |
| Greg | 10 | 100286 | Rigby | 11 | 126107 |
| Hayward | 7 | 74116 | Stephen | 9 | 97764 |

The first plot (Figure 4.1 below) reveals which authors are most alike and which are most different; which authors assume an outlying position on the plot and which group together in the middle.

Figure 4.1 Principal component analysis text plot
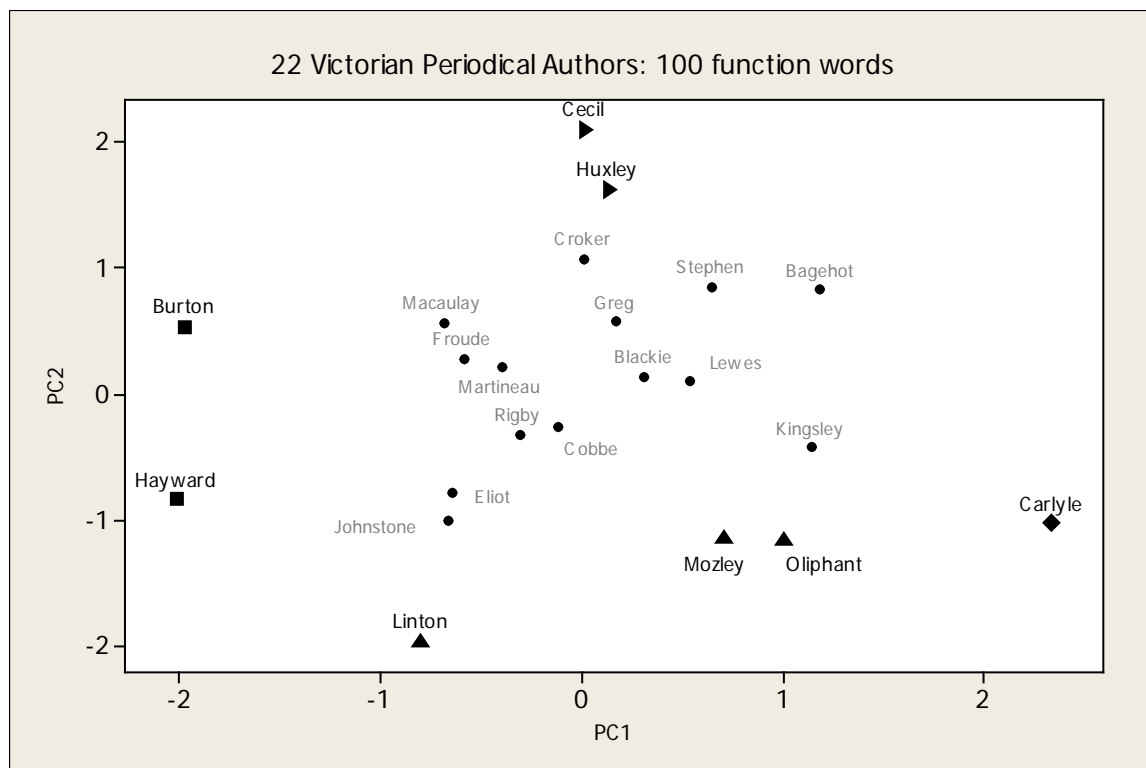
Hayward and Burton share the westerly outlying position with Carlyle proving the most different from them as the most easterly outlier. Cecil and Huxley are the two most northerly authors while Linton is the most southerly with Mozley and Oliphant next nearest to her. These 'outlying' authors have been highlighted in Figure 4.1, using the same symbols for each outlying location as Figure 3.1, but without the colours which were used to identify the outlying texts of Chapter 3. This is because the behaviour of a freshly calculated principal component analysis plot using authorial groups cannot be assumed to be identical to the behaviour of a plot of individual texts. The nature of these similarities and differences will be addressed later in the chapter. The fact that men authors dominate three of the four outlying positions, while women authors lay claim to only one, suggests the possibility that a gender-related factor is operating. This question will be explored in a later chapter.

The authorial placements seen in Figure 4.1 constitute a description of inter-relationships between authors, based on patterns of relative use and non-use of various combinations of the 100 word variables, by each author. The tacit assumption (in most instances a valid one) that the combination of available texts for each author truly represents an authorial signature, will be tested in this chapter. The outlying authors are outliers by virtue of making more use of the set of words at one end of one of the PC continua and less use of the set at the other end, while the middle authors make less extreme use of these sets of words. The plot allows us to see which authors are unlike each other (the outliers) and which are alike. Croker is close to Cecil and Huxley, and Macaulay is not too far from Burton, another historian. Johnstone and Eliot are neighbours and diagonally opposed to Bagehot, who has assumed a position which is almost equidistant from Carlyle and Cecil.

The accompanying plot (Figure 4.2 below) shows the words which have been responsible for these authorial text group placements. The ten words at each end of the PC1 and PC2 dimensions have distinctive markers in order to emphasise

their contributory role in the placement of the respective outlying authorial groups. (Although broadly similar to the outlying words of Figure 3.2, they are not identical.)

Figure 4.2 Principal component analysis word plot
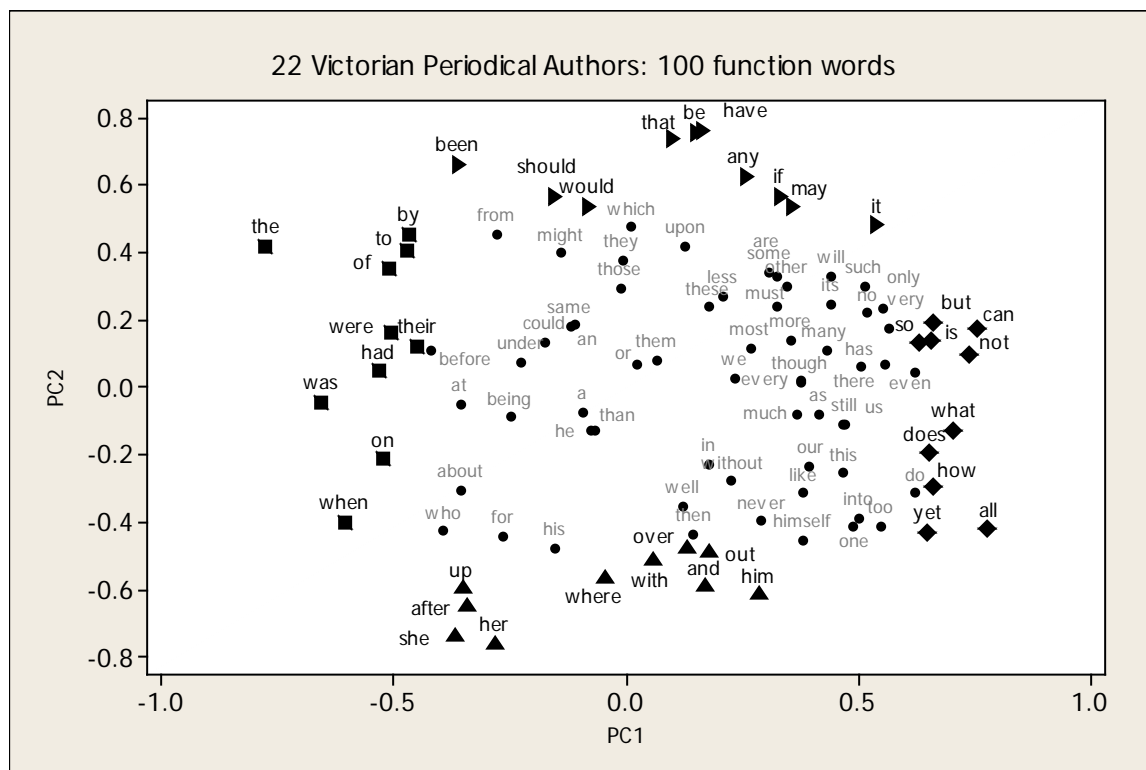


The westerly outliers of Figure 4.1, Hayward and Burton are likely to have made more use of the words at the westerly end of PC1: the definite article, past tense markers, (*was, were,* and *had*), prepositions (*on, of, by* and *to*) and a time adverbial (*when*) – words, indicative of a formal and historical style of writing. Carlyle, the easterly outlier of Figure 4.1, on the other hand, is likely to have favoured the present tense markers (*is, can* and *does*), the negative form, *not,* and indicators of a more argumentative or questioning style of writing (*all, but, yet, how* and *what*). The words underlying Cecil and Huxley's northerly placement in Figure 4.1, indicate a preference for an impersonal and logical style of writing, favouring the impersonal pronoun *it*, the conditional *if,* along with a number of modals (*may, should* and *would*) and the verb forms *be, been* and

*have.* Linton and her two closest southerly neighbours in Figure 4.1, Oliphant and Mozley, are likely to favour the connective *and,* the masculine and feminine personal pronouns and a number of  prepositions or adverbs indicative of place (*over, out, up,* and *where*), perhaps indicating a narrower or more particularized focus. Once the relative location of the twenty-two authorial groups was established, I moved on to consider the relationship of each author's individual texts to the remaining twenty-one authorial groups.

*Each author's separate texts with remaining 21 authorial text groups*

The next series of principal component analysis tests (twenty-two of them) made use of the same unselected set of function word variables and twenty-two authorial text groups which were used for the test seen in Figures 4.1 and 4.2. This time however, one authorial group was removed at a time and replaced by that author's separate texts and tested with the remaining twenty-one authorial entries. This enabled me to see whether the relative location of each author (now represented by separate texts) to the other authors had varied from the location it assumed in Figure 4.1, and to compare the consistency or variation across texts of different authors. The nature of this test (which compares items which are different in scale) makes it sensitive to extreme word pattern usages. This sensitivity becomes apparent when one or more of a single author's individual texts assumes an extreme outlying position while the twenty-one authorial groups are forced together in a single corner of the plot. In such instances, it can be seen whether the outlying text is an 'isolate' which differs greatly from the author's other texts, or if writing texts with marked or extreme stylistic characteristics is normal for that author. Such instances will be discussed later in the chapter.

The tests revealed that while the individual texts of many authors were generally uniform (cases 1 2 and 3), those of other authors displayed a considerable lack of uniformity (case 4). The 'general' uniformity of the first three cases includes authors whose texts formed two (or occasionally three) "authorial clusters," and

authors with an occasional individual text which could be considered as different from their usual type of text. Table 4.2 presents a summary of these cases.

Table 4.2:  Interplay between Authorial Groups and Individual Texts

| Case | Authors | Interplay |
|---|---|---|
| 1 | Burton Carlyle Cecil Croker Eliot Huxley Oliphant | Individual texts consistent with each other and bearing a similar relation to authorial groups texts as their combined texts entry. |
| 2 | Bagehot Hayward Macaulay Mozley Rigby Stephen | Individual texts forming 2 (or 3) authorial groups. |
| 3 | Cobbe Kingsley Martineau | Individual texts generally consistent with each other or forming authorial groups; an occasional text different from others. |
| 4 | Blackie Froude Greg Johnstone Lewes Linton | Individual texts non-uniform and varied; some authors having outlying texts. |

The information derived from this series of tests will allow me to investigate a number of related issues. I will briefly discuss the overall relationship between the individual texts and the authorial group entries. Next, I will compare the differences between the PC1 outliers in the texts plot (Figure 3.1) and in the authorial groups plot (Figure 4.1). There was no difference in the PC2 outliers with Cecil and Linton occupying the outlying position in both plots. I will then go on to consider the importance of authorship across all the scenarios described in Table 4.2.

*Relationship between individual texts and authorial group texts*
In Chapter 3, I described the individual texts located at each end of the two principal component continua as being characterized by a particular intra-generic focus, ranging from historical to polemical on the horizontal axis and from collective to individualized on the vertical axis. This characterization was based on the sorts of words whose relatively high usage contributed to the placement of the texts at the ends of the continua. This concept of stylistic variation along two axes of differentiation offered a way of mapping the 200 individual texts. Since the concept is helpful for describing differences between the individual texts of a

single author, it is preferable to reserve it for textual rather than authorial descriptions. Nevertheless, when all the texts of a particular author share the same intra-generic focus, the concept becomes authorial. For this reason, the authorial text group plots, seen here in Figures 4.1 and 4.2, are clearly related to the individual text plots (Figures 3.1 and 3.2) of the previous chapter, though they differ in a number of respects. It is the nature and the cause of these differences which constitute the subject matter of this chapter. Although the same words were used as variables in both tests, the outlying words of Figure 4.2 are not identical with those of Figure 3.2; however, there is enough overlap in each group of words to indicate that the same kinds of intra-generic focus are operating here as well.

*Comparing the outlier differences of figure 3.1 and figure 4.1*
*Froude and Carlyle*

The interplay (described in Table 4.2) between authorial consistency and authorial variation seems to account for the differences between the outliers in the plots of the individual texts in Chapter 3 and the outliers in the authorial groups plot (Figure 4.1) in this chapter. Joining texts by author has, in some instances, subordinated individual article variation. In the plot of individual texts (Figure 3.1), one of Froude's texts, *Spinoza* (F9) was the easterly outlying text. In the authorial plot (Figure 4.1), Carlyle has replaced Froude as the eastern outlier and Froude has assumed a location in the centre of the plot, not too far from Hayward (whose *Venice* was the most different from his *Spinoza* on the horizontal axis of Figure 3.1). The plot of the placement of Froude's individual texts in relation to the remaining twenty-one authorial groups (Figure 4.3) shows them widely spread across the plot with two texts, *St. Teresa* (F10) with its historical focus and *Spinoza* (F9) with its polemical focus, assuming diametrically opposed positions in the north-west and south-east. It can also be seen that some of Froude's outlying texts (*St. Teresa* in particular) are so different from the authorial text groups that the authorial groups have been forced into a tight bunch in the north east corner of the plot.

Figure 4.3: Principal component analysis text plot
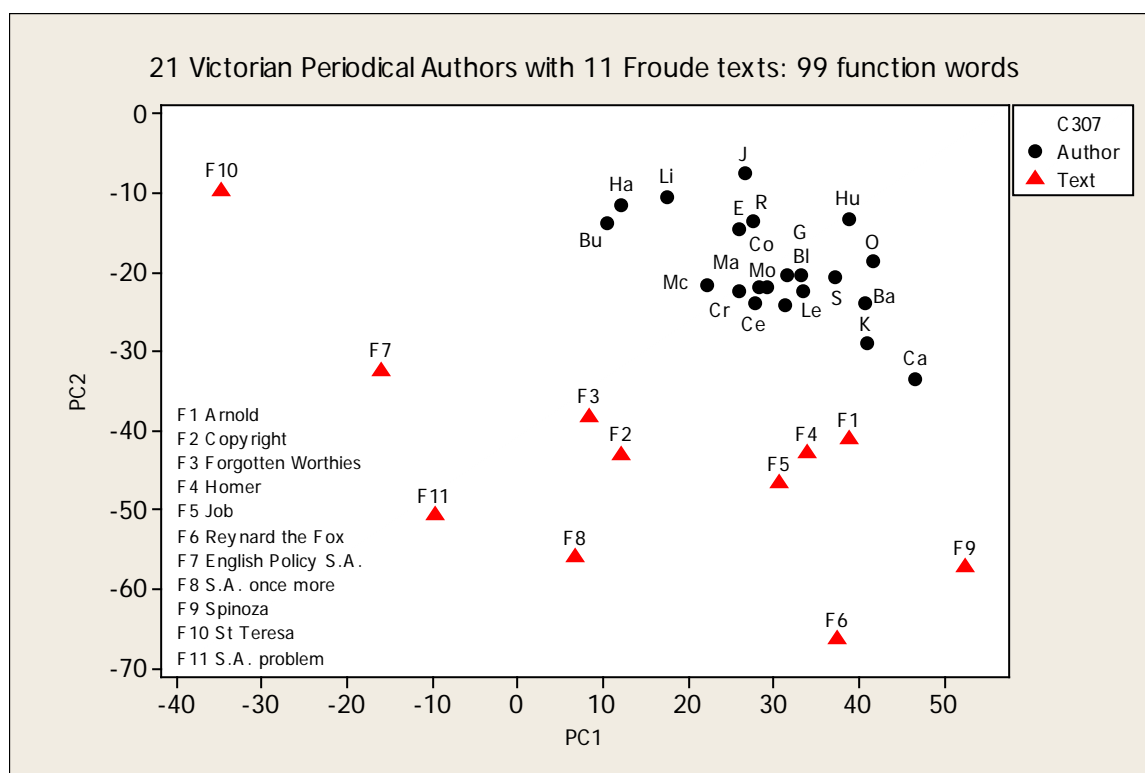


The distribution of Froude's individual texts in this plot (Figure 4.3) allows a characterization of his periodical *oeuvre*. The Froude text collection contains texts which exhibit different marked intra-generic foci. *St Teresa* (F10) and *Spinoza* (F9) were seen in Chapter 3 to be numbered among the highest ranking texts at each end of the PC1 historical-polemical spectrum. In Figure 4.3, *Reynard the Fox* (F6) is located on the southern border of the plot, not too far from the *Spinoza* (F9) on the eastern border. An examination of the location of the *Reynard* (F6) entry among the 200 texts, not shown here, reveals that it is located in the south-east sector of the plot where it would be expected to exhibit a combined polemical and individualized focus. Indeed the text shows Froude using the protagonist of the poem, Reineke Fuchs, to consider the nature of good and evil, and seems to combine Froude's concern with moral questions of current concern with the individualized focus of the review. Froude's three texts on South Africa (F7, F8 and F11) were numbered among the highest ranking texts at the collective focus end of PC2. Here they are seen forming an outer circle around

the five remaining texts (F1-F5) which form a close circle around the authorial group entries.

Carlyle's individual texts (seen in Figure 4.4 below) also force the main group of authors to cluster together, but not nearly so extremely as did Froude's.

Figure 4.4: Principal component analysis text plot
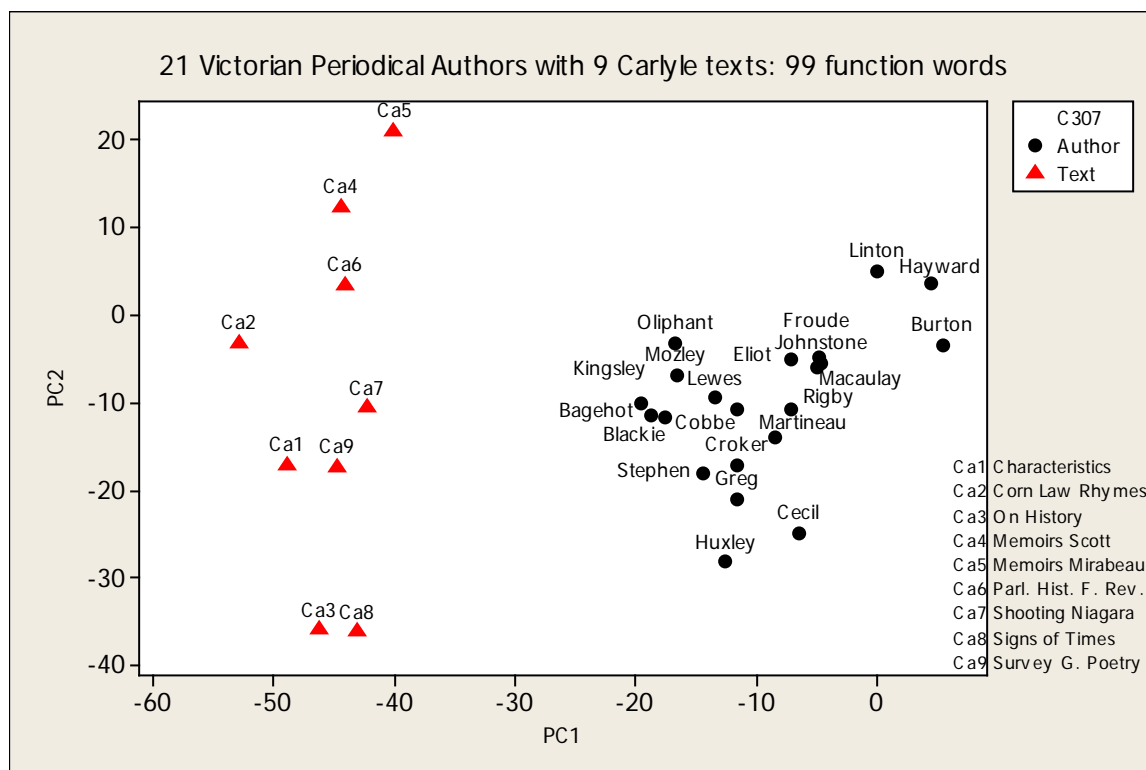


It can be seen that Carlyle's own texts form a more cohesive authorial cluster than Froude's and his texts bear a similar outlying relationship to the authorial groups as his combined entry in Figure 4.1 did, that is to say, opposed to Burton on the horizontal axis, and with Linton and Cecil and Huxley opposed on the other axis. This means that the style he adopts for all his texts, whether he is reviewing the works of others or writing prophetic essays, is characterized by a marked polemical focus. It is for this reason that we can say that the Carlyle authorial entry in Figure 4.1 (the easterly outlier) is a true reflection of the stylistic characteristics of his individual texts. On the other hand, the centrally located

Froude authorial entry in Figure 4.1 is clearly the result of the averaging of an extremely varied set of individual texts.

*Burton and Hayward*

In Figure 3.1 Hayward's "History of Venice" (Ha7) was the highest ranking text at the historical focus end of PC1, while three of Burton's texts were numbered among the ten highest ranking texts with that focus. In Figure 4.1, both the Hayward and Burton authorial groups entries are located on the western border of the plot. The new PC plots for each author however, reveal some differences. It was apparent from the tests that the relationship between the individual texts and the combined texts set was not the same for these two authors. None of the texts of Hayward and Burton differed from the authorial group greatly enough to cause the main group to bunch, as we saw with Froude and Carlyle. Figure 4.5 below shows Burton's individual texts were all relatively consistent and lying in the same relation to the remaining group texts, as his combined entry in Figure 4.1.

Figure 4.5: Principal component analysis text plot
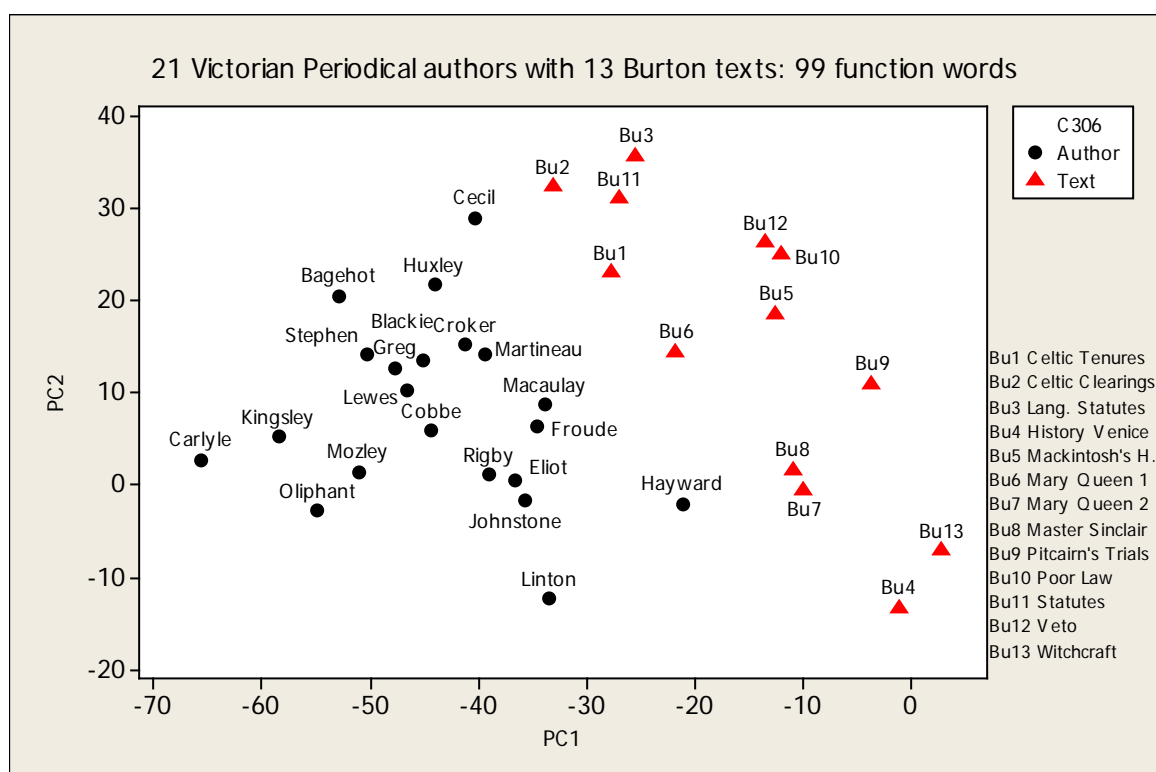
Burton is seen to be most different from Carlyle on the horizontal axis; he remains a close neighbour of Hayward; and Cecil and Linton continue to hold their relative positions to him on the vertical axis. It is interesting to note that his more historical or biographical texts (Bu4, Bu5, Bu6, Bu7, Bu8, Bu9 and Bu13) lie to the south of his articles on more general social and ecclesiastical issues (Bu1, Bu2, Bu3, Bu10, Bu11 and Bu12) which would have demanded a more impersonal approach.

On the other hand, Figure 4.6 below shows Hayward's texts falling into two groups.

Figure 4.6:  Principal component analysis text plot
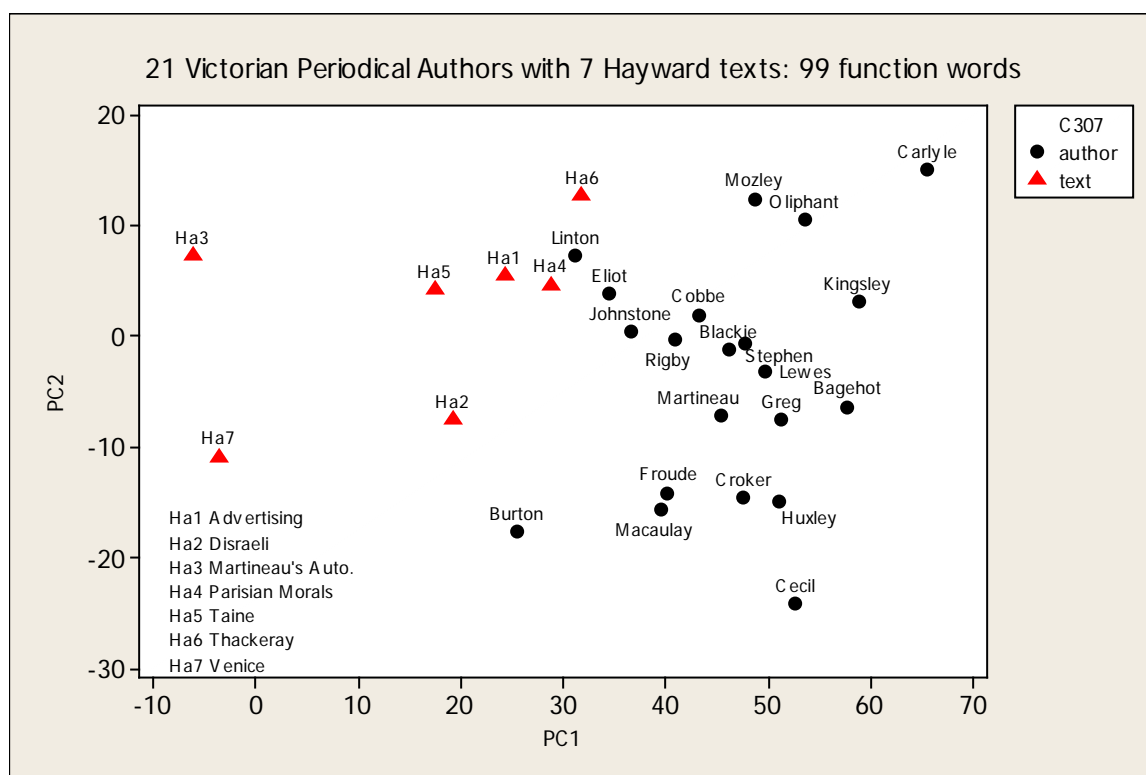


Five texts assumed a central position, while the two texts with a historical focus, "History of Venice" (Ha7) and "Martineau's Autobiography" (Ha3), assumed an outlying position. It can also be seen that the positions of the outlying authorial groups of Figure 4.1 relative to the Hayward texts, have somewhat altered in

Figure 4.6. Carlyle and Cecil for example, are in different positions, and Linton is now a close neighbour of three of the texts, and Burton relatively close to only one of them. Granted the configuration of Hayward's individual texts in Figure 4.6, it might have been expected that his authorial groups entry in Figure 4.1 would have reflected some averaging of the two groups. The fact that it didn't appears to be a reflection of the degree of historical focus in the two texts exhibiting it, and the lack of a marked focus in the remaining texts. Clearly the texts constituting Hayward's *oeuvre* are not as uniform as the texts constituting Burton's. Hayward's biographer relates that he "contributed some forty articles to the *Edinburgh Review* … and another eighty to the *Quarterly,*" and that the topics he wrote on included "history-writing, foreign travel, French and German novels, fox-hunting and etiquette" (Harling *DNB*). Such variety might well account for this relative lack of uniformity.

### *Importance of authorship across the 4 scenarios*

Authorship emerged as a very significant factor in the distribution of texts, in this series of tests,[35] since, apart from an occasional 'text isolate', the location of the individual texts of most authors demonstrated author-related similarities. For just one case (number 4) from Table 4.2, authorship seemed less important than individual text variation. It will be shown however, that much of this text variation can be explained by changes in intra-generic focus, and that in every instance an author's underlying syntactic and deictic habits persist through these variations.

### *Case 1*

### *Authorial Consistency: Burton, Carlyle, Cecil, Croker, Eliot, Huxley and Oliphant*

The distribution pattern of Carlyle's texts seen in Figure 4.4 and Burton's texts in Figure 4.5 are good examples of the first scenario – where authorial consistency is seen across all an author's texts. Cecil's texts (seen in Figure 4.7 below) provide another example. In this plot all of Cecil's texts can be seen to be lying in

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[35] This series of tests used only 99 of the function word variables, since they were run on Minitab while the other tests (using 100 function words) were run on SPSS.

the same relationship to the authorial groups as his own combined group did (in Figure 4.1). He is a close neighbour to Huxley and furthest away from Linton on one axis, while Hayward, Burton and Carlyle assume the same relative positions to Cecil on the other axis. One of his six texts has moved a little way from the group; oddly enough, this is not his sole non-political article on photography, but one of his political articles, "The Budget and the Reform Bill" (Ce1).

Figure 4.7: Principal component analysis text plot
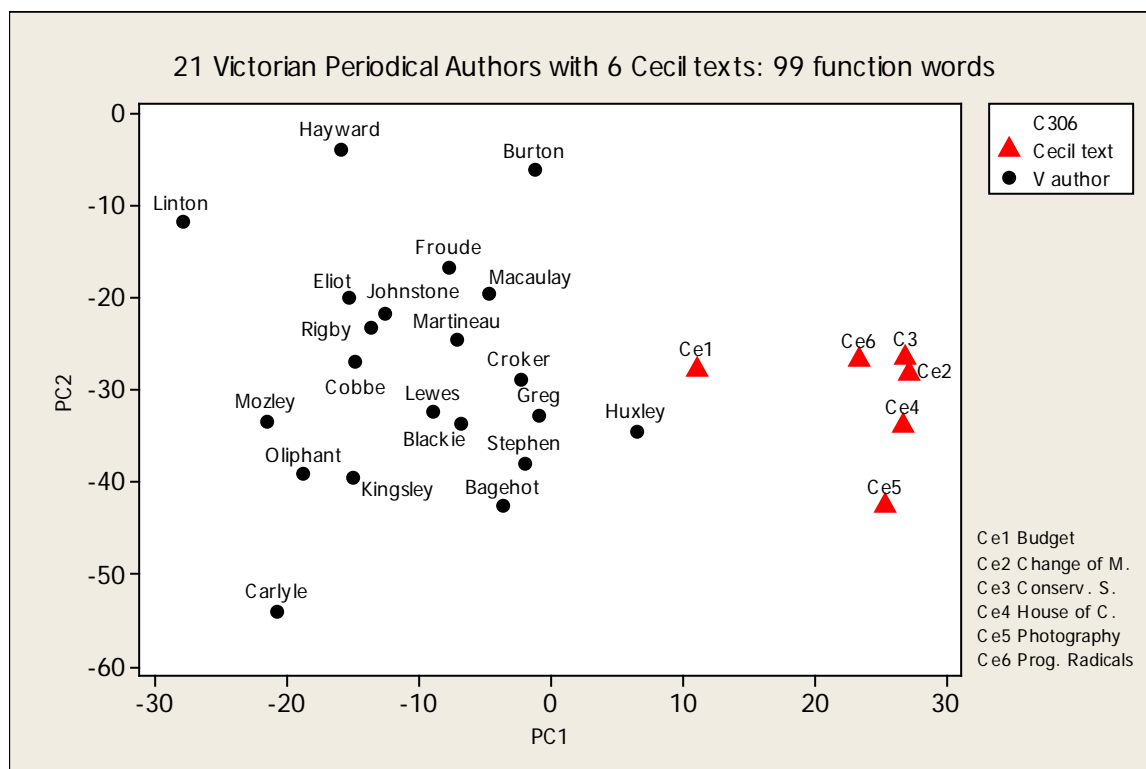


Huxley's texts pattern in very similar fashion to those of Cecil, his close neighbour, with the authorial groups in the same relative position to his texts as in Figure 4.1. Croker's texts also form a clear authorial group. One Croker text however, his literary review of Tennyson, is slightly removed from the other five texts, suggesting that his literary review style differs in some respects from his political and historical style. The same pattern of consistency across texts is seen with the other authors of case 1. Eliot's texts group together on one side of the plot with the authorial groups on the other side. As in Figure 4.1, Bagehot is the

author at furthest remove from Eliot. Oliphant's texts assume a diagonal position on one side of the plot and bear a similar relationship to the authorial groups as her combined group did in Figure 4.1 - a neighbour to Mozley and Carlyle and opposed to Cecil.

*Case 2*

*Authorial Groups: Bagehot, Hayward, Macaulay, Mozley, Rigby and Stephen*

The texts of a number of authors fall into two or more groups and there appear to be a number of different explanations for these groupings:  differing classes of subject matter (political, social, literary, scientific, historical, biographical); differing time frames (early or late in writing career); and differing attitude to subjects (still alive or deceased). A further explanation is lent by the finding in Chapter 3 that many outstanding differences between texts can be described in terms of authorial intra-generic stance or focus.

Hayward's two groups of articles (historical and non-historical) have already been mentioned. Bagehot's articles appear to divide along subject matter lines – literary or biographical reviews on the one hand and historical or social essays on the other. The texts in Macaulay's first group deal with contemporaries (Sadler and Gladstone) while those in his second deal with recently deceased or historical figures (Byron, Lord Holland, Mirabeau and Barère). There seem to be two possible explanations for Stephen's having two groups of texts:  literary articles written for the family-oriented *Cornhill Magazine*; and psychological-religious articles written for the *Fortnightly Review*. The placement of his article on *Taine's History of English Literature* with the literary articles (rather than with the articles of the *Fortnightly* for which it was written) lends weight to the notion of a subject matter division. Rigby's articles fall into two or perhaps three groups. There appears to be something of a difference between her early articles and her later ones, as well as something of a difference between her articles for the *Quarterly Review* and those for the *Edinburgh Review*.

*The 'why' and 'wherefore' of the groups*

A number of possible explanations have emerged as to why the texts of some authors split into groups. Firstly, it seems likely that some writers were able to avail themselves of a number of conventional approaches for dealing with different subject matter. For example, a description of the rise, decline and fall of Venice would lend itself to a historical approach, while a consideration of some heated, local issue of the day would lend itself to a more polemical approach. Secondly, it is possible that the early style of some authors may differ in some respects from their later style, and finally, it is possible that writing for a different journal affected some authors' styles. All these explanations challenge the significance of authorship. If, however, it can be shown that authorial integrity is unaffected by the ability of some writers to adopt differing intra-generic foci, or by changes in an author's writing style over time, or by authors writing for different journals, then it is possible to claim that it is helpful to consider the Victorian periodicals as a set of authorial *oeuvres.*

*Differing intra-generic foci as explanation for an author's separate groups of texts*
The texts of Bagehot (like those of Stephen and Mozley) seem to have aligned themselves at middling points at the intersection of different continua. In Bagehot's case, the individual texts plot of the 200 texts helps make it apparent that the foci for his two groups are somewhat variable (Figure 4.8 below). One group includes three of his articles from his 'Physics and Politics' series (Ba1, Ba4 and Ba5), and these articles share a somewhat polemical, somewhat collective focus. The other group includes his two literary articles (texts Ba3 and Ba7), which have a somewhat individual but still polemical focus; and a biographical review (text Ba6) and the famous article on *The First Edinburgh Reviewers* (Ba2) which share the collective/polemical focus.

Figure 4.8: Principal component analysis text plot
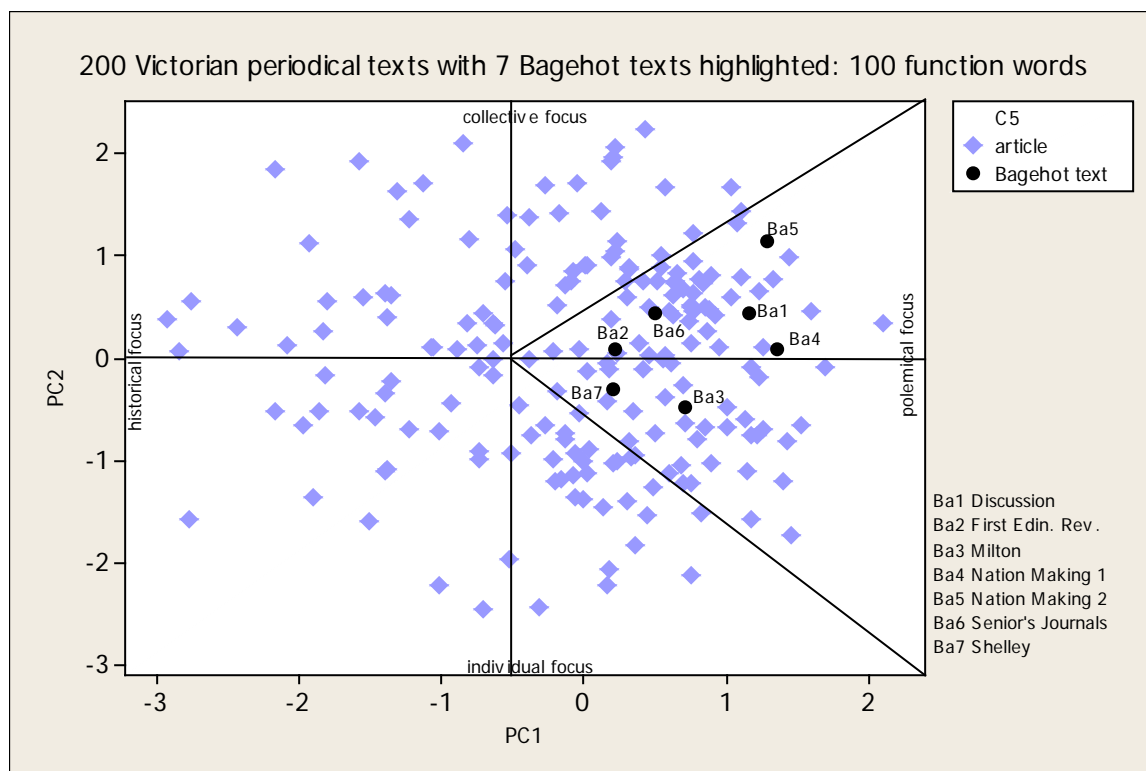


Mozley's texts also fall into groups which seem to divide on the basis of differing intra-generic foci. An examination of the location of her individual texts among the 200 texts show all her texts except one, *Récit d'un Soeur* (Mo8), appearing on the polemical side of the individual texts plot with her literary reviews sharing an individual focus and her social issues articles locating in the polemical focus area. One article, *Fiction as Educator* (Mo3), which shares both literary and social concern, is actually located at the midway point between the two continua. Though sharing the individual focus of the literary reviews, *Récit d'un Soeur* is located closer to the historical focus end of the first continuum than any of her other texts. Mozley suggested that readers might be forgiven for thinking *Récit* was a work of fiction, since it was highly unlikely that they had ever encountered real people like the subjects of this religious biography. As a biography, *Récit* required a more historical approach than the literary reviews.

Though it is harder to discern in the plots of individual texts with authorial group texts, it is still possible to see (Figure 4.9 below) that Stephen's literary group of texts ( S2, S4, S5, S7 and S9) tends towards an individual focus, while his other group (S1, S3, S6 and S8) tends towards a somewhat collective and somewhat polemical focus. The first group of texts is located in an area which is closer to the authors whose texts tended to be associated with a more individualized focus (Linton and Oliphant for example). The second group, on the other hand, is in an area near authors whose texts are associated with both a collective focus (Cecil and Huxley) and a polemical focus (Carlyle). An individualized focus was seen In Chapter 3 to be associated with texts which might be called 'literary reviews', since such texts generally focus quite closely on the author and the work under review. On the other hand, articles relating to personally held beliefs which require some explication, lend themselves to a somewhat polemical, somewhat collective focus.

Figure 4.9: Principal component analysis text plot
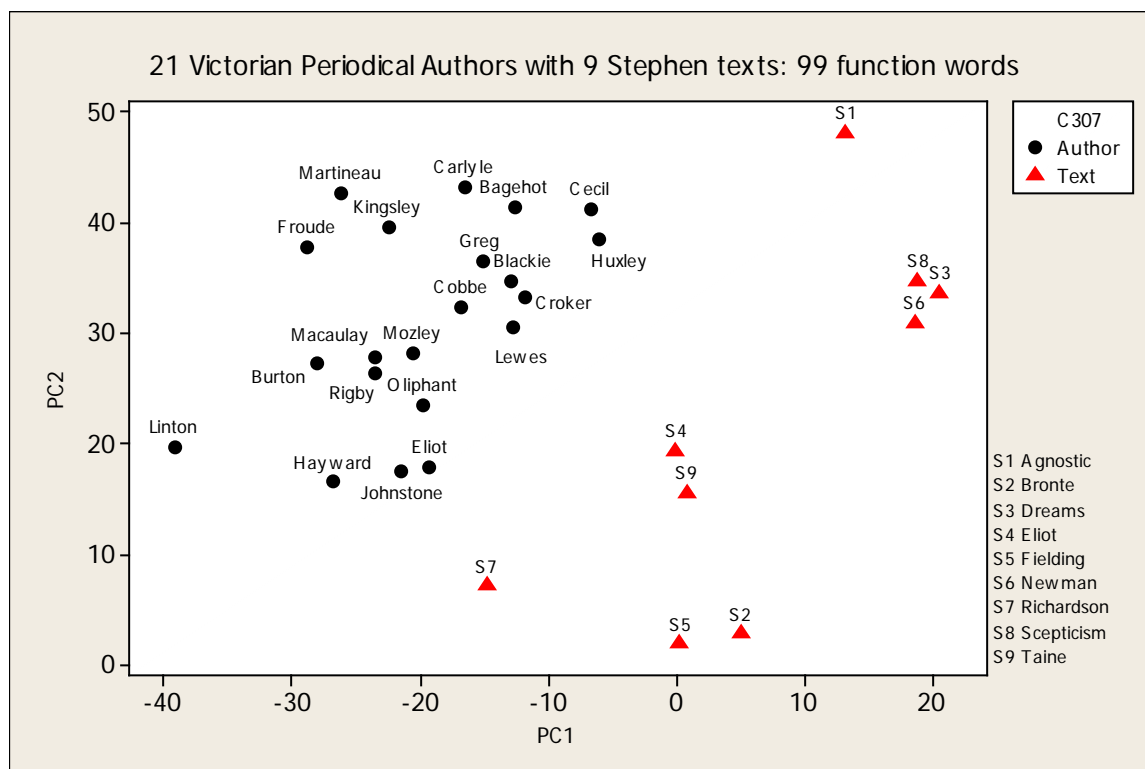
Macaulay's two groups align themselves along a single continuum:  it would appear he adopts a polemical focus for his contemporaries (Mc2, Mc6 and Mc7) and a historical one for his deceased subjects (Mc1, Mc3, Mc4 and Mc5).  Two quotations, one demolishing Sadler, the other Barère, demonstrate this difference.

Yet we must own that, though Mr Sadler has not risen to the level of Locke, he has done what was almost as difficult, if not as honourable - he has fallen below his own.  He is at best a bad writer.  His arrangement is an elaborate confusion.  His style has been constructed, with great care, in such a manner as to produce the least possible effect by means of the greatest possible number of words. ("Sadler's Refutation Refuted" 505)

If no class has taken the reputation of Barère under its patronage, the reason is plain:  Barère had not a single virtue, nor even the semblance of one. … Barère had no principles at all.  His character was equally destitute of natural and of acquired strength.  Neither in the commerce of life, nor in books, did we ever become acquainted with any mind so unstable, so utterly destitute of tone, so incapable of independent thought and earnest preference, so ready to take impressions and so ready to lose them. ("Barère's Memoirs" 277-78)

Though Macaulay makes short work of both subjects under discussion, the preponderance of present tense verb forms in the first passage makes the analysis of Sadler and his writings a matter of current concern, as indeed it was, since this article is Macaulay's refutation of Sadler's refutation of Macaulay's previous article on Sadler. The second passage, dealing with Barère, appears to have a more historical focus with many instances of past tense verb forms. It is interesting to observe however, that at the end of the article Macaulay attacks the contemporary compiler of the *Barère Memoirs* with a fervour indicative of current concern:

> By attempting to enshrine this Jacobin carrion, [M. Hippolyte Carnot] has forced us to gibbet it; and we venture to say that, from the eminence of infamy on which we have placed it, he will not easily take it down. (351)

The location of these two groups of texts along a single continuum of differing foci, can be seen in the plot of 200 texts below (Figure 4.10).

Figure 4.10:  Principal component analysis text plot
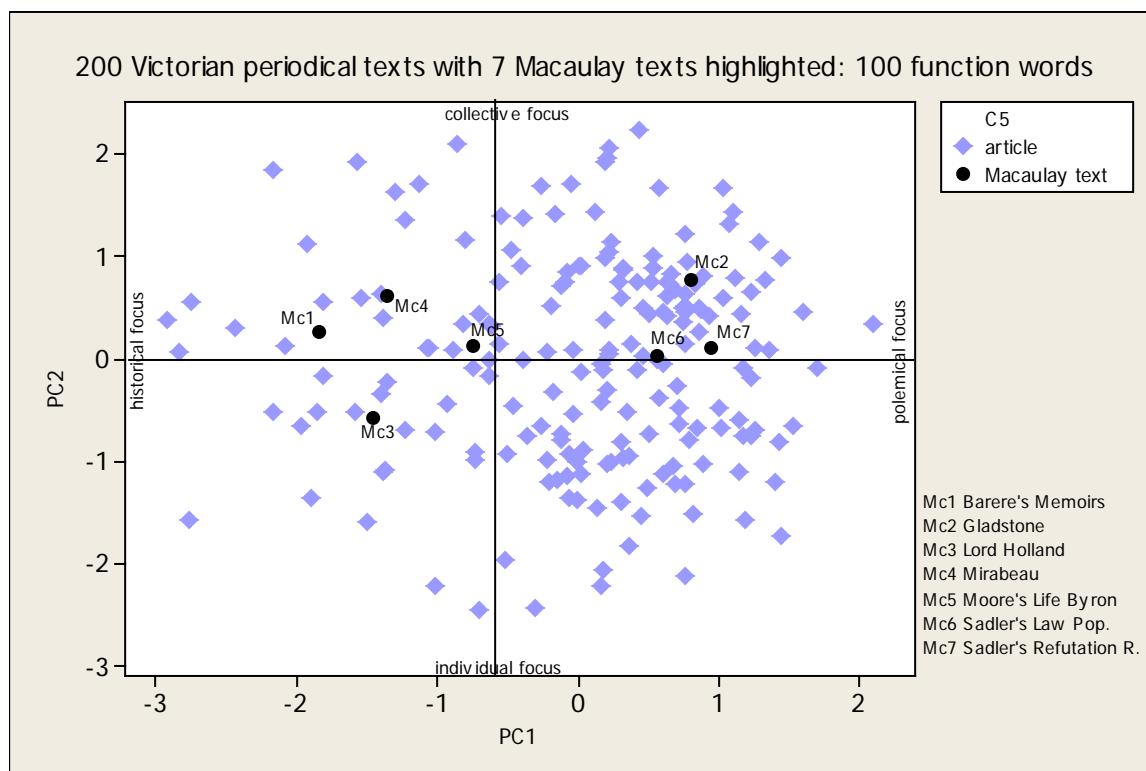


Hayward's two groups of texts, which were seen in Figure 4.6, align themselves along a single continuum in the plot of individual texts in the same way as Macaulay's do. In his case however, the line of texts starts at the western border and stops at the midway point where the two axes intersect. This would appear to confirm my earlier suggestion that the main difference between Hayward's two groups of texts, is the marked historical focus of the two border texts, which the five central texts lack.

In Rigby's case (Figure 4.11) it is possible to discern two main groups of texts: R2, R5, R9 and R10,  (early articles for the *Quarterly Review*) and R1, R3, R4, R6, R7, R8 and R11  (late articles for both the *Quarterly* and *Edinburgh* Reviews).  The Rigby texts for each journal have been coloured differently and

the proximity of two late texts (R1 and R8) written for the two different journals suggests that the main factor operating here is a change in her writing over time. A line has been drawn in the plot to separate the early texts from the late. The presence of her early literary review among the authorial groups is a matter of interest which will be discussed later.

Figure 4.11:  Principal component analysis text plot

[Rigby's *Quarterly Review* texts red and *Edinburgh Review* texts green]



*21 Victorian Periodical Authors with 11 Rigby texts: 99 function words*
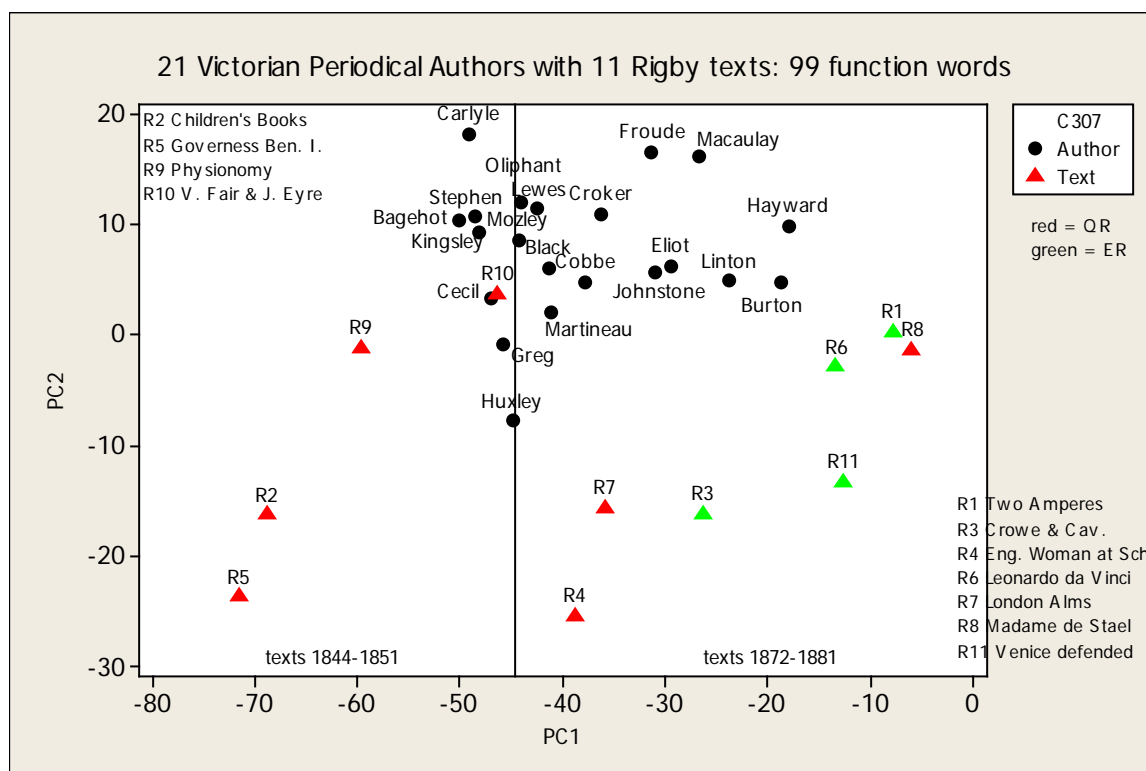
### Changes in an Author's style over time

In order to explore the difference between Rigby's two groups of texts, correlation tests were run on Rigby's articles against date, using the 100 most common function words as variables. The test revealed a number of significant (at the 0.005 level) and highly significant (at the 0.001 level) changes in the frequency of her use of some of these words. Over time, changes in her writing involved her having less resort to the first person plural pronouns (*we, us* and *our*); less use of the impersonal stylistic forms *it* and *there*; less use of the indefinite article

coupled with a greater use of the definite article; less use of the conjunctions *but, or, so* and *if;* less use of the negative forms *not* and *no;* and an increase in the use of the prepositions *by, on* and *at*. While there was a decrease in present tense verb forms and modals, there was an increase in the past tense forms *was* and *were*.

The sort of changes indicated by these changing preferences involve a movement away from the editorial first person plural usages; a movement away from the markers of a polemical stance (present tense verbs and modals, conjunctions, negative forms); a movement away from some of the markers of an impersonal style (*a, it,* and *there*) and a movement towards a more historical approach (past tense markers) and a more particularized focus (prepositions *by, on* and *at*). This would seem to tie in with Rigby's increasing involvement in the world of art, art history and travel following her marriage to Sir Charles Eastlake in 1849 (Mitchell, *DNB*).

In order to see if the methods of computational stylistics were able to detect an underlying authorial identity across these date-related styles, I first looked for a set of words which were used significantly differently by Rigby and the other Victorian writers. I then modified this word set by removing those words which the correlation tests showed had changed significantly in Rigby's usage over time. The remaining eighty words were then used in a principal component analysis test against a random selection of other Victorian authors' texts.

Clearly, Rigby's eleven texts show much more authorial cohesion in this plot (Figure 4.12), than they did in the earlier plot (Figure 4.11). Omission of the date related words from the Rigby marker set has been able to bring her previously separated texts together. The three texts in the south-east corner below Rigby's texts are the three Carlyle texts included in the selection, while the other outlying text in the mid-west section of the plot is Linton's "Literature Then and Now".

Figure 4.12:  Principal component analysis text plot



11 Rigby texts with other Victorian authors' texts: 80 Rigby date modified markers
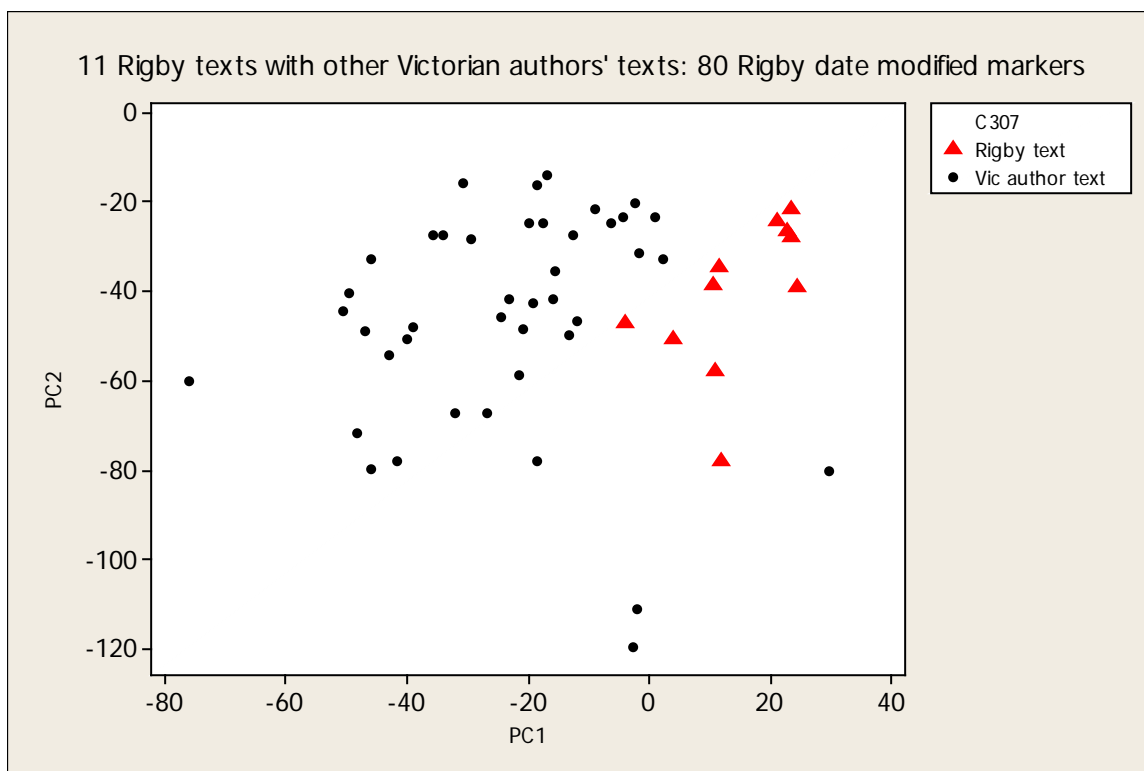
*Case 3*

*Authorial Grouping with Outlying Texts: Cobbe, Kingsley and Martineau*

Martineau's texts deal with matters of literary, social and American concern. Only her American articles are located on the historical side of the individual texts plot, while her articles of social and literary concern tend to blend the stylistic characteristics of two authorial foci – the collective and the polemical. Each of the American texts seems different from all the others. "The brewing of the American storm" (Ma1) exhibits a greater use of the past tense markers than is usual for Martineau, moving it close to historians such as Burton and Hayward. An examination of the article reveals that indeed this article is Martineau's personal historical account of her pre-civil war time in America and her knowledge of some key public figures.

> As it would be a serious falsification of history to say that the civil war was unnecessary, sudden, unexpected, and the like, it may be worth while to record what one person can testify to the contrary. Of the first generation of the public men of the republic, four (and I

believe no more) were living when I was in the United States, and I knew them all, more or less.  They were Madison, Gallatin, Chief Justice Marshall, and the venerable Bishop White (97-8).

Martineau's second American article, "The negro race in America," (Ma8) was mentioned in Chapter 3 as one of the texts which ranked highly on the collective focus continuum. Its particular combination of two foci (the collective and the historical) makes it different from "Brewing," with its solely historical focus, and the other articles with their collective and polemical focus.

All of Kingsley's texts are located on the polemical side of the individual texts plot, and he is frequently found to be a close neighbour of Carlyle. One text, however, "Women and Politics" (K9), seems different because of its combination of collective and polemical foci. The topic of this article, suggested by the book supposedly under review (Mill's *Subjection of Women*), lent itself to Kingsley's usual polemical flourishes, but also (as this extract from the conclusion shows) required something of a collective focus.

> Be all this as it may, every man is bound to bear in mind, that over this increasing multitude of 'spinsters', of women who are either self-supporting or desirous of so being, men have, by mere virtue of their sex, absolutely no rights at all. They are independent and self-supporting units of the State, owing to it exactly the same allegiance as, and neither more nor less than, men who have attained their majority.  They are favoured by no privilege, indulgence, or exceptional legislation from the State, and they ask none. They expect no protection from the State save that protection for life and property which every man, even the most valiant, expects, since the carrying of side-arms has gone out of fashion.  They prove themselves daily, whenever they have simple fair play, just as capable as men of not being a burden to the State.  They are in fact in exactly the same relation to the State as men. (561)

The texts of Cobbe generally fall into two groups, those of social concern and those of 'scientific' concern. All these texts share a polemical focus. Her biography of Mary Somerville, however, with its combination of past tense

markers with the feminine personal pronouns is different enough from all these others to be considered an 'isolate'. The marked historical focus of this text moves it away from her other texts with their interest in the here and now. Cobbe's biography joins a number of other texts on the 'historical focus' end of the first principal component continuum which happen to have a feminine referent. Indeed, nine of the first twelve texts at this end of the continuum, share this characteristic. See Table 4.3 below.

Table 4.3: Highly ranked texts on PC1 with female referents

| Author | PC1 rank | Referents |
|---|---|---|
| Hayward | 1, 8 | Venice, Martineau |
| Froude | 2 | St. Teresa |
| Linton | 3, 7, 11 | English women, Venice |
| Burton | 4, 5, | Venice, witches |
| Cobbe | 12 | Mary Somerville |

## Case 4

*Non-uniformity: Blackie, Froude, Greg, Johnstone, Lewes and Linton*

The marked variety of Froude's individual texts (seen in Figure 4.3) has already been noted. His individual texts were seen to spread widely across the plot forcing the authorial groups into a tight cluster in one corner. Three of the texts ("St. Teresa" (F10), "Spinoza" (F9) and "Reynard the Fox" (F6) assumed outlier positions on three different borders of the plot, each of these texts being marked by a different intra-generic focus: historical, polemical and individual/polemical, respectively. A number of his other texts were seen to be less extreme in their stylistic characteristics and accordingly closer to the authorial groups texts.

Whereas Froude's individual texts all contrasted with the authorial groups texts, a number of Lewes' individual texts actually share a location with one of the authorial groups (Le1 with Cobbe, Le10 with Stephen and Le11 with Mozley). Lewes' three articles on literary style form a cohesive group (Le4, Le8 and Le9) of their own on the southern border, while his "Jane Eyre" (Le3) and his "Spinoza" (Le7) are outliers on two other borders, declaring their extreme

difference from each other. Three of Lewes' reviews (those written for quarterly magazines, Le1, Le6 and Le11, form a close-knit group at the top edge of the authorial groups while his two semi-scientific essays (on phrenology and uncivilized man) written for *Blackwood's* (Le5 and Le10) are neighbours at the lower edge of the authorial groups texts. The final text, Le2, his "Jane Austen", is neighbourless in 'no man's land'. This extraordinary variability is seen in Figure 4.13 below.

Figure 4.13 Principal component analysis text plot
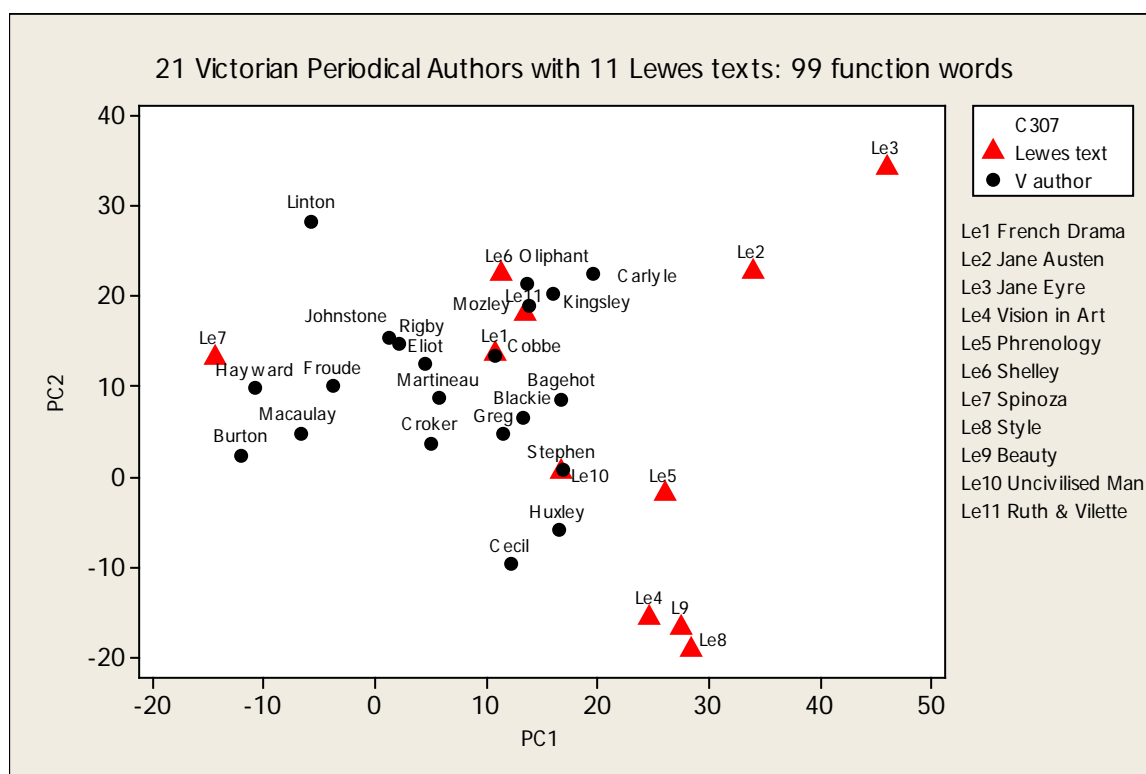


*Does authorship transcend text variation?*

The sort of text spread we see in Figure 4.13 might suggest that in the case of Lewes and the other authors whose texts lack consistency, the concept of a highly individualized authorial style is less meaningful. However, this series of tests was specifically designed to allow the individual texts of each author the freedom to locate, each according to its relative use of an unselected set of the most common function words of the text collection.

Lewes' versatility has been remarked on by a number of commentators. Laurel Brake, for example, says of him: "The variety of … periodicals to which he contributed in his life as a journalist and critic is prodigious, as is his variation of tone and seriousness" ("Literary" 99). Nevertheless, beneath this impressive variability was an authorial distinctiveness that was apparently evident to an astute contemporary critic. In his "revelatory pieces on the periodicals in *The Critic* in 1852" Francis Espinasse detected "the sparkles of an unmistakeable and a unique vivacity" in an anonymous *Blackwoods* article. He continues: "The reader has already guessed the name, and with a cordial smile of welcome on his lip already murmurs fondly: 'Once more the omnipresent LEWES!'" (Brake, "Literary" 111).  This "unmistakable" authorial identity is detectable in a principal component test that was carried out on exactly the same data entries (twenty-one authorial groups and eleven Lewes texts), but this time using Lewes 'marker' words.

Figure 4.14: Principal component analysis text plot
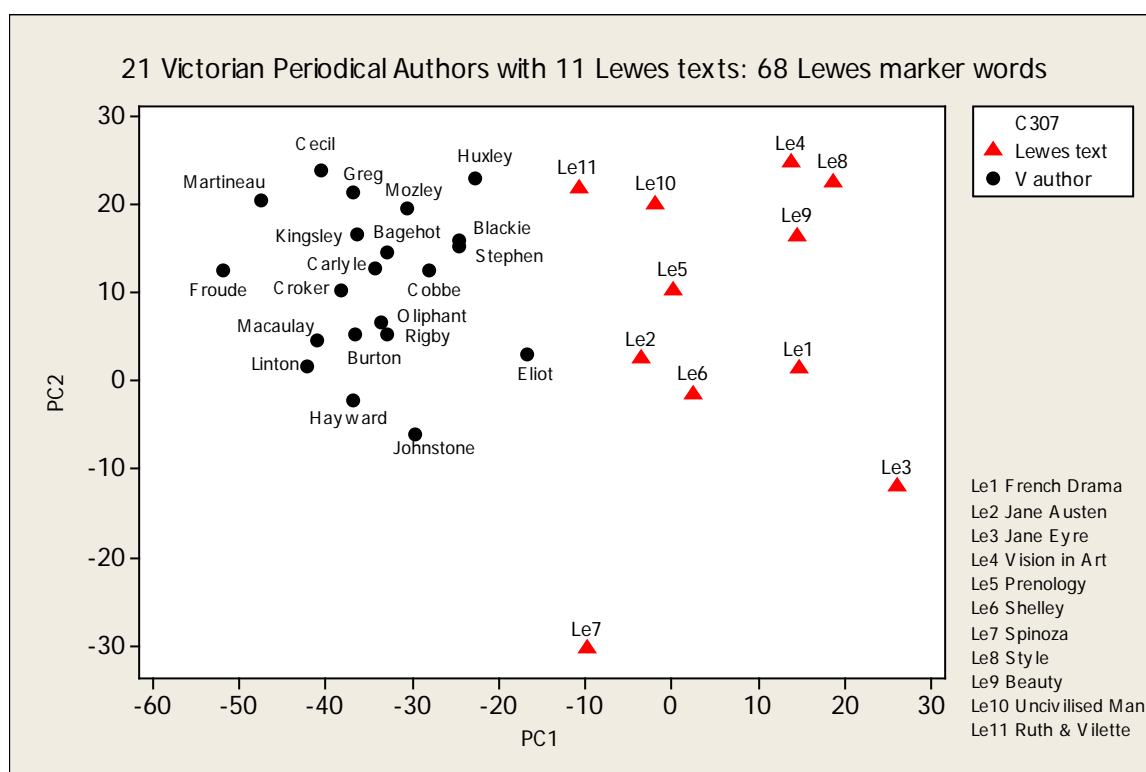
These 'marker' words (selected by means of a distribution test of the 200 most common function words of the texts collection) are the sixty-eight words which Lewes uses significantly more or less often than his fellow authors. These words belong to an underlying authorial pattern of preferences and non-preferences of function word usage, which is systematic enough to encompass Lewes' stylistic distinctiveness. The result of this second principal component analysis test, seen in Figure 4.14, shows that the high level of variability of Lewes' texts displayed in Figure 4.13 has been replaced by a level of consistency strong enough to confirm an authorial signature for these texts. The most southerly Lewes text (Le7), a little way from the others, is his "Spinoza", which is a much more historical text[36] than is usual for him.

*Intra-generic focus range as explanation for authorial text variability*
An examination of the individual texts plots for each of the authors of the fourth scenario shows their texts spreading across at least three of the four quadrants of the plot. For Greg and Blackie a good deal of this variability is found in texts located around the central axes, their texts showing a wide range of moderate differentiation. For example, the text sample of each of these two authors includes only one historical review – Blackie's "Colonel Mitchell's Napoleon" (Bl2) and Greg's "Alison's History" (G1). In both instances, it is this text which is found in the historical focus quadrant of the individual texts plot; about half way along the axis for Blackie and quite close to the centre point for Greg. Neither of these authors seems given to extremes. For Froude, Johnstone, and Lewes, part of the variability occurs in the central area of the plot while part is associated with outlying texts. Froude's three articles on South Africa all exhibit marked collective focus characteristics, while his "Spinoza" (F9) is markedly polemical and his "St. Teresa" (F10) markedly historical. His other articles are more centrally located. Johnstone's review of Mackintosh's history seems marked by a historical focus,

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[36] In the plot of 200 texts Lewes' Spinoza is the only one of his eleven articles located in the 'historical focus' quadrant.

while her "Light Reading for June" (J3) shares a somewhat individual, somewhat historical focus. Her article on "Periodical Literature" (J6) is found in the collective focus quadrant, while her reviews of Edgeworth and Lytton are found in the individual focus quadrant. Her two essays of social concern (on marriage and suitable employment for genteel young men) are close to the centre of the plot with no obvious focus.

As I showed with Lewes, it is possible with the use of 'marker' words to find an underlying authorial style which generally transcends this textual variability. Except for Froude, whose texts were seen in Figure 4.3 to show complete separation from the authorial groups simply on the basis of the 99 unselected most common function words, the individual texts of the other authors in this group did not. Like Lewes, two or three texts of these authors (Blackie, Greg and Johnstone) joined the authorial groups while their other texts were located either singly or in groups in other widely spread areas of the plot. For these authors then, it was necessary to find 'marker' words which distinguished each of them from the remaining twenty-one authors[37], and to rerun the test using the author-distinctive words. In each instance an authorial signature was established.

*Linton – authorial groups or non-uniform?*

Of all the authors tested, Linton was the hardest to assign to one of the four scenario groups. In the plot of her individual texts with the twenty-one authorial groups, her texts were located in two diagonally opposed quadrants, one of which had outliers on two different borders, the other a text on the central axis. Although there appear to be three authorial clusters concerned with literary or biographical subjects, matters of social concern and feminine history issues, two of these groups are so different from the main group, that they forced it and the third group into a tight cluster. While her texts on social matters and feminine history issues are extreme in their difference from the other authors, her two early reviews ("Alfred de Musset" (Li7) and "Daniele Manin" (Li5) are not too

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[37] 56 words were found to be distinctive for Blackie; 74 for Greg; and 51 for Johnstone.

dissimilar. This Linton characteristic of writing texts which are extremely unlike those of other authors, as well as texts which blend in with the crowd can be seen in Figure 4.15 below. I decided in the light of these complications to group her with the case 4, non-uniform authors.

Figure 4.15  Principal component analysis text plot
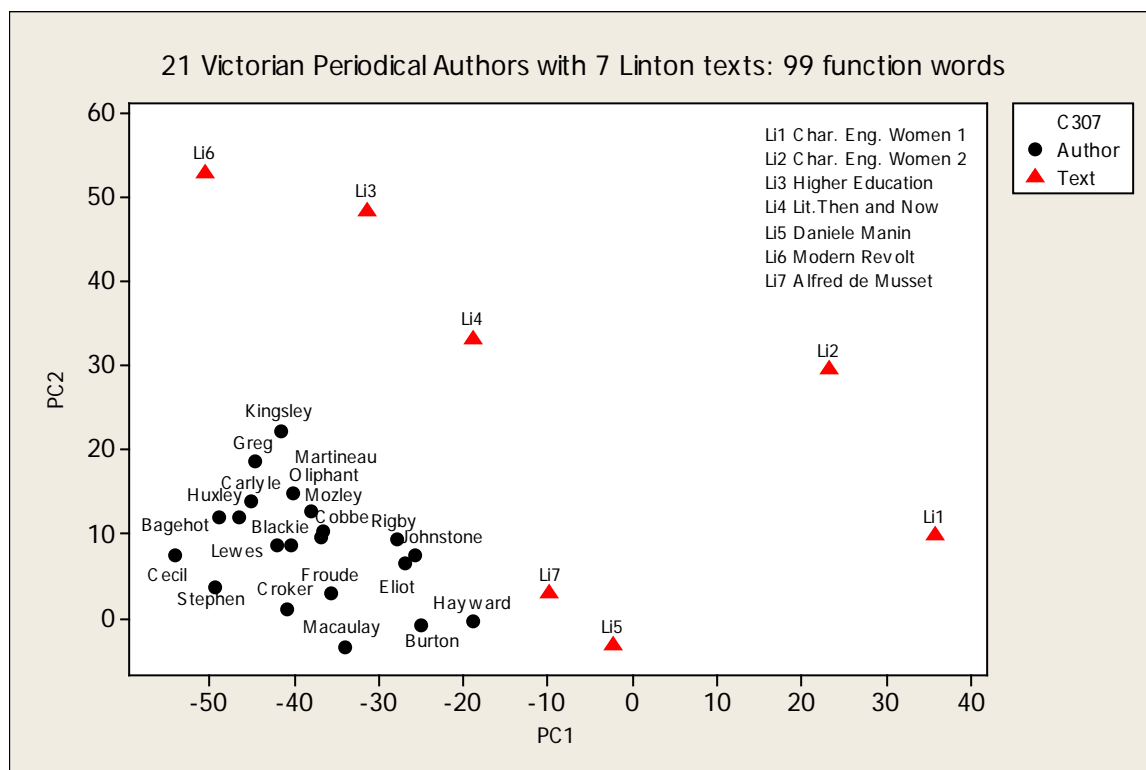


The early literary or biographical reviews[38] by Linton, "De Musset" and "Manin" and Martineau (two articles on Scott for *Tait's*) and a rare literary review by Rigby, her famous review of "Vanity Fair and Jane Eyre", all find locations within or close to the authorial groups. This is interesting – in light of the fact, that all their other articles (later or non-review) adopt their own author specific location. It is almost as if – in their early review articles – they were closely following a

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[38] Of the texts in my text set: Linton's 2 literary articles were written in 1857 while her other articles were written between 1870 and 1890. Martineau's 2 literary articles were written in 1832 and 1833 while her other articles were written between 1857 and 1865.  Rigby's review ("Vanity Fair and Jane Eyre") was written in 1848 – very much earlier than her later articles in the text collection, which were written between 1872 and 1881.

model of 'the archetypical review article', and that having proved their ability to write a review article which blended with the crowd, they were subsequently free to pursue their own ideas and their own style of writing. As Fraser, Green and Johnston observed "the work of women for the press was largely obscured by the cultural identification of the 'journalist' as a signifier of masculinity" (6).

All three of these women seem to have found a way to enter and to blend successfully with the male-dominated world of journal writing, as the following commentators' remarks reveal. Bevington says Linton's "first contributions to the Saturday Review … were reviews of popular sensations novels, which she flayed with a ferocity hardly equaled by her male colleagues" (34); Easley speaks of Martineau often adopting "a male persona in her essays" "since the narrative voice of many reform-minded periodicals was assumed to be masculine" (38); and Mitchell points out that Rigby, who believed "Jane Eyre" was written by a man "on the basis of errors in details about dress and cuisine which (she argued) no woman would have made," "was obliged to attribute [this insight] to an imaginary female friend" "as she was herself writing as a man" (*DNB*).

In the plot of 200 individual texts, however, Linton's three groups (seen in Figure 4.13 above) experienced a change of membership, with her biographical text, "Daniele Manin" (Li5)*,* joining the two articles on feminine history. Although the article on Manin shares the intensely personal focus of "Alfred de Musset" (Li7) - she says of Manin: "Another of the great men of the present generation has passed away; leaving us, as so many others have done, but the record of a noble endeavour and an unfulfilled task" (612) - it also shares some of the characteristics of her feminine histories as she speaks of Venice: "Never in the history of the world was there a more heroic, a more sublime defence than that of Venice under Daniele Manin" (618). This plot also shows that two articles on social issues, "Higher Education" (Li3) and "The Modern Revolt" (Li6) share a somewhat polemical, somewhat collective focus, while her article entitled "Literature Then and Now" (Li4) is not marked by any particular focus, being

located at the intersection of the two central axes. Perhaps Andrea Broomfield is correct in her assessment of Linton and her journalism. Broomfield suggests that when Linton's proto-feminist novel, *Realities*, failed to make her famous, she "worked hard to establish herself as the most formidable critic of Victorian womanhood, because she was determined to make the journalism profession work to her benefit" and anti-feminism happened to be "a particularly salient theme" which "generated the audience demand and editorial respect she needed" (267-8). If indeed Linton were writing 'on demand' - now blending with the crowd, now making waves to keep a controversial story line going - it would explain the apparent contradictions I encountered in her writing style.

*Summation*

The tests of this chapter have demonstrated the validity of the notion that the 200 texts of my Victorian periodical text collection can generally be considered as constituting a set of authorial *oeuvres*. Although the 200 texts belong to a single genre, it was discovered in Chapter 3 that a great deal of individual text variability could be described in terms of differing intra-generic foci. This concept allowed the mapping of the texts along two intersecting continua, and provided an explanation for why the texts of some authors showed variation while those of other authors did not.

The tests revealed that four authors, either habitually or occasionally, wrote texts so extremely different from their fellow-authors that all the usual differences between the other authors were reduced to relative insignificance, causing them to cluster together in one corner of the plot. All of Carlyle's texts are extremely different from all the other authors and could all be described as being characterized by a marked polemical focus. Kingsley's texts are different from all the other authors, except Carlyle, with three of his individual texts forming a circle around the Carlyle authorial group. Kingsley's habitual intra-generic focus is also markedly polemical, at times combining with a more individual focus, at other times with a more collective one. In Froude's case, it is the presence of texts at

each end of the PC1 continuum and texts near one end of the PC2 continuum which help make his individual texts so different from his fellow authors' group texts. A number of his other texts do not display such extreme stylistic characterization. Linton's two texts on the characteristics of English women throughout the ages proved extremely different from the authorial groups entries, which were forced into a corner by virtue of this difference. Yet two of Linton's early texts were not unlike the authorial groups entries, finding a location at the edge of the group.

None of the individual texts of the remaining authors was different enough from the main group of authorial texts to force it 'into a corner', as did the four authors just mentioned. Most of them exhibited some degree of authorial based separation from the main group – either in a single cluster or in two (or occasionally three) groups. The reason for some authors' texts forming separate clusters was found to be related to the operation of differing intra-generic foci for different types of article, or in the case of Rigby, some changes in her writing style over time. Some authors demonstrated the ability to write a text or texts which blended with the main group, while their other texts were separate.

In every instance, whether their individual texts were seen to exhibit variability or consistency, moderation or extremities, the writing style of each of these authors was shown to be distinctive. Even an author as versatile as Lewes, who seemed able to avail himself of a variety of intra-generic approaches to best suit the variety of subjects he wrote on, was seen (with the use of marker words) to have an underlying individual style which separated his texts from those of his contemporaries. This individual style is the end product of a system of personal preferences and the largely unconscious habit of using a particular set of function words more often than other authors and another set less often.

**Conclusion**

This chapter explored the importance of authorship, asking whether the largely anonymous mass of Victorian periodical articles could nevertheless be properly considered as a set of authorial *oeuvres*. It explored the interplay between authorial groups and individual texts in order to highlight each author's consistency or variability across a number of texts. Authorship immediately emerged as an important and significant factor in the groupings of most authors' texts. Explanations were sought as to why the texts of some authors were variable, why an occasional text declared its difference and why texts of other authors formed a couple of different groups. Authorial integrity was seen in most instances to transcend the sort of text variability created by an author's ability to adopt differing authorial stances for the presentation of different subjects, or in the case of Rigby, against changes across time.

I was careful in this chapter to point to the similarities yet differences which emerged between the tests of Chapter 3 on the 200 individual texts and the tests of this chapter on the same 200 texts now viewed as twenty-two authorial groups, or twenty-one authorial groups in combination with successive authors' individual texts. The reality seems to be that the interrelationships of oeuvre and intra-generics are complex and varied. Although I was able to conclude that intra-generic focus emerged in Chapter 3 as a more crucial factor in the distribution of the 200 texts than did authorship, in fact a principal component analysis test of a 200 text multi-author set would have been unlikely to detect author differences. Nevertheless, the finding that inter-generic focus was crucial in the distribution of texts on both principal components is real and important. Equally, there is no doubt in this chapter that an authorial signature can be assigned to the individual texts of each of the twenty-two authors, although it is difficult to weigh the importance of this factor relative to the other factors that are operating.

In this exploration of authorship and consistency or variation across a number of texts, I did not pursue the question of the importance of house-style and its

possible influence on an author's style. The question of journal difference as a possible explanation for Rigby's and Stephen's two authorial clusters was raised and set aside. In most discussions of the Victorian periodicals, this question of house-style comes up, usually in the context of questioning the role of the author in the face of house policy and editorial control. Brake for example, notes the complexity of the issue: "The question of the more positive relation between the styles of any single critic and the periodicals in which he or she published is more complex. It is necessarily involved with a journal's house-style and the effort the author makes to meet it" (Brake, "Literary" 101). The nature and the significance of house-style and its effect on authorial style will be explored in the next chapter.

# Chapter 5: Change your Journal – Change your Style?

*Just what is House Style? Does it really exist?*

When the notion of 'house style' is evoked, it seems to entail a broad general reference to any number of features which might constitute the particular distinctiveness of one journal as against other journals, including its physical appearance, the tone and quality of its articles and its collective ethos. Some aspects of this broadly conceived concept are assumed to be able to be adopted by writers and used while they are writing for that journal, and set aside when they cease writing for it. Bagehot, in 1867, neatly encapsulates these assumptions in the first of his "Physics and Politics" series articles for *The Fortnightly Review.*

> Everyone who has written in more than one newspaper knows how invariably his style catches the tone of each paper while he is writing for it, and changes to the tone of another when in turn he begins to write for that. (24-25)

Such a conception of 'style' is rather different from the individual theory of style which underlies much of the work in computational stylistics as it seeks to describe the distinctiveness of a writer's style in more empirical terms. In this thesis, I have been analyzing those aspects of a writer's 'style' which are revealed by the relative frequency of use of a large number of function words

## *Journals' House Style – contemporary and modern notions*

Both contemporary and modern commentators have argued that the anonymity of periodical journalism brought about a Foucault-like "distinction between the insignificant speech acts of an individual writer and the highly significant author-function which" could "only be performed effectively by and through the discursive focus of a journal's name and reputation" (Liddle 53-4). In the last chapter, I argued that the periodicals could justifiably be considered as a set of authorial *oeuvres*, since it was possible to identify the distinctive stylistic

characteristics of the various authors on the basis of the relative frequency of their use of particular sets of common function words. Laurel Brake speaks of the '*oeuvre*' notion of authorship as being a "vertical category" where meaning comes from "placing work in a succession of other works." "Viewing work in its periodical context" however, she says, offers "a horizontal slice which opens up the possibilities of viewing work outside the framework of authorship" ("Writing" 55). Each viewpoint has validity.

Walter Bagehot, writing in the 1860s, sought an explanation for the corporate identity which gave each journal its distinctive 'tone'. The answer, he said, according to an editor of *The Times*, as to why all its articles sounded the same, was that the rest imitate the best. Bagehot continues "And this is doubtless the true account of the manner in which a certain trade mark, a curious and indefinable unity, settles on every newspaper" ("Physics and Politics" 65). The next step in the process, he says, is that the "writer for a journal … gives the readers of the journal the sort of words and the sort of thoughts they are used to." Further, he argues that once the style of a periodical is formed and the subscribers are happy with it, editors use a selection process to ensure the readers get what they want ("Physics and Politics" 65).

Bevington contends that this editorial selection process worked so well for the *Saturday Review* that people were able to refer to what the *Saturday* said, rather than what a particular author said in the *Saturday* (34). Of all the journals, the *Saturday* seemed to have developed "a special identity and tone which … began to take on an independent and imposing identity of its own" (Kent, "Higher" 192). Leslie Stephen spoke of the way he "unconsciously adopted the tone" of his colleagues when writing for the *Saturday*, while John Morley spoke of the *Saturday* as having a spirit which "enters into you when you take up your pen to write for it" (Kent, Higher, 192). Morley went on to condemn this "abnegation of agency by journalists" (Liddle 42) and joined a number of pro-signature

advocates in believing that "the solution to the problem was to return individual identity to journalism through a voluntary system of signed articles" (Liddle 42).

A modern commentator, Laurel Brake, lists the factors which she believes could be controlled by the editorial policy of different journals:

> The subject and length of an article, its style and tone, the audience to which it is addressed, whether it is anonymous or signed, and its political and theological assumptions are aspects open to direct control by the character of the journal and its editor(s). ("Literary" 97-8)

Brake also identifies other factors which may be relevant in assessing the extent to which journals were able to exercise control over the output of their writers. Money, she argues, was important, and could certainly tempt writers to overcome a personal ideology to adopt that of a high-paying journal. On the other hand, she says, "writing without pay suggests a commitment to the periodical's fortunes and politics which is likely to be reflected in the article" ("Literary" 98). Equally, journalists pressed for money might recycle articles on the same subject in competing journals.

Length is one of the factors Brake identifies as relevant to journal identity. In the early days of periodical writing dominated by the quarterlies, length was equated with seriousness, and some of the early monthlies adopted this policy. There is no doubt that the lengthier review allowed writers the liberty of indulging in "effusions, surveys, moral, philosophical and theological speculations" ("Literary" 101) not to mention extremely long quotations. The length limitation imposed by the post mid-century monthlies led to more focused and less diffuse articles, while articles for weeklies like the *Saturday Review* were perforce succinct.

There is a further consideration which needs to be taken into account in any attempt to assess the effect of house style on authorial style: namely, the extent to which editors influenced or altered writers' original contributions. While agreeing that editors did at times alter articles, Brake believes that writers themselves were generally able to pitch an article "to the style, tone and taste of

the periodical for which it was intended" ("Literary" 104). This belief in the ability of writers to adapt their approach to suit particular periodicals echoes Bagehot's 1867 remarks.

Editors could choose to employ only those writers who were able to comply with their expectations. Bevington relates how Douglas Cook, the first editor of the *Saturday*, set a task for Eliza Lynn Linton to see if she possessed "the qualities he demanded of his writers: - grasp of subject, ability to take a line consistent with editorial policy, and mastery of a style, the distinguishing marks of which were a feeling of authority and clear, hard, masculine economy and directness" (14).  Finally, there is the editor's and writer's awareness of the audience of the periodical and the ultimate need to keep it loyal, entertained and interested.

These commonly held beliefs about the effect of house style on the style of authors are suggestive of a more conscious level of stylistic choice than that understood by practitioners of computational stylistics. As I mentioned in Chapter 1, it is assumed in computational stylistics "that authors have an unconscious aspect to their style, an aspect which cannot consciously be manipulated but which possesses features which are quantifiable and which may be distinctive" (Holmes, "Evolution" 111).  Researchers in the field maintain that the relative frequencies of 'function words' constitute a set of readily quantifiable features which distinguish between the texts of different authors. It is argued that the word frequencies of these very common words "are largely outside the author's conscious control, because they result from habits that are stable enough to create a verbal fingerprint" (Hoover, "Corpus" 175), and that a writer's style is "individual and generally stable" and therefore amenable to stylometric analysis (Milic, "Progress" 393).  On the other hand almost everyone who speaks about house style assumes that this 'style' is something which a writer can master or adapt to suit a particular set of requirements. Can this notion of an authorial writing style which is distinctive and personal be reconciled with claims of a nineteenth-century proprietor, A.J.B. Beresford Hope, that journalists are "the

persona acting at that time on behalf and in the name of the incorporate paper" their writings really being "those of a corporate body" (Liddle 54)?

It is possible to regard most of the factors on Brake's list as 'extrinsic' to the writer's task: subject, article length, tone, assumed audience and broad political or theological approach could all be part of the brief assigned to the writer. Against this one might argue that once the writing starts, the author's own style begins to exert an influence – especially those aspects of it which are 'largely unconscious'. In this view, consistent differences in the relative use and non-use of a number of very common function words come to reflect (as the writing proceeds) the "syntactic and deictic habits" (Burrows and Craig, "Lyrical" 64) of particular authors. The question of whether or not this 'structural' dimension of style is uniquely authorial and not subject to the dictates of house style, is one which will be explored in this chapter. One way of investigating this question might be to discover which factor proved to be more significant across the periodical articles – authorship or journal identity. I conducted an empirical investigation to find out, using my text collection of 200 Victorian periodicals which consists of 99 quarterly and 101 monthly articles and my *Saturday Review* text collection which consists of 159 weekly articles.

*House Style versus Author*

For the test, I selected only those authors from the set who had written at least two articles in two different Journals. I was able to use the three major quarterly journals, four monthlies and the *Saturday Review* weekly. There were 166 articles in eight Journals written by sixteen authors which qualified (See Table 5.1 below). The top 150 function words of the text collection were used to run a cluster analysis test of the 166 texts. The SPSS Hierarchical Cluster Analysis program was used for this test because it produces a proximity matrix, which shows the closest match for each text from among the text set.

Table 5.1: 16 Authors' texts across 8 Journals

| Code | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Journal | Edinburgh Review | Quarterly Review | Westminster Review | Blackwood's Edin. Magazine |
| Blackie | | | | 2 |
| Burton | 3 | | 3 | |
| Carlyle | 4 | | 3 | |
| Cecil | | 6 | | |
| Cobbe | | 2 | | |
| Eliot | | | 10 | |
| Froude | | 3 | 4 | |
| Greg | 2 | 4 | 2 | |
| Hayward | 4 | 3 | | |
| Huxley | | | 2 | |
| Lewes | | | 2 | 3 |
| Linton | | | | |
| Martineau | 3 | | | |
| Mozley | | | | 6 |
| Oliphant | 3 | | | 10 |
| Rigby | 4 | 7 | | |
| Totals | 23 | 25 | 26 | 21 |

| Code | 5 | 6 | 7 | 8 |
|---|---|---|---|---|
| Journal | Fortnightly Review | Fraser's Magazine | Tait's Edinburgh Magazine | Saturday Review |
| Blackie | | | 7 | |
| Burton | | | 7 | |
| Carlyle | | 2 | | |
| Cecil | | | | 10 |
| Cobbe | | 3 | | |
| Eliot | | 2 | | 4 |
| Froude | 2 | | | |
| Greg | | | | |
| Hayward | | | | |
| Huxley | 2 | | | |
| Lewes | 4 | | | |
| Linton | 4 | 2 | | 10 |
| Martineau | | | 2 | |
| Mozley | | | | 10 |
| Oliphant | | | | |
| Rigby | | | | |
| Totals | 12 | 9 | 16 | 34 |

The idea of the test was to calculate how often you would expect one of the 166 texts to match with another text by the same author and, how often you would expect one of the 166 texts to match with another text from the same journal, and to compare these random expectation results with the actual cluster analysis test results. Normalised counts of the 150 function word variables were obtained for each text and "the sum of squared differences between these counts" was used "as the measure of similarity or dissimilarity" between texts (Craig, "Is the Author" 121). The proximity matrix was used to find the closest match for each text from among the text set. Counts were then made of how many texts found a match with a text by the same author, and how many texts from a particular journal found a match with a text from the same journal. The results are seen below.

Table 5.2: Author versus Journal: closest matches for 166 texts

Journal matches

| Code | Journal | N-1 | matches | score | average |
|------|---------|-----|---------|-------|---------|
| 1 | Edinburgh Review | 22 | 16 | 119 | 80.2 |
| 2 | Quarterly Review | 24 | 16 | 109 | |
| 3 | Westminster Review | 25 | 11 | 71.6 | |
| 4 | Blackwood's Ed. Mag. | 20 | 11 | 89.75 | |
| 5 | Fortnightly Review | 11 | 5 | 74 | |
| 6 | Fraser's Magazine | 8 | 2 | 40.25 | |
| 7 | Tait's Edin. Magazine | 15 | 5 | 54 | |
| 8 | Saturday Review | 33 | 17 | 84 | |

Author matches

| Code | Author | N-1 | matches | score | average |
|------|--------|-----|---------|-------|---------|
| 1 | Blackie | 8 | 2 | 40.25 | 106.827 |
| 2 | Burton | 12 | 9 | 122.75 | |
| 3 | Cecil | 15 | 12 | 131 | |
| 4 | Eliot | 15 | 9 | 98 | |
| 5 | Lewes | 8 | 4 | 81.5 | |
| 6 | Carlyle | 8 | 9 | 184.63 | |
| 7 | Greg | 7 | 5 | 116.86 | |
| 8 | Froude | 8 | 6 | 122.75 | |
| 9 | Cobbe | 4 | 0 | -1 | |
| 10 | Hayward | 6 | 4 | 109 | |
| 11 | Huxley | 3 | 2 | 109 | |
| 12 | Linton | 15 | 9 | 98 | |
| 13 | Martineau | 4 | 3 | 122.75 | |
| 14 | Mozley | 15 | 13 | 142 | |
| 15 | Oliphant | 12 | 11 | 150.25 | |
| 16 | Rigby | 10 | 5 | 81.5 | |

The two sets of results (for author and journal matches) were calculated by working out an expected number of matches in each category based on a random distribution. Leaving the article being matched out of the calculation, if the author's other articles were one tenth of the total number of articles, then the expected match would be one chance in ten. A normalized score for each author and each journal was calculated by dividing the difference between the actual result and the random expectation by the random expectation. The average of these two sets of scores (106.827 for authors and 80.2 for journals) reveals that authorship is a considerably stronger factor in accounting for similarities between texts than is journal identity. Journal identity, nevertheless, accounted for some text similarities and the extent of its influence requires further investigation.

The idea of particular journals being associated with particular ideological groups had its origins with the three major quarterlies; it is here, therefore, that I will begin looking for the influence of house style.

### *House Style and the Quarterlies*

As the name suggests, quarterly publications were intended to appear four times a year. The early nineteenth century was dominated by the quarterlies, and they continued production throughout the entire century. However, they gradually lost pre-eminence during the second half of the century as the "more progressive monthly reviews" (Mason 281) started to do well in the readership stakes. The system of review writing, begun by the *Edinburgh Review* in 1802, was adopted by other quarterlies, notably, by *The Quarterly Review* in 1809 and *The Westminster Review* in 1824. Most commentators note the political affiliation of these three quarterlies: namely, the Whig association of *The Edinburgh*, the Tory connection of *The Quarterly* and the Benthamite or Radical bent of *The Westminster*, but insist that none of the journals was a mere mouthpiece for any political party. Houghton, for example, finds "more free play of mind, more currents of independent thought, in the sectarian journals" ("Periodical", 11) than you would have expected from journals created solely on party lines.

*The Edinburgh*

The *Edinburgh Review,* with its Whig associations, commenced publication in 1802 and was an immediate run-away success. Henry Cockburn, a friend of the first editor Francis Jeffrey, described the effect of the publication of the first volume as 'electrical'. It was, he said "an entire and instant change of everything that the public had been accustomed to in that sort of composition … its talent, its spirit, its writing, its independence were all new" (qtd. *Wellesley* article on *Edinburgh Review*). Instead of providing "little more than abstracts of all current publications" (Clive 115), the founders of the *Edinburgh* decided to choose fewer and better works in all fields of interest to review. Contributors were encouraged to emphasize their own opinions and to take "large and original views of all the important questions to which these works might relate" (*Wellesley* article on *Edinburgh Review*).

The independence of the new journal was due to the fact that critics writing for the *Edinburgh Review* were to receive higher remuneration than had ever been paid to writers, and that the editor was allowed to be totally independent from the booksellers (Clive 117-8).  The attractive rate of pay attracted better writers, whilst the policy of anonymity allowed eminent and professional persons to contribute articles without jeopardizing their professional integrity. Because of the quarterly appearance of the journal and the smaller number of books under notice, the length of the articles was allowed to increase, thus making room for more authorial input.

In 1855, just over fifty years after the *Edinburgh* began publication, Bagehot was able to comment on the fact that the "system" of "essay-like criticism", the presentation of "large topics of suitable views for sensible persons," begun by the *Edinburgh Review*, had replaced the more scholarly writings of the past with their systematic arguments, regular discussion and completeness ("First Edinburgh Reviewers" 313). As Mason observes, the essay-length article was well suited to

the conditions of the nineteenth century; the new, well-educated middle-class reader was eager for guidelines in an age of expanding scientific knowledge, religious doubt and the approach of democracy (281ff). Bagehot also notes another advantage of the genre. Whereas scholars and scholarly theses are of necessity somewhat few in number, he says, "many able men" can "give themselves up to" review writing and they may write on any topic that takes their fancy ("First Edinburgh Reviewers" 309).

In speaking of its political affiliation, Stephen observes that the *Edinburgh*'s position as the 'middle' party was a difficult one – "they could protest against the dominant policy as rash and bigoted, but could not put forward conflicting principles without guarding themselves against the imputation of favouring the common enemy" ("First Edinburgh Reviewers" 247). Regarded as too liberal by the conservatives and as vacillating and cowardly by the radicals, the *Edinburgh* nevertheless remained attached to its liberal principles throughout its long history. Bagehot concluded that "the glory of the *Edinburgh Review* is that from the first it steadily set itself to oppose … timorous acquiescence in the actual system" ("First Edinburgh Reviewers" 317). Its authors aimed to bring the worst features of society to public notice without recourse to revolutionary principles. As an organ of political enlightenment and social reform the *Edinburgh* did generally delight the Whigs. However, the famous 1808 article, entitled "Don Pedro Cevallos on the French Usurpation of Spain" which "mingled praise of the Spanish patriots … with bitter criticism of the upper classes … and a demand for the reform of the British Constitution" (Clive 119) offended Whigs and Tories alike, and led to the founding of the more conservative *Quarterly Review* in 1809.

### *The Quarterly*

Sir Walter Scott, one of the early supporters of the *Quarterly*, wrot: "This projected Review" should not be "exclusively or principally political." "Its purpose … ought to be to offer to those who love their country … a periodical work of criticism conducted with equal talent, but on sounder principles" than the

*Edinburgh Review* ("*The Quarterly* Centenary" 739-40). The *Quarterly* "appealed to the basic conservatism of the British reading public," standing solidly for 'God, King and Country'. Although neither its publisher nor its supporters had wanted it to be partisan, "it had to assume a conservative air" in order for it to attack the *Edinburgh* (Sullivan Part 2, 359).

## The Westminster

The rationale behind the founding of the *Westminster* can be seen in a letter written by Henry Southern in 1823 to his friend William Whewell at Trinity College, Cambridge. "A party of my friends are about to establish a new periodical work in the shape of a quarterly review … in short the great work of the amelioration of mankind carried on through the channel of a review of modern books … The politics of the Review (party politics being however avoided as much as possible) are to be what are called *liberal*" (qtd. *Wellesley* article on *Westminster Review*). Apparently the label "liberal" could be used to describe both the 'moderate-liberal' stance of the *Edinburgh* and the 'far-left-liberal' stance of the *Westminster*.

## Affiliations

The quarterlies were founded and supported by like-minded groups of people, who naturally enough belonged to the same political party. Alvin Sullivan quotes De Quincey who claimed that "only politicians and retainers care much about party loyalties" and that "most good citizens care for no party interest but carry their good wishes by turns to men of every party" (Part 2 xii). Lee quotes Lord Lytton's opinion of the partisan nature of the journals:

> Large classes of men entertain certain views on matters of policy, trade or morals. A newspaper supports itself by addressing these classes; it brings to light all the knowledge requisite to enforce or illustrate the view of its supporters; it embodies also the prejudice, the passion and the sectarian bigotry that belong to one body of men engaged in active opposition to another. It is, therefore, the organ of opinion; expressing at once the truth, the errors, the good and the bad of the prevalent opinion it represents. (21-2)

Brake cites a number of examples as evidence that writing for a particular journal did not necessarily indicate a commitment to that journal's 'collective ethos': - Lewes' contributions to journals of every type – quarterly, monthly, weekly, Whig, Tory and Radical; Lockhart's assistance in the founding of *Fraser's* while still editing its rival *The Quarterly*; and W.M. Rossetti's professed ability to vary the style and level of his articles to suit journals with marked "differences of tone, style, politics and audience" ("Literary" 90). Such heterodoxy was possible, Brake suggests, because the policy of anonymity allowed writers the freedom of contributing articles to different journals while "the corporate identity of the individual periodical appeared to survive unharmed" ("Literary" 100). Kent agrees with Brake that it was the general rule of anonymity which "gave greater freedom and authority to editors in shaping a journal's identity and giving it a distinctive style or tone" (Kent, "Introduction" xiv). Oakely remarked on the "corporation" effect afforded by anonymity to the writers of each particular Review, "each member of which derives an immense accession of weight from the fact of his forming an integral part of its whole" (qtd. in Brake, "Literary" 108).

*Testing the Quarterlies*

The question I wanted to answer was: Did any of these three major quarterly journals, each with its own particular political and social affiliation, actually develop an unmistakable stylistic signature that influenced authors' unconscious choice of function words?

My text set for each of the quarterlies was reasonably comprehensive and quite substantial in terms of word count (see Table 5.3 below). My empirical test involved running a series of principal component analyses for each of the three pairs, *Edinburgh Review* versus *Quarterly Review, Edinburgh Review* versus *Westminster Review* and *Quarterly Review* versus *Westminster Review*, using the 100 most common function words of the text collection as variables. The first

three components for each of the three tests were then, in turn, correlated with each pair of journals.

Table 5.3: Major Quarterlies: text set

|  | Texts | Words | Authors |
|---|---|---|---|
| Edinburgh Review | 31 | 387578 | 9 |
|  |  |  |  |
| Quarterly Review | 32 | 422065 | 9 |
|  |  |  |  |
| Westminster Review | 28 | 262757 | 8 |

An examination of the text plot (Figure 5.1) of the first two components in the analysis of the thirty-one *Edinburgh* and thirty-two *Quarterly* texts shows how the relative usage of the 100 most common function words has distributed the texts.

Figure 5.1: Principal component analysis text plot
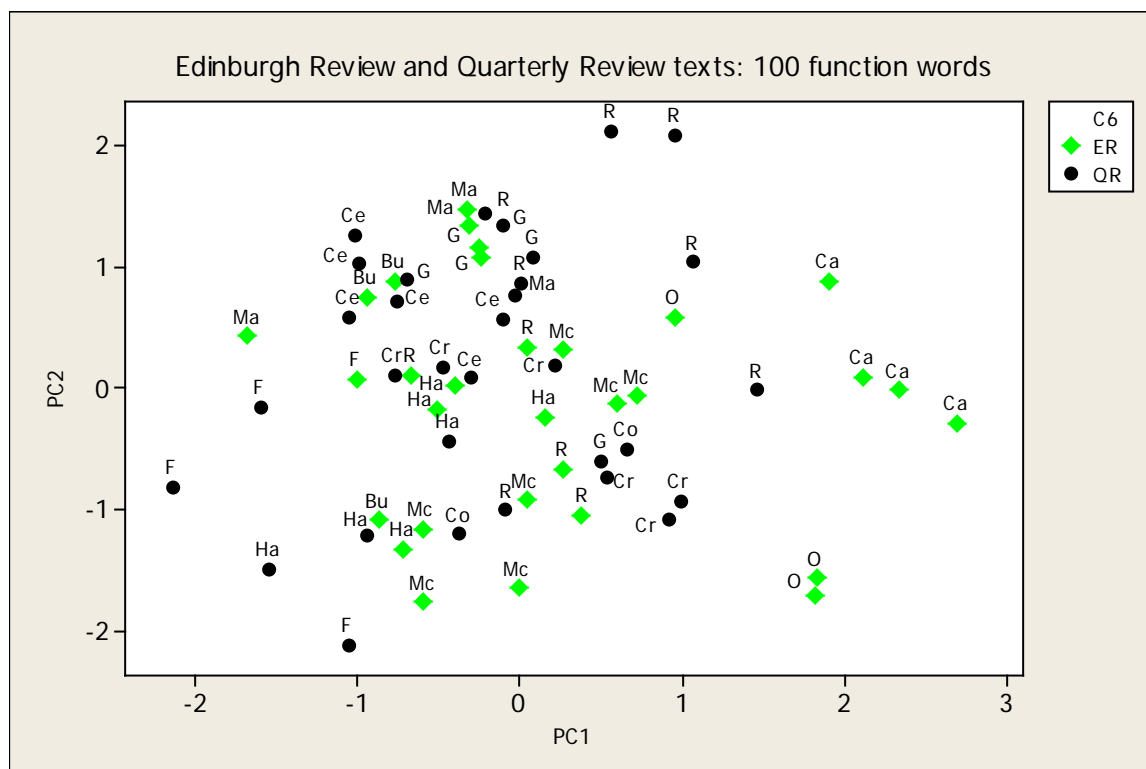
If the most significant difference between the two sets of texts had been their membership of one or other of the two sets, the plot would have shown a greater concentration of green *Edinburgh Review* entries clustering together and a similar concentration of black *Quarterly Review* entries. As it is, the two sets seem almost randomly distributed. At first sight, it might appear that the Carlyle and Froude placements on the east and west boundaries represent a journal-related difference. This division however is not supported by the placements of the texts of authors who wrote for both journals. Greg, Hayward, Martineau and Rigby all have at least one text closer to the "wrong" side. Authorial clustering appears to be a significant factor for some texts while a shared intra-generic focus makes neighbours of the texts of other authors.  In order to objectify the impression this plot gives that the texts have not been distributed in any significant fashion according to journal type, I used SPSS to run a correlation of each of the first three principal components against journal type. This was done by entering a numerical code for the journals, thus turning them into 'dummy' variables. No significance was found in any of the three results.

The second principal component analysis and correlation tests comparing the *Edinburgh Review* and the *Westminster Review* gave very similar results to the first tests. The text plot (not shown) showed no apparent distribution on journal lines and the correlation of the first three components against journal type found no significances.

The third series of tests between the conservative *Quarterly* and the radical *Westminster* provided a more interesting result seen in Figure 5.2 below. Here the correlation between the two journals and the second principal component showed a significance at the 0.001 level; the correlation of the other two components showed no significance. An examination of the text plot, Figure 5.2, provides some insight into what the tests have found.

Figure 5.2: Principal component analysis text plot



Quarterly Review and Westminster review texts: 100 function words
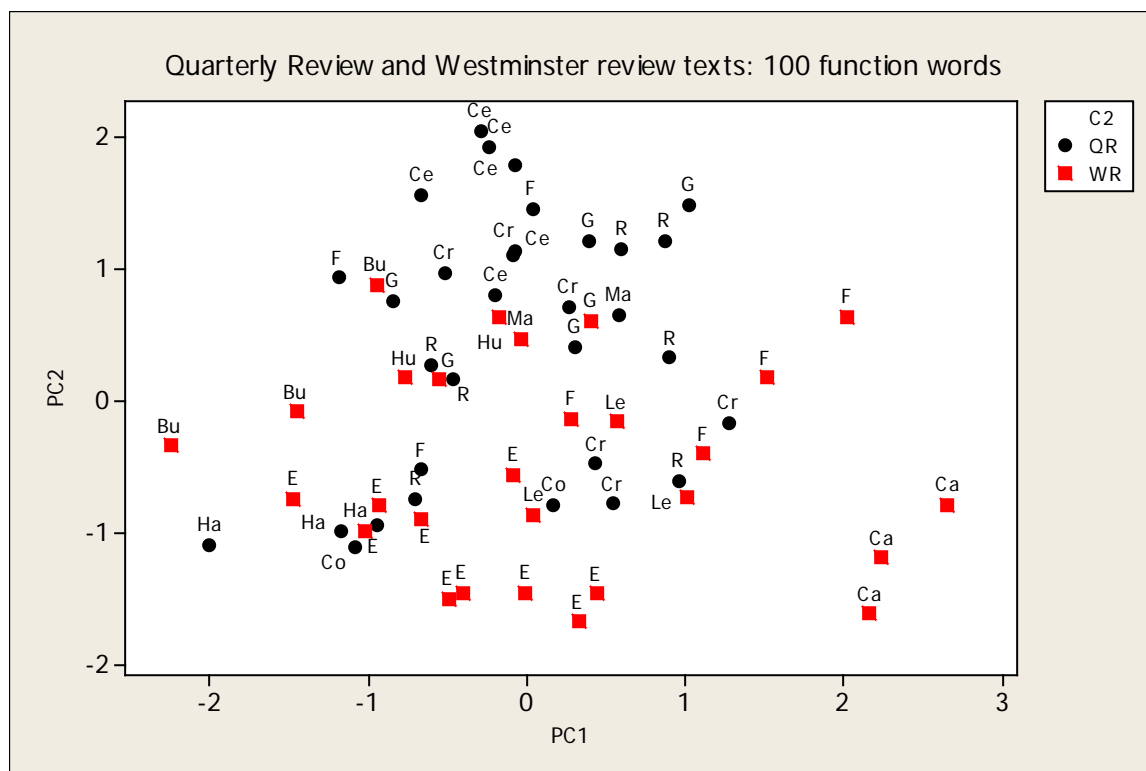
The second component results are seen in the north-south placements of the texts. Here we can see the concentration of *Quarterly* texts written by Lord Robert Cecil in the north and the group of *Westminster* texts written by George Eliot and Thomas Carlyle in the south. One cannot imagine Cecil writing for the *Westminster*, nor Eliot or Carlyle writing for the *Quarterly*. Carlyle did however, write for the *Edinburgh* as well as the *Westminster*, and in the second set of tests (not shown), the two journal types of Carlylean texts intermingle in a similar fashion to the texts of authors who wrote for both the *Edinburgh* and the *Quarterly* in the first tests. This would appear to confirm Stephen's observations about the *Edinburgh* holding the 'middle' position – too liberal for the conservatives and not liberal enough for the radicals. It needs to be asked whether this significant difference in the second component truly reflects a stylistic difference between the texts of the *Quarterly Review* and those of the *Westminster*, or whether it is simply a reflection of differences in the writing styles of three authors. An examination of the word plot (Figure 5.3) underlying the text

placements in Figure 5.2 reveals that the known authorial preferences of these particular authors have been at work here.

Figure 5.3: Principal component analysis word plot



Cecil was seen (in Chapter 3) to use the third person plural pronouns, the definite article and some of the past tense verb forms significantly more often than other writers, while Carlyle was seen to make heavier use of the present tense verb forms and certain quantifiers. Eliot's style (considered in a later chapter) shows, among other things, considerably higher usage of the indefinite article, prepositions *like in* and *with*, and the masculine personal pronouns than her fellow writers. As we saw in Chapter 3, Cecil's impersonal and collective focus results in a style of writing which contrasts strongly with the style of an author (such as Eliot) whose focus is more particularized. I would argue then that the apparent PC2 difference between the two journals is, rather, due to a strong authorial difference between writers included in the test who wrote only for one of the journals involved. In order to test this question further, I ran another principal

component analysis test using only authors who had written for both these quarterlies. Not surprisingly, I found that only three of the authors in my text collection had written for both the conservative *Quarterly* and the radical *Westminster*. The result of the test is seen in Figure 5.4 below.

It is evident from this plot that the texts are clustering in authorial groups, rather than according to journal identity. Froude's two *Quarterly* articles on South Africa (F7 and F11) have been seen to carry a marked collective focus, and this helps explain their slight separation from his other two articles ("England's Forgotten Worthies" (F3) and "Job" F5). Martineau's article for the *Quarterly* is her review of Nightingale's Nursing Notes (Ma9) which makes it rather different from her article, "Female Dress" (Ma4) written for the *Westminster*. Greg's articles were seen in Chapter 4 to vary within a narrow range, and he was described as being an author not given to extremities. This seems reflected in the apparent similarity between his articles for two different journals.

Figure 5.4: Principal component analysis text plot



3 Authors writing for the Quarterly and Westminster Reviews: 99 function words
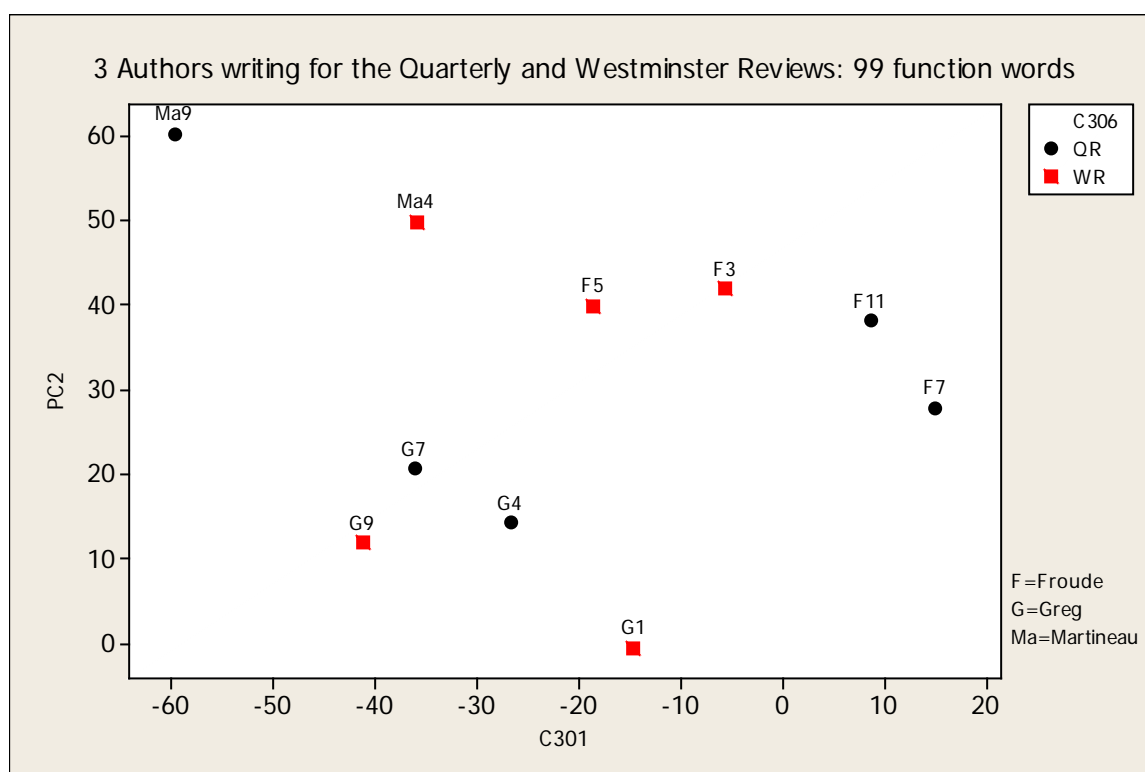
This analysis of the three major quarterlies has shown that there are no significant journal-related stylistic differences between them, in terms of function word use.  One factor that did emerge was an occasional author-specific identification with a particular journal. Macaulay, for example, was one of the shining lights of the *Edinburgh*; Cecil and Croker seem to typify writers who might be identified with the *Quarterly*; and Huxley and Eliot seem to reflect the *Westminster*'s famed freedom of expression. On the other hand, many of the other writers in the text set were able to write for two (Carlyle, Hayward and Rigby), and even all three (Froude, Greg and Martineau) of the great quarterlies.

### *The Saturday Review*

In my earlier discussion of what contemporary and modern commentators said about the influence of 'house style' on the articles of the literary periodicals, I noted that it was *The Saturday Review* which was seen to exhibit the effect most clearly. People spoke of what the *Saturday* said; contributors remarked about the apparent loss of personal identity once they took up the *Saturday* pen; and even today, commentators have difficulty in distinguishing between articles written for the *Saturday*'s 'Modern Women' series by different authors. In the Prologue, I showed that the methods of computational stylistics had no difficulty in separating articles, now known to be written for the 'Modern Women' series by Eliza Lynn Linton and John Richard Green. Carrying this exploration a little further, I want to see if I am able to separate the writings of these two authors from other *Saturday* authors.

### *Four Saturday Authors*

Apart from the Linton and Green articles, my *Saturday Review* text collection has a number of articles firmly attributed to Anne Mozley and Lord Robert Cecil.[39] Running a principal component analysis test using the 10 Green and 10 Linton

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[39] See Chapter 2 for the bases of attribution of the *Saturday* texts with known authors.

articles from the "Modern Women" volume with 12 Cecil and 12 Mozley articles using the 99 most common function words of my text collection as variables, I was able to separate the four authorial groups reasonably well.

Figure 5.5: Principal component analysis word plot
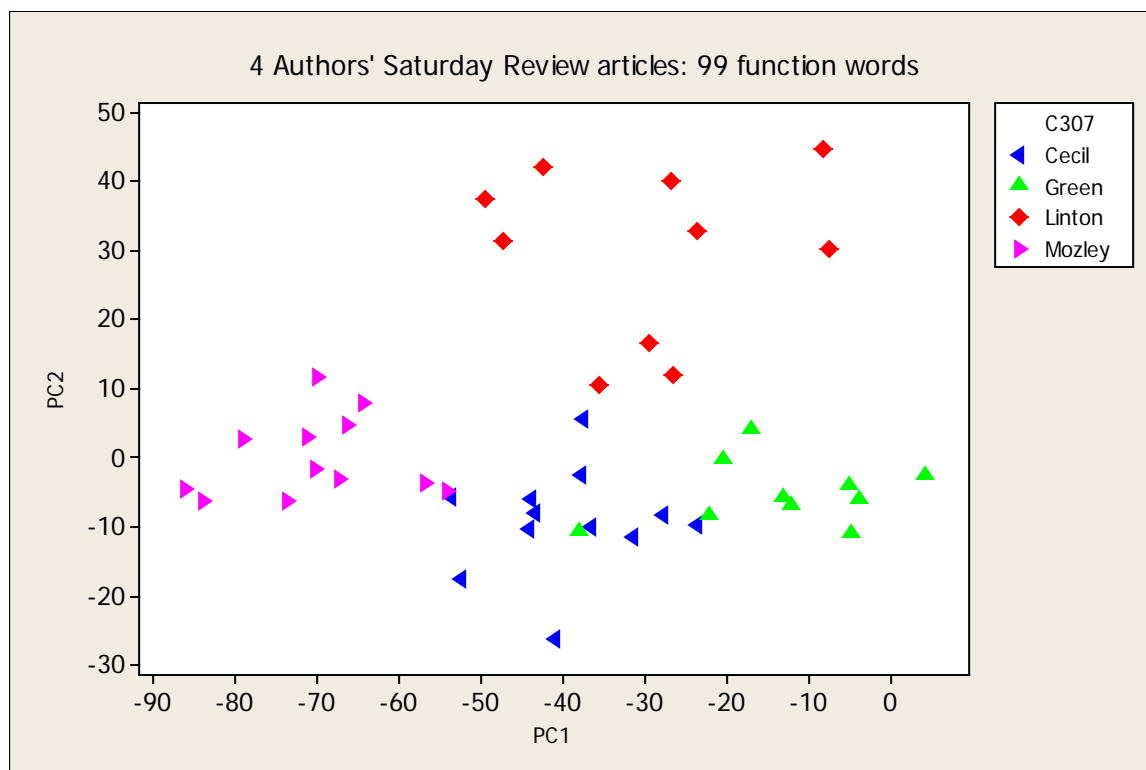


Linton appears to separate most completely from the other three authors, occupying the upper right quadrant of the plot. The remaining three authors occupy the bottom half of the plot with Mozley in the left hand quarter, Cecil in the central section and Green in the right hand quarter. There is a slight overlap in the groupings, with one of Cecil's articles ("Haymarket") adjacent to one of Mozley's ("Journal"), with Green's article ("Man and Master") moving into Cecil territory and with Cecil's article ("Ladies Spiritual and Temporal") and Green's article "Priesthood of Women") close neighbours.  Since the words used in this test were the unselected 99 most common words, the authorial separation seen in Figure 5.5 is remarkable. It is evident from this test that the methods of

computational stylistics are indeed able to penetrate the impenetrable 'house style' of the *Saturday* to detect authorial differences.

## *Searching for 'Saturdayness'*

The question I now want to ask is whether the methods of computational stylistics can uncover what unifies these articles – that is, discover what it was that made it difficult for contemporaries to discern an individual hand at work. How did authors manage to make their articles sound like *Saturday* articles, even though (as I have shown) they were unable to jettison their own largely unconscious stylistic habits?

The 159 *Saturday Review* articles in my text collection consist of middles and reviews ranging from just under 1000 words to just under 4000, while the 101 monthlies could all be described as essay-like reviews or review-like essays ranging from 2000 to 16000 words. The longer monthlies were divided into sections of 2500 word blocks to render them more comparable to the *Saturday* articles. Using the ability of zeta prime to discern the words (lexical or function) which are regularly used more often by the *Saturday* than by the Monthlies, and the words which are regularly used less often by the *Saturday* than by the Monthlies, I was able to plot these differences between the two groups. In this test where I was simply looking for a generalized difference between the two journals, I did not omit the function words from the test. We see the result in Figure 5.6 below. The axes represent the two sets of scores; those from when the *Saturday* was the base, and those from when the monthlies were the base.

There is an overlap section in the middle, where the groups share the same territory; nevertheless there is enough separation to allow us to say that there is a real difference between the two sets in their respective preferred usages of the two groups of words on which the plot was based.

Figure 5.6: Zeta prime test of Saturday Review and Monthly texts
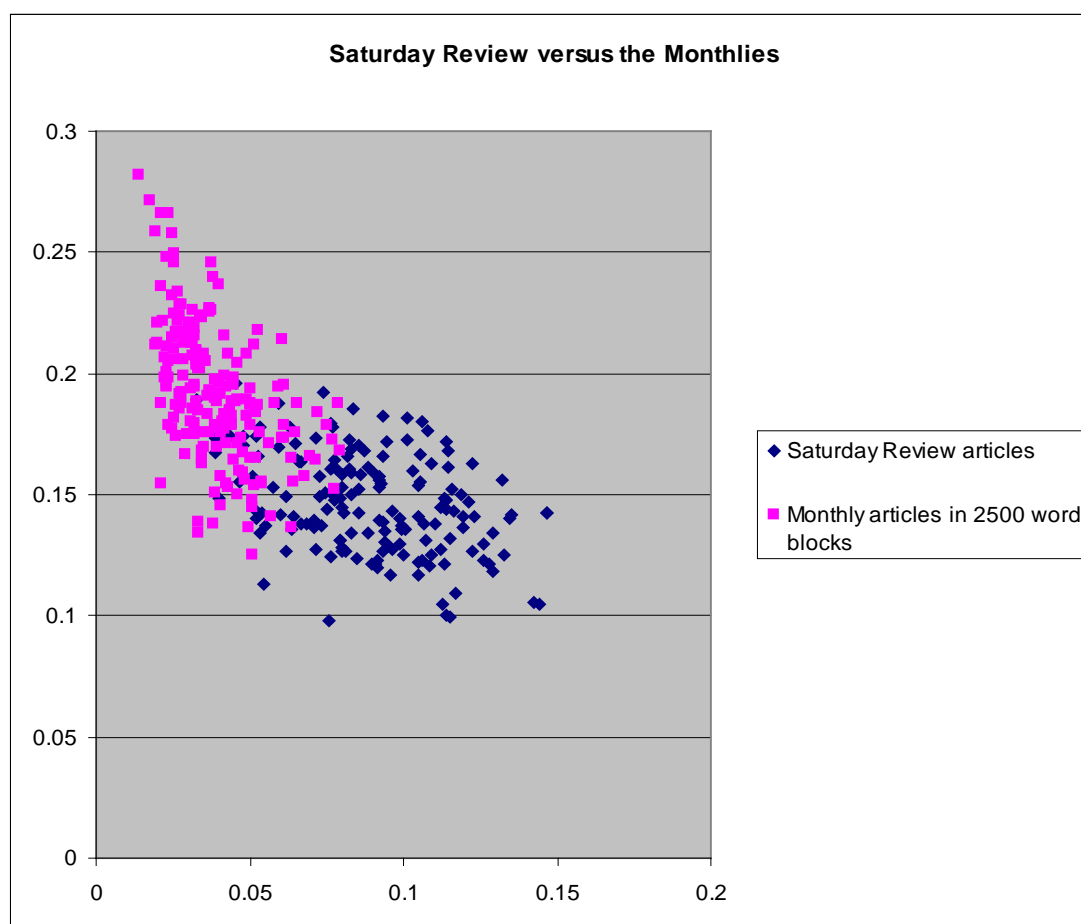


Tables 5.4 and 5.5 show the first 100 words of the two sets of 500 words on which the plot was based; the first set being those used more often by the *Saturday*, the second being those used more often by the monthlies.

Table 5.4: *Saturday* as zeta prime base: top 100 words

| sex | she | women | young | husband |
|---|---|---|---|---|
| girls | herself | woman | feminine | wives |
| social | likes | married | wife | home |
| domestic | lady | marriage | her | sort |
| dinner | ladies | mothers | matrimonial | takes |
| female | daughters | husbands | amusing | run |
| mother | thinks | class | house | season |
| fashionable | male | woman's | flirtation | flirting |
| charming | morning | one's | heavy | household |
| go | amount | matrimony | probably | drawing-room |

| trouble | hours | womanhood | looks | half |
|---|---|---|---|---|
| turns | marry | useful | society | girl |
| money | confined | gone | balls | friends |
| conversation | effort | commons | pleasure | madame |
| husband's | evening | dressed | pay | exactly |
| laughs | dresses | dull | odd | outer |
| intended | gets | listen | ball | breakfast |
| cynical | hers | bonnet | matrons | face |
| accomplishments | bills | education | occupation | strong-minded |
| level | training | gossip | game | creature |

Table 5.5: Monthlies as zeta prime base: top 100 words

| I | here | says | my | did |
|---|---|---|---|---|
| me | different | history | said | called |
| true | thus | distinct | ancient | forth |
| important | truth | principle | am | doctrine |
| words | god | matters | modern | also |
| nay | clear | let | greatest | individual |
| means | method | believe | evidence | admit |
| faith | speak | human | remarkable | why |
| nature | authority | conclusion | since | once |
| living | laws | writer | noble | again |

| sound | another | already | established | held |
|---|---|---|---|---|
| works | pure | facts | could | philosophy |
| instead | itself | science | strange | known |
| mind | law | yet | shall | genius |
| prove | surely | scientific | enough | see |
| contrary | suppose | plain | regard | above |
| religion | call | justice | strong | worthy |
| truly | answer | person | general | necessary |
| state | therefore | deny | religious | greek |
| highest | characteristic | learned | less | within |

The remaining 400 words in each group continue in similar fashion. These word lists suggest that the separation revealed in figure 5.6 was produced by the difference in each journal's sphere of preoccupation. The function words which appear in each table are illuminating. Only the feminine personal pronouns (*she, her herself* and *hers*) appear in the Saturday "base" list in table 5.4. This is entirely in keeping with the domestic cum societal focus of the lexical words.

From the *breakfast* table to the *drawing room*, from *household occupation*s to getting *dressed* for a *ball*, the habitants of this word-set go about the business of their days and nights. The most common of the *Saturday* preferred words, *sex*, heralds in its *female* army (*women, girls, woman, wives, wife, lady, ladies, mothers, daughters, mother, woman's, womanhood, girl, madame* and *matrons*) whose main business would seem to be the *training* and *education* of *young girls* to be *charming, amusing* and *fashionable* so that they can rule the *male sex* (*husband, husbands, husband's*) in the *matrimonial game* (*marriage, married, matrimony, marry*).

The words in Table 5.5 could hardly be more different. We see the first personal singular pronouns *I, me* and *my* along with the auxiliary verb forms *am, shall, could* and *did*. This contrasts strongly with the preferred pronominal usage of the *Saturday*. Some of the other function words which appear in this table, *thus, also, nay, why, since, again, yet,* and *therefore*, suggest a propositional style of writing involving argument and proof and this seems affirmed by the presence of substantives such as *history, principle, truth, doctrine, evidence, conclusion, laws, philosophy* and *science*, and verbs like *says, said, called, believe, admit, speak, established, held, suppose, call, deny* and *regard*.

In the light of what these two very different word sets suggest about the respective preoccupations of these journals, it may even seem remarkable that there was so much shared territory in Figure 5.6. Evidently, Brake was correct in pointing to length as being a significant factor in the 'house style' characteristic of particular journals. The enforced word limit on the *Saturday* articles and its weekly appearance (and disappearance) meant that writers had to forego the luxury of illustrative and propositional writing with its development and proof and settle for providing a "feeling of authority and clear, hard, masculine economy and directness" (Bevington, 14). On the other hand, in the light of the frequency of the gender-oriented lexical words exhibited by the *Saturday* articles, it is hard

not to suspect something of a preoccupation of *Saturday* writers with woman-kind and the issues emanating from the 'Woman Question'.

To economy we might also add topicality and currency: *Saturday* articles seem to favour present tense verbs, while the monthlies feature both past and present tense verbs. The relative absence of the first person pronouns in the *Saturday* reflects the authoritative corporate stance which was generally adopted by its writers. Bevington says of this stance: "As self-appointed critics of English civilization, the *Saturday Review* reviewers of necessity assumed a pose of lofty condescension and infallibility which gave their utterances an oracular rather than an argumentative tone" (41).

I would conclude that 'house style' is something quite distinct from authorial style. Its total effect derives from an accumulation of editorial choices such as the ones Brake enumerated: choice of topic, article length, journal tone or stance, social and political assumptions and choice of suitable writers. In the case of the *Saturday*, the choice of writers for a number of years appears to have been exceptional, most of them boasting a First from Oxford or Cambridge (Bevington 25). Such writers, while exercising "independence of judgment" nevertheless shared "common habits of thought, education, reflection and social views" (Bevington 19) which lent an apparent air of similarity to the articles – the "Saturdayness" of the *Saturday*. This survey of house style – what it is, and what it is not – concludes the second part of the thesis.

## Part 2
### Conclusion

I commenced this second part of the thesis by allowing the 200 texts of the Victorian periodical collection to 'speak for themselves' and discovered that the individual differences between them could be mapped along two axes of differentiation which I was able to describe in terms of differing intra-generic foci. The validity of the notion of authorship was explored and confirmed, even for

authors whose text sets appeared to lack consistency. The operation of these differing foci offered an answer as to why the texts of one author were uniform while those of another were so variable. In spite of the fact that I had been able to describe the 200 texts of the collection as a set of authorial *oeuvres*, there was still the generally accepted notion of 'house style' and its presumed effect on authorial style to explore. I was able to conclude that the type of underlying authorial stylistic signature of interest to me, and discerned by the relative frequency of use of a large number of function words, was not affected by the operation of a journal's house style.

# Part 3

## Chapter 6: Gender and the Victorian Periodical

A topic that appears frequently in the recent scholarly discussions of the nineteenth-century periodical press is the question of the presence of women authors among the generally masculine crowd of nineteenth-century writers. Easley, for example, draws attention to the ways women were able to capitalize upon the conventions of journalistic and literary print media as a way of making their way in a male-dominated profession ("First Person" 1). In a sphere where "the work of women for the press was largely obscured by the cultural identification of the 'journalist' as a signifier of masculinity" (Fraser, Green and Johnston 6), the questions I want to address in this chapter are: "Do men and women write differently?" and if they do, "How persistent and marked is the gender difference?"

A number of books and articles attest to the importance of the role of the nineteenth-century periodical press in portraying and reinforcing the gender notions and ideals of the day.[40] Women authors were in an anomalous position in the early decades of the nineteenth century and any discussion of gender and writing has to take into account the almost universally accepted notion of separate spheres. The contradictory position of women authors is encapsulated in the following description:

> …they must be separated from the commercial marketplace in order to maintain a sense of middle-class propriety and to preserve their claim to producing works of culture rather than of profit; at the same time, they must claim to have broad knowledge of issues outside the domestic sphere – to demonstrate understanding of the social and political issues associated with all classes of society. (Easley, "First Person" 20)

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[40] For example, Easley; Fraser et al.; Brake et al.; Thompson

This confinement of women to an exclusively domestic role became increasingly at odds with the gradual emergence of the democratic notions of equality of educational, political, legal and employment opportunity. The periodical press not only provided an arena for conducting this debate, it also provided an anonymous avenue for many women authors to contribute to the debate and to exhibit a competing gender ideology. Along with the 'Condition of England' question, the 'Woman Question' was one of great concern and interest to educated Victorians,[41] and hence, a frequent topic of the periodicals.

In *First Person Anonymous Women Writers and the Victorian Print Media, 1830-1870,* Alexis Easley focuses on the "history of gender and authorship during the Victorian period" (1), looking at how a number of women authors managed to construct and complicate their authorial identities through their contributions to the periodical press. Easley sets her discussion against the backdrop of the newly emerging definitions of the popular author in the 1830s. Such an author was of necessity 'masculine' - given that the breadth of knowledge and communicative abilities he was to be possessed of, were generally considered to be outside the realm of feminine experience. The policy of anonymity allowed women to enter the male-dominated world of journalism and to write on some of these topics which were thought unsuitable for a woman. Equally, anonymity "allowed men to enter female preserves, addressing subjects just as conventionally regarded as feminine" (Fraser, Green and Johnston17).

Anonymity and pseudonymity in the nineteenth-century press caused readers and reviewers to speculate about the gender of the authors of various articles and novels as they appeared. The article entitled "The Girl of the Period", now known to be written by Eliza Lynn Linton, was mentioned in The Prologue, above. A contemporary reviewer, outraged by the article, when it appeared in *The Saturday Review* in 1868, began his article with: "No one but a man could have written this" (Fraser, Green and Johnston 26). And in her 1859 review for

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[41] Turner 2-5, for example.

*Bentley's Quarterly*, the gentle and perceptive periodical writer, Anne Mozley, offered her reasons for believing the author of "Adam Bede" to be female, in spite of the male pseudonym:

> We feel ourselves incapable of entering upon a discussion of "Adam Bede" with our readers without expressing our suspicion that it is from a female pen.… The time is past for any felicity, force, or freedom of expression to divert our suspicions on this head: if women will write under certain conditions, perhaps more imperatively required from them than from men, as well as more difficult of attainment, it is proved that a wide range of human nature lies open to their comprehension; so that if things in this novel seem to be observed from a woman's point of view, we need not discard the notion because it is well and ably done. … So, having thus satisfied our candour, we will not further invade the reserve the author seems determined to maintain in spite of all attacks made on it by "Times" correspondents, but continue to apply such personal pronouns as *he* would have us use. ("Adam Bede" 310-311)

These readers and reviewers were responding to something in the article or novel which they perceived to be essentially "gendered"; in the case of Linton, her ability to write like "the clever college don favoured by the *Saturday Review*" (Fraser, Green and Johnston 27); and in the case of Eliot, the perception by Mozley of a rare ability, which, in the nature of things in the nineteenth century, would have been assumed to be masculine. "Here is a picture of life of rare power, of close adherence to nature. Where has this knowledge been learnt? through what processes has the author acquired his skill" ("Adam Bede", 310)?

Another advantage for women of the policy of anonymity, noted by Easley, is that it "allowed them to evade essentialized notions of 'feminine' voice and identity" (1). Above all, the women who wrote for the major periodicals did not want to be identified with the sort of women writers who were in turn patronized or ridiculed by reviewers. "Although the periodical press provided expanded opportunities for women … it was also the primary medium concerned with constructing negative stereotypes of the female author" (Easley, "First Person" 3). Eliot makes short work of such women authors in her article for the *Westminster Review*. "Silly Novels by Lady Novelists are a genus with many species, determined by the

particular quality of silliness that predominates in them - the frothy, the prosy, the pious, or the pedantic" ("Silly Novels by Lady Novelists", 301).

Anonymity, however, did not mean that writers were able adopt a genderless narrative voice in most of the Victorian periodicals since "the assumption of male narration and male readership was almost universal" (Easley, "Authorship" 154). Margaret Oliphant's 1855 letter to John Blackwood, written not long after she began contributing to *Blackwood*'s, shows her acute awareness of its maleness. "I am sometimes doubtful whether in your most manly and masculine of magazines a womanish story-teller like myself may not become wearisome" (Elizabeth Jay, qtd. Shattock 168). Hence "women journalists often wrote in 'drag' referring to themselves and their readers using masculine gender markers" (Easley, "Authorship"154). Nevertheless, as the century progressed it was inevitable that "the hegemony of the masculine in the field of publishing" would be challenged by "the emergence of the woman writer" in the periodicals and "the concomitant emergence of female identity as the source of a legitimate public voice" (Fraser, Green and Johnston 17).

Given the role of anonymity and the changing assumptions about gendered authorship in the course of the nineteenth century, the question of gender in the periodicals is not entirely a straightforward one. My question, however, is a relatively simple one: I want to use my text collection to explore the question of whether these men and these women, whatever the circumstances under which they were writing, wrote differently from each other. This question relates to the notion underlying most computational stylistics research that a writer's style is largely unconscious and therefore stable enough to be amenable to these methods. Anthony Mulac and Torborg Louise Lundell attempted to answer this same question – 'Do men and women write differently?' – in a more contemporary sphere and argued that multivariate analysis was more likely to be successful than univariate or bi-variate analyses, since "writing is both encoded and decoded as a *combination* of interrelated language features" (300).

Mulac and Lundell's study is of interest since, as they pointed out, "few studies have investigated gender differences in writing, and even fewer have analyzed the writing of adults" (300). Mulac and Lundell used seventeen language features appearing in student essays, to test their "second research hypothesis" (the one of most interest to me) "whether a weighted combination of language features of the essays, coded by trained observers, could distinguish between male and female writers" (303). Nine of these features proved to be of value, men making greater use of four features and women of five. The features favoured by men were "references to quantity, locatives, elliptical sentences, and judgmental adjectives", while those favoured by women were "uncertainty verbs, progressive verbs, references to emotions, longer mean length sentences, and sentence initial adverbs" (304). Although these features are more specific and more dependent on lexical words than the large set of function words I use in my analyses, the support they offer for the idea 'that men and women write in ways that differ linguistically' is encouraging. The authors conclude that "the persistent and robust nature" of the gender-linked language effect "is undeniable" (308).

Two other researchers have attempted to answer this question using much larger samples of language than Mulac and Lundell. In his chapter for *Digital Humanities* (2001) John Burrows presents an account of some unpublished work which he had presented at the Association for Computers and the Humanities meeting in 1993. His corpus was divided into fifty-five authors born before 1860 and forty-five born after, women representing almost half of each group. The texts are all fictional first person narrative 'histories' extracted from larger works. In the series of tests he performed on the data, Burrows found that "the two sets of results indicate that in our earlier but not our later set, the male and female authors represent different populations" (340). It would appear from his results that the difference between men's and women's writing was more apparent in his earlier set and accordingly easier for his methods to detect. Burrows thought it possible that the advent of universal educational opportunity may have contributed to a reduction in the differences in the second of his gendered sets.

He had noted in his early set of authors that the men who had not had a classical education had more affinity with the female authors than did the male authors with an education in the classics (344-45).

Recent computational work on a late twentieth century corpus by Moshe Koppel, Shlomo Argamon and Anat Rachel Shimoni, indicates that gender differences in formal writing do still exist. This finding is interesting, in the light of Burrows' work which had suggested that the difference may have been decreasing in the latter part of the nineteenth century. These researchers used "combinations of simple lexical and syntactic features to infer the gender of the author of an unseen formal written document with approximately eighty percent accuracy" (401). This is a particularly valuable study which uses "ideas from both the stylometric community and the text categorization community" (402-3). Like Mulac and Lundell, the authors point to the lack of studies on written language and add that "the relatively few studies on gender differences in writing have focused on more informal contexts – such as student essays, electronic communications and correspondence" (403). They also note that some researchers have asserted "that no difference between male and female writing styles in more formal contexts should be expected" (403). Mulac and Lundell also refer to this line of reasoning which suggests "that gender-linked language differences are more likely to be found in informal, descriptive writing than in formal, philosophical writing" (306).

Since Koppel, Argamon and Shimoni use the British National Corpus (BNC) as their language sample, they had very large amounts of formally written gender-labelled fiction and non-fiction available for testing. They were, accordingly, able to test quite rigorously previous researchers' claims that gender-related language differences were difficult to find in formal writing and were able to conclude that their paper had presented "convincing evidence of a difference in male and female writings in styles in modern English books and articles" (410).

The 200 periodicals of my text collection, as specimens of well-written nineteenth-century non-fictional prose, appear to offer a particularly good data base of formal writing for testing this question. The word count for texts written by men was 1,224,473 and for texts written by women, 698,229. Women represent eight of the twenty-two authors, and seventy-nine of the 200 texts, an imbalance reflecting their smaller number of contributions to the periodical press. The standardizing of numbers for all the tests allows for equivalence of testing. I began the tests by reusing Figure 4.1 from Chapter 4, this time labelling the twenty-two authorial groups as two gendered sets. The expectations, in this test, where the variables were unselected, are open. (Figure 6.1)

Figure 6.1: Principal component analysis text plot
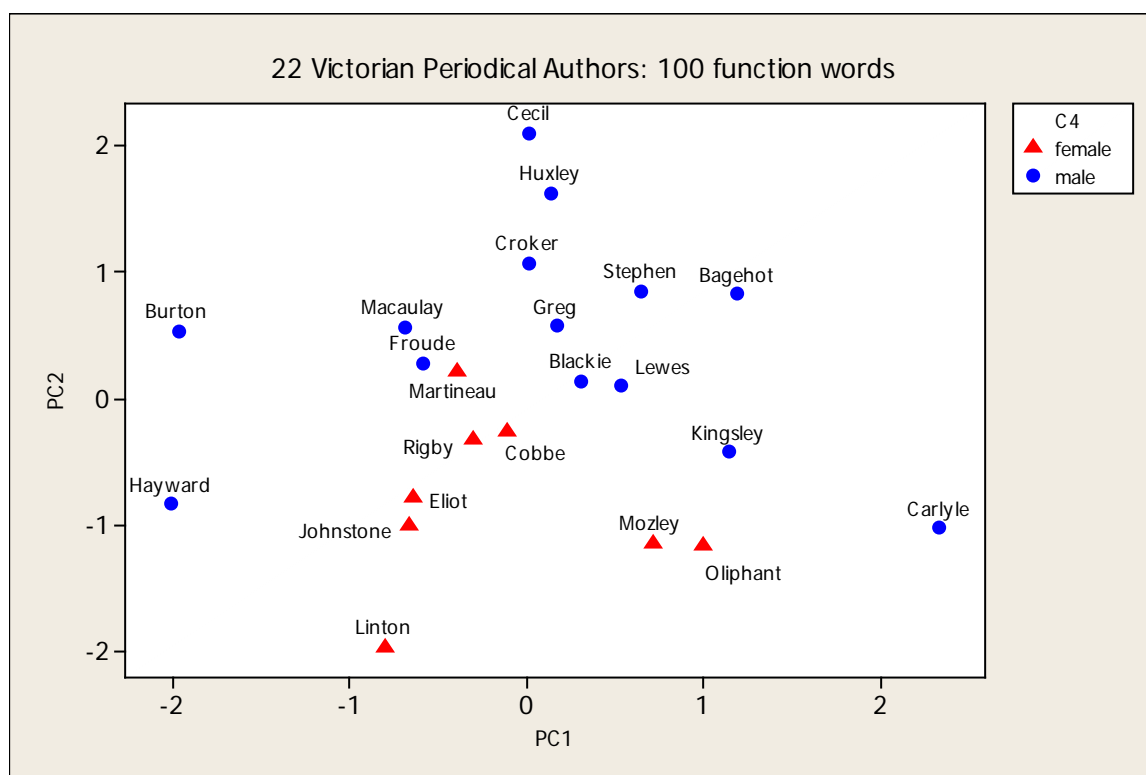


According to this plot, some difference between the writing of men and women is already apparent – simply in their relative use of the 100 most common function words of the text collection. Apart from Martineau, who is much closer to Froude and Macaulay than she is to Linton, the women form a triangular group in the mid

to mid-south section of the plot. The men, with the exception of Hayward, Carlyle (and perhaps Kingsley) all cluster in the northern half of the plot. Since the unselected words are so suggestive of a gender-based difference between the two groups, further testing with marker words is clearly called for.

The texts of the two groups were divided into segments of 5000 words[42] (producing 112 segments for women and 201 for men) and these were used in a t-test on the 200 most common words of the text collection. (Table 6.1)

Table 6.1: Results of Discrimination Test between Women and Men Periodical Writers

| Women  use relatively more often | Men  use relatively more often |
|---|---|
|  |  |
| Indefinite Articles/Pronouns | Indefinite Articles/Pronouns |
| nobody everything | an it itself anyone |
| 2nd person personal Pronoun | 1st & 2nd  person personal Pronoun |
|  | I you your |
| 3rd person personal Pronouns | 3rd  person personal Pronouns |
| she her herself his | they them theirs |
| Relative Pronoun | Relative Pronoun |
| who | that |
| Function Verbs & Modals | Function Verbs & Modals |
|  | was were be been have had having did am |
|  | shall will would should could might ought may |
| Conjunctions | Conjunctions |
| and while than | if but or unless although whilst |
|  |  |
| Prepositions | Prepositions |
| of in for with up over beside around | by down during against |
| through throughout |  |
| Quantifiers/qualifiers | Quantifiers/qualifiers |
| all less another other every | enough only any some most least several |
|  | either |
| Adverbs | Adverbs |
| here when whenever where wherever | what often just why |
| always perhaps |  |
| Negative forms | Negative forms |
| nor | not |

Eighty-four words had a t-value of + or – 2 or higher which indicated that these were the words which the women and men (as a group) used significantly more or less than each other. The t-value score of thirty of these words was very high

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[42] Textual integrity was maintained by adding remainders to the last 5000 word section.

with a probability value < 0.000. Table 6.1 above tabulates the eighty-four words in grammatical categories in order to highlight the differences, especially any which might be seen to underlie differing stylistic habits. The pattern of word distribution is interesting - as much for the absence of preferred usage in one group, as for its presence in the other. The most obvious absence from the women's list of marker words is any of the auxiliary or modal verb forms. This contrasts strongly with the men's more frequent usage of seventeen of these verb forms. The other obvious difference between the two groups is in the preferred usage of personal pronouns with the women showing a greater use of only the third person singular gendered pronouns, and the men a greater use of most of the other forms (impersonal, first, second and third person plural).

Figure 6.2 shows the 84 gender marker words from Table 6.1 used in a principal component analysis plot.

Figure 6.2: Principal component analysis text plot
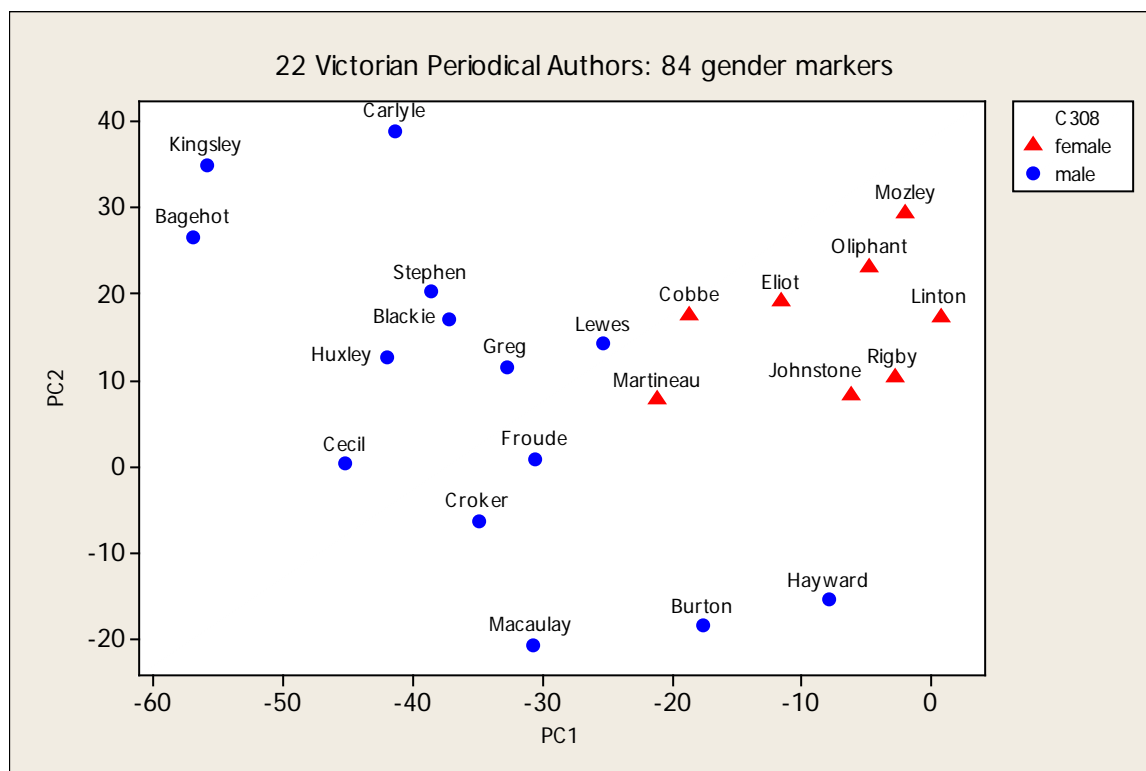
Apart from Martineau (and to a certain extent, Cobbe), the women form a tight cluster in the north-east corner, while the men spread out around them in an arc, leaving the south-west corner empty. There is little doubt that a marked gender-based division can be seen in this plot. Since this test has made use of authorial groups of texts, these differences can only be regarded as general ones, based on the relative usage and non-usage of the group of function words favoured by one group and disfavoured by the other. For this reason the differences can only be described as 'tendencies' since a few of the authors in the text collection have individual texts which vary quite considerably. Such text-related differences are not accounted for in this general survey, but will be considered later on.

## Gender-based writing differences

### Complexity versus Directness

The distribution of words in Table 6.1 indicates that men as a group favour more impersonal and complex sentence constructions. They use more of the impersonal pronouns *it, itself* and *anyone* and the indefinite article, *an*, along with the conjunctions *if, unless, although, but* and *or* and a large set of modal and function verbs. This group of words is suited to the language of discussion or debate. On the other hand, women as a group favour more direct sentence constructions and less complex verb phrases, evidenced by their preference for employing the simple conjunction, *and,* the comparative conjunction *than*, and the time conjunction *while*, as well as their avoidance of the conditional and concessive conjunctions and all the modal and auxiliary verbs. Women writers make greater use of the time and place adverbials, which can also act as conjunctions: *when, whenever, where* and *wherever*. This contrasts with the men's preferred adverbial conjunctions *what* and *why,* which relate more to questioning and discussion. Women make greater use of a number of prepositions which relate to relative location: *up, over, beside, around* and *through*, suggesting a concern for descriptive detail and perhaps more interest in the concrete than the abstract. The contrast between the two sets of third person pronouns – the women preferring the singular gendered forms and the men the

more impersonal plural forms – seems to tie in with the notion of a generalized difference between the complex and the direct. The women's preference for the relative pronoun *who* contrasts with the men's preference for *that*[43] and continues the idea of women's writing tending to be more personal than men's.

Table 6.1 contains three pairs of words, the first of each group preferred by women writers, and the second by men: *while* and *whilst*; *nor* and *not*; and *less* and *least*. The men's *not* and *least* suggest a preference for the absolute over the women's comparative *nor* and *less*.  Women's preference for the conjunction *than*, perhaps confirms their liking of comparison. *While* and *whilst* present a pair of alternatives where the preference for one over the other is personal and not always complete, since some people use both forms, while others have a marked preference for one over the other. Apparently, men as a group prefer *whilst*, while women as a group prefer *while*.

There do appear to be gender-based differences in the Victorian periodicals in large authorial groups of texts, where individual text differences are averaged out. Eighty-four words (out of 200) were identified as being words used significantly differently by each of the two groups, allowing me to characterize the styles of writing signaled by these differences. Men's writing was characterized by a preference for using impersonal and collective pronouns, relative *that*, the conjunctions of contrast, condition, concession and disjunction (*but, if, unless, although, or*) and a very large set of function verbs (modals and auxiliaries). Women's writing was characterized by a preference for using the gendered personal pronouns, relative *who*, the conjunctions *and* and *than*, simple verb phrases, and prepositions, conjunctions and adverbials descriptive of location and time. In order to explore this broadly based characterization of two gender-based styles of writing further, I checked it against a number of texts which I

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[43] Since 'that' has not been separated into its homographic forms, it is not always a relative pronoun.

thought might be considered as examples of a 'typical' male and 'typical' female style of writing.[44]

*A 'typical' men's style of writing*

I chose Kingsley's 1869 review of Mills' *Subjection of Women*, entitled "Women and Politics", and Cecil's 1866 article on "Change of Ministry" as articles which might be expected to contain the sort of stylistic characteristics which I described earlier; characteristics based on a greater usage of one set of words and a reduced usage of another set (Table 6.1).  I suggested that the style of writing might be characterized by its complexity and by its suitability for discussion and debate. It would demonstrate a preference for using impersonal and collective pronouns, for using complex verb forms with greater use of modal and auxiliary verbs and for complex sentence structures introduced by conjunctions such as *if, or, but* and *although.* A tendency towards the absolute with the use of *not* was also noted. In an attempt of understand what the gendered characteristics, suggested by these descriptions, might be in terms of style as perceived by the reader, I have chosen a few passages from each article, with the words of interest coloured.

There are three passages taken from Kingsley's "Women and Politics",

> On every side the conviction seems growing (a conviction which any man might have arrived at for himself long ago, if he would have taken the trouble to compare the powers of his own daughters with those of his sons), that there is no difference in kind, and probably none in degree, between the intellect of a woman and that of a man… (554)

> It may be, that such women would not care to use the franchise, if they had it.  That is their concern, not ours. (557)

> What women have done for the social reforms of the last forty years is known, or ought to be known, to all.  Might not they have done far more, and might not they do far more hereafter, if they …  (558)

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[44] The reason for my choice of these particular articles will become clear later on; cf. Figure 6.3.

and two passages from Cecil's "Change of Ministry".

> The history of the Session now drawing to a close has been marked by a unity which rarely distinguishes the prosaic labours of the English Parliament. … it would be a fitting subject for an epic. (228)

> Yet there can be no doubt that if some enfranchisement were made, the feeling of soreness even in their minds would be diminished. They would not have won anything for themselves; but still they would have won a partial triumph. (248)

Although I noted a slight difference in each author's attitude to his subject (Kingsley seems somewhat more polemical and Cecil more expository) I found a great many similarities in the two articles. Both authors complicate their narrative passages with qualifications and added thoughts, often introduced by the conjunctions *if, or* and *but*; both make frequent use of impersonal *it* or collective *they* as sentence starters; and both make frequent use of the negative form *not.* Both articles could be described as proceeding logically and persuasively; each author seeming sure of his ground.

### *A 'typical' women's style of writing*

Oliphant's "Evelyn and Pepys" and the first instalment of Linton's two part series "Characteristics of English Women" are the two articles I chose for testing to see if they contained some of the stylistic characteristics of a typical women's writing. Table 6.1 shows that women's writing in the text collection sample is characterized by directness with a preference for using the gendered personal pronouns, relative *who*, the conjunction *and,* and simple verb phrases with few modals or auxiliaries. There was also a hint of a liking of comparison with the qualifier *less* and conjunctions *than* and *nor,* and a preference for using prepositions, conjunctions and adverbials descriptive of location and time.

The following passages from Oliphant's article, "Evelyn and Pepys" show a style of writing quite different to that seen in the Kingsley and Cecil extracts. Here we see a great deal of comparison, regular use of the third person singular

pronouns, much use of simple co-ordination with the conjunction *and*, a lot of use in one of the passages of the relative *who*, and simple verb phrases with few modals and auxiliaries. When function verbs are used, they tend to be main verb usages. Again, words of interest have been coloured.

> Samuel Pepys and John Evelyn, of all men most unlike each other, come down to us, side by side. The one unfolds his brisk panorama, the other solemnly exhibits his stately picture. (35)

> And now it is noon: perhaps Mr Pepys has a venison pasty at home, where his wife, "poor wretch," grumbles to know of the gay programme of her husband's afternoon, yet is not without projects of her own, and is little less fine in her tabby gown, turned and newly laced, than Samuel himself. (38-9)

> … the poor wife who burns her hand making ready the remains of a turkey for the Sunday's dinner, and who has rather a secluded life of it … but who for the rest seems to have wonderfully little to grumble at -- very much less than she comes to have …(41-2)

Oliphant's style is descriptive; she wants her readers to be charmed and amused by seeing things through her eyes and powers of description. I believe this can justly be characterized as a far more direct style of writing than that displayed by our 'typical' men writers. Linton exhibits a similar desire to amuse her readers with her stories of Englishwomen of bygone days. Apart from *and*, she uses another of the women's preferred conjunctions *while*, and often uses *when* as a conjunction of subordination. The third person singular pronouns are again in evidence, and apart from the useful historical verb phrase *have been*, most verb phrases are simple without modal or auxiliary. Three passages from her "Characteristics of English Women 1" have been chosen.

> "Charmeresses" like Lady Shrewsbury -- that uncompromising adulteress who held her lover's horse while he fought with and mortally wounded her husband -- have been rare in our history. (245)

> She must surely have been even more than a vixenish kind of woman to have so far helped the king to his wish, and smoothed the way for her gallant brother, fair Geraldine's lover, to the block. (248)

> She was on bad terms with her son when she died (1679), and all she left him was her portrait... (248)

## *Summation*

In these four articles, we have seen authors displaying a number of the characteristics which I have outlined as 'typical' of men's and women's writing for the periodicals, based on the gender marker words of Table 6.1. As I showed in Chapters 3 and 4 however, a number of periodical writers occasionally wrote an article which differed greatly from all their others while the articles of a few writers showed considerable variation. I would not expect the concept of a 'typical' style of gendered writing to hold up in all of these instances.

## *Gender differences in the 200 individual texts*

In order to determine if the gender differences seen in the authorial groups of texts could be detected among the 200 individual texts, I carried out a correlation test of the PC1 and PC2 data for the 200 texts with a gender variable. The tests (Table 6.2) found significance at the 0.01 level on both axes, though rather stronger on PC1.

Table 6.2: Correlation of PC1 (200 texts) with gender and PC2 (200 texts) with gender

| Correlations | | PC1 | Correlations | | PC2 |
|---|---|---|---|---|---|
| Gender | Pearson Correlation | .490** | Gender | Pearson Correlation | .210** |
| | Sig. (2-tailed) | .000 | | Sig. (2-tailed) | .000 |
| | N | 200 | | N | 200 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | **. Correlation is significant at the 0.01 level (2-tailed). | | |

When the eighty-four gender markers were used as variables for a principal component analysis of the 200 individual texts, the variability which had been masked within the authorial groups of texts (in Figure 6.2) became apparent. The plot (seen below in Figure 6.3) could be described as moving from a mainly women's territory in the south-east, through a mixed territory in the middle to a mainly men's area on the right. A few texts have been labelled to facilitate the discussion, and lines have been drawn across the plot to provide a rough indication of the three territories.

Figure 6.3: Principal component analysis text plot
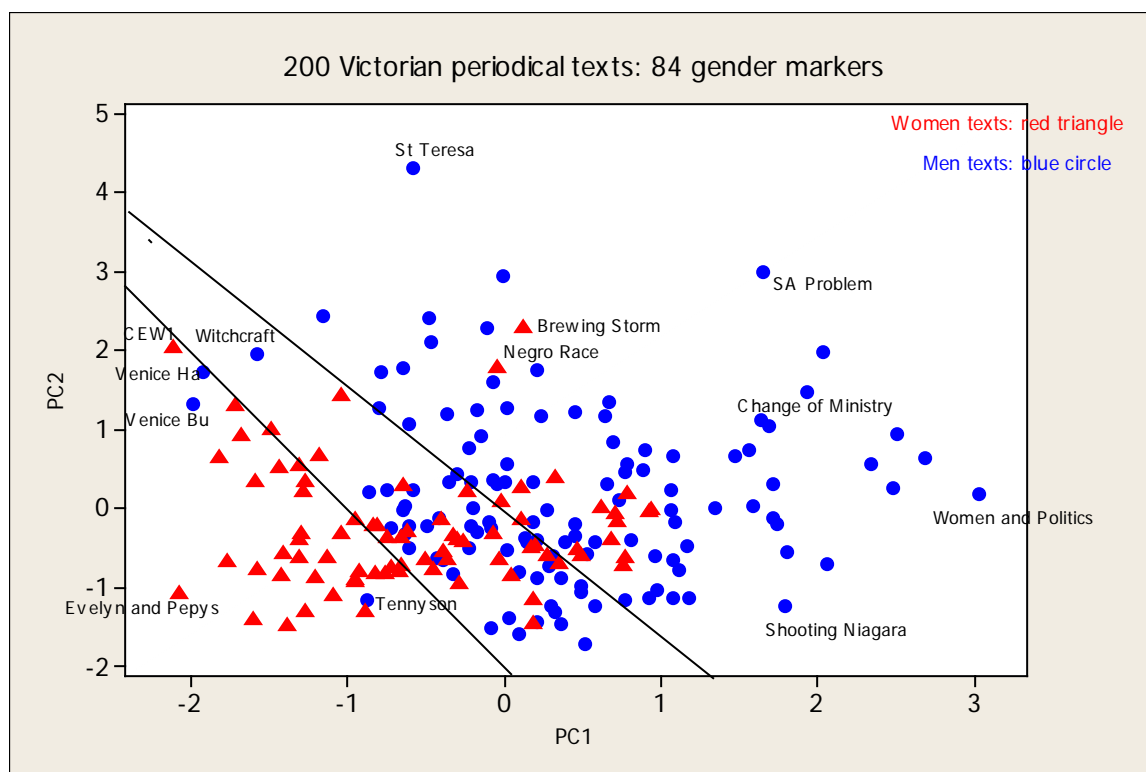


Kingsley's "Women and Politics" (K9) is the rightmost outlier, while his "Tennyson" (K8) is found among a group of women's texts. Martineau's two American texts, "The Brewing of the American Storm" (Ma1) and "The Negro Race in America" (Ma8), are located among a group of men's texts. Oliphant's "Evelyn and Pepys" (O6) is the leftmost outlier for the main group of women's texts, while Linton's "Characteristics of English Women 1" (Li1) joins the historical

texts of Hayward and Burton, "Venice: Rise Decline Fall", (Ha7) "History of Venice" (Bu4) and "Witchcraft in Scotland" (Bu13), in the north west corner. Two of Froude's texts, "St. Teresa" (F10) and "The South Africa Problem" (F11), are northerly outliers. Cecil's "Change of Ministry" (Ce2) and Carlyle's "Shooting Niagara" (Ca7) have been labelled as points of reference.

It would appear from some of these placements that the operation of a gendered effect is not as strong for some texts as the operation of the intra-generic foci described in Chapter 3. Returning to the authorial groups plot, Figure 6.2, which was based on the 84 gender markers, and using the findings from Chapters 3 and 4 to associate certain authors with one or other of the intra-generic foci, Figure 6.2 can be seen in a slightly different light, now reconfigured as Figure 6.4.

Figure 6.4: Principal component analysis text plot
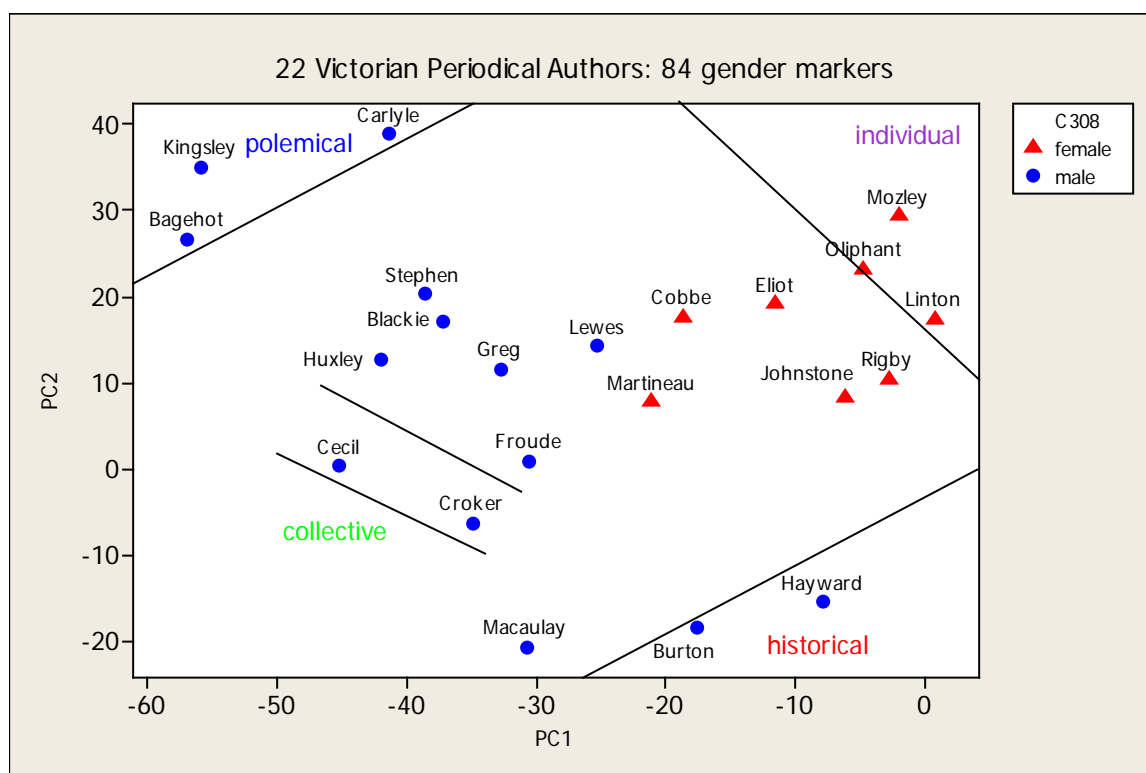
The question of whether men and women write differently in the periodicals seems to be complicated by the discovery of Chapter 3 that women tended to dominate only one of the four ends of the axes of differentiation. It appears that women chose to write (or were asked to write) articles within a more limited range of intra-generic foci than men. The oppositions highlighted in Figure 6.4 reflect the preference of some authors for writing one particular type of article over another. Although (as we have seen) authorial groups like these can mask the text variability of some authors, they do reflect the normal behaviour of others. Based on the findings in Chapter 4, I was able (in Figure 6.4) to oppose Cecil's habitual 'collective' focus with Oliphant's normal 'individual' focus, and Carlyle's habitual 'polemical' focus with Burton's normal 'historical' focus.[45]

Although my gender question appeared to be a simple one - 'Do men and women write differently in the periodicals?' - it is in fact inextricably mixed with the complexities of the nineteenth-century cultural assumptions about authorial identity in the periodical press. "The cultural identification of the 'journalist' as a signifier of masculinity" (Fraser, Green and Johnston 6), has meant that my 'playing field' (the 200 periodical texts collection) was not as level as Burrows' eighteenth and nineteenth-century collection of fictional histories or Koppel, Argamon and Shimoni's twentieth-century BNC collection where women's and men's writing were represented in almost equal proportions. Apart from the disparity of having only eight women authors in a field with fourteen men authors, it has also emerged that there is a gender-based difference in the adoption of one or more than one of the intra-generic foci identified in Chapter 3. Of the conventional approaches available to men and women journalists, few women in my collection availed themselves of a collective focus, while relatively few men adopted an individual focus. Table 6.3 below tabulates the thirty highest ranking texts for each of the four types of focus[46]. There is an obvious contrast between

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[45] I used the term's 'habitual' and 'normal' to indicate that for the texts in my collection, Cecil and Carlyle always adopt the same intra-generic focus, while Burton and Oliphant normally do – but not always.
[46] As we saw in Chapter 3, a single text can occur among the highest ranked texts for two different axes.

the two axes of differentiation, with women more or less on an equal footing on the horizontal axis and almost completely differentiated on the vertical.

Table 6.3:  30 highest ranking texts for four intra-generic foci

| Top 30 texts | Written by men | Written by women |
|---|---|---|
| **Horizontal axis** | | |
| Historical focus | 17 | 13 |
| Polemical focus | 21 | 9 |
| **Top 30 texts** | **Written by men** | **Written by women** |
| **Vertical axis** | | |
| Collective focus | 26 | 4 |
| Individual focus | 7 | 23 |

The gender demarcation seen on the vertical axis suggests that women show a decided preference for adopting an individualized focus when writing periodical articles, while men tended to avoid this approach. Two women, however, Martineau and Cobbe, defy the norm since none of their texts is numbered among the thirty highest ranking texts with an individual focus. On the other hand, Martineau has three texts among the highest thirty texts with a collective focus, while six men authors have none. In other words, a gender division along intra-generic lines tells only part of the story, as did a corpus-based list of gender marker words.

In an attempt to isolate any underlying, less conscious stylistic characteristics which might be related to a gender difference, I needed to eliminate the more consciously adopted effects of intra-generic focus. To this end, I looked for gender marker words among texts which could be assumed to share the same focus, thus eliminating that particular source of gender-based difference. This procedure was only possible for two of the four sets of texts (the polemical focus and historical focus sets) because of the disparity in numbers in the other two sets. The distribution test revealed fifty-four words which were used significantly differently by the male and female authors of the texts with a polemical focus. The principal component analysis plots are seen in Figures 6.5 and 6.6 below.

Figure 6.5: Principal component analysis text plot
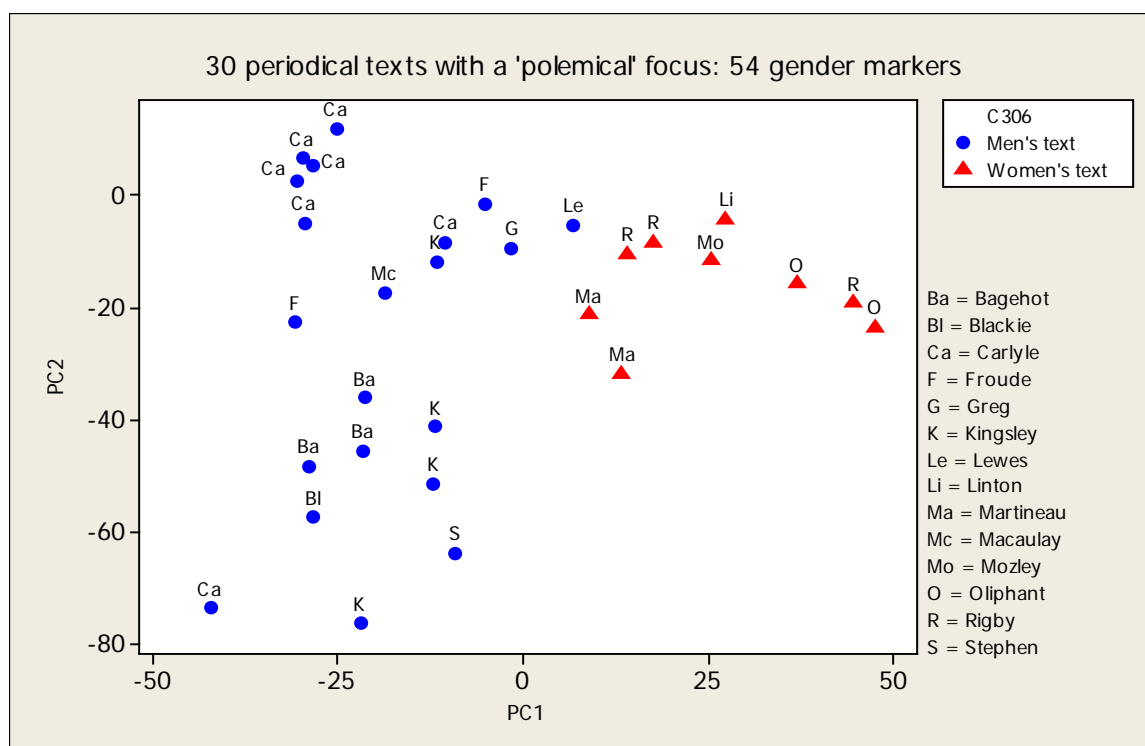


Since these texts share the same intra-generic focus, the separation of them on the basis of their relative frequency of use of the fifty-four (polemical focus) gender markers suggests a gender-related difference between the two sets of words. There are some similarities with the eighty-four marker words of Table 6.1 but also a number of interesting differences. It is not surprising, for example, that women writers have retained their more frequent resort to the feminine personal pronouns, since many of the subjects tackled in these articles involved women's issues. However, women have added one of the third person plural pronouns, while the men have lost their preferred usage of three of these. The men continue to make frequent use of the impersonal pronouns (*it, itself* and *its*) and have added *my, me, ours, he* and *himself* to their former *I, you* and *your*). The most obvious addition to the women writers' preferred words are four of the verb forms (*be* and *are* and the modals *can* and *should*). By comparison, the men's list of preferred usage of these forms has more than halved. Both groups of writers make less use of indefinite articles and pronouns with the loss of *nobody,*

*everything, an* and *anyone*, while the women show an increased use of the definite article. Such a change may well reflect the need for a polemicist to argue in more definite terms.

Figure 6.6: Principal component analysis word plot
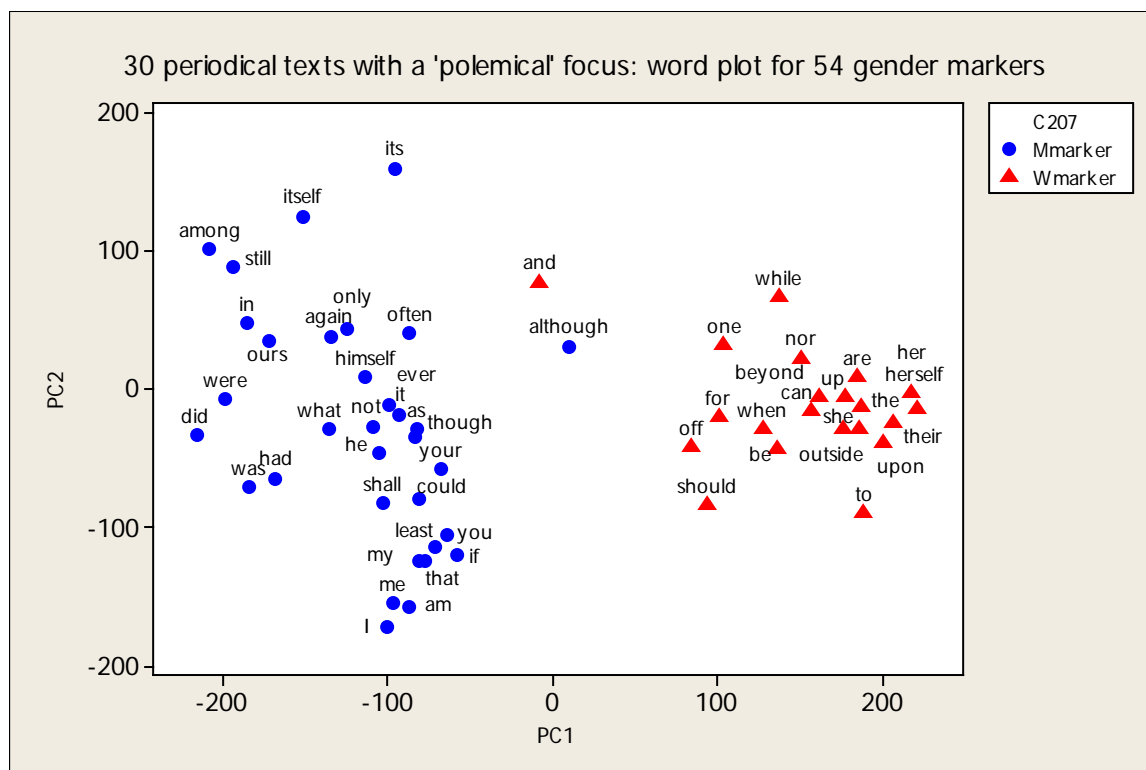


Although it is beyond the scope of this chapter to explore in depth the sorts of stylistic characteristics which might lie behind the relatively greater or lesser use of these particular words, the potential is there.

The distribution test carried out on the thirty articles sharing a historical focus identified sixty-three function words as differing significantly in the relative frequency of use by the two gendered groups. The principal component analysis plots using these words as variables can be seen in Figures 6.7 and 6.8 below.

Figure 6.7: Principal component analysis text plot



30 periodical texts with a 'historical' focus: 63 gender markers

C 308
● men's text
▲ women's text

Bl = Blackie
Bu = Burton
Co = Cobbe
E = Eliot
F = Froude
Ha = Hayward
J = Johnstone
Le = Lewes
Li = Linton
Ma = Martineau
Mc = Macaulay
R = Rigby
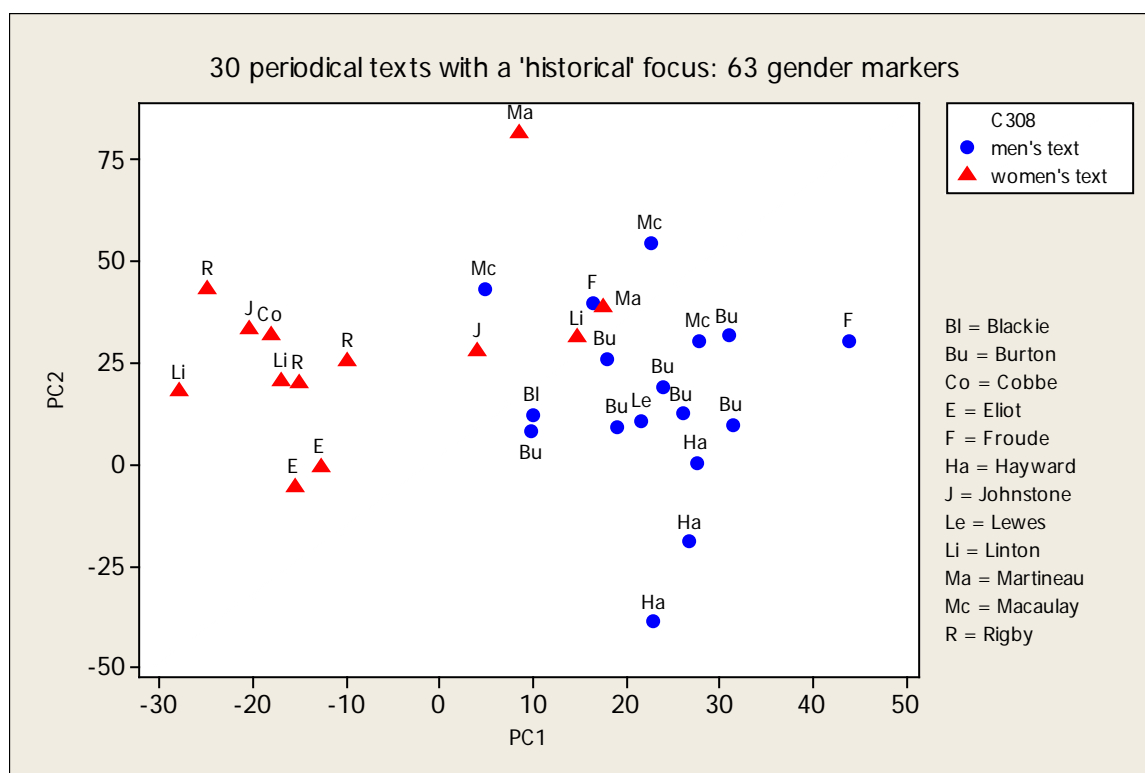
The gender separation between the texts written with a historical focus is not as complete as that seen between the texts written with a polemical focus. Three texts written by women are located among the men's texts: Martineau's "Negro Race in America" (Ma8), Linton's "Daniele Manin" (Li5) and Johnstone's "Mackintosh's History" (J4). It is interesting to see the location of these women's other texts in the plot. Both Johnstone and Linton have texts clearly among the women writers' texts, Johnstone's "Light Reading for June" (J3) and both parts of Linton's "Characteristics of English Women" (Li1 and Li2), while Martineau's text "The Brewing of the American Storm" (Ma1) is an outlier on the northern border. The easterly outlier is Froude's anomalous text "St. Teresa" (F10).

Figure 6.8 is the word plot accompanying Figure 6.7, and shows – in reduced fashion – a number of the function words which were associated with the gender division of the authorial groups plot. Though there are fewer of them, the men continue to make more use of function verbs and modals; they have lost the first and second person personal pronouns (*I, you* and *your*) while gaining *he* and

retaining *they*; they continue to favour *it, that* and *if* and they now favour both forms of the indefinite article. Women on the other hand retain only *her* from the feminine pronouns; gain no function verbs or modals; and make considerable gains in a variety of conjunctions, quantifiers and adverbs.

Figure 6.8 Principal component analysis word plot



It would seem that the three women's texts which find a location among the men's texts in Figure 6.7 represent texts which were written (by the women) in a style of writing that was more characteristic of many of the men writers in the text collection than it was of the writings of the other women or even (in the case of Linton and Johnstone) other texts of their own. I will look at each of these women in turn, using information from Chapters 3 and 4 to help contextualize these three texts.

## Harriet Martineau

Given the location of Martineau's authorial group in Figures 6.1 and 6.2, it is not so surprising to find that, in the location of her individual texts, Martineau's writing more closely approaches the writing of her male counterparts than the other women authors. In Figure 6.1 I noted that her authorial group of texts was closer to those of Froude and Macaulay than it was to those of Linton, Mozley and Oliphant. In Figure 6.2, she is closer to Lewes than to most of the other women. In Figure 6.3, her two American texts were highlighted as being located among a group of men texts. In Figure 6.5, her two texts with a polemical focus "Death of Life in India" (Ma6) and "Nurses Wanted" (Ma10), though aligned with the women's texts, are relatively close to the men's texts, and in Figure 6.7 her "Negro Race in America" (Ma8) is once again located among the men's texts.

Certainly, Martineau was one of the earliest women to enter the male-dominated world of journalism; her articles on Scott for *Tait's Edinburgh Magazine* were published in 1832 and 1833. Fraser, Green and Johnston quote Martineau's letter to the editor of the *Edinburgh Review* when she submitted her "Female Industry" (Ma3) article in 1859: "I do hope you will like it, & that you will think I have succeeded in making it look like a man's writing" (29). Easley agrees that "Martineau often adopted a male persona in her essays" in order "to distance her work from what she saw as self-indulgent forms of feminine writing" ("Authorship" 38), and says that she modeled her style after the works of masculine sages.

Easley suggests that Martineau's motivation for wanting to blend with the then masculine crowd of periodical writers, was based on her conviction "that women would be successful in entering the debate over the Woman Question only if they argued their points from a de-personalized point of view" ("Authorship" 35). I suspect that here we have the answer to Martineau's ability to write articles which appear 'masculine'. It might explain, for example, why none of Martineau's texts are written with an individualized focus, when this is by far the preferred mode of writing for most of the women in the text collection. Martineau's

distinctiveness in this respect can be seen in the relative location of her texts according to the mapping of the 200 texts of the collection in Chapter 3 (Figure 6.9). Eight of her ten texts are located on the polemical focus side of the collective focus area, while the two American texts are seen to be different from these other eight by virtue of their marked historical focus, and different from each other because of the collective focus of "The Negro Race" (Ma8).

Figure 6.9: Principal component analysis text plot
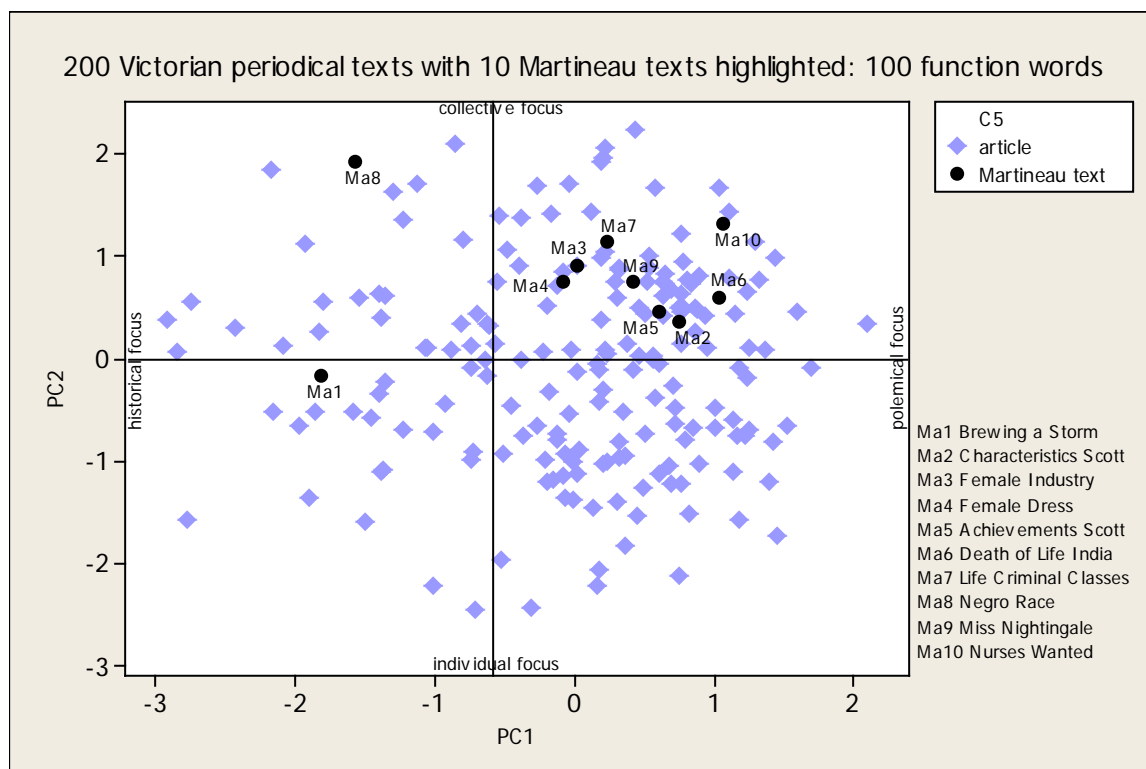


*Christian Johnstone*

Christian Johnstone was another woman writer who (like Martineau) entered the periodical scene very early. She was for many years the editor and writer of a number of articles for *Tait's Edinburgh Magazine* and was regarded (by Tait at least) as "a distinctly feminine, though clearly 'versatile' writer" (Easley 67). Easley points out that, "during the 1830s, the role of the editor in mainstream magazines and quarterlies was gendered masculine by default" (62), and

suggests that Johnstone "probably viewed the creation of a masculine voice as a prerequisite to a successful editorship" (68). In Chapter 4, Johnstone was described as one of the authors whose individual texts were variable, many of them finding a location in the central area of the plot and in the individual focus sector favoured by most of the women writers. Her review of Mackintosh's history is marked by its historical focus, and it is located in Figure 6.8 near three historical reviews written by men. In Figure 6.10 below, it can be seen just how different this text is from all her others except "Light Reading for June", (J3) which is marked by its combination of individual and historical foci.

Figure 6.10: Principal component analysis text plot
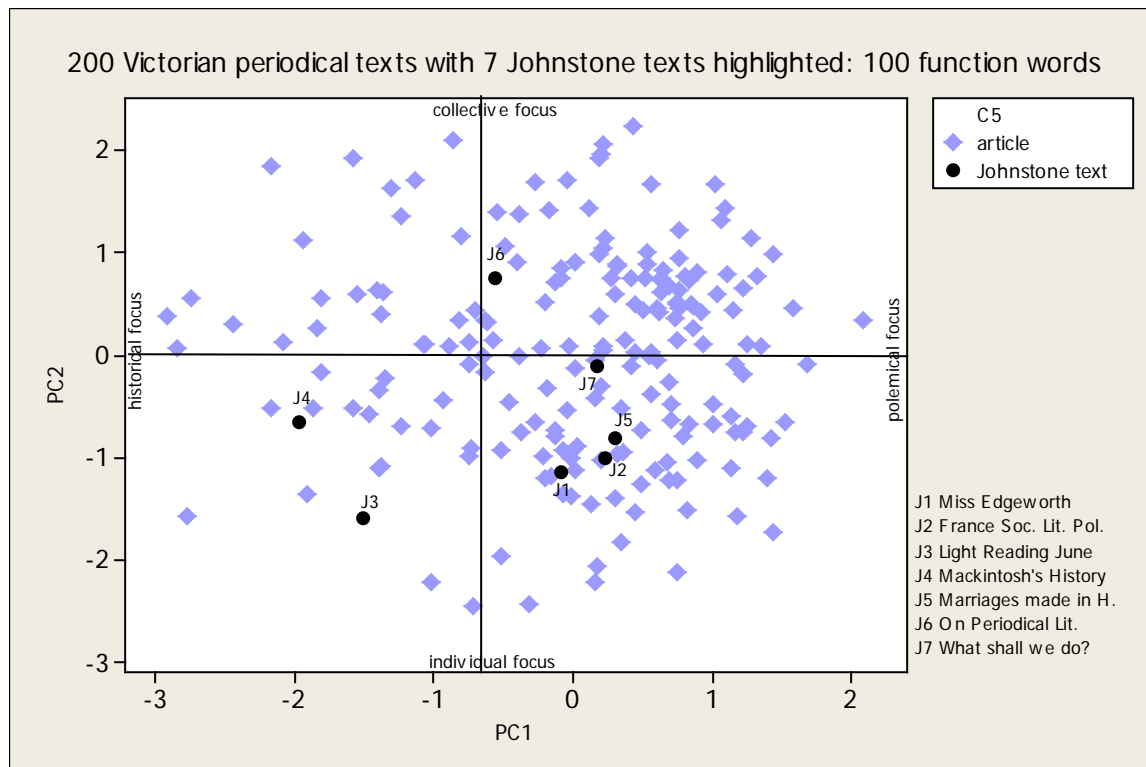


*Eliza Lynn Linton*

Broomfield argues that Linton played an important role "in the development of popular journalism at mid-century" and worked hard from 1851 to 1868 "to establish herself as the most formidable critic of Victorian womanhood, because she was determined to make the journalism profession work to her benefit" (268).

To this end, Broomfield suggests, "she had to master the rules of the game in order to compete with her colleagues – the majority of whom were male" (269). She should be remembered (according to Broomfield) for helping journalism to achieve its voice as an inciter and perpetuator of public debate (281).

In Chapter 4, I described Linton as being the hardest author to assign to one of the four scenario groups, since her individual texts were so contradictory that they defied the sort of classification I was attempting. On the one hand, she produced texts which were extreme in their difference from other authors, while on the other hand she could write texts which blended in with the crowd. Although, as I showed in the Prologue, I had no trouble in identifying her authorial signature, I have not been able to assign the characteristics of a feminine style of writing to all her texts, even though some of them (Li1 and Li2, for example) are almost archetypical instances of it.

Figure 6.11: Principal component analysis text plot
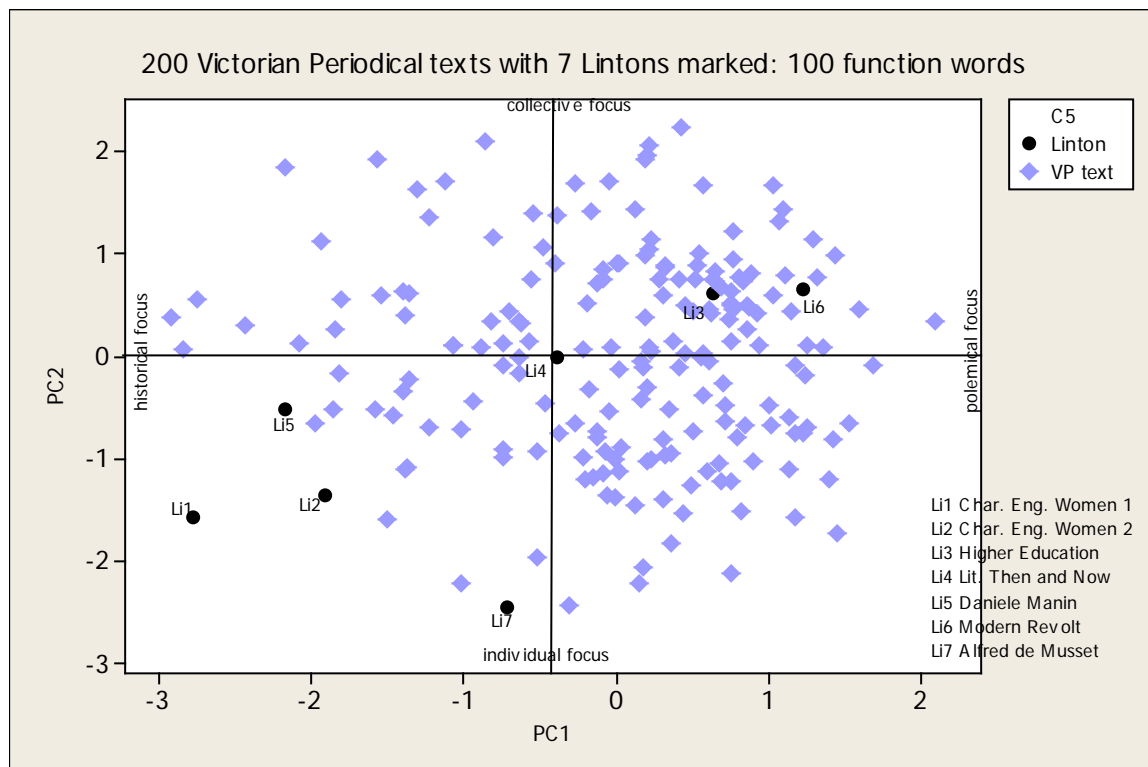
Her two early texts, written for *Fraser's Magazine* in 1857, "Alfred de Musset" (Li7), and "Daniele Manin" (Li5), were seen to be different in the way each was marked by a different intra-generic focus in Chapter 3, (seen here in Figure 6.11) but similar in the way they blended with the authorial groups in Chapter 4. Clearly, the strong historical focus of "Manin" (Li5) is what separates it from "de Musset" (Li7).

*Summation*

From this survey of the individual texts of Martineau, Johnstone and Linton, it can be seen that the texts they wrote with a historical focus were markedly different from their other texts. This suggests that they were aware of the contemporary conventions of the way a historical review or essay should be written. It also suggests that I was not completely successful in eliminating the intra-generic factor in my attempt to isolate gender markers for these tests.

**Conclusion**

Although the "origins of the gender-linked language effect have not yet been definitively established" (Mulac and Lundell 308), there seems no doubt that such an effect does operate. Much of the research on the question has been confined to the spoken language[47] and to identifying sociological and cultural causes for differences in men's and women's language.  These oral and sociological based studies lie largely outside the field of research I am interested in, where the data base (the articles contributed to the periodical press by a number of Victorian men and women) is allowed to 'speak for itself' by virtue of the relative usage or non-usage of its function words.

Each of the researchers I cited noted that the gendered-effect was not absolute, residing rather in the realm of 'tendency'. We may say that 'in general' men tend to write this way and women that way, but there will always, for one reason or another, be exceptions. Burrows found the effect to be more pronounced in his

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[47] For example, Janet Holmes, and Lakoff

earlier group than in his later group. Koppel, Argamon and Shimoni were able to claim only an 80% success rate for the ability of their language features to distinguish between samples of male and female formal written documents while Mulac and Lundell could claim only a 72.5% success rate for the correct identification of essays by their language features. My results confirm the notion of the differences lying in the realm of 'tendency' since they showed much better separation for large authorial groups than for authors' individual texts.

My analysis of the writing differences between men and women in the nineteenth-century periodicals has shown the differences to be located in a tendency, in men, towards impersonality and complexity and, in women, towards simplicity and directness. This finding, however, is complicated by my earlier discovery that most women wrote articles within a more limited range of intra-generic foci. Simplicity and directness are among the characteristic features of the individualized focus which was found to be the focus most often adopted by many women authors for their articles. Impersonality and complexity are among the characteristic features of articles written with a wider more collective focus, a focus almost totally dominated by men, Martineau excepted. It would appear that the gender marker words I established in this chapter are not as successful in overriding the influence of intra-generic focus as were the authorial marker words which were invariably able to establish an authorial identity for all an author's texts, even those written with differing intra-generic foci.

In her article "Men are from Earth, women are from Earth", Deborah Cameron raises a number of questions that are pertinent to this discussion of gender differences in writing in the nineteenth-century periodicals. She cites Simon Baron-Cohen's suggestion that "men's and women's brains have evolved for different tasks" and that "although there are individual differences, most women are 'empathizers', good at reading and responding to others' feelings, while most men are what he calls 'systemizers', good at analyzing the workings of rule-governed systems" (143). Cameron's reaction to Baron-Cohen's demonstration

of 'different but equal' is that it is "always a lie". Rather, she argues, "when difference is naturalized, inequality is institutionalized" (144). Perhaps Cameron is right about the institutionalizing of equality, since it is not stretching Baron-Cohen's characterizations too far to see 'empathizers' as preferring to write literary reviews in an individualized focus and 'systemizers' as preferring to write about the complex problems of government or South Africa in a collective focus.

Another question that Cameron raises is the fact that when gender differences in verbal behaviour are cited, they "are not absolute but statistical tendencies, to do with the frequency or probability of certain behaviours in certain contexts. The claim is always that men do more or less of something than women, not that men do something and women do something else entirely" 145). She concludes from this that "any difference in men's and women's ways of communicating is not natural and inevitable, but cultural and political" (145).

Although these differing views on the question of gender differences in language appear to take it into the unanswerable territory of the nature-nurture debate, I continue to believe that the empirical methods of computational stylistics offer one of the best paths for pursuing the enquiry. Since these methods involve statistical procedures, the results will perforce be in the arena of frequency and probability. This should not invalidate the enquiry; it might simply mean that the question needs to be reframed. Perhaps instead of asking whether the men and women who wrote for the nineteenth-century periodicals wrote differently, the question should be rephrased as: "when and why do men and women write differently in the periodicals?" and (even more interestingly) "when and why do men and women write in similar fashion in the periodicals?" This chapter has provided some substantial answers to the question of when, but the answer to why must seemingly remain part of the much wider nature-nurture debate.

# Chapter 7: George Eliot

The opening remarks of Leslie Stephen's 1881 article on George Eliot, published just after her death, pay tribute to her greatness.

> Had we been asked a few weeks ago to name the greatest living writer of English fiction, the answer would have been unanimous. No-one … would have refused that title to George Eliot. … In losing George Eliot we have probably lost the greatest woman who ever won literary fame, and one of the very few writers of our day to whom the name 'great' could be conceded with any plausibility. (207)

This chapter examines in detail the periodical articles of George Eliot, no ordinary user of the English language. If anyone was going to stand out among a crowd of professional writers for periodical journals, it would be someone like her, whose talent was later to issue in a series of powerful and original novels. In the tests of Chapter 4, Eliot was one of the authors whose texts demonstrated a fairly high level of consistency – with each other, and in their relationship to the texts and authorial groups of the other writers. When her texts are highlighted, in the Chapter 3 plot of the 200 texts (Figure 7.1 below), they are found to be all located in the central section of the plot – well away from the extremities of either of the axes of authorial stance described in Chapter 3, suggesting a writer given more to subtlety than extremes.

Rosemary Ashton (one of Eliot's biographers) argues that "in the essayist, increasingly confident, wide-ranging, witty, and rhetorically complex, we can see many of the characteristics of the future novelist George Eliot" (*DNB*). Thomas Pinney says in the introduction of his collection of Eliot essays that "her articles display, in lesser measure, the same intelligence and breadth of view that we have learned to appreciate in her novels" (10). The second part of this chapter will explore the writing style of Eliot as a novelist, seeing in what respects Eliot differs from other Victorian fiction writers, and seeing which stylistic characteristics have carried over from her journalism.

As the anonymous subeditor of the *Westminster* from 1851 to 1856, Eliot had the opportunity to review works "on topics ranging from English, French, and German literature to science to philosophy to evangelical sermons" (Ashton, *DNB*) while her time in Weimar in 1854-5 with Lewes resulted in two articles for *Fraser's*. Eliot's first work of fiction "Scenes of Clerical Life", began appearing in instalments in *Blackwood's Edinburgh Magazine* in 1857.  Once she started writing fiction, her periodical articles all but ceased; in the 1860s we have only her review of Lecky's *Rationalism* (E7) which appeared in *The Fortnightly Review* in 1865 and her 1868 article for *Blackwood's*, where she assumed the persona of her fictional character, Felix Holt (works cited). Twelve of the thirteen articles in my text collection were written between 1851 and 1857.

## Journalist

The first glimpse of Eliot's work as an anonymous journalist amidst the mass of other mostly anonymous articles seen in Figure 7.1 below is revealing.

Figure 7.1: Principal component analysis text plot
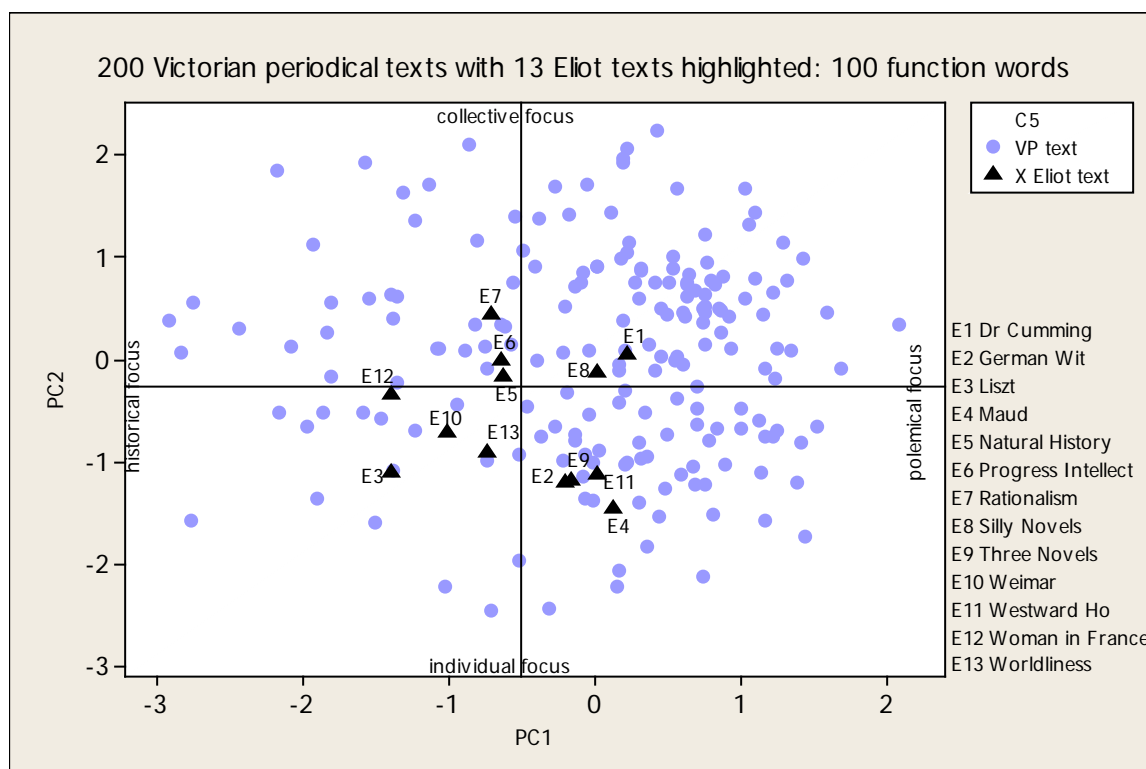
Lines have been drawn across the plot to indicate the PC1 and PC2 dimensions which were outlined in Chapter 3 on the basis of the outlying texts and the words underlying their placement. None of Eliot's texts has assumed an extreme position on either axis; rather, they cluster around the central point and demonstrate her ability to vary her focus (ever so slightly) in any chosen direction. Of the individual texts of other authors, only two (Blackie and Rigby) find locations in all four sections of the plot, and in the case of Rigby this is partly caused by her two chronological groups. Richard Stang describes Eliot's "point of view" as being one of "imaginative sympathy" and hence "multiple and shifting". Speaking of her novels, he goes on to suggest that restricting them to a single point of view would have falsified them for her (954). Perhaps this location of Eliot's texts in terms of the four sectors of the plot reflects this "multiple and shifting" point of view in her periodical articles as well. The texts are unified by their common central location, although the sector location of each group of texts reflects a slight increase in the use of words favoured in that sector.

The four texts in the bottom right quadrant in Figure 7.1, for example, are all literary reviews, where the words underlying an individual focus tend to appear. On the other hand, the three articles in the top left quadrant include her reviews of more philosophical works Mackay's "Progress of the Intellect" (E6), Lecky's "Rationalism" (E7) and Riehl's "Natural History of German Life" (E5), where "she advocated a particular (Spinozan) kind of realism in art" (Ashton *DNB*). The two articles in the top right hand quadrant (still very close to the central point) are the two articles where she allowed herself the indulgence of wittily attacking silly lady novelists (E8) and the evangelical teacher Dr Cumming (E1). Her other "slashing essay" (Pinney 2) "Worldliness and Other-Worldliness" (E13), also quite close to the central point, is located in the bottom left quadrant with the two *Frasers* articles (E3 and E10) and her article on Madame de Sable (E12).

In order to examine Eliot's style more closely and to see how it differed from that of the other writers represented in my text collection, I carried out a distribution test on the 200 most common function words to see which words were used significantly differently by Eliot and the other twenty-one authors (Table 7.1).

Table 7.1: Results of Discrimination Test of Eliot and 21 Victorian Periodical Writers

| Eliot | Other Victorian periodical writers |
|---|---|
| uses relatively more often | use relatively more often |
| **Indefinite Articles/Pronouns** | **Indefinite Articles/Pronouns** |
| a an everyone | it one there everybody |
| **1<sup>st</sup> and 2<sup>nd</sup> person personal Pronoun** | **1<sup>st</sup> and 2<sup>nd</sup> person personal Pronoun** |
| you us | ourselves |
| **3<sup>rd</sup> person personal Pronouns** | **3<sup>rd</sup> person personal Pronouns** |
| he his him | they them themselves |
| **Relative Pronouns** | **Relative Pronouns** |
| who | |
| **Function Verbs and Modals** | **Function Verbs and Modals** |
| | be have had been were would do should could |
| | might cannot did shall done ought doing |
| **Conjunctions** | **Conjunctions** |
| than until | so if before though |
| | |
| **Prepositions** | **Prepositions** |
| in with by on from into through towards | to upon without under during behind across amid |
| opposite | |
| **Quantifiers/qualifiers/demonstratives** | **Quantifiers/qualifiers/demonstratives** |
| | all such most these some those much every few |
| | each neither |
| **Adverbs** | **Adverbs** |
| here rather quite instead | what only even yet how well ever thus always |
| | somewhat whenever |
| **Negative forms** | **Negative forms** |
| | no nothing nor none |

Eighty-six of the 200 words had t-values of + or – 2.0 or higher with probabilities ranging from 0 to 0.05. Twenty-four of the words had positive t-scores, with means higher in the Eliot articles, while sixty-two had negative scores with means higher in the non-Eliot articles. Sheer weight of numbers then, suggests that Eliot is more marked by the words she uses consistently less often than other authors than she is by the words which she uses consistently more often.

The words in this table show that Eliot makes greater use than the other journalists of the indefinite articles *a* and *an*, third person masculine personal pronouns *he, his* and *him*; first person plural pronoun *us*, second person pronoun *you*; relative pronoun *who*, the prepositions *in, with, by, on, from, into, through, towards* and *opposite* and adverbs *here, rather, quite* and *instead*. This increased usage by Eliot of the grammatical features signaled by these words is offset by the much larger list of the usages which she tends to eschew.  Do these different usages of words simply indicate that Eliot was writing a different type of article from the other journalists, or are they indicators of a true stylistic difference? There are sixteen verb forms - function verbs, auxiliaries and modals - Eliot uses less often than other writers. How does this affect her style? She seems to avoid using conjunctions such as *so, if* and *though*, and the negative forms which are generally found in more complex or argumentative types of writing. She uses eleven quantifier, qualifier and demonstrative forms less often than other authors and makes consistently higher use of certain prepositions and less use of others. The grammatical distribution of these positive and negative marker words is certainly suggestive of an underlying style of writing which is distinctive.

Two broad characteristics of style seem to unite the typical Eliot choice of words. One is a heightened generality and a deliberative and essayistic style; the other is directness, forcefulness, and an avoidance of qualification and negation. Eliot remarks on "the greater solidity and directness of the English mind" (30) – as compared to that of the German, in her first journal article for the *Westminster Review* in January 1851, a review of Mackay's "The Progress of the Intellect" (E6).  Perhaps these virtues are characteristic of her own journalistic style. Certainly the attributes 'solidity' and 'directness' go a long way towards describing the sort of style indicated by the eighty-six marker words.

In an attempt to examine these stylistic characteristics more closely, I looked for texts which rated high in the usage of several positive Eliot marker words whilst rating low in many of the negative ones. "Three Months in Weimar" (E10)

published in *Fraser's Magazine* in 1855 was one such text and "Three Novels", (E9) a review published in the *Westminster Review* in 1856 is another. Three examples from the Weimar article illustrate some of these words in action, as Eliot shares her travel tales with the reader. Words of interest are coloured red.

> A walk in the morning in search of lodgings confirmed the impression that Weimar was more like a market town than the precinct of a court. (83[48])

> To anyone who loves Nature in her gentle aspects, who delights in the chequered shade on a summer morning, and in a walk on the corn-clad upland at sunset, within sight of a little town nestled among the trees below, I say -- come to Weimar. (84)

Here, the reader is invited to see things through the eyes and descriptive powers of the writer. We see the careful weighing of alternatives and observation combined with reflection. This is an assured deliberative style illustrating some of the features predicted by the marker words – repetition of the indefinite article, reliance on the simple prepositions *in* and *on*, the directness of using main verbs without auxiliaries or modals (*confirmed, loves, delights, nestled* and *come*), and extension of generalized description through use of the relative pronoun *who*. The third example also shows repetition of the indefinite article as it paints a picture of the Thuringian head-dress for the reader through the use of simile and the preposition *with.*

> A head-dress worn by many of the old women, and here and there by a young one, is, I think, peculiar to Thuringia. Let the fair reader imagine half-a-dozen of her broadest French sashes dyed black, and attached as streamers to the back of a stiff black skullcap, ornamented in front with a large bow, which stands out like a pair of donkey's ears; let her further imagine, mingled with the streamers of ribbon, equally broad pendents [sic] of a thick woollen texture, something like the fringe of an urn-rug, and she will have an idea of the head-dress in which I have seen a Thuringian damsel figure on a hot summer's day. (91)

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[48] Page numbers for quotations from Eliot's periodical articles here and elsewhere refer to Pinney's edition of her collected works.

Another writer might have used third person plural pronouns to refer to the Thuringian women. Eliot chooses not to; instead she chooses to generalize the Thuringian head-dress and damsel by using the indefinite article. The long series of main verbs (*worn, imagine, dyed, attached, ornamented, stands out* and *mingled*) concludes with just two examples of auxiliaries (*will have* and *have seen*), nicely illustrating the fact that the sorts of stylistic traits I am looking for are only relative. One feels an assurance in these passages, which seems to come at least in part from the way Eliot handles both her (first person) authorial voice and her awareness of the reader.

The opening sentences of her review "Three Novels" (E9) show another assured authorial voice at work, this time commending a new novel against the imagined complaints of 'Fadladeens', under the cover of the editorial *we*.

> AT length we have Mrs. Stowe's new novel, and for the last three weeks there have been men, women, and children reading it with rapt attention -- laughing and sobbing over it -- lingering with delight over its exquisite landscapes, its scenes of humour, and tenderness, and rude heroism -- and glowing with indignation at its terrible representation of chartered barbarities. Such a book is an uncontrollable power, and critics who follow it with their objections and reservations -- who complain that Mrs. Stowe's plot is defective, that she has repeated herself, that her book is too long and too full of hymns and religious dialogue, and that it creates an unfair bias -- are something like men pursuing a prairie fire with desultory watering-cans. In the meantime, "Dred" will be devoured by the million, who carry no critical talisman against the enchantments of genius. We confess ourselves to be among the million, and quite unfit to rank with the sage minority of Fadladeens. (325)

The repeated use of the relative pronoun in this passage again shows how Eliot is able to inject such marvelous detail into her generalized descriptions. She speaks of "critics who … who" and then compares them to men "pursuing a prairie fire with desultory watering-cans." The simple preposition *with* is accompanied by such a variety of descriptive noun phrases that its repetition adds to the cumulative power of the passage. Two examples of Eliot's favoured

indefinite article serve to move the book under observation into a more generalized realm: "Such a book is an uncontrollable power …".

A writer's style is often characterized by its usage of pronouns. R. Brown and A. Gilman note that a person's "consistent pronoun style gives away his class status and his political views" and that a person "may vary his pronoun style from time to time so as to express transient moods and attitudes" (253). John Burrows devoted the first chapter of his book *Computation into Criticism* to show how Jane Austen used 'A Set of Pronouns' to such brilliant advantage. The Weimar passages showed Eliot's ability to blend the authorial first person voice unobtrusively into the descriptions and to use the indefinite article as a way of avoiding the use of third person plural pronouns. The review passage demonstrates her ability to use the authorial first person plural pronoun with every bit as much assurance as her male counterparts. The third person singular pronouns tend to be tied to the subject under discussion, and this proves to be the case with Eliot's usage of the masculine pronouns. Although these pronouns are included in the list of her preferred marker words, in fact her usage of them is only high in those articles which involve the discussion of a male author or subject (Dr. Cumming, Henrich Heine, Tennyson, Lecky, Kingsley, Reade and Young).

Although the second person pronoun *you* also appears among Eliot's preferred marker words, her use of it is intermittent and flexible. Several of her texts make little use of it, while those texts which do use it show considerable variation. In the Weimar text, for example, it is often used as a substitute for *I, we* or *one*.

> To the disgust of your wakeful companions, you are totally insensible to the existence of your umbrella, and to the fact that your carpet bag is stowed under your seat, or that you have borrowed books and tucked them behind the cushion. (83)

In "Silly Novels by Lady Novelists" (E8) it is used to address the male protagonist of the silly novels and to contrast them with their heroines.

She is a polking polyglott, a Creuzer in crinoline. Poor men! There are so few of you who know even Hebrew; you think it is something to boast of if, like Bolingbroke, you only "understand that sort of learning, and what is writ about it;" and you are perhaps adoring women who can think slightingly of you in all the Semitic languages successively. (305)

Finally, Eliot's fictional persona, Felix Holt, is able to use this pronoun as the natural form of address from one working man to others.

I am not going to take up your time by complimenting you. (416)

You will not suspect me of wanting to preach any cant to you… (422)

Pinney, in his introduction to his edition of George Eliot's essays, speaks of her preference "to admire, rather than criticize" (2) and to base her praise on genuine liking and understanding. Nevertheless, when the occasion arose, she was able to demolish her subject quite effectively, as in her "three slashing essays – 'Dr. Cumming', 'Silly Novels' and 'Worldliness and Other-worldliness'" (2). It is interesting to note that the positive marker word *instead* seems not to be used across the majority of the texts; only two of them, "Dr Cumming" (E1) and "Silly Novels" (E8) having high readings. An examination of the use of the word in these texts shows that the word is favoured by Eliot when she is holding someone up for ridicule – in these texts Dr. Cumming and the heroines of the Silly Novels.

Indeed, his productions are essentially ephemeral; he is essentially a journalist, who writes sermons instead of leading articles, who, instead of venting diatribes against her Majesty's Ministers, directs his power of invective against Cardinal Wiseman and the Puseyites. ("Dr. Cumming" 164)

Her knowledge remains acquisition, instead of passing into culture; instead of being subdued into modesty and simplicity by a larger acquaintance with thought and fact, she has a feverish consciousness of her attainments… ("Silly Novels by Lady Novelists" 316)

tender glances are seized from the pulpit stairs instead of the opera-box, tête-à-têtes are seasoned with quotations from Scripture, instead of quotations from the poets… ("Silly Novels by Lady Novelists" 318)

> … she is as fond of a fine dinner table as before, but she invites clergymen instead of beaux… ("Silly Novels by Lady Novelists" 319)

The subjects of discussion in the other articles should have been relieved to find Eliot had no cause to use *instead* on them.

What of her liking of the words *rather* and *than*? I wondered if she preferred the more neutral word, *rather,* to other more emphatic qualifiers such as *very* or *most*. An examination of the use of this word in her texts reveals that at times Eliot does indeed rely on the ameliorating or softening qualities of *rather* – as in "rather a difficult position", "rather an insipid personage", "rather saddening" and "rather childish". In all, twenty-seven of eighty eight occurrences are of this type. However, her greatest usage of this word is related to her frequent careful weighing of alternatives, her considered opinion that "this, rather than that, is so." Comparative usage accounts for sixty occurrences of *rather*. It also explains her frequent use of the conjunction, *than*.

> Carlyle's love of the concrete makes him prefer any proper name rather than an abstraction. ("Westward Ho! and Constance Herbert" 127)

> … if we dwell on what has disappointed us, rather than on what has gratified us. ("Westward Ho! and Constance Herbert" 133)

> … rather in the light of a homily than of a fiction. ("Westward Ho! and Constance Herbert" 135)

> … whose sympathies are more easily roused by fiction than by bare fact. ("Three Novels" 327)

> … we cannot help regretting that she has not presented her views on a difficult and practical question in the "light of common day," rather than in the pink haze of visions and romance. ("Three Novels" 332)

I noted earlier that the list of marker words underlying Eliot's habitual stylistic choices is populated more by the words she tends to avoid than by those she uses more often. There are a number of negative marker words which have a very high t-value (and p value of < 0.000): these include the conjunctions *so* and *if* and many function verb forms – *do, doing, be, been, were, would, could, cannot, might* and *ought*. It is not so easy to see how an author avoids using words; however, we can get some idea of how Eliot may have used words she normally avoids, by looking at the use she makes of these 'negative marker' words in her anomalous text[49] "Felix Holt". This text has a much higher score for a number of the high scoring negative markers than her other texts.

We find many of these words being used in an exhortatory fashion as Felix urges his recently enfranchised fellow workers not to abuse their new power. The conditional conjunction finds a use as Felix delves into cause and effect, and almost every verb phrase is complex.

> We could groan and hiss before we had the franchise: if we had groaned and hissed in the right place, if we had discerned better between good and evil, if the multitude of us artisans, and factory hands, and miners, and labourers of all sorts, had been skilful, faithful, well-judging, industrious, sober we should have made an audience that would have shamed the other classes out of their share in the national vices. We should have had better members of Parliament, better religious teachers, honester tradesmen, fewer foolish demagogues, less impudence in infamous and brutal men; and we should not have had among us the abomination of men calling themselves religious while living in splendour. ("Address to Working Men, by Felix Holt" 416)

This text – so very different from Eliot's other thirteen texts – provides a useful example of the sort of stylistic characteristics which Eliot usually avoids. Whereas Eliot's usual style is characterized by directness, this passage seems particularly circuitous and indirect. Where her normal use of *we* is editorial, the examples here are inclusive of both Felix and the audience.

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[49] In a series of tests (not reported here) Eliot's 'address' text "Felix Holt" proved to be extremely unlike all her other journal articles.

*Eliot's avoidance of Modals and Function Verbs*

One of the most remarkable features of the marker words listed in Table 7.1, which distinguish Eliot's usage from the other authors is her avoidance of so many of the modal and function verbs. Of the complete set of twenty-eight[50] such verbs in the 200 wordlist, (Appendix 2.3) she uses sixteen significantly less often than the other authors. These sixteen have been coloured blue in Table 7.2 which lists these verb forms.

Table 7.2: Function verbs and modals

| BE | HAVE | DO | MODALS | EXTRA |
|------|--------|-------|---------|--------|
| be | have | do | will | cannot |
| been | has | does | would | [ought] |
| being | had | did | shall | |
| is | having | done | should | |
| am | | doing | can | |
| are | | | could | |
| was | | | may | |
| were | | | might | |
| | | | must | |

In order to test this difference I used the 'transform' function of SPSS to create two new variables (*modals* and *fverbs*) which were computed as the sum of counts of the named modals and function verbs. In the first instance, I used only the seven modals and nine function verbs which appear on Eliot's marker word list. When these two variables were used in a t-test for each of the authors in turn against the others, Eliot's scores were very low,  -8.272 for modals and -6.384 for function verbs, compared to Froude, for example, who scored 3.217 on modals and 3.112 on function verbs. In order to ensure that the tests were not biased in Eliot's favour, I ran a second set of tests, this time creating two new variables of all the modals and all the function verbs. The results of these t-tests are listed in ascending order in Tables 7.3 and 7.4 below.

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[50] 'Ought' is generally considered only a 'marginal' auxiliary modal (Crystal 64); it was included in the test because it was one of the negative marker words for Eliot.

Table 7.3:  T-values for all modals for 22 authors

| rank | Author | All Modals | rank | Author | All Modals |
|------|--------|-----------|------|--------|-----------|
| 1 | Eliot | -6.61 | 12 | Carlyle | 0.36 |
| 2 | Rigby | -3.564 | 13 | Macaulay | 0.757 |
| 3 | Hayward | -3.451 | 14 | Croker | 1.313 |
| 4 | Oliphant | -3.113 | 15 | Kingsley | 1.843 |
| 5 | Huxley | -2.882 | 16 | Martineau | 1.961 |
| 6 | Johnstone | -2.739 | 17 | Lewes | 2.107 |
| 7 | Linton | -2.157 | 18 | Greg | 2.33 |
| 8 | Blackie | -1.516 | 19 | Froude | 2.394 |
| 9 | Mozley | -1.393 | 20 | Stephen | 2.407 |
| 10 | Burton | -1.038 | 21 | Bagehot | 2.735 |
| 11 | Cobbe | 0.125 | 22 | Cecil | 4.483 |

Table 7.4: T-values for all function verbs for 22 authors

| rank | Author | All F. Verbs | rank | Author | All F. Verbs |
|------|--------|-------------|------|--------|-------------|
| 1 | Johnstone | -4.585 | 12 | Kingsley | -0.161 |
| 2 | Eliot | -4.041 | 13 | Carlyle | 0.181 |
| 3 | Blackie | -2.922 | 14 | Huxley | 0.524 |
| 4 | Linton | -2.842 | 15 | Burton | 1.16 |
| 5 | Mozley | -2.592 | 16 | Lewes | 2.255 |
| 6 | Cobbe | -2.568 | 17 | Macaulay | 2.376 |
| 7 | Rigby | -2.322 | 18 | Stephen | 2.552 |
| 8 | Croker | -2.29 | 19 | Martineau | 2.736 |
| 9 | Hayward | -2.289 | 20 | Bagehot | 4.895 |
| 10 | Greg | -1.916 | 21 | Froude | 5.227 |
| 11 | Oliphant | -1.055 | 22 | Cecil | 5.966 |

Eliot's scores are still very low compared to almost all the other authors. No author comes close to her low score of -6.61 for modal usage; Rigby and Hayward are the closest with -3.564 and -3.451 respectively. Johnstone is the only other author with a very low score for function word usage, just beating Eliot's -4.041 with her -4.585. These results lend weight to the idea that Eliot's periodical writing is characterized by a preference for simple verb forms and a corresponding avoidance of modal and auxiliary verb forms.[51]

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[51]  The fact that the seventeen function verb forms have not been separated into auxiliary and main verb entities (for example, I **have gone** vs I **have** a hat) makes the interpretation of the function verb result less clear-cut. Nevertheless, as the tests revealed, Eliot's usage of these verb forms is significantly lower than all but one of her fellow authors, which makes it highly likely that this is at least partly due to a reduced use of the auxiliary forms in line with her proven reduced modal auxiliary forms usage.

When the eighty-six marker words are used in a principal component analysis of the 200 periodical texts of the text collection (Figure 7.2), Eliot's texts move from their former central position among the texts to an outlying position opposing most of the other texts of the collection. (Because of the crowding of her texts in the plot, I have dropped the 'E' from their code name.)

Figure 7.2: Principal component analysis text plot
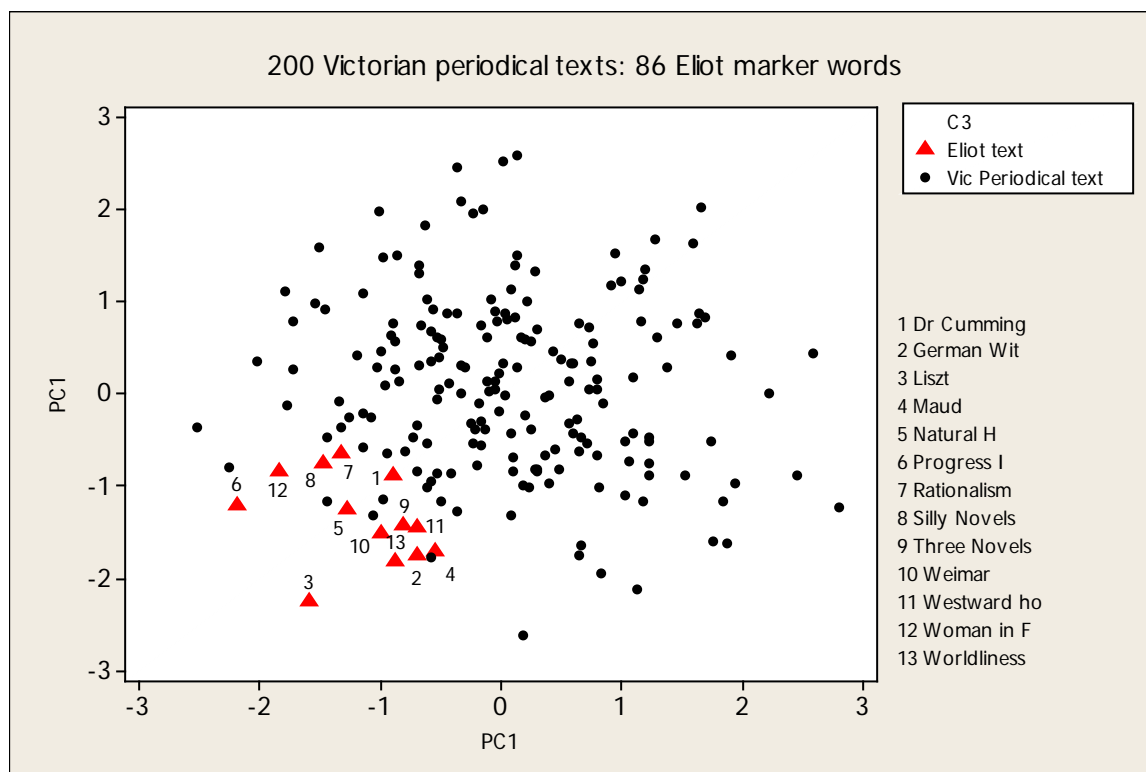


This opposition suggests that these words do capture something of the essence of her distinctive style. The fact that the separation between Eliot's texts and those of the other twenty-one authors is not quite complete is, I believe, due to the fact that Eliot's style is a flexible one, not given to extremes, and that her style is characterized more by the words she tends to avoid, than by those she uses more often than other writers. This is seen in the word plot underlying Figure 7.2 (not shown here), which shows most (but not all) of the twenty-four words Eliot favours underlying the new location of her texts and most (but not all) of the sixty-two words she disfavours underlying the opposing texts. The positive

and negative marker words which fail to separate completely are those which she tends to favour or disfavour intermittently – *you*, for example, which appears often in some texts and not at all in others.

This analysis of George Eliot's periodical articles has shown that in her normal usage of the 100 most common function words, she displays an authorial cohesion which unites her articles, but which is flexible enough to allow her articles to move around the central point of the two axes of intra-generic focus, now adopting slightly more of one possible stance, now another, without ever moving towards any of the extremes. Only in her address article, "Felix Holt", does she display her ability to adopt an extreme (polemical) stance. The distribution test on the 200 most common function words revealed that there were eighty-six marker words which she uses either significantly more or significantly less than her fellow writers.

The principal component analysis plot (Figure 7.2) using these marker words and a close reading of various passages of text reveal how Eliot's tendency towards usage or non-usage of these positive and negative 'marker words' underlies some of the features of her style. We can speak of her generalizing tendencies which are reflected in the frequent usage of the indefinite articles. I noted her directness which is reflected in her preference for simple verb forms and a very low modal auxiliary usage. This directness may also be seen in her preference for simple prepositions and in her avoidance of conditional clauses and negatives. I spoke of her careful weighing of alternatives which was reflected in her frequent use of comparatives. Finally, I noted the assurance of her authorial voice. This was reflected in a personal pronoun usage, which was flexible and varied.

## Novelist

The second part of this chapter considers Eliot's style as a writer of fiction, whether it can be seen to be distinct from that of other writers of comparable

fiction, and whether there are stylistic features which are common to both types of her writing – periodical and fiction.

My data base of fiction was a rather specialized one, comprising forty Victorian 'histories' which are part of a larger corpus[52] of such texts spanning three centuries which was built up by Emeritus Professor John Burrows while he was developing some of the computational stylistics techniques, now known as the 'Burrows' method'. The texts (written by eight Victorian authors) are all retrospective fictional narratives, couched in the first person and treating of the narrator's supposed experiences or observations. Most of the narratives are embedded in larger works of fiction; however the texts are marked up so that the narrator's own words can be counted separately. The forty texts comprise 225,863 (narrator only) words; five of the eight authors are women. Each author is represented by at least three texts, up to as many as eight. (See Table 7.5 below for a brief list and Appendix 7.1 for a detailed list.)

Table 7.5: Eight Victorian novelists and their 40 'histories'

| Authors | No. of Histories | Authors | No. of Histories |
|---------|------------------|---------|------------------|
| Anne Bronte | 3 | Emily Bronte | 3 |
| Charlotte Bronte | 5 | George Eliot | 7 |
| Wilkie Collins | 6 | Elizabeth Gaskell | 8 |
| Charles Dickens | 3 | Thomas Hardy | 5 |

This corpus of 'histories' represents an extremely useful textual resource for the computational-stylistic testing of prose fiction, since many of the usual problems of competing and conflicting variables have been overcome. The careful marking up of each text extract makes it possible to use only those words spoken by the 'historian', thus avoiding the deictic and referential problems of using combined

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[52] These Victorian 'histories' are part of a larger corpus of such texts spanning 3 centuries which was built up by Emeritus Professor John Burrows whilst he was Director of the CLLC. A full list of texts in the corpus can be viewed on the CLLC projects page. Burrows' corpus contained only three Eliot histories. I am grateful to Dr. Tim Dolin who helped me locate an additional four Eliot histories.

narrative and dialogue. Each 'history is identified by the name of its historian storyteller.

The first test involved running a principal component analysis of the forty texts using the 100 most common words of the histories text set as variables, in order to see the placement of Eliot's seven histories in relation to the remaining texts. Because of the generic difference between the histories and the periodical articles, it was important to use a word list whose frequencies were derived from the histories text set for these tests. The most obvious difference between the two word lists is the movement of the first person singular pronouns towards the top of the histories list. This relates directly to the fact that each history is narrated by a fictional character for whom the story is a personal one, whereas the periodical articles are more like essays where there is "a direct, equal, personal communication on a matter of shared interest between writer and reader" (Clendinnen 29). The results of the test are seen in Figure 7.3 below.

Figure 7.3: Principal component analysis text plot
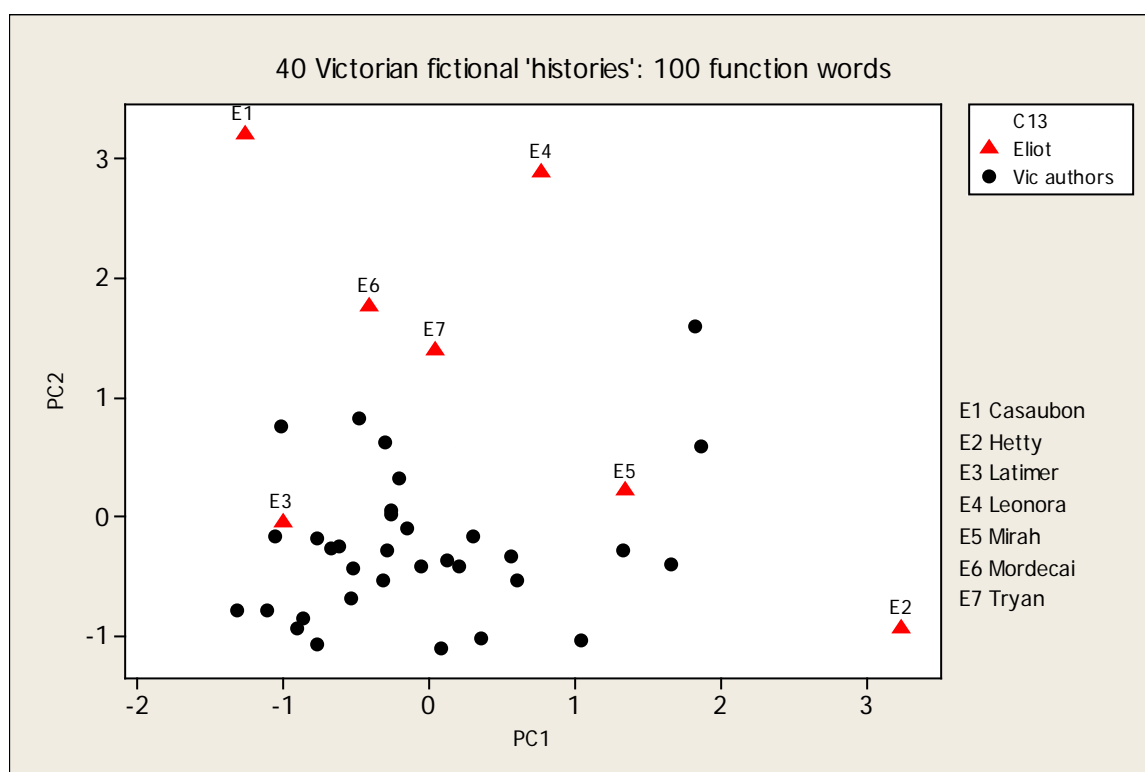
The plot, based on the unselected 100 most common words of the histories text collection, shows that Eliot's texts are quite distinct from most of the texts of the other authors as they spread widely across most of the plot. Two of her texts, "Casaubon" (E1) and "Hetty" (E2) assume opposing positions at opposite corners of the plot. Only "Latimer" (E3) finds a location within the cluster of texts of the remaining seven authors. Gaskell is the only author whose texts show a tendency (like Eliot's) to spread, with five of them fanning out to form the right border of the cluster. Evidently, in these plots, both principal components are exerting some influence on the text placements. In order to see this more clearly, Figure 7.3 has been redrawn as Figure 7.4 with lines separating the four sectors, and the Gaskell texts in the right hand side of the plot labelled. Eliot and Gaskell are the only authors with texts in more than one sector.

Figure 7.4: Principal component analysis text plot
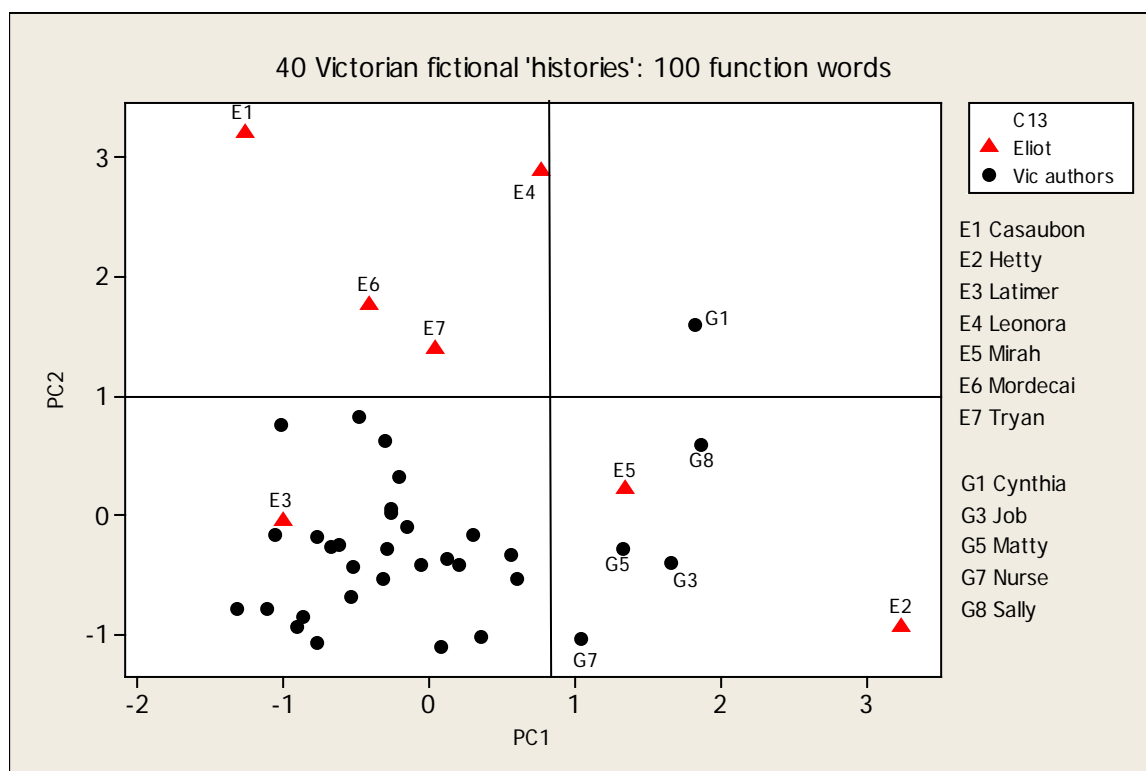


The fact that almost three-quarters of the forty texts cluster in the south-west section is a reflection of the generic integrity of the 'history' as a text sample. One

Eliot text and three of Gaskell's are numbered among these. The four Eliot texts in the north-west section represent one sort of variation while the Gaskell and Eliot texts on the right hand side of the plot represent another. Burrows offered his own theory as to the development of the history over three centuries.

> There is some evidence of a subtle change in genre. … my impression as a reader [is] that, in its modern form, the 'history' no longer treats so much of 'what happened to me' as of 'what I saw'.  'What I saw' is more likely to treat of things observed than 'what happened to me', which so often, in the earlier texts, emphasises 'what he did to me'. In the latter part of the nineteenth century, 'what I saw' commonly deals in experiences of the supernatural and the fantastic. ("Computers" 192)

A closer examination of the word plot (Figure 7.5 below) shows that the groups of words whose relatively more frequent use accounts for the placement of the texts in that vicinity seem to form three rough clusters.

Figure 7.5: Principal component analysis word plot

The words in the south-west section where most of the other authors' texts cluster, and where Eliot's "Latimer" (E3) is located, contain some of the markers of more formal speech (*the, a, an, of* and *which*) and the simple prepositions (*in, by, from* and *with*). The opening sentence of "Latimer" shows it to be a typical history: "My childhood perhaps seems happier to me than really was, by contrast with all the after-years" (280), where the narrator goes on to tell the story of his or her life. Most of the texts in this section are of this type.

The words in the south-east to mid-east area include the impersonal pronoun *it,* conjunctions *and* and *but,* modals *would* and *could*, and verb forms *did, do* and *was*, negative markers *never* and *not*, emphatic marker, *very* and the first person pronoun. Eliot's "Hetty" (E2) has the corner of this vector to herself, with "Mirah" (E5) and some of Gaskell's texts in the vicinity. The opening of Hetty's text shows her using some of these words to tell her story to Dinah. "I did do it, Dinah - I buried it in the wood - the little baby - and it cried - I heard it cry - ever such a way off - all night - and I went back because it cried" (247). A perusal of the other texts in this sector revealed that, though each of them seems a typical history, each of them (like "Hetty") includes the heart-rending narration of a death. A possible description of the placement of texts along the first principal component axis (west to east) might be in terms of 'typical histories with increasing elements of affective sensibility'.

The north-west section of the plot is home to Eliot's "Casaubon" (E1), "Leonora" (E4), "Mordecai" (E6) and "Tryan" (E7). The words here include the present tense verb forms *is, are, am, has, have* and *will* and the second person pronoun, many of which are clearly in evidence in the extracts below.

> Our conversations have, I think, made sufficiently clear to you the tenor of my life and purposes: a tenor unsuited, I am aware, to the commoner order of minds. ("Casaubon" 39)

I don't know now -- what you will feel toward me. I have not the foolish notion that you can love me merely because I am your mother … ("Leonora" 536)

I expected you to come down the river. I have been waiting for you these five years. ("Mordecai" 423)

The presence of the second person pronoun, as well as the present tense verb forms, is a clear indicator that these historians seem more in control of their life, their story and its probable effect on the listener, the *you* of the story. The histories in this sector may be reflecting the subtle change observed by Burrows from the more passive ('this happened to me') to the more active ('I do…'). The verb forms of the second principal component demonstrate a movement from present tense and infinitive forms in the north to past tense forms in the south. The next step was to take the 200 most common function words of the text collection and apply the t-test to each of these words to find if there was any difference between Eliot's use of some of the words and the usage of the other seven authors. (Table 7.6)

Table 7.6:  Results of Discrimination Test between Eliot and 7 Victorian Novelists

| Eliot | Other Victorian Authors |
|---|---|
| uses relatively more often | use relatively more often |
| **Indefinite/combined forms** | **Indefinite/combined forms** |
| itself everything | no-one |
| **1st person personal Pronouns** | **1st and 2nd person personal Pronouns** |
| I  my  me  our | |
| **2nd person personal Pronouns** | **3rd person personal Pronouns** |
| you | he him his she her |
| | himself herself |
| **Function Verbs & Modals** | **Function Verbs & modals** |
| be been are will | having |
| **Conjunctions** | **Conjunctions** |
| because but that | or nor until |
| **Prepositions** | **Prepositions** |
| like within | at by up over down round during |
| **Quantifiers/qualifiers/demonstratives** | **Quantifiers/qualifiers/demonstratives** |
| | almost few most both every many |
| | either neither these |
| **Adverbs** | **Adverbs** |
| why | however thus rather also |
| **Negative forms** | **Negative forms** |

Of the 200 words tested 51 had a t-value greater than 2.0 and a P value < 0.05; nineteen of these had positive t-scores with means higher in the Eliot texts; thirty-two had negative t-scores with means higher in the non-Eliot texts. This stylistic characteristic - of having the negative marker words outnumber the positive ones - mirrors the pattern observed with Eliot's journal articles, though there are fewer marker words overall.

In these examples of her fictional narrative Eliot makes significantly greater use than the other authors of the first and second person pronouns, whilst the other authors make significantly greater use of the third person singular pronouns. Eliot favours the verbal forms *be, been, are* and *will,* conjunctions *because, but* and *that,* prepositions *like* and *within* and the negative forms *no* and *nothing.* On the other hand there are several disjunctives – *or, nor, either, neither* for example, prepositions, quantifiers and adverbs which she tends to avoid. I believe much of this difference between Eliot and the other authors is due to the fact that her texts are more varied – "Casaubon" (E1) and "Hetty" (E2) representing the extremes of this variability. Every history (by virtue of its text-type) makes use of the first person pronoun; Eliot, in the more 'psychological' of her histories,  tends to make more use of it than authors whose narrators also tell what *he* or *she* did as well as what they themselves did or had done to them. This interest in the mind and motivation of her characters may also explain her greater use of words such as *why* and *because.*

A comparison of these marker words of fictional style with the marker words of journalistic style is interesting. The most notable difference between the two styles is that the marked preference for using the indefinite articles in the journal articles has not carried over to the histories. Other characteristic word avoidances which were seen in the journal articles, but which are not seen here include: the avoidance of the conjunction *if,* the avoidance of most of the auxiliary and modal auxiliary forms and negative forms. Although the difference in

personal pronoun usage is largely accounted for by the fact that the fictional extracts chosen were all first person narratives, nevertheless, it seems significant that Eliot's positive reading for the second person pronoun *you* is found both in the fictional extracts and the journal articles.

Another stylistic feature which seems to be found in both types of writing is a preponderance of similes introduced by the preposition *like.* Although there are variant grammatical forms of *like*, Eliot's characteristic usage is prepositional, as can be seen in Table 7.7 below. In spite of the fact that *like* did not appear as one of the marker words for her periodical writing, it did score quite highly with a t-score of 1.96 and a probability of 0.05.

Table 7.7:  Occurences of 'Like' in Eliot's Fictional Histories and Journal Articles

| Histories | Total | Preposition | Verb | Adjective | Noun | Adverb |
|---|---|---|---|---|---|---|
| E1 Latimer | 31 | 30 | 1 | | | |
| E2 Hetty | 10 | 7 | 2 | | | 1 |
| E3 Leonora | 22 | 18 | 3 | | | 1 |
| E4 Mirah | 17 | 14 | 3 | | | |
| E5 Mordecai | 6 | 6 | | | | |
| E6 Casaubon | 1 | 1 | | | | |
| E7 Tryan | 0 | 0 | | | | |

| Journals | Total | Preposition | Verb | Adjective | Noun | Adverb |
|---|---|---|---|---|---|---|
| E1 Dr Cumming | 10 | 9 | | | 1 | |
| E2 German Wit | 20 | 19 | 1 | | | |
| E3 Liszt Wagner Weimar | 15 | 14 | | 1 | | |
| E4 Maud | 4 | 4 | | | | |
| E5 Natural History of Germany | 5 | 5 | | | | |
| E6 Progress of the Intellect | 6 | 6 | | | | |
| E7 Rationalism | 4 | 4 | | | | |
| E8 Silly Novels by Lady Novelists | 16 | 15 | 1 | | | |
| E9 Three Novels | 3 | 3 | | | | |
| E10 Three Months in Weimar | 16 | 16 | | | | |
| E11 Westward Ho | 9 | 8 | 1 | | | |
| E12 Woman of France | 14 | 13 | | 1 | | |
| E13 Worldliness | 14 | 9 | 3 | 2 | | |
| FH Felix Holt | 10 | 8 | 2 | | | |

The love of the apt description – that painting a picture for the mind's eye with words – is found in both types of writing; this is especially to be seen in her frequent "x is like y" comparisons.

> … and this pale, fatal-eyed woman, with the green weeds, looked like a birth from some cold sedgy stream, the daughter of an aged river. ("Latimer" 291)[53]

> We abstain on principle from telling the story of novels, which seems to us something like stealing geraniums from your friend's flower-pot to stick in your own button-hole: ("Westward Ho and Constance Herbert" 128)

I then used the fifty one "Eliot marker" words in a principal component analysis test to see how using only those words which Eliot either favours or disfavours affects the distribution of the texts which we saw with the unselected words in Figure 7.3.

Figure 7.6: Principal component analysis text plot



40 Victorian fictional 'histories': 51 Eliot marker words

C 307
▲ Eliot
● Vic author

E1 Casaubon
E2 Hetty
E3 Latimer
E4 Leonora
E5 Mirah
E6 Mordecai
E7 Tryan

D1 Convict
D2 Stroller
H1 Icenway

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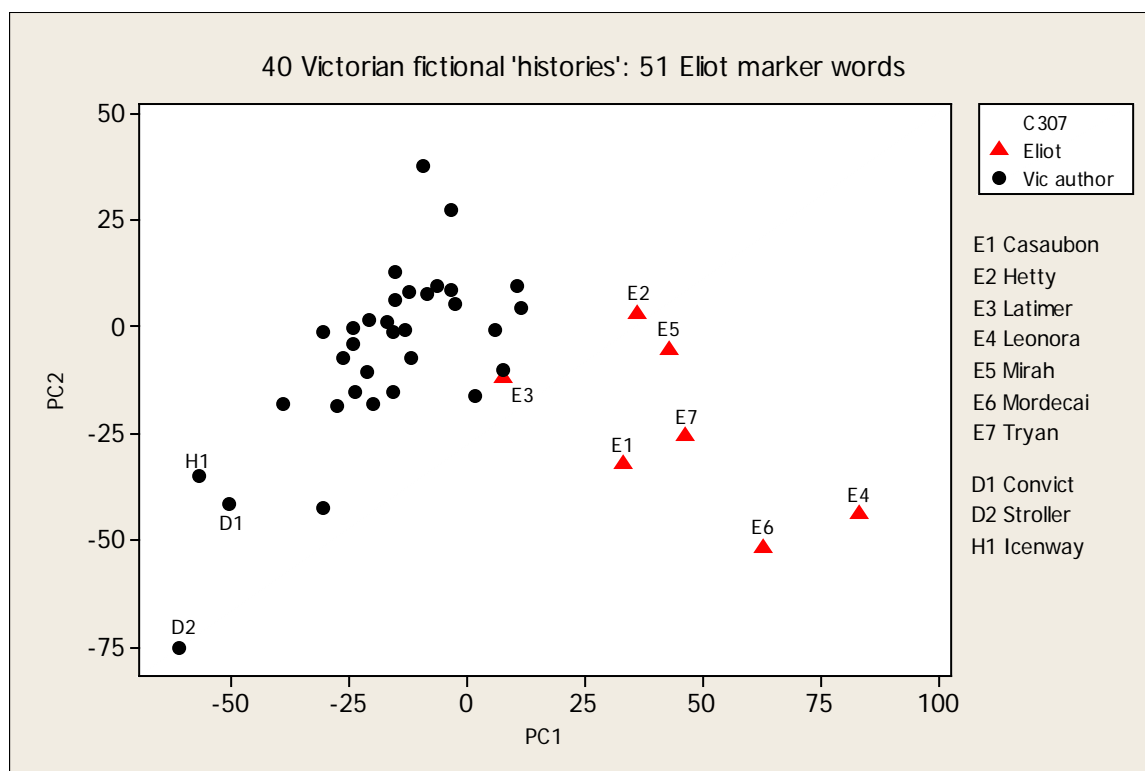
[53] Page numbers for all the 'histories' quotations refer to the published work which was used as the copy text for keyboarding the electronic text. These are listed in Appendix 7.1.

This text plot (Figure 7.6) shows six of the seven Eliot texts clearly separated from the texts of the other authors. The seventh text (E3) has moved from its Figure 7.3 location in the centre of the bunch to take up a position on the right hand side of the bunch, thus declaring itself as the least Eliot-like of the seven texts. E2 (which was the outlier in Figure 7.3) is now more comfortably part of the Eliot group of texts. The non-Eliot texts which take the left hand outlier position (thus signaling their extreme difference from the Eliot texts) are two Dickens texts "Convict" (D1) and "Stroller" (D2) and one Hardy text "Icenway" (H1).

The accompanying word plot (Figure 7.7) shows the distribution of the marker words underlying the separation of the texts.

Figure 7.7: Principal component analysis word plot
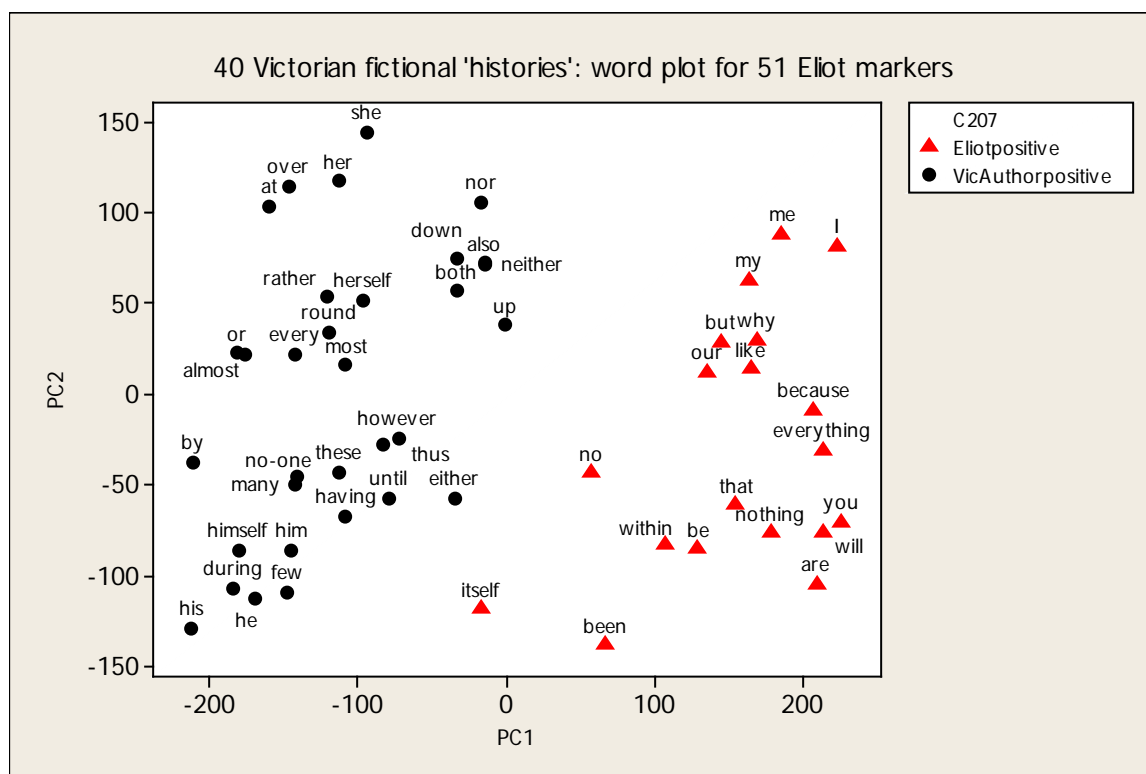


The nineteen words which Eliot prefers and the thirty-two words she tends to avoid do seem to capture the essence of the style she adopts for recounting this type of retrospective narrative fiction. A good way of seeing this preferred usage

and preferred non-usage of words in action is to look at the way they are used in the two sets of outlying texts of Figure 7.6. Eliot's "Leonora (E4) and "Mordecai" (E6) on the right hand border and Dickens' "Stroller" (D1) and "Convict" (D2) on the left hand border are likely to be good examples of texts making most and least use of each of the two sets of words respectively.

The two Eliot texts are both "histories" found in *Daniel Deronda*, and in both instances the narrators tell Daniel about their past and about themselves. The two Dickens texts, "Convict" (D1) and "Stroller" (D2), present quite a different picture. Here the narrator is telling, not his own story, but that of someone else[54]. Indeed this contrast between the Eliot and Dickens narratives seems to confirm Compton-Rickett's observations:

> Dickens treats his characters primarily from without; he dwells only on the characteristics which express themselves externally. George Eliot takes you within. She is primarily interested to show you the growth and expansion of the soul. Only secondarily, and then not always, is she concerned with the externals of her characters.  (Westland 123)

This difference in approach is sufficient to account for Eliot's greater usage of the first person singular pronouns and the greater usage of Dickens' texts of the third person singular (masculine) pronouns as the following pairs of extracts from each author show.

> In his better days, before he had become enfeebled by dissipation and emaciated by disease, he had been in the receipt of a good salary, which, if he had been careful and prudent, he might have continued to receive for some years -- not many;  ("Stroller" 35)

> The convict thought on the many times he had shrunk from his father's sight in that very place. He remembered how often he had buried his trembling head beneath the bed-clothes, and heard the harsh word, and the hard stripe, and his mother's wailing; and though the man sobbed aloud with agony of mind as he left the spot, his fist was clenched, and his teeth were set, in fierce and deadly passion. ("Convict" 74)

---

[54] This is also true of Hardy's "Icenway" whose narrator tells the tale of a young lady of "many talents and exceeding great beauty" (137).

> But the hidden reasons why I need you began afar off… began in my early years when I was studying in another land. Then ideas, beloved ideas, came to me, because I was a Jew. They were a trust to fulfill, because I was a Jew. They were an inspiration, because I was a Jew, and felt the heart of my race beating within me. ("Mordecai" 425-6)
>
> People talk of their motives in a cut and dried way. Every woman is supposed to have the same set of motives, or else to be a monster. I am not a monster, but I have not felt exactly what other women feel -- or say they feel, for fear of being thought unlike others. When you reproach me in your heart for sending you away from me, you mean that I ought to say I felt about you as other women say they feel about their children. I did *not* feel that. I was glad to be freed from you. But I did well for you, and I gave you your father's fortune. ("Leonora" 538-9)

We can see that Eliot's 'historians' are providing reasons for their behaviour, which would account for the greater usage of *but, that, because* and *why.* Their description of their inner feelings and motivations creates a different narrator orientation from Dickens' historians who are describing what they observed. This comparison of Leonora's "I did *not* feel that" with the convict's "his fist was clenched, and his teeth were set in fierce and deadly passion" illustrates some of the stylistic traits which help set Eliot apart from her fellow authors, as well as from Dickens.

Whilst there are differences between Eliot's journal and fictional writing, nevertheless there are some distinctive features of her style which remain. The directness noted in the journal articles (reflected in the avoidance of many quantifier and qualifier forms) can be seen in the fictional extracts. The deliberative style of the journal articles (reflected in the confidence of the authorial voice and its assured awareness of the reader) seems translated into a more personal, but equally confident narrator's voice aware of the listener in the histories.

Eliot no longer avoids the conjunction *if* and now shows a preference for using some of the forms of the verb "to be", and negative forms *no* and *nothing*. Perhaps the most surprising difference between Eliot's periodical articles and her fictional histories is the change from her rating as the lowest user of modals and second lowest user of function verbs in the periodical articles to her score as the highest Victorian novelist user of modals and second highest user of function verbs, as we see in Table 7.8 below. It would appear from this that the directness Eliot felt to be important in her periodical articles was modified to allow a greater portrayal of modulation of attitude and perception in her novels.

Table 7.8: Modal and Function Verb usage of 8 Victorian authors

| Author | All Modals | Author | All Function Verbs |
|--------|-----------|--------|--------------------|
| Eliot | 2.641 | Gaskell | 2.758 |
| Gaskell | 0.804 | Eliot | 2.675 |
| A Bronte | -0.005 | Hardy | 0.427 |
| E Bronte | -0.472 | Dickens | -0.373 |
| C Bronte | -0.739 | Collins | -2.153 |
| Dickens | -1.47 | C Bronte | -2.546 |
| Hardy | -2.901 | E Bronte | -3.242 |
| Collins | -3.646 | A Bronte | -3.694 |

The following extract, related by Mirah, shows, that Eliot has not abandoned the directness and simplicity of her periodical writing style, but that she has enriched it by the addition of an occasional conditional and by the use of simple and complex verb phrases alongside each other. Thus we have both the directness of a simply narrated story and the complexity of the exploration of the narrator's psyche.

> I remember my mother's face better than anything; yet I was not seven when I was taken away, and I am nineteen now. … Sometimes in my dream I begin to tremble and think that we are both dead; but then I wake up and my hand lies like this, and for a moment I hardly know myself.  But if I could see my mother again, I should know her. ("Mirah" 320)

## Conclusion

A number of commentators (Pinney and Ashton, for example) have remarked that Eliot's periodical work was something like an apprenticeship, where she had the opportunity to hone the writing skills which later flowered in her works of fiction. Stephen suggests "that there is nothing preposterous in the supposition that George Eliot's work was all the more powerful because it came from a novelist who had lain fallow through a longer period than ordinary" ("George Eliot" 210). In this chapter I have examined some of the characteristics of Eliot's periodical and fictional writing style, indicated by the use and non-use of a number of function words. I found that Eliot's texts were, in each instance, distinctive from those of her fellow writers and I identified a number of stylistic indicators of those differences. I concluded that the stylistic traits of the periodicals had not been abandoned in her fiction writing, but had become enriched and used to greater effect as her biographers (Ashton and Stephen) suggest.

# Chapter 8:  Commonality versus Individuality

*Blackie and Burton – a testing case for the Wellesley Index*

*The Wellesley Index to Victorian Periodicals, 1824-1900* was born of the realisation that there was no author index for the hundreds of nineteenth-century periodical journals and thousands of periodical articles which contained a remarkable record of contemporary thought in every field. Until well into the twentieth-century the authors could only be identified if the contributions had been republished by the author as part of a collection of essays. From the 1930s on, however, both literary scholars and historians began supplementing this information by combing surviving publishers' records and personal memoirs and letters from the period for further information on the authorship of these articles.[55] Between 1966 and 1989 much of the effort was harnessed into producing the multi-volume *Wellesley Index* where "citations of evidence are provided to support attributions of authorship". The Index includes forty-five monthly and quarterly titles and covers the period from 1824 to the end of the century (on-line *Wellesley* guide). Rosemary Van Arsdel paid tribute to the foresight of Walter Houghton who began the project, saying "Under his leadership it was destined to become one of the twentieth century's great and enduring feats of collaborative scholarship (257). Houghton estimated that "perhaps only three percent of the articles in the whole period are signed, and before 1870, closer to one per cent, if that many" ("British" 561). The scholarly importance of this material highlighted the need for an Index through which it could be accessed (on-line *Wellesley* guide). The *Index* has been a great resource for scholars for the last twenty

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[55] In a private communication from Eileen Curran to Ellen Jordan, a member of the CLLC, she explained that the attribution of unsigned articles as a scholarly project began in the 1930s when Ashley Thorndike and Emery Neff, professors at Columbia University, encouraged graduate students to make the intensive study of individual periodicals, even of a few years of a periodical's run, their dissertation topics. Many of these students then discovered that adequate understanding of a periodical must involve an attempt to identify the authorship of articles. Curran cited the following as examples: George Nesbitt, "Benthamite Reviewing:  Twelve Years of the Westminster Review, 1824-1836" (1934); Miriam Thrall, "Rebellious Fraser's" (1934); Edwin Everett, "The Party of Humanity:  The Fortnightly Review and its Contributors, 1865-1874" (1939); Leslie Marchand, "The Athenaeum.  A Mirror of Victorian Culture" (1941); Merle Bevington on The Saturday Review (1941); Francis Mineka, "The Dissidence of Dissent. The Monthly Repository, 1806-1838" (1944).

years. Solveig Robinson, for example, testifies to the importance of the *Wellesley Project* for identifying the work of "dozens of influential women critics" among "the anonymous contributors to nineteenth-century reviews and magazines" (xii).

Nevertheless, doubt has for some time been thrown on the accuracy of some of the *Wellesley* identifications.[56] In the earlier stages of the *Wellesley* project, when scholars were dealing with periodicals for which substantial editorial archives had been preserved, attributions were restricted to those for which such 'external evidence' could be found. When, however, the project moved on to journals for which archival material was scanty the use of 'internal evidence' was admitted, and scholars began to identify authors from such aspects as subject matter, point of view, and 'style', using what one of the editors described as "the warts, tics and scars" of individuals to differentiate one author's writing from another's (Hiller 98). There is, however, growing evidence that some of this use of internal evidence has been rather cavalier, and scholars such as Mary Ruth Hiller and William Coxall have been at pains to establish and refine "a more reliable methodology for the use of internal evidence" (Coxall 93). Wayne Hall makes the point that speculative attributions may be acceptable at the scholarly stage where hunches are being followed, but are unacceptable in major reference works which have "the effect of a pronouncement etched in stone, continuing to shape scholarly inquiry on its subject for decades" (33).

Eileen Curran's *The Curran Index: Additions to and Corrections of The Wellesley Index to Victorian Periodicals* (works cited) is an ongoing work which seeks to identify and amend errors in the *Wellesley* and to add new entries. For example, the original *Wellesley Index* attribution information for the *Tait's Edinburgh Magazine* article "On a criticism of Niebuhr", offers Blackie as the probable author with the following notation:

> **Tait 431** On a criticism of Niebuhr, 5 o.s. 1 n.s. (April 1834) 188-189. J.S. Blackie, prob. Signed **B**.; Blackie lived in Rome during 1830 and 1831,

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[56] See, for example, Coxall, Hall, Hiller.

writing home about his "detailed study of Roman history" and of Roman antiquities (Stoddart, Blackie, I, 99 and 109); nos. 1522 and 1719 are also signed B.

*The Curran Index* amends this attribution with the following notes:

> **Tait 431** On a criticism of Niebuhr, 5 o.s. 1 n.s. (April 1834) 188-189. s/ **B.** *Delete* entry, with its attribution to John Stuart Blackie. *Add*: **John Hill Burton, prob.** A year earlier, Burton had contributed #229; see above. The first article that can safely be attributed to Blackie, #803, did not appear until 3 years later and carried no signature. Burton, a historian educated in the classics, contributed a great deal to *Tait's* in the 1830s. [*Wellesley* attributes to Burton 4 later articles signed B.--#s 1804, 1846, 1870, and 1878; and to Blackie 2 others--#s 1522 and 1719. The evidence is often tenuous for these and also for several other articles given to the two men.]

It was Eileen Curran's concern with the possible further misattribution of articles by Blackie and Burton, two Scotsmen with many similar characteristics, that led to the undertaking of the project reported on here. Curran sent a list of the articles in *Tait's Edinburgh Magazine* ascribed to Blackie and Burton, and her own notes suggesting that although 94 articles are attributed to one or other of these men between 1833 and 1854, there is good external evidence for the authorship of only 16 of them.

As I noted in Chapter 2, the authors of my text collection were chosen with certain commonalities in mind: same genre – serious literary quarterly or monthly journals; same period – between 1830 and 1890; same text-type – Bagehot's essay-like review or review-like essay; and similar authorial social and educational backgrounds – middle/upper class and well-educated. Two of the male authors of this text collection are the John Stuart Blackie and John Hill Burton, just mentioned. They exhibit more similarities than any other two authors

in the text collection. Apart from sharing a common first name and surname initial, both men were born in 1809, educated at Marischal College, Aberdeen, and were frequent contributors to the periodical press, both of them contributing articles to *Tait's Edinburgh Magazine* in the 1830s and 40s.

Nevertheless, in Chapter 4 these two authors were seen to exhibit a different pattern of relationships between their authorial group and their individual texts. Burton's texts were markedly uniform and showed the same relationship to the other authorial groups as his own authorial group did. Blackie's texts, on the other hand, were markedly non-uniform, while his authorial group appeared to owe its central location in Figure 4.1 to the averaging of disparate texts. Each author showed a different pattern on the intra-generic map of the 200 texts from Chapter 3.

Figure 8.1: Principal component analysis text plot
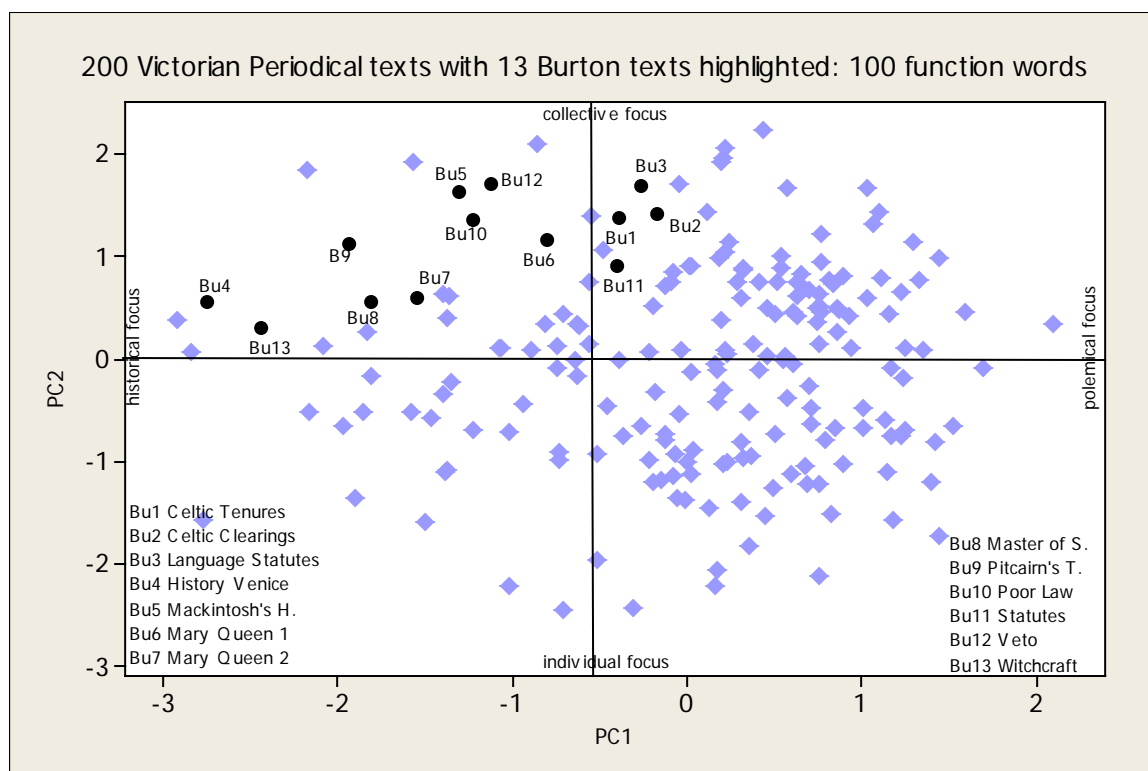


Burton's texts (seen in Figure 8.1 above) are all located within a fairly narrow range, moving from a historical focus through to a collective focus and everything

between. Blackie, on the other hand, is like Eliot one of the very few authors whose texts are located in all four quadrants of the intra-generic map, as is seen in Figure 8.2 below. The pattern of his texts' location in the central area of the plot shows him to be an author able to write within a variety of differing intra-generic foci, but nonetheless, an author not given to extremes. None of his texts has assumed an outlying position. His only historical review, "Colonel Mitchell's Fall of Napoleon" (Bl2) is the closest of his texts to the historical focus end of the first principal component analysis axis, while his reviews of Goethe (Bl3), Homer and his translators (Bl4) and Schlegel (Bl10) are the closest of his texts to the individual focus end of the vertical axis. Equally his essays on church matters, "Parochial Schools", (Bl6 and Bl7) "Protestantism" (Bl8) and "Rights of the Christian People" (Bl9) are on the collective focus side of the central axes. This is a very different pattern from that of Burton.

Figure 8.2:  Principal component analysis text plot
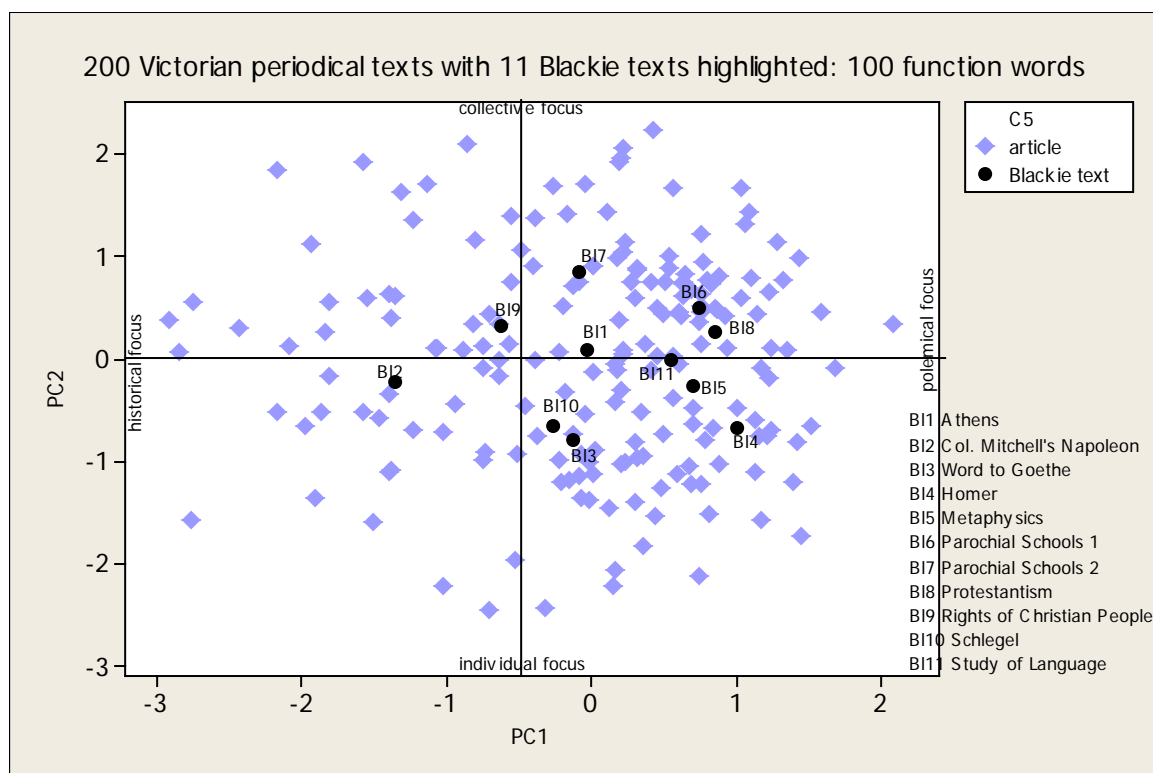
*Authorship and empirical internal evidence*

Thus although the commonalities shared by these two men created a situation where the usual methods of internal attribution were likely to fail, the ability of computational stylistics to reveal distinctive authorial stylistic patterns would seem to offer a better chance of success in assigning authorship to one or other of the authors. In spite of the fact that some scholars question the role of authorship "as a key to understanding textuality and as a basis for interpretation and editing" (Craig "Style"), the monumental work behind the production of the *Wellesley Index* rests on the "older authorship model … which made authorship the chief guarantor and constituting power of meaning in texts" (Craig "Style"). The methods of computational stylistics support this fundamental assumption and challenge the claims of those who would discount the reality of author effect. Houghton argued for the importance of the attribution work of the *Wellesley Index* by pointing out that "the context in which one discusses an essay, and therefore its place in a work of scholarship, can depend on knowing the contributor and therefore the group he speaks for."  "An anonymous paper attacking the Thirty-nine Articles" he suggested, "would mean one thing if it were written by T.H. Huxley and something quite different if the author were the Bishop of London" ("A Brief History" 50).

*The function word tests*

Etexts were created by keyboarding microfilm printout images of fourteen of the *Tait's* articles which Curran believed were firmly attributed to Blackie and Burton (seven each – Table 8.1) and sixteen of the *Tait's* articles she thought were less firmly attributed to the two authors (eight each – Table 8.3). The firmly attributed articles were to be used to establish an authorial signature for each author, against which the doubtfully attributed articles could be tested. Because the additional (less firmly attributed) *Tait's* articles are not part of my text collection, I have adopted a simple numeric system for identifying the texts in this chapter.

Table 8.1: *Tait*'s articles firmly attributed to Blackie and Burton

| Appendix code | Chapter code | Blackie Tait's articles | Date |
|---|---|---|---|
| Bl2 | 1 | Colonel [John] Mitchell's Fall of Napoleon | 1845 |
| Bl3 | 2 | Politics and poetry: a word from Goethe and a word to Goethe | 1837 |
| Bl6 | 3 | Parochial Schools of Scotland (Part I) | 1844 |
| Bl7 | 4 | Parochial Schools of Scotland (Part II concl.) | 1844 |
| Bl8 | 5 | Protestantism | 1841 |
| Bl9 | 6 | Rights of the Christian people - apostolical succession - lay patronage - the veto | 1840 |
| Bl11 | 7 | On the study of languages | 1842 |

| Appendix code | Chapter code | Burton Tait's articles | Date |
|---|---|---|---|
| Bu1 | 8 | Celtic tenures and highland clearings | 1846 |
| Bu6 | 9 | Mary Queen of Scots (Part I) | 1846 |
| Bu7 | 10 | Mary Queen of Scots (Part II concl.) | 1846 |
| Bu10 | 11 | Prospect of a Poor-Law for Scotland | 1845 |
| Bu11 | 12 | The statutes at large | 1836 |
| Bu12 | 13 | The Church of Scotland the veto question | 1840 |
| Bu13 | 14 | Witchcraft in Scotland | 1836 |

There are similarities of topic, as well as some differences, apparent in this list. Both authors, for example, wrote on issues relating to the Church of Scotland, particularly 'the veto question.' Most of Burton's articles are reviews of historical works, but it appears he does not have a monopoly on this, since Blackie reviewed Colonel Mitchell's "Fall of Napoleon" (Bl2). Blackie's interest in literature is seen in his *Politics and Poetry* article (Bl2), while his interest in language is seen in his article "On the study of languages" (Bl11).

The first step was to discover whether the relative frequencies of the Victorian periodicals wordlist usage would separate the firmly attributed Blackie and Burton articles on the basis of authorship. Using the 150 most common function words as variables in a cluster analysis test of these fourteen articles, I was able to show that the two sets of articles divide into quite distinct authorial trees. Figure 8.3 below shows that there is a significant difference in these authors' usage of the words in the Victorian periodicals function wordlist. This test also lends weight to the correctness of the original *Wellesley* attributions for these articles.

Figure 8.3: Cluster analysis test
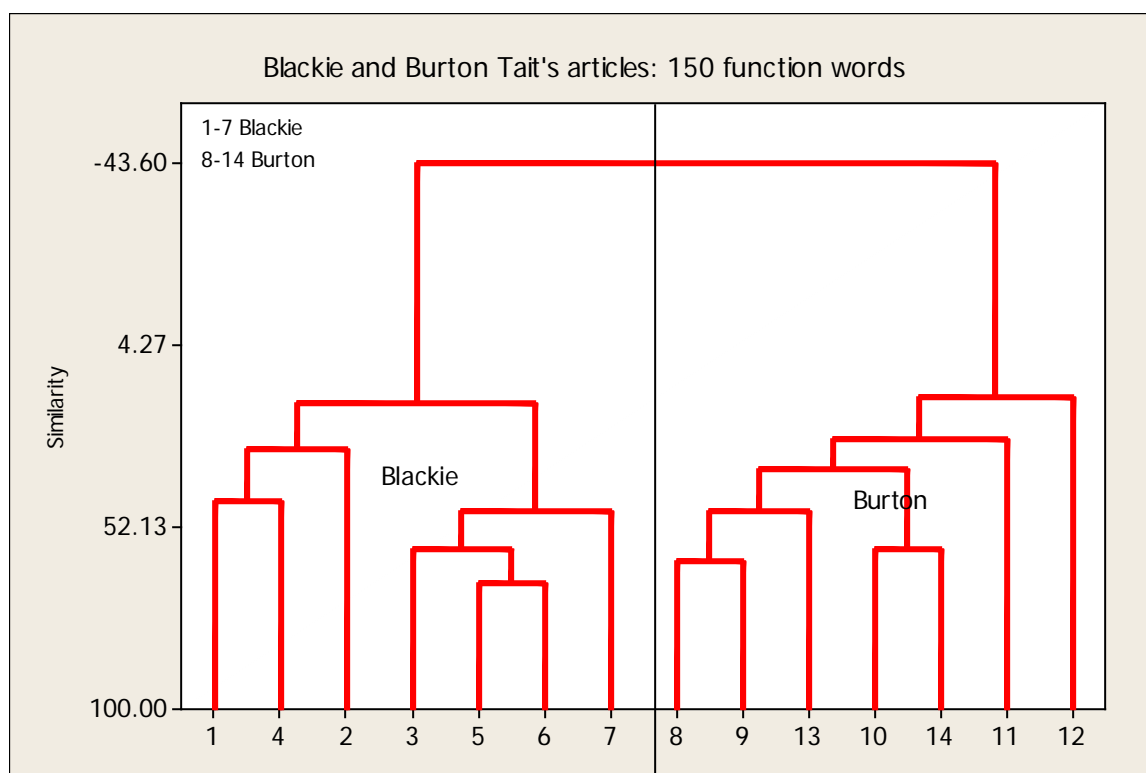


The second step was to see if this distinction was preserved when checked against firmly attributed articles written by contemporaries. A large number of trials were made comparing the Blackie and Burton articles with different groups of texts from my text collection and it was found that each of the two authors' texts invariably formed an exclusive authorial cluster before joining (at a higher level) with the text groups of other authors. Figure 8.4 below shows one such test where the word distribution in the Blackie and Burton articles was compared with the distribution in twelve articles by three other authors of the text collection - Cecil, Macaulay and Rigby[57]. This plot shows the texts of the other authors, especially those of Cecil, uniting earlier than the texts of Blackie and Burton, suggesting a greater level of uniformity among Cecil's texts. It also indicates that Blackie's group of texts has greater similarity with Cecil's group than with Burton's, since these two groups unite earlier. The final pairing of groups sees

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[57] The articles used in this test are listed in Appendix 8.1.

the Blackie, Cecil and Burton groups uniting with the combined text groups of Macaulay and Rigby.

Figure 8.4: Cluster analysis test
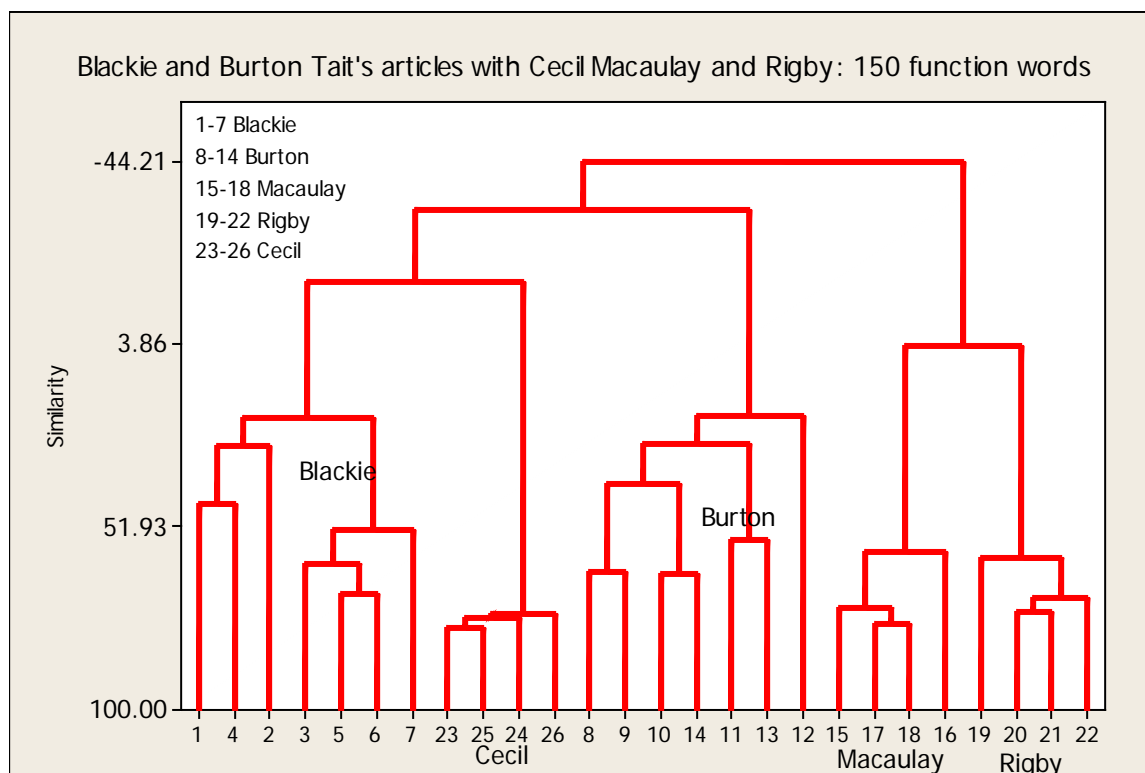


This result shows the ability of the tests to make authorial distinctions on the basis of relative frequency of use of an unselected list of function words.

*The marker word tests*

The next step was to find Blackie and Burton 'marker' words; that is, words which are used significantly differently by one or other of the authors. This was done by running a distribution test on the fourteen reliably attributed texts (which were divided into 2000 word sections) using as variables the top 200 function words of the text collection. Forty-nine words had a t-score greater than + or – 2, which was the level at which I found probabilities start to attain a good level of significance, around 0.01 and better. Twenty-one of the words are used more often by Burton and twenty-eight by Blackie. Table 8.2 below displays these

words. The most obvious difference between these two writers can be seen in Burton's more frequent use of the past tense markers (*was, were, had, been, would* and *used*) and Blackie's more frequent use of the present tense forms *is* and *can.* Blackie can be seen to be dominating the editorial first person plural forms while Burton uses the feminine personal pronouns more often. Blackie makes more frequent use of a larger set of prepositions and adverbs than Burton as well as the negative markers *no* and *nothing.* Burton on the other hand uses the relatives *who* and *which* more often than Blackie. Burton's more frequent use of the time conjunction *when*, as well as his more frequent resort to the past tense forms ties in with his location in Chapter 3 at the 'historical' end of the first principal component axis.

Table 8.2: Results of discrimination test of Blackie versus Burton

| Burton uses relatively more often | Blackie uses relatively more often |
|---|---|
| Articles/Indefinite Pronouns | Articles/Indefinite Pronouns |
| | |
| 1$^{st}$ and 2$^{nd}$ person Pronouns | 1$^{st}$ and 2$^{nd}$ person Pronouns |
| | <span style="color:green">we our ourselves</span> |
| 3$^{rd}$ person Pronouns | 3$^{rd}$ person Pronouns |
| <span style="color:red">her she their</span> | |
| Relative Pronouns | Relative Pronouns |
| <span style="color:red">which who</span> | |
| Function Verbs & Modals | Function Verbs & Modals |
| <span style="color:red">was were had been would having used</span> | <span style="color:green">is can</span> |
| Conjunctions | Conjunctions |
| <span style="color:red">when</span> | <span style="color:green">and as but</span> |
| Prepositions | Prepositions |
| <span style="color:red">of on among</span> | <span style="color:green">in into out upon above</span> |
| Quantifiers/qualifiers/demonstratives | Quantifiers/qualifiers/demonstatives |
| <span style="color:red">such some those each another</span> | <span style="color:green">all this only most many every least</span> |
| Adverbs | Adverbs |
| | <span style="color:green">what here also even both always</span> |
| Negative forms | Negative forms |
| | <span style="color:green">no nothing</span> |

The use of these words in a principal component analysis test produced a plot (not shown) with one author's texts on the western boundary and the other author's on the eastern boundary, demonstrating just how effective the marker words are in distinguishing between the two writers.

A closer examination of Blackie's historical review article reveals some of the stylistic tendencies which led to his greater usage of the words on the right hand side of Table 8.2. The opening paragraph of his review of "Colonel Mitchell's *Napoleon*" (with the words of interest coloured) is illustrative:

> That Napoleon Buonaparte should have been, and should still be, much overrated by his own countrymen, the French, no man wonders. Man is naturally a religious being, and prone, above all things, to that sort of veneration which lies nearest to him, viz. "Hero worship." As a chief part of the volatile Frenchman's religion is the love of glory, it is natural that he should be the idolator of Napoleon; but that John Bull, with his British pride, his Nelson and his Trafalgar, his Wellington and his Waterloo, should have allowed himself to fall prostrate, in any unworthy way before a French Dagon, seems a thing scarcely credible. And yet the intelligent author of the volumes here before us tells us, that we have, all in a body, Whig, Tory, and Radical, more or less been guilty of this great sin; we have paid homage to a brilliant apparition of vain continental quackery, and allowed our sober eye sight to be blinded in many important views by a magnificent conglomeration of French dust. Is there any truth in this? Is it common, is it fashionable with any class of men at the present moment to overrate Napoleon Buonaparte? Let us see how the tendencies and the probabilities lie; it is a question of some moment. (409)

There are some nice examples of Blackie's use of first person plural pronouns; these are used both to associate the author with the readership and beyond "we … Whig, Tory and Radical …" and to associate the author with the omniscience of the journal's editorial "we/us" ("Let us see …"). His three favoured conjunctions (*and, but* and *as*) are in evidence and the present tense verb form *is* occurs throughout the passage, culminating in the final set of rhetorical questions: "Is there any truth in this? Is it common, is it fashionable…?"

Some of Burton's stylistic habits, marked by a greater usage of the words on the left hand side of Table 8.2, can be seen in the passage below, which is the opening paragraph of one of his historical reviews, Prince Labonoff's *Mary Queen of Scots*. Discounting his greater usage of *her* and *she* (which could be

explained by the presence of feminine subjects in at least three of his articles) we can immediately observe his frequent resort to the relative pronoun, *which*, and his liking of the preposition *of* for his descriptions. The Mary Queen of Scots papers become "the multitude of documentary collections"; the work he is reviewing becomes "a library of many volumes, reviewers become "the miners of literature"; and so on until the work under review becomes "the fruit of the labour of fourteen years."

> The multitude of documentary collections referring to Mary Queen of Scots, which have been newly published, demand attention by the sheer extent of surface which they cover. A library of many volumes is now lying before us and the public … demand that we the miners of literature … tell them how far it appears to contain valuable ore … the fruit of the labour of fourteen years' research, in all parts of Europe, offered up as a sacrifice to the manes of  "an injured Queen." Imagine the occupations, other than rummaging through dusty records, in which a Prince might have occupied himself for fourteen years. (425)

A number of Burton's 'historical' stylistic traits, including the use of past tense markers and the conjunction *when*, can be seen in the extract below from his "Prospect of a Poor-Law for Scotland"*.*

> There have been several things peculiar to the people of Scotland, besides their agriculture and their metaphysics.  They have had peculiarities regarding the law of marriage…  Among other social difficulties which they had long the credit of having set at rest, was the complex question of the Poor-laws … .  It had received its practical embodiment in an age when simple legislative measures adapted themselves to a rude taste of society: .… When the whole country was comparatively poor; when we had no commerce or manufactures; when the parish was a family in which each man knew his neighbour's abilities, wants, and character, -- the system of voluntary relief … probably met all the necessities of a Poor-law. (323)

The sorts of stylistic traits indicated by a relatively higher or relatively lower usage of these forty-nine function words are, I would argue, a better form of 'internal' evidence of authorship than some of those that were used to assign articles to one or other of these two authors. These were generally based on things such as one of the author's assumed knowledge of a particular subject or

previous publication on a similar subject. One of the advantages of using "patterns of occurrence and word-frequency patterns" (Burrows, "Numbering" 1) is that the process is empirical with the texts being allowed to 'speak for themselves'. The "systematic effect" seen in the patterns "is present whenever the occurrence of any one word-type in a given text creates a better or worse than random likelihood that any other word-type will also be used there. Such an effect is also present whenever there are concomitant variations across a range of texts, in the frequencies of two or more word-types" (Burrows, "Numbering" 1). Table 8.2 is a particularly good illustration of these co-occurrence patterns.

Since my Victorian Periodical text collection contained additional articles reliably attributed to Blackie and Burton and published in non-*Tait's* journals, (Table 8.3) this offered the opportunity of testing the ability of the marker words to attribute known works to the correct author. These works were not used in the selection of the marker words, and so could be regarded as independent test pieces for the attribution test.

Table 8.3: Articles for Non-*Tait's* journals written by Blackie and Burton

| Appendix code | Chapter code | Non-Tait's Blackie | Date | Journal |
|---|---|---|---|---|
| Bl1 | 1 | Athens in 1853 | 1853 | Blackwood's Edinburgh Magazine |
| Bl4 | 2 | Homer and his translators | 1861 | MacMillan's Magazine |
| Bl5 | 3 | The relation of metaphysics to literature and science | 1873 | Fraser's Magazine |
| Bl10 | 4 | Frederick Schlegel | 1843 | Blackwood's Edinburgh Magazine |

| Appendix code | Chapter code | Non-Tait's Burton | Date | Journal |
|---|---|---|---|---|
| Bu3 | 1 | Language and structure of the statues | 1846 | Edinburgh Review |
| Bu4 | 2 | History of Venice | 1835 | Westminster Review |
| Bu5 | 3 | Sir James Mackintosh's History of the Revolution in 1688 | 1834 | Westminster Review |
| Bu9 | 4 | Pitcairn's Trials | 1833 | Westminster Review |

The ability of the marker words to separate the two authorial groups can be seen below in Figure 8.5. It is interesting to note that this time Burton's articles have

spread more widely than Blackie's and that the four non-*Tait's* articles form a close-knit group with three of Burton's *Tait's* articles, these seven articles seemingly a little different from the remaining four *Tait's* articles. Blackie's non-*Tait's* articles cluster quite closely amongst his *Tait's* articles. An examination of the underlying word plot suggests that it is an increased usage of the feminine personal pronouns that has contributed to the more northerly location of three of these texts, "Mary Queen of Scots" parts 1 and 2 (Bu6 and Bu7) and "Witchcraft in Scotland" (Bu13). The fourth northerly text, "The statutes at large", (Bu11) was seen in Figure 8.1 to be a somewhat unusual Burton text, being the very last of the texts to join the Burton group.

Figure 8.5: Principal component analysis text plot
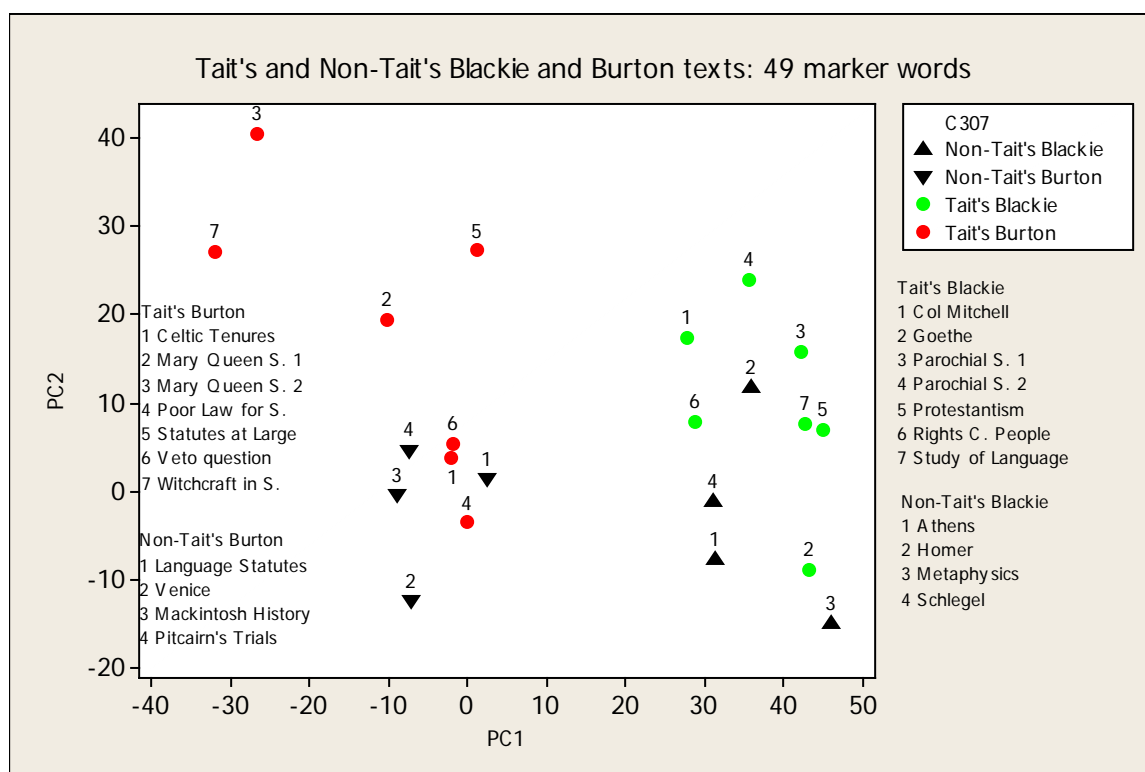


Having confirmed the effectiveness of the Blackie versus Burton marker words in separating the two authors' known texts, the next step was to use them to test texts which had been attributed to the authors on less convincing evidence. The

sixteen test texts, published in *Tait's Edinburgh Magazine* between 1833 and 1846 are listed in Table 8.4 below.

Table 8.4: *Tait's* articles questionably attributed to Blackie and Burton

| Code | attributed to Blackie | Date |
|------|----------------------|------|
| 1 | The politics of the New Testament | 1844 |
| 2 | The Scottish Universities | 1845 |
| 3 | The Rev. Dr. Lindsay Alexander's Switzerland and the Swiss Churches | 1846 |
| 4 | National versus state education | 1837 |
| 5 | Mr. Carlyle's Oliver Cromwell's Letters and Speeches | 1846 |
| 6 | Thomas Carlyle's Past and Present | 1843 |
| 7 | The Works of the De La Motte Fouqué | 1845 |
| 8 | Styria, and the Styrian Alps | 1843 |

| Code | attributed to Burton | Date |
|------|---------------------|------|
| 1 | Monastic studies, jests, and eccentricities | 1845 |
| 2 | M'Cullagh's Industrial History of Free Nations | 1846 |
| 3 | The Life and Rebellion of the Duke of Monmouth | 1845 |
| 4 | Pitcairn's Criminal Trials | 1833 |
| 5 | St. Andrews [by C.J. Lyon] | 1844 |
| 6 | Tytler's History of Scotland [Vol. V] | 1834 |
| 7 | Tytler's History of Scotland [Vol. VI] | 1837 |
| 8 | Von Raumer on the character and times of Charles I | 1837 |

*The Wellesley basis for attribution of these texts*

An examination of the basis of attribution for these sixteen texts reveals that a number of different reasons were advanced for the assignation, and that the attributions for two of Blackie's articles and four of Burton's were listed only as "probable" or with a query mark. The most common reason for assigning an article to one or other of these authors was the fact that the author had written extensively on the topic; had a particular interest in it; or had reviewed a work on the topic elsewhere. Another reason for attributing an article to one of the two men was if the article contained a reference to the authorship of another article of known provenance. A further line of reasoning was based on a type of phraseology or critical perspective in the article, which was seen to be peculiar to that particular author, or which had appeared in another of his articles. The subjectivity of some of these techniques of attribution means that they should only be used in conjunction with other evidence and not as the basis for

attribution of other articles. This seems to have been the case with the attribution to Burton of all the reviews of Tytler's *History of Scotland* (V, VI, VII, VIII, IX parts 1 and 2) solely on the basis of his interest in historiography and his having written a book on Scottish history. The first two of these articles (Volumes V and VI) are among the candidates for computational stylistic testing. Table 8.5 below provides a brief summary of the *Wellesley* bases of attribution for the sixteen articles. (The numeric code in Table 8.5 refers to the articles listed in Table 8.4.)

Table 8.5: Summary of *Wellesley* bases of attribution for 16 *Tait's* articles

| Code | Wellesley basis for attribution to Blackie |
|------|-------------------------------------------|
| 1 | Arguments similar to those Blackie used in another article. |
| 2 | Blackie published a book and wrote many articles on the subject. |
| 3 | **Blackie prob.**/ Article's tone and style that of a Scottish controversialist. |
| 4 | Blackie refers to an article like this in another article. |
| 5 | Blackie reviewed a Carlyle work in another article. |
| 6 | **Signed B.** Blackie uses a similar phrase about Carlyle in another article. |
| 7 | **Blackie?**/ Writer discusses German literature and uses parentheses. |
| 8 | Blackie reviewed a work quoted in this article and had traveled in Styria. |

| Code | Wellesley basis for attribution to Burton |
|------|-------------------------------------------|
| 1 | Burton wrote many articles on Church history. |
| **2** | **Burton prob.**/ Writer is historian interested in political economy. |
| **3** | **Burton prob.**/  Many details in article are same as Burton's later book. |
| 4 | Burton reviewed this book for another journal. |
| 5 | Writer of this article mentions his authorship of another (Burton) article. |
| 6 | **Burton prob.**/ Writer has a concern for Scottish historiography. |
| **7** | **Burton prob.**/ Same reasoning as above. |
| 8 | Writer shows intimate knowledge of Hume, whose life Burton wrote. |

*Using the marker words to test the 16 test texts*

*Burton tests*

In this sort of attribution study it is advisable to test texts in a variety of ways to see if they always behave the same way. For this reason, I ran tests where the test articles were introduced one at a time, and then in different group combinations. In every test, two of the eight test articles attributed to Burton, "St Andrews" (code 5) and "Von Raumer" (code 8) showed an affinity with the seven Burton *Tait's* articles, while the remaining six Burton test articles showed no affinity with either of the two author's texts. Figure 8.6 below shows the result of a principal component analysis test which used the forty-nine marker words as

variables for the seven Blackie and seven Burton *Tait's* articles and the eight test articles attributed to Burton. None of the articles which *Wellesley* lists as "Burton prob." (code 2,3,6,7) appears to have any affinity with Burton's *Tait's* articles. It would appear that this caution was well-founded.

Figure 8.6: Principal component analysis text plot



Tait's Blackie and Burton texts with attributed Burton texts: 49 marker words
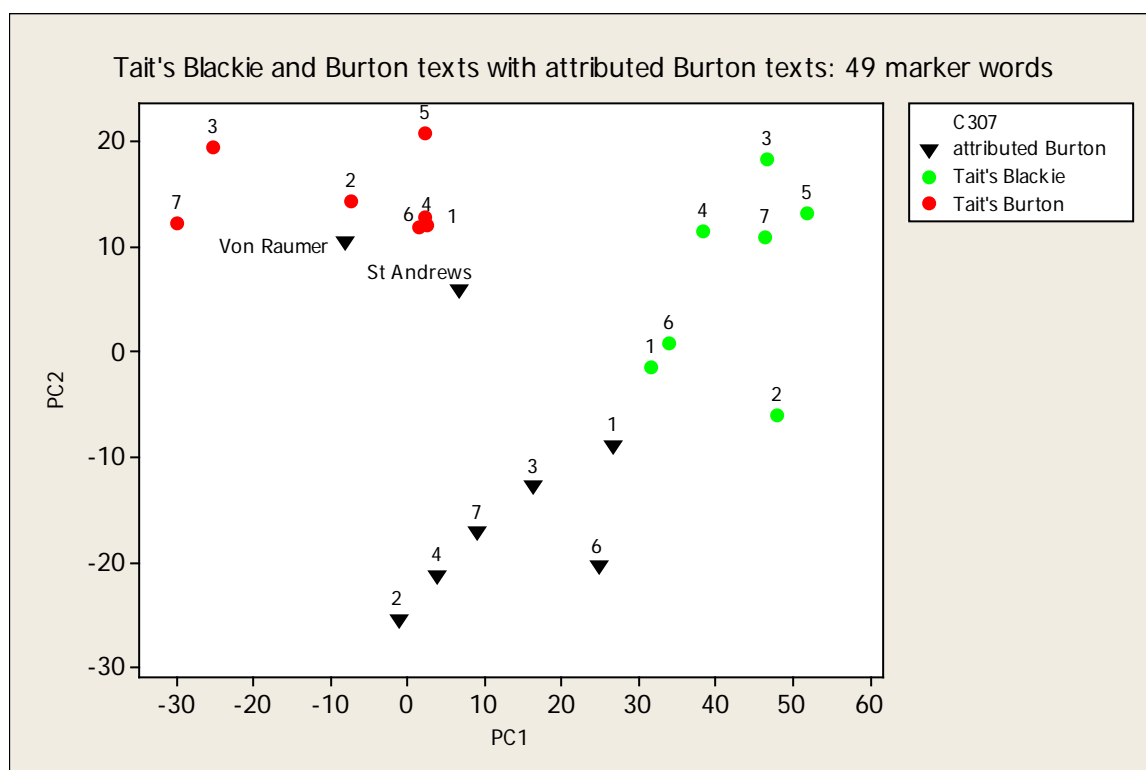
*Blackie Tests*

In the series of tests using the test articles attributed to Blackie, the results were less definitive than for the Burton tests. Only six of the texts always behaved the same way, while the behaviour of the other two texts was variable.

In all the tests three of the articles attributed to Blackie, "The Scottish Universities" (2), "Thomas Carlyle's Past and Present" (6), and "Styria, and the Styrian Alps" (8) invariably showed affinity with the Blackie group while three articles, "Rev. Dr. Lindsay Alexander's Switzerland and the Swiss Churches" (3), "Mr. Carlyle's Oliver Cromwell's Speeches and Letters" (5), and "The works of the De La Motte Fouqué" (7) always declared their difference. Two texts, "The

Politics of the New Testament" (1) and "National versus State Education" (4), showed some affinity with the Blackie group, when introduced singly, but less affinity when introduced in some of the group tests. Once again, the *Wellesley* expression of doubt for two of the articles, "Dr. Lindsay Alexander" (3) and "de la Motte Fouqué" (7), appears to be well-founded.

The discovery in Chapter 4 that Blackie's texts were in fact more variable than the texts of many other authors suggested the possibility that the two texts (1 and 4) which were showing variable affinity with Blackie's *Tait's* articles, may show greater affinity with his non-Tait's articles. For this test I moved away from the marker words which were used differently by Blackie and Burton and returned to an unselected set of variables. (Figure 8.7)

Figure 8.7: Principal component analysis text plot
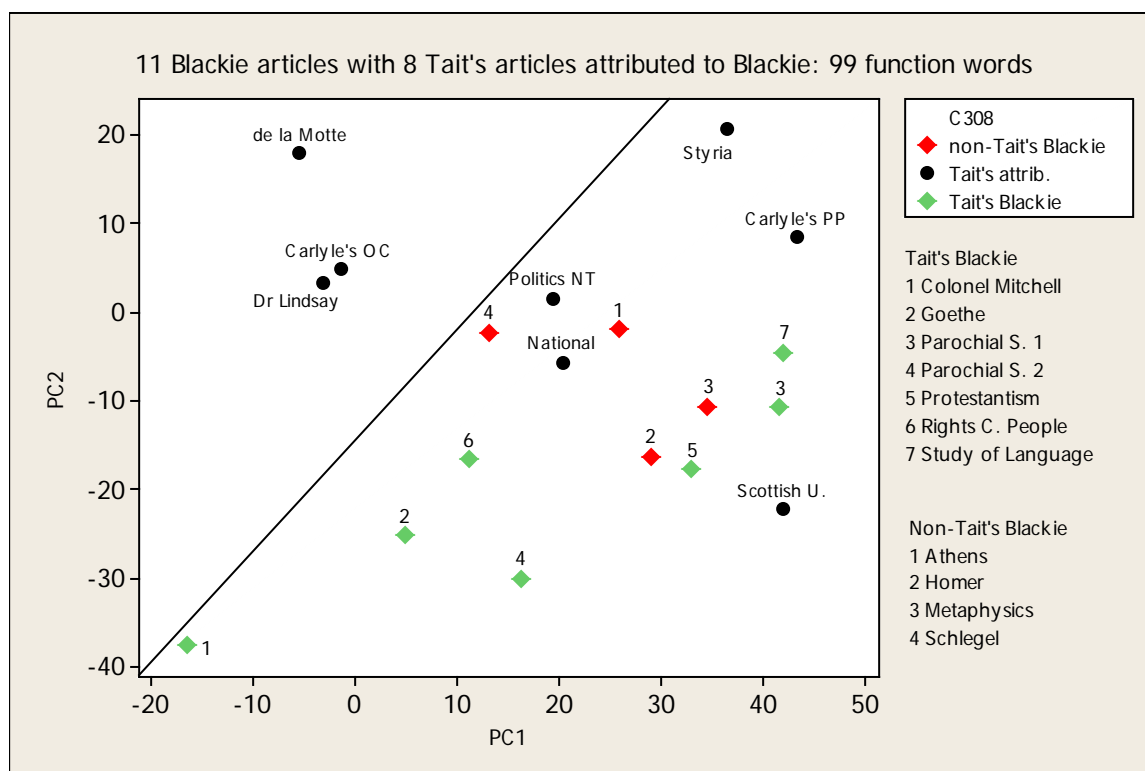


All eleven of Blackie's firmly attributed articles were used in this test along with the eight test articles. The two variable test texts ("Politics and the New

Testament" and "National versus State Education") are seen in Figure 8.7 to show more affinity with two non-*Tait's* articles, "Athens in 1853" (1) and "Frederick Schlegel" (4) than with any of Blackie's *Tait's* articles. The three texts which remained outside the Blackie group in the earlier tests, "Dr. Lindsay Alexander" (3), "Carlyle's Oliver Cromwell" (5) and "de la Motte Fouqué" (7), remained unaligned in this plot.

From the results of all the tests I carried out and in the light of Blackie's text locations on the intra-generic map of Chapter 3 and the authorial variability tests of Chapter 4, I feel quite confident in concluding that Blackie was not the author of three of the eight *Tait's* texts attributed to him, but that there is a strong probability that he was the author of at least three and perhaps as many as five of them. A dendrogram using the 49 marker words gives a similar result to the consensus view of my tests. (Figure 8.8)

Figure 8.8: Cluster analysis test
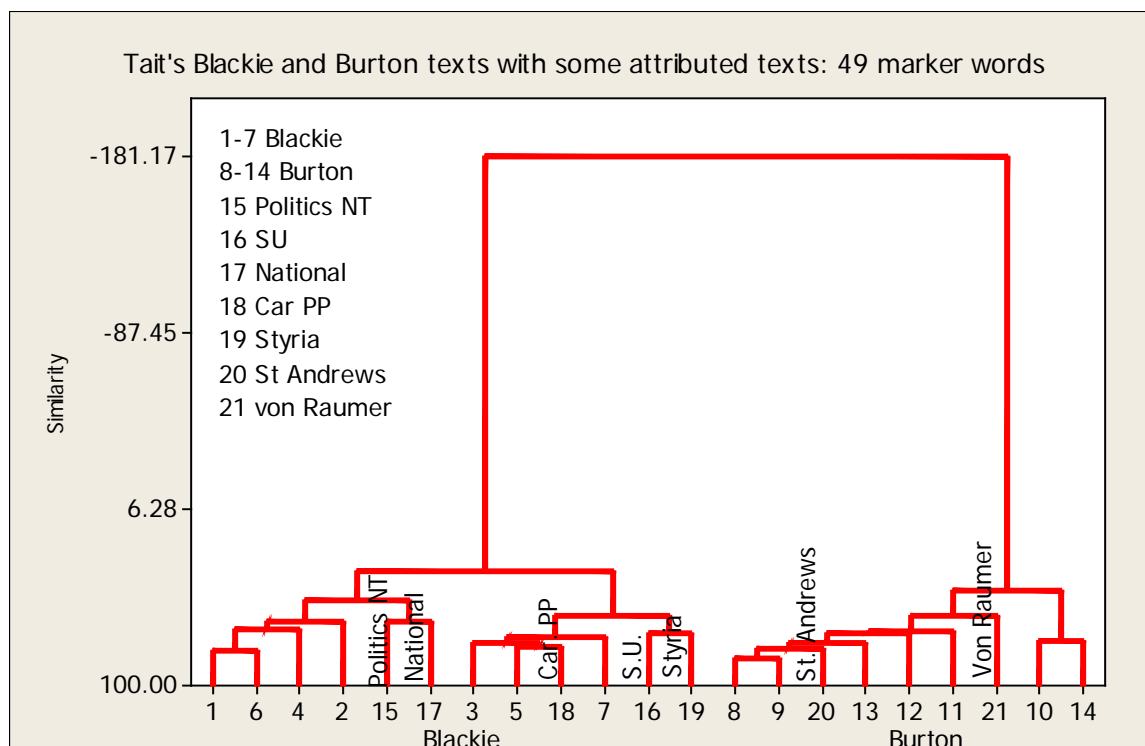
In this plot, the two major branches representing the Blackie group and the Burton group reflect the greatest difference detected by the test. Within the Blackie group, the seven *Tait's* articles form two separate groups before uniting to form one of the two major branches of the tree. The two attributed Blackie articles (which showed more affinity with two of the non-*Tait's* articles) join together before joining one of the Blackie *Tait's* groups. The three attributed Blackie articles which invariably showed affinity with Blackie's *Tait's* articles join the other Blackie's *Tait's* group, one of them ("Carlyle's Past and Present") uniting very early, demonstrating a high degree of similarity. The second major branch containing Burton's articles shows the two attributed Burton articles, which always showed affinity with Burton's *Tait's* articles, uniting with his main group of articles. The two Burton articles (10 and 14) which join together before uniting with the main group are the two which have the highest usage of the feminine personal pronouns ("Witchcraft in Scotland" and the second part of "Mary Queen of Scots").

These tests were carried out to test Eileen Curran's concern that some of the texts attributed to one or other of these two authors on the basis of 'internal' rather than 'external' evidence may have been mistaken. Our tests seem to indicate that three of the texts attributed to Blackie and two of those attributed to Burton were correctly attributed, and that a further two attributed to Blackie were probably correctly attributed. The remaining nine texts appear to belong to neither Blackie nor Burton.  Our tests have not shown any replication of the situation described at the beginning of this chapter, where a text, belonging to one of the two authors, was incorrectly attributed to the other. Rather, the tests have raised the notion that another (unknown) author may be involved in the writing of some of these articles. This moves the testing out of the territory of 'a two horse race' into the world of periodical writers. One of the ever-present dangers in the use of the methods of computational stylistics for attribution testing is this possibility of 'an unknown hand.' That is to say, although I now suspect Blackie to be the author of five of the sixteen articles and Burton to be

the author of two of them, I need to do further tests to be sure of this. It may have been the case, that the articles which joined each of the authors were attracted there on the basis of a 'passing' similarity which would disappear in a wider field. Setting up such a wider field is an important phase of the testing procedure.

*Burton against the world tests*

This series of tests introduced the Test set (the eight *Tait*'s articles attributed to Burton on 'internal' evidence) into a field consisting of a Burton set (ten reliably attributed Burton texts) and a series of world sets composed of pairs or trios of authors chosen randomly from the Victorian Periodical Corpus. The word variables used in these tests were the 150 most common function words of the corpus. Regardless of which authors were used for the world set, two of the eight test articles, "Von Raumer" and "St. Andrews", always attached themselves to the Burton set branch of the tree. Figure 8.9 below shows one of these tests.

Figure 8.9: Cluster analysis test
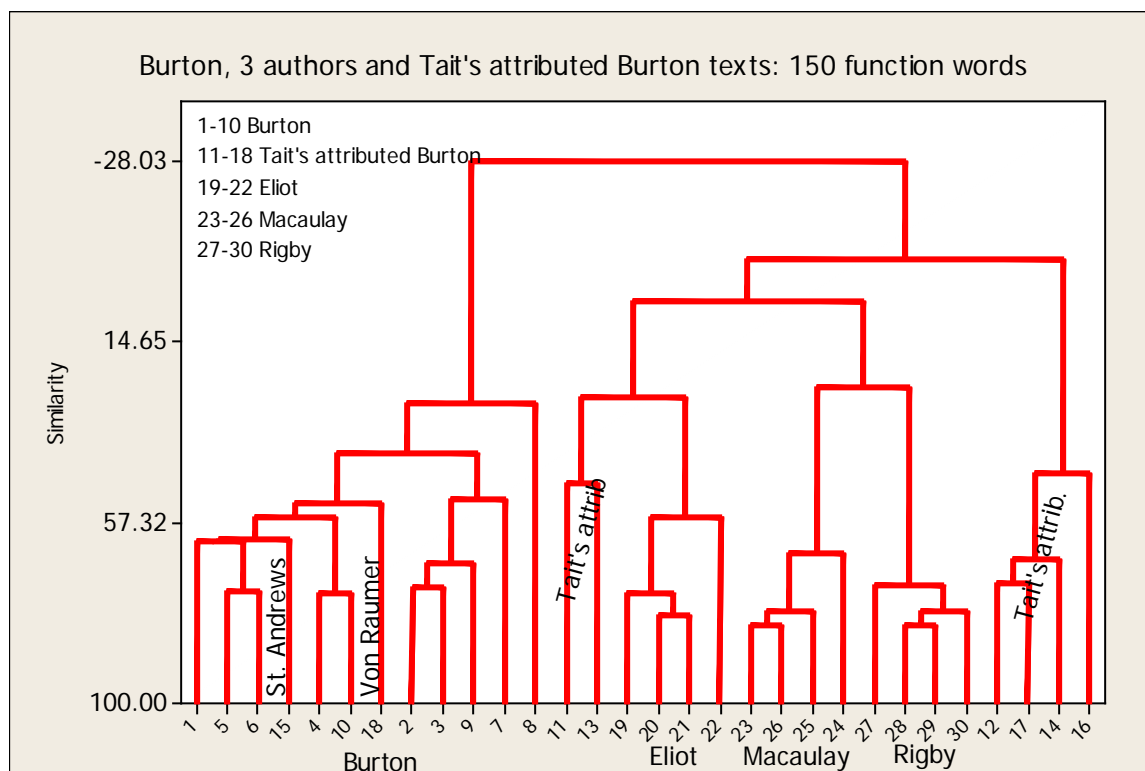
The remaining six Test set articles showed considerable volatility, sometimes forming a single cluster, sometimes separating into two groups and uniting belatedly with various authors or groups of authors from the World set (as in Figure 8.9). These tests confirm the earlier tests and show that there is good reason to believe that "Von Raumer" and "St. Andrews", were written by Burton, but that the other six texts that are attributed to him probably were not. The other author texts used in this Figure 8.9 are listed in Appendix 8.2.

*Blackie against the world tests*

Since Blackie's articles are less uniform than Burton's articles I used the Victorian periodical 150 function word list to obtain a list of the words Blackie used relatively more and relatively less often than his contemporaries. There were 56 words with a t-test value of + or - 2 or stronger. These 'Blackie markers' were then used for the tests. The eight test texts were introduced with the Blackie texts and a variety of world sets. The result of one of these tests is seen below.

Figure 8.10: Cluster analysis test
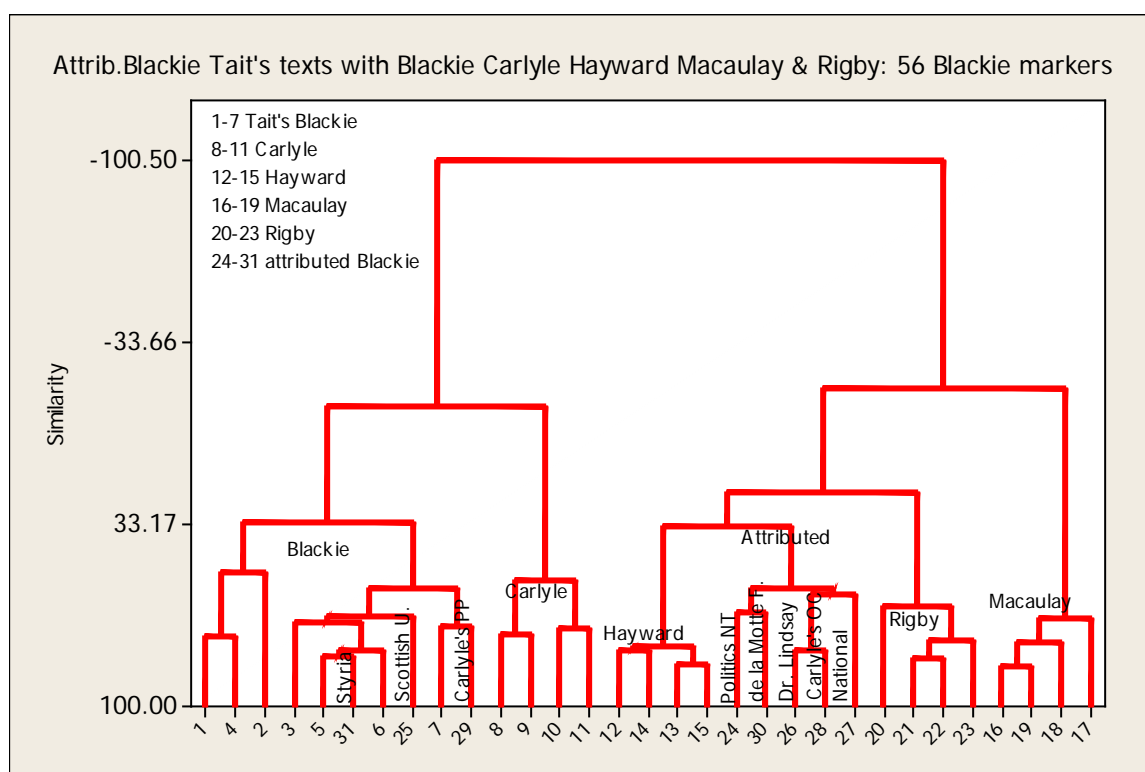
Three of the test texts, "Styria, and the Styrian Alps", "The Scottish Universities", and "Thomas Carlyle's Past and Present" always aligned with Blackie's groups of texts. In all the tests of Blackie versus the world, the three attributed texts ("Dr. Lindsay Alexander", "Carlyle's Oliver Cromwell" and "de la Motte Fouqué") which showed no affinity to Blackie in the Blackie-Burton tests continued to declare their difference from him. Two of the test texts, "National versus State Education" and "Politics of the New Testament" were inconsistent in their alignments, sometimes aligning with the Blackie group, sometimes aligning with one of the non-Blackie groups, and sometimes (as in Figure 8.10 above) aligning with the other *Tait's* texts attributed to Blackie. The other author texts used in this test are listed in Appendix 8.3.

These tests helped confirm the strong probability that Blackie wrote three of the texts, "Scottish Universities", "Carlyle's Past and Present" and "Styria, and the Styrian Alps", and that he did not write another three, "Dr. Lindsay", "Carlyle's Oliver Cromwell" and "de la Motte Fouqué". The case for two of the texts, "National versus State Education" and "Politics of the New Testament", which only showed affinity with Blackie's group of texts some of the time, can be considered still open.

## Conclusion

The methods of computational stylistics were able to establish stylistic differences between the two writers, on the basis of each author's relative usage of a number of function words in the fourteen *Tait's* articles attributed to them on 'external' evidence. Two different sets of tests were carried out on the sixteen articles whose attribution to Blackie and Burton in the *Wellesley Index* was under question. The first set of tests used the differences between Blackie and Burton to try to determine which of the two was the more probable author of each of the articles. One outcome of these tests was that, although it appeared Blackie had written at least three and perhaps five of his eight questionably attributed articles and Burton had written two of his eight, the other nine questionably attributed

articles were not written by either of them. In the light of this finding a second series of tests was carried out, pitting each of the two authors in turn against a random selection of contemporaries represented in my Victorian periodical text collection. These tests confirmed the results of the first set of tests that it is highly probable that three Blackie attributions and two Burton attributions were correctly attributed and that it is possible that a further two Blackie attributions were written by him.

More generally, it would appear that their perceptions of 'internal evidence' have led some of the scholars who worked on the *Wellesley Index* to make some rather shaky attributions. While it is not possible to claim that a computational stylistics test, which is itself a form of 'internal evidence', can alone generate a reliable attribution, I have shown that it can be of considerable use in helping to confirm or disprove claims based on other grounds. Moreover it has the advantage of being an empirical test which can tap in to a writer's largely unconscious stylistic habits and discover relationships between apparently quite different texts. Figures 8.1 and 8.2 showed that the texts of these two authors exhibited very different patterns on the intra-generic map of 200 texts, while Table 8.2 was able to show that these two authors were differentiated by their relative frequency of use or non-use of tensed function verbs; certain personal pronouns; particular conjunctions and prepositions; relative pronouns; negative markers and so on. In this particular study, the tests were able to confirm the fact that the doubt felt by the *Wellesley* attribution team (signalled by their use of "prob" or the query mark) for two of Blackie's and four of Burton's articles was indeed well-founded. In so far as all the tests invariably pointed to three Blackie articles and two Burton articles as being correctly attributed, the *Wellesley* evidence for these five articles is affirmed.

### NEW YEAR'S DAY AT THE TUILERIES.

THINGS are changed at the Tuileries since the time when the little Gods used to gather round the throne of the French Jove on the first day of the year, and wait to see what sort of nod the great ruler of events would give. His awful frown set all the money-markets in Europe quivering, and an unpleasant word from his mouth was looked on as the portentous sign of war and bloodshed and the distress of nations. Nothing can be quieter than New Year's Day at the Tuileries now, and scarcely anything less important than the EMPEROR's speech to the diplomatic body. It is true that his prophecies are of smooth things; his hopes are of peace; and his talk is of another of those Great Exhibitions which we

though not outwardly so grand and imposing as that which she occupied ten years ago, is far more secure, solid, and beneficial to her.

No man alive knows Europe so well as the EMPEROR does, and what others can see he can see much more plainly than they. And as he surveys Europe mentally at the beginning of the year, it is scarcely possible that he should not find in it symptoms of greater changes and newer phases of national life than he thought it necessary to hint at in the complimentary nothings of his New Year's Day speech. Above all, there are two consequences of the present state of things in Europe which are of very serious importance, and the importance of which must force itself very strongly on his mind. We cannot say that either is very satisfactory in itself, and it is exceedingly

### DETAILS OF THE REFORM BILL.

THE appointment of the Boundary Commissioners was a very delicate matter, and the Government has shown much tact and good judgment in the mode in which it has dealt with it. Mr. DISRAELI is freely accused by indignant Liberals of having contrived his scheme of redistribution for party purposes; and any one who has an intimate knowledge of any of the localities affected, who can produce reliable figures, who will show how the job has been managed, and how it can be avoided, is quite right in exposing it, and in

right. And the Government has done its best to raise before-hand the anticipation that the decisions will be impartial, and has sedulously removed every ground for asserting that any particular decision may be set down as a Conservative job.

How very difficult it is to prevent bribery by statutory enactments may be gathered from the long discussion which took place on the wording of the clause by which the corrupt payment of rates in order to place the name of the nominal ratepayer on the register was declared to be an act of bribery. It may be confidently anticipated that

Scan of Microfilm Copy of First Page of Two 1867 Issues of *The Saturday Review*

# Chapter 9: A study in attribution
*Who wrote the Women's Movement articles in The Saturday Review[58]?*


*The Saturday Review*

In the 'Modern Women' series of articles of 1866-1868, discussed in the Prologue, we saw an example of the sort of the controversial article which *The Saturday Review* delighted in. When the first issue of the *Saturday Review of Politics, Literature, Science, and Art* was published on November 3, 1855 "the time was ripe" for the "experiment of a journal which would … enlarge the scope of criticism to take in all the political, social, and cultural activities of the English nation" (Bevington 6-7). The journal itself was, Bevington notes, remarkable for the unity of its house style; it seemed to be able to call on the talents of its staff to merge their own individuality into such a "consistency of tone and point of view" that readers were able "to refer to what the *Saturday* said, rather than to what a particular writer said in the *Saturday*." (Bevington 34) This tone was abrasive, being variously characterized by its critics as "cynical, skeptical, hypercritical, malicious and destructive" and earning the paper the title of "the Saturday Reviler" (Bevington, 43-44).

One of the paper's targets in its early years was the emerging Women's Movement. In the late 1840s social reformers had become concerned with the difficulties faced by governesses and the inadequacies of their education, and had founded the Governesses' Benevolent Society, which offered annuities to governesses no longer able to work, and Queen's and Bedford Colleges where university-educated men delivered courses of lectures to women, with some emphasis on the needs of governesses (Strachey, 60-63). A little later, in 1855, two young women, Barbara Leigh Smith and Bessie Rayner Parkes, began a campaign to alter the laws relating to married women's property, and in 1858 founded the *English Woman's Journal*, which aimed to raise awareness of the disadvantages women suffered in education and employment as well as in

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[58] See Antonia and Jordan for an earlier version of this work.

marriage. They also established a reading room for women, and supported the founding of a Society for Promoting the Employment of Women. In 1860 all three organizations moved into a house at 19 Langham Place and the women connected with them became known as the Langham Place group (Strachey 71-74, 89-98).

All these initiatives were commented on critically and frequently satirically by the *Saturday Review*, often to the distress of the women concerned. In January 1860, for example, Bessie Rayner Parkes wrote to her friend: "The Saturday review wrote the most beastly article against the 'Ladies Club' that has yet appeared in its pages; dirty, indecent to a horrible degree. I expect it will set all the husbands & fathers of our 80 ladies wild with anger; for this time, you see, the whole body are attacked & not me alone!" (works cited). Furthermore, a number of these *Saturday* articles have aroused the interest of later scholars, and most historical accounts of the English Women's Movement, from Ray Strachey's *The Cause* on, have quoted from them.[59] Nevertheless almost nothing is known about the authors, whether there was one or many, whether they were male or included among them women unsympathetic to the new movement, whether they were writing from conviction or following editorial dictates. The articles in question are listed in Table 9.1 below.

Only two of the articles have attributions of any sort and only one is convincingly credited. Bevington reports that "two partially marked files of the *Saturday Review*" (331) have the annotation "Mrs. Bennett [?]" beside the article "Lectures to Ladies on Practical Subjects" published on December 15, 1855, but he cannot identify the author further and has some doubts of the significance of the annotation. The second attribution is much firmer: of the article "Bloomeriana" (published September 12, 1857) to Lord Robert Cecil (later the Marquess of Salisbury). The name of this article appears with 606 others on a document in the

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[59] For example: Strachey 93, Stephen, Barbara 43, Burton, Hester 68-9, Holcombe 141, 145, Anderson and Zinsser 159, Hirsch 147,193, 197-8, 223, 265.

handwriting of Salisbury's daughter headed "List of the articles written by Lord Salisbury for *The Saturday Review*" which was reproduced in 1961 by J.F.A. Mason (Pinto-Duschinsky, 32-33).

Table 9.1: Articles appearing in *The Saturday Review* from 1856-8

| code | article title | date | words |
|---|---|---|---|
| 1 | A Woman's Thoughts about Women | April 10 1858 | 1603 |
| 2 | Bloomeriana | Sept 12 1857 | 1653 |
| 3 | Claims of Governesses | Jan 30 1858 | 1962 |
| 4 | The English Women's Journal | April 10 1858 | 1674 |
| 5 | Head or Woman | Feb 7 1857 | 1346 |
| 6 | Industrial Occupation of Women | July 18 1857 | 1740 |
| 7 | Law for Ladies | May 24 1856 | 2022 |
| 8 | Man's Might and Women's Right | May 3 1856 | 1704 |
| 9 | Marriage and Divorce | July 5 1856 | 1696 |
| 10 | The Overeducation of Women | May 8 1858 | 1919 |
| 11 | Lectures to Ladies on Practical Subjects | Dec 15 1855 | 1338 |
| 12 | Social Science | Oct 17 1857 | 1382 |
| 13 | Woman's Rights | June 14 1856 | 1491 |

*Testing the Women's Movement articles*

In the initial series of tests carried out on these articles (reported in Antonia and Jordan) I set up a control group of articles by both men and women from the Victorian periodicals text collection to act as a gendered background for testing the Women's Movement articles. Since the articles from the *Saturday Review* ranged in word-length from 1346 to 2022 words, while the articles from the other periodicals used in the test ranged from around 4000 to over 30000 words, these background articles were divided into 2500 word sections to make them more comparable to the *Saturday* articles being tested.

The variables for these tests were seventy 'gender markers' which had been derived from earlier gender work on the periodicals. Frequency counts of the seventy gender marker words were made for each of the male and female periodical text sections and for each of the Women's Movement articles. The tests consistently positioned the *Saturday Review* Women's Movement articles away from the women's periodical texts sections, placing them near or among

the men's periodical text sections. I concluded that it is probable that the thirteen Women's Movement articles (1855-58) under investigation were written by men.

The next stage of testing was carried out to see if the author (or authors) of the Women's Movement articles was one of those whose contributions to the periodical press were included in my Victorian periodical text collection. Relying on Bevington's attributions and dates of authors writing for the *Saturday* I looked for men who were known to have written articles for *The Saturday Review* between the years 1855 and 1859. Seven authors, Walter Bagehot, Robert Cecil, James Anthony Froude, William Rathbone Greg, Abraham Hayward, Charles Kingsley and George Henry Lewes qualified. Using a random selection of 5000 word text sections of periodical articles by each candidate and the thirteen Women's Movement articles, I ran a series of principal analysis and cluster analysis tests based on the 75, 50 and 35 most common function words of the Victorian periodical text collection. The results for six of the seven candidates showed a complete separation for each of the trials, suggesting that none of these authors (Bagehot, Froude, Greg, Hayward, Lewes, Kingsley) had a hand in writing the women's movement articles. On the other hand, Cecil's periodical sections invariably attracted four, five or six articles; always "Law for Ladies", "Woman's Rights", "Marriage and Divorce" and "Social Science", and sometimes "Head or Woman?" or "Bloomeriana" or both, depending on the length of the word list.

Although only one of these six, "Bloomeriana", is included in the list made by Cecil's daughter of his contributions to the *Saturday Review*, that list cannot be accepted as comprehensive. Mason found a reference in Cecil's correspondence to an article not listed there which appeared on November 28, 1868, leading one scholar to suggest that Cecil's daughter's judgment in identifying his journalistic contributions was "too cautious" (Pinto-Duschinsky 33). It therefore seemed worthwhile to investigate the possibility further.

*Testing Cecil*

Lord Robert Cecil (1830–1903), later third Marquess of Salisbury and Prime Minister of Great Britain, married young against the wishes of his father, who cut off his allowance. He therefore began supplementing by journalism the modest income inherited from his mother. Alexander Beresford-Hope, the owner of the *Saturday Review*, was his brother-in-law and there is archival evidence that between 1856 and 1868 he contributed 608 miscellaneous unsigned pieces to the paper (Pinto-Duschinsky 32-33). It also seems likely, given the results of our tests, that he contributed a number of others.

The initial series of tests, which compared the thirteen Women's Movement articles with twelve 5000 word sections from four of Cecil's known contributions to the *Quarterly Review*, proved suggestive rather than conclusive, with the Women's Movement articles suspected of belonging to Cecil not forming an integrated cluster with the *Quarterly* sections. Furthermore, in some of the tests two of the Women's Movement articles, "Head or Woman?" and "Bloomeriana", appeared to have rather more in common with the remaining Women's Movement articles than with Cecil's contributions to the *Quarterly.* The *Quarterly* articles are, however, all rather lengthy political commentaries and so somewhat different from the hard-hitting, clever, short articles demanded by the *Saturday*, and this seemed a possible explanation of why the two groups did not integrate. In addition, "Head or Woman?" and Bloomeriana" (the two articles which only grouped with Cecil's texts intermittently) are more aggressively misogynistic (or 'beastly' as the ladies of Langham Place would have put it) than the other four in the group; and it occurred to me that it may have been their greater conformity to the "reviler" tone of the *Saturday* that produced a word usage more similar to that of the other Women's Movement pieces than to Cecil's *Quarterly Review* contributions.

I therefore digitized sixteen of Cecil's firmly attributed *Saturday Review* articles, and ran a further series of tests which confirmed the suspicion that Cecil's

*Saturday* style differed in some respects from the style he used for the *Quarterly*, and provided further confirmation of the likelihood that he wrote all six of the Women' Movement articles which had shown some similarity to his texts in the earlier tests. When the Women's Movement articles were compared to Cecil's *Saturday Review* contributions without the intervention of his other writings, his authorship of the six articles in question appeared even more likely.

*Further thoughts and other tests*

When these initial tests were carried out, there had been no possibility of using a *Saturday Review* text collection for the tests, since such a collection did not exist. The digitizing of some of the known Cecil *Saturday* articles at that time allowed me to complete the testing and to confirm his probable authorship of six of the Women's Movement articles. Since that time, other well-attributed articles have been added to my *Saturday* text collection, making it just about large enough to do some attributional and stylistic testing. Ideally of course, the collection should be much larger and should carry the firmly attributed work of more authors. The collection was described in Chapter 2 and Table 2.4 from that chapter is reproduced below for convenience as Table 9.2

Table 9.2:  Anonymous and Attributed Saturday Review articles

| author | articles | reviews | middles | leaders | years |
|--------|----------|---------|---------|---------|-------|
| Anonymous | 46 | 15 | 31 | 0 | 1855-68 |
| Lord Robert Cecil | 39 | 14 | 23 | 2 | 1857-64 |
| George Eliot | 4 | 4 | 0 | 0 | 1856 |
| John Richard Green | 27 | 7 | 20 | 0 | 1867-68 |
| Eliza Lynn Linton | 27 | 2 | 25 | 0 | 1867-68 |
| Anne Mozley | 16 | 0 | 16 | 0 | 1861-64 |
| Total | 159 | 42 | 115 | 2 | |

One of the main difficulties with working with articles from the *Saturday* is the fact that it lacks an attribution Index comparable to the *Wellesley* and there are accordingly a greater number of anonymous articles to deal with. These articles need to be put aside when creating 'base' sets against which to test the various

sets of mystery articles. Furthermore, until suitable methods of attribution are developed for assigning authorship to the many anonymous or misattributed articles, these difficulties will continue. Finding a sufficient number of suitable and well-attributed articles for particular projects is both difficult and time-consuming.

Equally, there is a serious gender imbalance in the articles which creates difficulties for gender testing. Although Anne Mozley and Eliza Lynn Linton are known, through republication in book form, to have contributed many articles (mostly in the form of essays on social subjects) to the *Saturday,* evidence is lacking for significant contributions by any other woman writer. A quick survey of Bevington's "Authorship of Articles Appendix" shows only seven women alongside the seventy-nine men to whom he assigned articles and a further five women alongside the twenty-two men for whom he had evidence of having contributed articles, but no knowledge as to which ones. Since the contributions of Mozley and Linton are much later than the Women's Movement articles, they cannot be considered as possible authors, and although George Eliot's contributions belong to the correct period, it would appear that the external evidence for her contributions is sufficient to rule her out as a possible author of the articles.

In the tests on *Saturday* articles in Chapter 5, I found that the enforced shorter length of the weekly articles had had the effect of making them somewhat different in style and tone from the longer periodical articles. They generally exhibited more economy and directness and an oracular authoritative tone in place of a propositional and argumentative one. In the light of these findings, I decided to repeat the earlier attribution tests on the Women's Movement articles using only *Saturday* articles for the testing. I did not however feel that it was possible to use the *Saturday* collection for repeating the earlier gender tests.

*A bird's eye view of 159 Saturday Review articles*

In order to allow all the Saturday articles (anonymous and attributed) to declare themselves, I carried out a principal component analysis using the 100 most common function words of the periodical text collection as variables. The result is seen in Figure 9.1, with the outliers at each end of the two axes highlighted.

Figure 9.1: Principal component analysis text plot
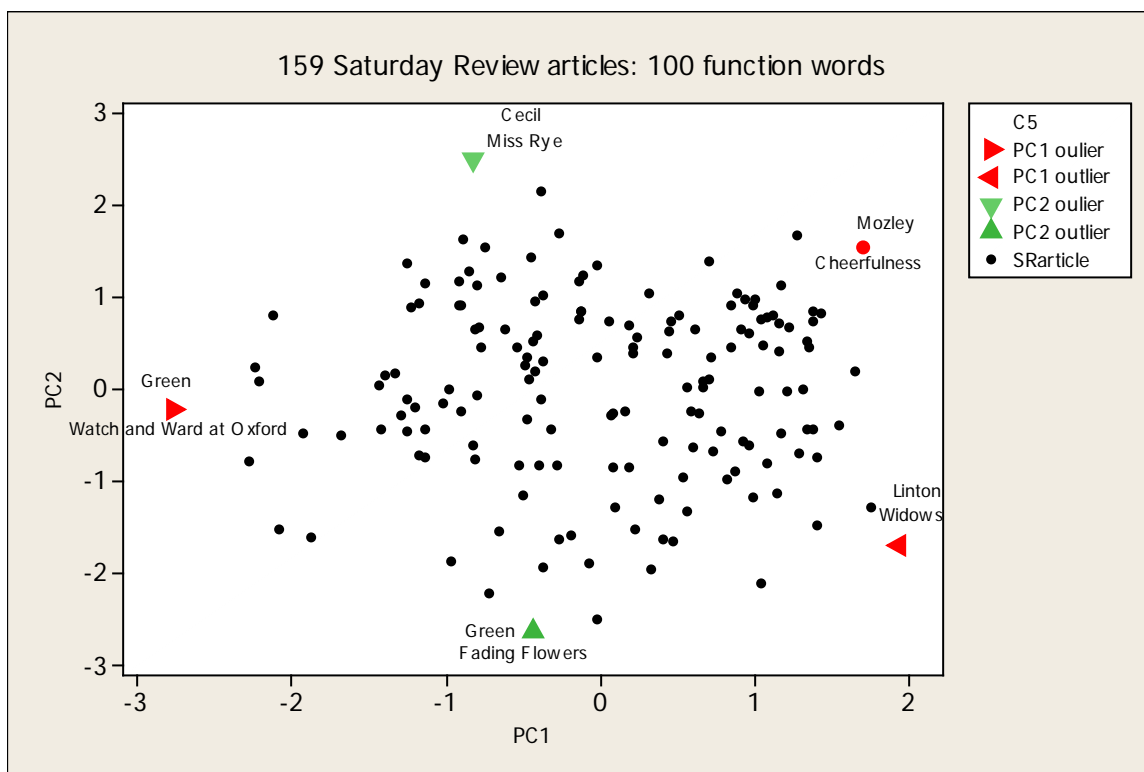


The outlying articles at each end of the first principal component continuum are Green's 1867 article on "Watch and Ward at Oxford" and Linton's 1868 article "Widows," which was one of the *Saturday* articles reprinted in her 1883 *Girl of the Period and other Social Essays* volumes. The outlying articles at each end of the second continuum are Cecil's 1862 article "Miss Rye's Emigrants" and one of Green's *Saturday* articles, "Fading Flowers", which appeared in the 1868 volume *Modern Women and What is Said of Them*. Because of the relative proximity of the Linton and Green 'Modern Women' articles, I also highlighted a second outlying text, Mozley's "Cheerfulness", as a point of reference, on the right hand

side of the plot. The word plot underlying these text placements (seen in Figure 9.2 below) helps identify the sorts of stylistic characteristics exhibited by the outlying texts. Lines have been drawn across Figure 9.2 in order to illustrate a number of features in the distribution of the variables. The relatively sparse spread of words in the left hand sector reflects the fact that the definite article is exerting a very strong influence in that sector.

Figure 9.2: Principal component analysis word plot



Green's "Watch and Ward at Oxford" and the other texts at the westerly end of the first PC in Figure 9.1, are likely to have made more frequent use of the definite article and the past markers (*was, were, had* and *been*) located in that sector in Figure 9.2. Cecil's "Miss Rye's Emigrants" is located in the central north in Figure 9.1, this location suggesting more frequent recourse to some of the

markers which I noted were associated with a collective focus in Chapter 3,[60] such as (*they, their, them* and *be*). Some of the words loosely associated with an individual focus may be seen in the south and south-east sectors (*his, him, she, her* and *and*). The words in the central and north-east sectors include some of the words associated with a polemical focus (*are, can, do, does, is, not* and *never*). I suspect from the relative locations of the Mozley and Linton texts, that each of these texts shared some of the characteristics of its outlying neighbour: Mozley with Cecil in the north, and Linton with Green in the south. The central section of Figure 9.2 containing many of the markers favoured by all writers (including the editorial first person plural pronouns) is so crowded, it was impossible to separate all the words completely.

### *Some stylistic characteristics of the outlying texts*

Using the ten highest ranking words from each end of the two principal component continua, I will attempt to isolate some of the stylistic characteristics of each of the outlying texts of Figure 9.1. This will allow me to identify both similarities and differences between these weekly articles and their lengthier and more infrequent periodical siblings.

Green's article "Watch and Ward at Oxford" is the leftmost outlying text of the first principal component axis, and the ten highest ranking words at this end of the PC1 continuum are *the, of, was, which, had, were, been, by, from* and *in*. Green's article brought to the attention of readers,

> A little squabble which is now going on at Oxford between the University and the town, on the apparently uninteresting subject of the night-police. (297)

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[60] Although I use some of the labels and descriptions of intra-generic foci that I developed in Chapter 3, I do not intend to imply that the situation here is by any means identical. There are some passing similarities, but the *Saturday* text collection is not comprehensive enough to allow a complete mapping of texts.

He placed the quarrel in a historical context as being,

> probably the last of the long series of contests about privileges which kindled so
> fierce an hostility between the civic and academic bodies during four or five
> centuries…(297)

noting with amusement

> that the parts of the two combatants are now reversed. The cherished privilege of
> 'watch and ward,' which the University wrested after such bitter struggles from
> the town, it now desires to restore. The town, on the other hand, equally
> unmindful of the past, declines to receive it. (297)

It is interesting to see how Green makes the historical aspects of this essay of current interest and amusement, eminently suitable for the passing interest of a weekly reader. None of the past tense markers appears in this opening extract, although they occur quite frequently later in the article. It seems however, a far cry from the detailed concern with the past shown by the periodical western outlier of Chapter 3, Hayward's historical account of Venice.

The ten highest ranking words at the rightmost end of the PC1 continuum are *not, do, and, is, if, what, does, can, are* and *when*. The opening paragraphs of two outlying articles on the right hand side of Figure 9.1, Linton's "Widows" and Mozley's "Cheerfulness", show that highest ranking words at this end of the continuum tell only part of the story for Linton who uses only four of the ten words. The Linton extract is replete with instances of the present tense verb form *are*, while Mozley has several instances of *is*. Both have occasion to use the conjunction *and*, and the negative *not*. In place of the other words on the list, however, Linton makes frequent use of the relative pronoun *who*, the plural demonstrative *those*, and a number of the words which are highest ranking on the south-most end of PC2 continuum (*with, into, over* and *she*), for example. The extract seems to exemplify what we have come to see as a method favoured by Linton – that of subjecting the subject under discussion to an intense scrutiny and objectifying it as archetypical of the species.

> There are widows and widows; there are those who are bereaved and those who are released; those who lose their support and those whose chains are broken; those who are sunk in desolation and those who wake up into freedom.  Of the first we will not speak.  Theirs is a sorrow too sacred to be publicly handled even with sympathy; but the second demand no such respectful reticence.  The widow who is no sooner released from one husband than she plots for another, and the widow who leaps into liberty over the grave of a gaoler, not a lover, are fair game enough.  ("Girl of the Period and Other Social Essays" 223)

In her extract, Mozley makes use of eight of the ten words on the list, which makes it a better sample of the sort of style the words suggest. Its use of *we* and *us* is not so much editorial pontification as identification of the writer as a member of the human race, offering the reader a series of observations and propositions.

> CHEERFULNESS is universally acknowledged as a duty, and as such is affected by us all. We are glad, and find pleasure, a dozen times a-day, and do no more than is expected of us ~~ in fact, should pass for morose fellows if we did not smile at the accost of every acquaintance: and if we can superadd an air of brisk self-gratulation at the good fortune of the encounter, so much the better. If, then, we have all to seem cheerful, a few speculations on different kinds of cheerfulness, what is the best sort, and how we may invest ourselves with it, cannot come amiss. ("Essays on Social Subjects" 23)

The highest ranking words for the north-most end of PC2 are *be, are, have, to, should, upon, their, will, they* and *some*. In Cecil's article "Miss Rye's Emigrants" the first person plural pronouns assume their full editorial "pose of lofty condescension and infallibility" (Bevington 41), as he expresses 'painful surprise' at the furore an earlier article of his had caused some readers.

> A few weeks ago we ventured to make some remarks upon Miss Rye's project for the emigration of women of the middle class.  It was a matter of painful surprise to us to find that our article upon "The Export Wife-trade" had excited very ungentle emotions in the bosoms of some of our fair readers. (566)

The self-justifying explanation is equally condescending:

> The article was intended to warn Miss Rye and her supporters against some dangers which seemed to us very imminent. We could not but express a fear that they were undertaking to supply a market with which they were imperfectly acquainted; and that, in attempting to dispose of our superfluity of educated women by furnishing colonial bachelors with wives, they might be involuntarily incurring dangers which they were very far indeed from contemplating. (566)

as is the reason for the current article:

> It is not, therefore, with any foolhardy intention of provoking another onset of female pens that we venture to recur to this dangerous subject. We are emboldened to do so only by the circumstance that we have been happy enough to make a convert, and that convert is no less a person than Miss Rye herself. (566)

This article makes use of most of the highest ranking words for the north-most end of PC2 (mentioned above), as well as a number of others a little further down that list: (*it, that, very* and *could*) for example, and one or two of the high ranking past markers from the left-most end of PC1 including *was, were* and *had*.

At the south-most end of the PC2 continuum, the highest ranking words are *her, she, into, and, over, after, him, like, at* and *with*. Green's "Fading Flower", the outlying text at this end of PC2, was one of the ten articles of his known to have been included in the 1868 *Modern Women and What is Said of Them* volumes. It is an amusing, though somewhat misogynistic, journey through the stages of womanhood from her debutante "simply receptive" stages to the "subdued vivacity" of the early fading flower who

> turns chatty, and her chat insensibly deepens into conversation. She discovers a new interest in life and in the last novel of the season. She ventures on the confines of poetry, and if she does not read Mr. Tennyson's *Lucretius*, she keeps his photograph in her album. She flings herself with a far greater ardour into the mysteries of croquet. She has

been known to garden.  As petal after petal floats down to earth she becomes artistic. She reads, she talks Mr. Ruskin.  She has her own views on Venice and its Doges, her enthusiasm over Alps and artisans. (81)

The arrival of her autumn brings an interest in politics; a further loss of petals brings out a country horsey aspect, while the grey of life "hushes the Fading Flower into the kindly aunt" until "it is hard to recognize the proud beauty … of days gone by" (81ff).

*Summation*

It appears from this brief analysis of the outlying articles of Figure 9.1 that the *Saturday* articles in the collection were all operating within a much narrower range of stylistic variation than were the monthly and quarterly articles. None of the articles exhibits very marked differences from the others. Each of the outliers seems to make only incidental use of some of the highest ranking words in its own sector, while making regular use of some of the high ranking words from the adjacent sector. The differences between the two Green outlying articles for example, are illustrative: in "Watch and Ward at Oxford" the historical content, though present, is incidental to the amusing current interest of the story, while the individualized characteristics of the subject of his "Fading Flower" are cleverly generalized to make her an instance of the type. Though cast in a similar mould, Linton's characterization of the type in her "Widows" seems somewhat more generalized (and brutal) than Green's characterization of the fading flower. The editorial voice in Cecil's "Miss Rye's Emigrants" provides the amusement of this article by way of its feigned distress and reasonable explanations, sharing a joke with one section of the readership (presumably the larger) at the expense of another. The Mozley article also exhibits cleverness, but hers is a cleverness of observation and expression to be shared with anyone who can appreciate the general 'truth' of the observation. One can imagine an identical writing brief for the authors of all these articles: 'Be clever, be brief, be interesting, but above all – be amusing.'

## Cecil's *Saturday Review* articles

Table 9.2 indicates that the *Saturday* text collection contains thirty-nine of the articles which can now be attributed to Cecil. Of these "Bloomeriana" was set aside and grouped with the other twelve anonymous Women's Movement articles under consideration. Figure 9.3 below shows where Cecil's remaining thirty-eight articles[61] are located in relation to the other *Saturday* articles according to their relative use of the 100 most common function words of the periodical collection.

Figure 9.3: Principal component analysis text plot
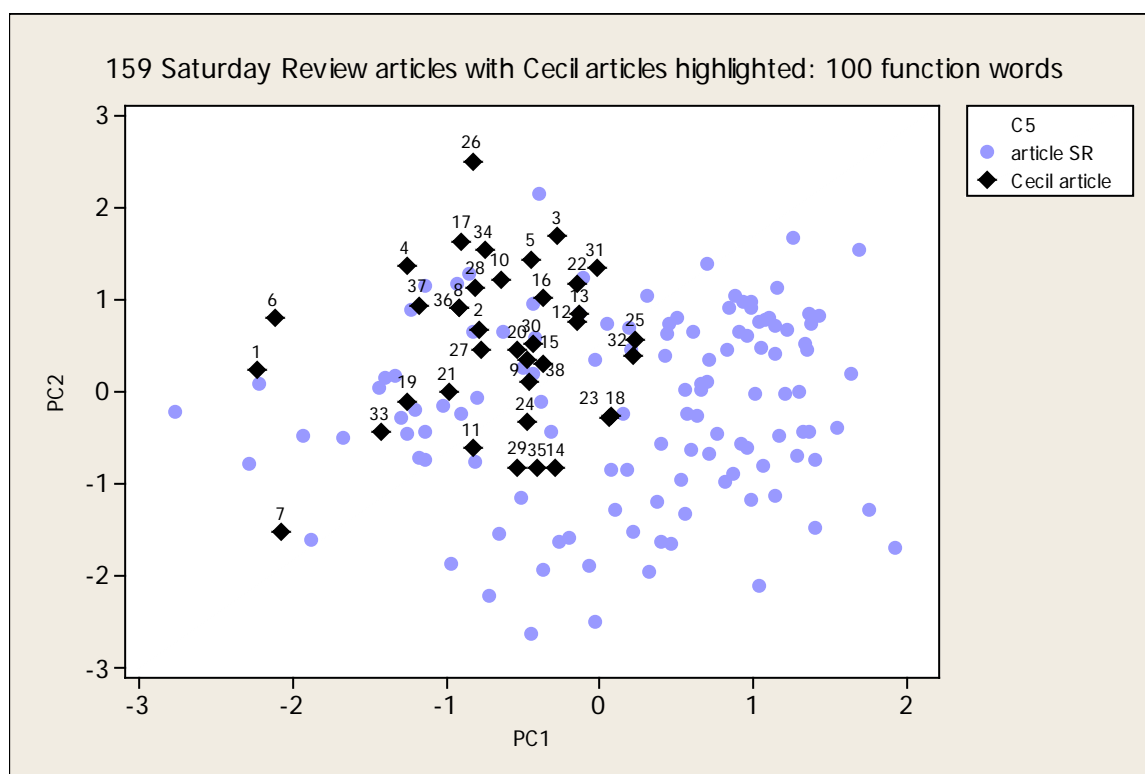


The three left-most texts, "An Ancient and Undoubted Privilege" (1) "The House of Commons Mare's-Nesting" (7) and "Cheap Governors" (6) are all clever and satirical accounts of parliamentary proceedings and procedures. The enormous war budget in a time of peace, for example, Cecil explained, "was simply the consequence of a theory prevailing among our statesmen that Governorships in the Colonies are convenient almshouses in which political incapables may be

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[61] The identity of these articles can be seen in Appendix 2.2

cheaply boarded and lodged" ("Cheap Governors" 456). Three of the four texts forming the right-hand border of Cecil's texts are examples of his "light-hearted sketches" (Smith 4) of the social scene, "Match Making Mamas" (25), "Heir Hunting" (18) and "Marriage Settlements" (23), while the fourth (32) is his 'reluctant' review of Reade's poems which begins in this way: "Under ordinary circumstances, we should not have thought it worth while to review four volumes of such unmitigated dullness as these poems of Mr. Reade" (249). The texts forming the lower border (11, 14, 29 and 35) are examples of what Smith calls Cecil's "sardonic reviews of the latest novels" (4).

Whether he was writing about politics, society or literature, Cecil seems to have possessed the ability to adopt the stance apparently required by the *Saturday* – that of an amused superior observer. This apparent authorial consistency is reflected in Figure 9.4 where a number of Cecil's articles group together in a principal component analysis plot based on 72 Cecil marker words.[62]

The two articles closest to the Cecil group are two Green articles, "Begging Parsons" and "The Cry of Curates", while the two articles furthest from the group are Linton's "Modern Mothers" and "Widows". The accompanying word plot (not shown here) showed that it is the relatively high and relatively low usage of markers such as *and, when* and the feminine pronouns by Linton and Cecil respectively, that accounts for the distance between the Linton texts and the Cecil group. On the other hand, it is the increased formality and the greater use of past tense markers that seems to account for the proximity of Green's texts about stipendiary curates and begging parsons to the Cecil group of texts.

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[62] The 72 Cecil markers were isolated by means of a distribution test of all Cecil's known *Saturday* articles versus all other authors' *Saturday* articles.

Figure 9.4: Principal component analysis text plot
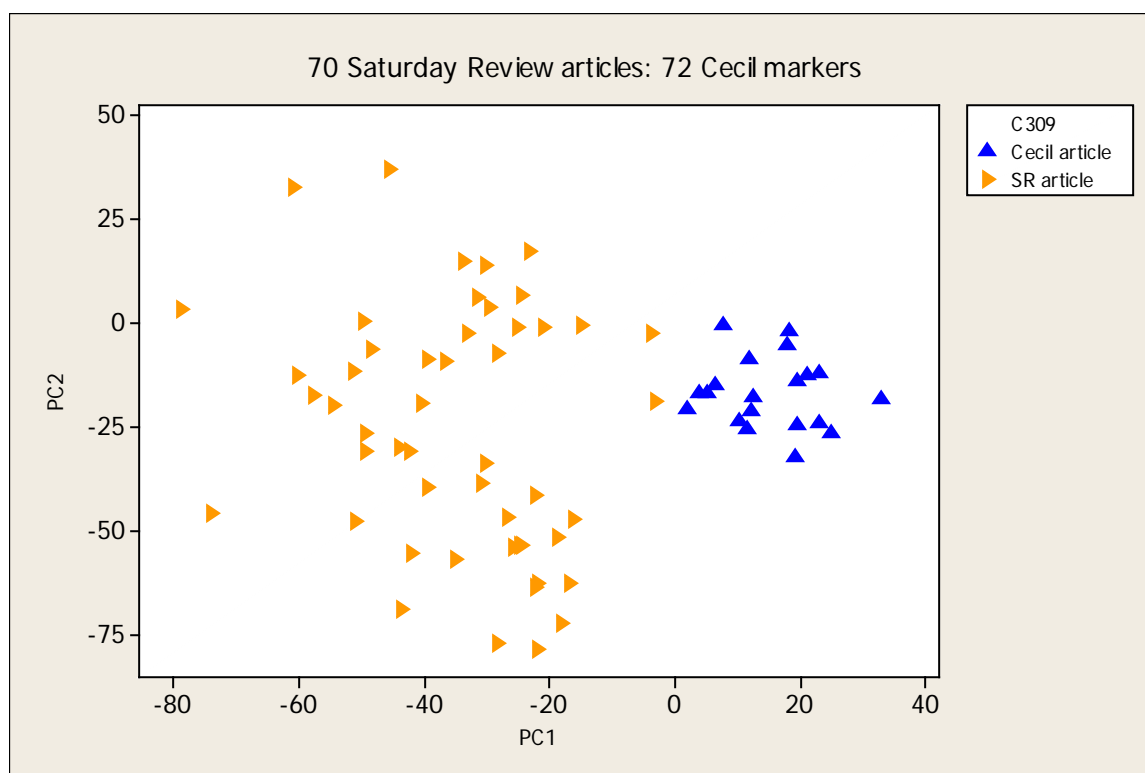


Having confirmed the effectiveness of the *Saturday Review* Cecil markers for separating his texts, I used the markers in another test which included the thirteen Women's Movement articles (Figure 9.5). This test not only confirmed the earlier series of tests which had affirmed the probability that Cecil had written six of the Women's Movement articles: "Bloomeriana" "Head or Woman" "Law for Ladies" "Marriage and Divorce" "Social Science" and "Woman's Rights, but appears to suggest that he may have written another two of them, namely, "Englishwoman's Journal" and "Lectures to Ladies on Practical Subjects".

Figure 9.5: Principal component analysis text plot



13 Women's Movement articles with 59 other SR articles: 72 Cecil markers
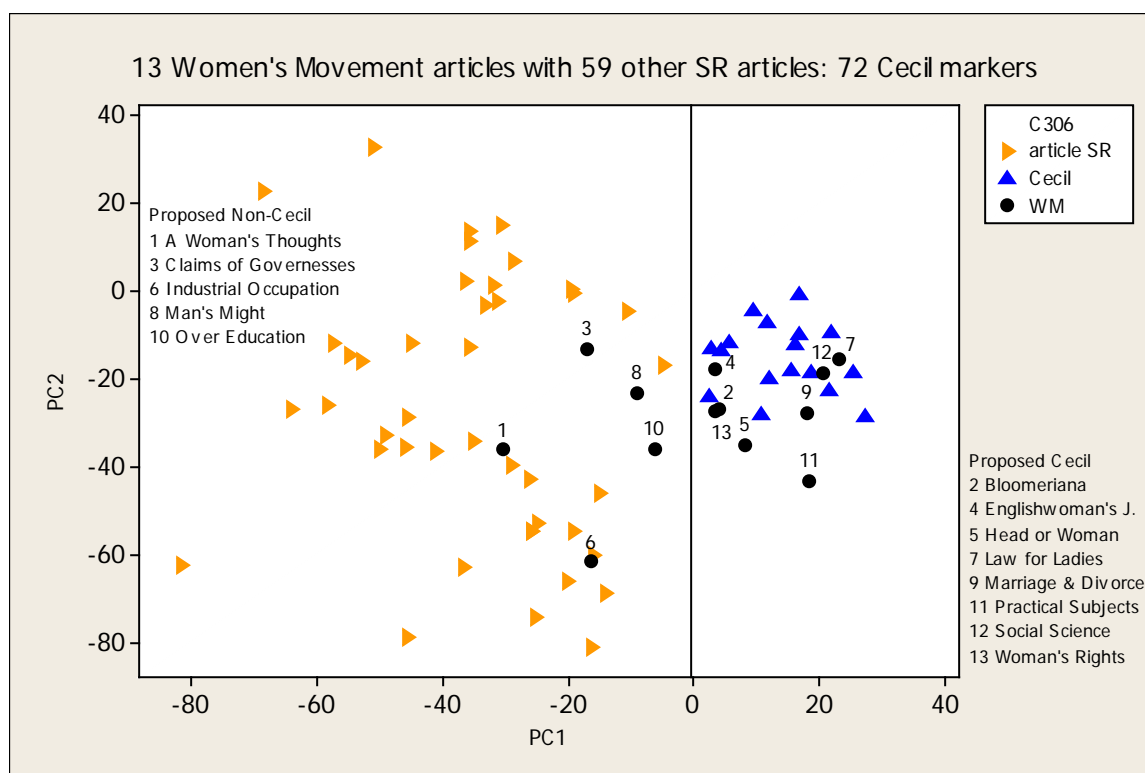
A careful reading of the relevant Women's Movement texts revealed a writer who called for moderation, who looked for inconsistencies in proposed legislation, and who enjoyed pursuing an idea to its logical conclusion. This is particularly true of the three of the articles, "Law for Ladies", "Marriage and Divorce" and "Woman's Rights", which are articles which consider the reformers' proposals for changes in laws concerning property and marriage. The writer is at pains to show the hidden dangers or inconsistencies of the proposals. These three articles were among the articles which showed affinity with Cecil's quarterly articles in the early tests. The fourth article that was attracted to Cecil's quarterly articles is entitled "Social Science" and it presents an argument that the National Association for the Promotion of Social Science is not likely to achieve much because "Physical science and social science stand in very different positions." This form of reasoning and argumentation conforms to the impression his longer articles made on a twentieth century commentator. Paul Smith writes:

> Salisbury's is an intellectual and sophisticated Toryism, which employs an apparatus of close empirical reasoning to support the conclusions at which it is programmed by instinctive predeliction to arrive. It is, or desires to be, a clear, hard, logical creed, realistic and skeptical, seeking an argumentative basis for resistance to radical change not in the sentimental or mystical idealization but in the rational justification of the existing order. (3)

The two articles ("Bloomeriana" and "Head or Woman?") which proved in the initial series of tests to be inconsistently attracted to the quarterly articles, but in the second series were consistently attracted to Cecil's *Saturday* articles, are indeed somewhat more 'beastly' than the four articles just discussed. "Bloomeriana" ridicules Miss Bessie Parkes and Miss Barbara Smith for their promotion of "the sciences for petticoat government." The writer continues: "But men have too much experience of the sex's charming ways ever to trust them with government or political economy, or moral philosophy, or oratory, or science" (238). "Head or Woman?" is an account of how the American Women's Rights Convention was overturning the theological statement that the head of the woman is the man. Instead of arguing against the idea, the writer mockingly espouses it: "Amongst other mistakes on which the nineteenth century has at last shed the light of truth, this, too, is, it seems, to be reckoned" (125), and continues the ridicule with references to classical and historical instances of female domination until the present prospect that now "the thunder-grasping eagle of the great Republic may turn out a hen after all" (126).

The two additional articles, which the current series of tests revealed as possibly being written by Cecil, share a similar liking for presenting the opponents' arguments and showing the inconsistencies or hidden dangers. Additionally, they both show strong support for the idea that a woman's proper place is in the home. In "The English Woman's Journal" for example, the writer presents what he understands is the main concern of the Women's Movement reformers:

> As far as we can judge, it seems to be settled among the female reformers that the female sex should have its appropriate work in business, professions, the arts, manufactures, commerce, and trade, just as men have. (369)

Granted, he allows, that society is wrong in one of its fundamental principles (presumably that of separate spheres), he must nevertheless pose another question for the reformers to consider: "But what would be the result? Certainly a very great lowering of wages and salaries" (369). After a series of logical arguments based on statistics and economic principles, the writer returns to what he sees as an unalterable fact:

> It is simply a fallacy that work is homogeneous for both sexes. The woman's ultimate function is to manage her home, to bring up children, and to attend to household duties. This is her calling and work. (370)

The separate spheres theme is also part of the series of arguments proffered against the idea of Evening College lectures for ladies on practical subjects. Apart from the fact, the writer contends, that such practical learning is best acquired in the home, "it seems very doubtful to us whether anything which draws women away from their own firesides may not, in the end, be more productive of harm than good" ("Lectures for Ladies on Practical Subjects" 116).

In this chapter, I applied the technique of allowing articles to 'speak for themselves' to the *Saturday Review* articles, and I found that there is a consistency in the articles of the *Saturday* not found in the monthlies and quarterlies. Despite this consistency however, particular combinations of the relative usage of a large number of function words proved to be authorially distinctive for the *Saturday* articles.

## Conclusion

I called this chapter 'a study in attribution' because I was interested in revisiting and possibly improving the techniques that were used in an earlier attribution

project which had achieved an outstandingly good result – that of shedding light on an authorship mystery of 150 years' standing. It was the discoveries of Chapters 3, 4 and 5 of this thesis that prompted the renewed interest in the Women's Movement articles project. When a large and representative number of articles were allowed to 'speak for themselves' (in Chapter 3) according to their relative usage of a large set of function words, the articles were found to range along axes relating to intra-generic focus. Such foci helped to explain the individual differences between the articles and to explain cases where the authorship of disparate articles was obscured. This successful mapping of the 200 individual periodical articles suggested the possibility of creating a similar map for a large number of *Saturday Review* articles. The finding (in Chapter 4) that a large number of mostly anonymous articles might nevertheless be considered as a set of authorial *oeuvres* suggested the hope that eventually at least some such authorial sets might be found among the *Saturday Review* articles. Finally the finding (in Chapter 5) that the style of the *Saturday Review* articles did indeed differ in some respects from that of the longer periodical articles confirmed the correctness of the *ad hoc* solution adopted in the earlier project, where known Cecil *Saturday Review* articles were digitized in the hope of resolving an inconsistent result.

The current *Saturday Review* text collection of 159 articles (though far from representative) was nevertheless able to reveal some interesting similarities and differences between the articles, and to provide a suitable background for the mapping of Cecil's known articles. It also allowed the identification of a number of marker words which successfully separated Cecil's articles from those of other known *Saturday* authors. Finally, the use of these marker words allowed the retesting of the thirteen Women's Movement articles in a purely *Saturday Review* environment. The result not only confirmed the earlier result that Cecil probably wrote six of the articles, but also suggested the likelihood that he was the author of another two. Further weight is also added to the probability that he was not the author of the remaining five articles. The success of this 'study in attribution'

opens the way for future projects on the articles of *The Saturday Review*. Perhaps with a genuinely representative text collection, the mystery of the authorship of the remaining five articles may be resolved.

# Conclusion

*The pre-requisites*

Computational stylistics relies on the notion that there are features of authorial style, such as the author's choice of function words, which are peculiarly individual, relatively stable and amenable to quantification. It is also assumed that these choices are largely unconscious and normally operate outside an author's conscious control. Acceptance of these tenets and application of the methods arising from them was the starting point of this research project, which involved three stages.

The first stage included assembling a text collection which could confidently be considered as truly representative of the underlying language-system of the nineteenth-century periodicals and declaring and defending a workable set of function words. In the second stage, frequency counts of the function words were used to look at the relative impact of textual consistency, authorial idiosyncracy and genre conventions in the text collection. In the third stage the discoveries of the second stage were used to address a number of questions that have for some time been of interest to scholars in the field of nineteenth-century periodical literature.

*The discoveries*

*(i) 'Intra-generic focus'*

Applying the methods of computational stylistics to the 200 texts of my Victorian periodical text collection in Chapter 3 led to the discovery that this mass of articles could be mapped along two axes of differentiation: ranging on one dimension from a purely historical focus through to a more polemical focus; and on the second dimension from a collective through to an individual focus. Allowing each of the texts to display its location on this 'map' according to its relative usage or non-usage of the 100 most common function words of the text

collection revealed another dimension to the notion of authorial style. Operating in conjunction with an author's distinctive (underlying and largely unconscious) style was what I have called an 'intra-generic' focus. This rather more conscious aspect of style allowed an author to adopt the particular approach conventionally considered 'suitable' for that topic and to make use of the set of stylistic words associated with that approach. The utility of this method of mapping individual texts is that it offers a way of understanding, and incorporating, the problem noted by David Hoover and Louis Milic that computational stylistics has to use the same methods to explore variation within a single author's style as it uses to differentiate between the styles of different authors. Examining the location of an author's individual texts in relation to the two axes of differentiation revealed that, while some authors habitually adopted one or other of the intra-generic foci, others were able to avail themselves of more than one or a combination of two adjacent ones. One or two authors, including George Eliot, made little marked use of any of them.

### (ii) The periodicals may be seen as a set of authorial oeuvres

The question of the importance of authorship in the periodicals is one of great interest in this arena where anonymity and house-style operated to reduce the role of authorial individuality. The series of tests in Chapter 4 immediately revealed that authorship was a very significant factor in the distribution of most authors' texts. There were however some exceptions, and it was the exploration of these variable texts which demonstrated the value of the notion of intra-generic focus. In almost every instance it was seen that an author's underlying syntactic and deictic habits persisted through these 'surface' variations. In the case of Elizabeth Rigby/Eastlake, authorship was further seen to transcend the chronological variation observed in her texts.

### (iii) House-style is different from authorial style

In the Prologue I showed that I was able to detect authorial signature behind the most notoriously uniform 'house-style' of a review such as *The Saturday* and

even behind articles sharing the uniformity of tone and common subject matter of the *Saturday'*s infamous *Modern Women* series. Equally, in Chapter 5 a correlation test of the relative strengths of authorship and journal type, in accounting for similarities between texts, revealed that authorship was a much stronger factor. Testing for stylistic differences in texts written for one or other of the three major quarterlies revealed few significant differences. The main difference appeared to be based on the fact that certain authors with a particular style of writing only ever wrote for the one journal, the journal whose ethos this particular author seemed to embody. For example, Croker wrote only for *The Quarterly* and Macaulay only for *The Edinburgh*. This fact was offset by the existence of other authors who were able to write for two or even all three of the major quarterlies. 'House-style' therefore appears to reside in factors I described as 'extrinsic' to the writer's task, its total effect deriving from an accumulation of editorial choices such as the ones Brake enumerated: choice of topic, article length, accepted tone or stance of the journal, social and political assumptions and the editor's choice of suitable writers. Bagehot observed that the attempts of authors to pitch an article towards the tone and taste of the particular journal and audience for which it was intended were not always successful. He says that "a writer" who "tries to write in a journal in which the style is uncongenial or impossible to him" will soon be weeded out. ("Physics and Politics: The Preliminary Age" 24-25).

*(iv) A gender-linked language effect is discernible in the periodicals*
The tests in Chapter 6 showed that in general, in spite of anonymity, men and women did often exhibit differences in their style of writing in the periodicals, these differences being located in a tendency, in men, towards impersonality and complexity and, in women, towards simplicity and directness. These characteristic stylistic differences emerged in the eighty-four 'marker' words which were found to be used significantly differently by each of the two groups. Although there was a marked gender-based separation between the twenty-two authorial groups of texts, in the light of the individual text variation discussed in

Chapters 3 and 4, a complete division of the 200 texts into two gendered groups was not to be expected. There was, nevertheless, a definite gendered effect on both dimensions of the principal component analysis plot of the 200 texts. This appeared to be related to the fact that men more often wrote texts exhibiting three of the four intra-generic foci (historical, polemical and collective) while women more frequently wrote texts exhibiting an individual focus. The presence of a definite (though not absolute) gender-linked language effect in formal writing supports the findings of the three researchers cited in Chapter 6, who have examined this question in other contexts.

*(v) George Eliot's periodical writing is distinctive and exhibits similarities to and differences from her fictional writing*

In the location of her texts among the remaining 200 in my corpus, Eliot's periodical style was seen to be moderate and not given to extremes. Based on the significant difference in her usage of eighty-six 'marker' words, Eliot's periodical writing style was characterized as reflecting a tendency towards generalization and directness, a careful weighing of alternatives and an assured use of authorial voice. In her fictional writing, the confidence of the periodical authorial voice and its assured awareness of the reader seem translated into a more personal, but equally confident narrator's voice. The fifty-one 'marker' words distinguishing Eliot's fictional writing from the other fictional writers in the "histories" corpus, however, reveal some interesting changes. Remarkably, Eliot changes from being an extremely low user of modals and function verbs in the periodicals to being a very high user in her fictional "histories". While the directness seen in the journal articles is not entirely abandoned, the fictional extracts exhibit greater stylistic complexity reflected in a greater use of conditional constructions (introduced by *if*) and more frequent complex verb forms. It would appear from this that the directness Eliot felt to be important in her periodical articles was modified to allow a greater portrayal of modulation of attitude and perception in her novels.

*(vi) Independent statistical evidence for possible Wellesley Index misattributions*

The use of authorial "marker' words revealed a number of characteristic stylistic differences between Blackie and Burton. In this particular study, the tests were able to confirm the fact that the doubt felt by the *Wellesley* attribution team about two of Blackie's and four of Burton's articles was indeed well founded. In so far as all the tests invariably pointed to three Blackie articles and two Burton articles as being correctly attributed, the *Wellesley* evidence for these five articles was affirmed.

*(vii) Shedding light on the mystery of who wrote the Saturday's anti-Women's Movement articles*

A long-standing question of attribution was addressed with a very happy outcome. People have been wondering since they were written who was responsible for writing the anti-Women's Movement articles which appeared in *The Saturday Review* between 1855 and 1858. The methods of the project were able to show that it was highly probable that all the articles were written by men and that more than half of them were written by Lord Robert Cecil, later Marquess of Salisbury and Prime Minister of England.

*Future use of the Text Collection and Function word variables*

The Victorian periodical text collection and the function word variables represent a valuable resource that could be used for any number of stylistic or attributional projects. The work described in this thesis is simply a beginning.

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**Appendix P.1: 10 Green and 10 Linton Articles in *Modern Women* 1868**

| Author | Title | pages |
|---|---|---|
| Green | 1 Aesthetic Woman | 272-280 |
| | 2 Fading Flower | 339-346 |
| | 3 Man and Master | 215-224 |
| | 4 Papal Woman | 291-299 |
| | 5 Platonic Woman | 206-214 |
| | 6 Pretty Preachers | 355-363 |
| | 7 Priesthood of Woman | 309-318 |
| | 8 Woman and her Critics | 253-261 |
| | 9 Woman and World | 93-100 |
| | 10 Woman in Orders | 243-252 |
| Linton | 1 Feminine Affectations | 73-82 |
| | 2 Girl of period | 25-33 |
| | 3 Ideal women | 83-92 |
| | 4 Inteference | 138-147 |
| | 5 La Femme Passe | 347-354 |
| | 6 Little women | 43-51 |
| | 7 Modern Mothers | 300-308 |
| | 8 Pinchbeck | 52-60 |
| | 9 Spoilt women | 364-371 |
| | 10 Woman's Work | 281-290 |

| Code | Author;  Article Title;  Journal | Date | words | Sig. |
|------|----------------------------------|------|-------|------|
|  |  |  |  |  |
|  | **Walter Bagehot 1826-1877** |  |  |  |
| Ba1 | Physics and politics (No. V. concl.): the age of discussion | Jan 1872 | 11260 | none |
|  | The Fortnightly Review Vol 17 O.S., 11 N.S., 46-70 |  |  |  |
| Ba2 | The First Edinburgh Reviewers | Oct 1855 | 11867 | none |
|  | The National Review Volume 1, 253-284 |  |  |  |
| Ba3 | On John Milton | Jul 1859 | 3978 | none |
|  | The National Review Volume 9, 150-186 |  |  |  |
| Ba4 | Physics and politics (Part III): nation making | Jul 1869 | 7453 | none |
|  | The Fortnightly Review Vol 12 O.S., 6 N.S., 58-72 |  |  |  |
| Ba5 | Physics and politics (No. IV): nation-making | Dec 1871 | 10384 | none |
|  | The Fortnightly Review Vol 16 O.S., 10 N.S., 696-717 |  |  |  |
| Ba6 | Senior's Journals | Aug 1871 | 4230 | none |
|  | The Fortnightly Review Vol 16 O.S., 10 N.S., 156-165 |  |  |  |
| Ba7 | Percy Bysshe Shelley | Oct 1856 | 12850 | none |
|  | The National Review Volume 3, 342-379 |  |  |  |
|  |  |  |  |  |
|  | **John Stuart Blackie 1809-1895** |  |  |  |
| Bl1 | Athens in 1853 | Nov 1853 | 5971 | none |
|  | Blackwoods Edinburgh Magazine Volume 74, 569-582 |  |  |  |
| Bl2 | Colonel (John) Mitchell's "Fall of Napoleon" | Jul 1845 | 4800 | none |
|  | Tait's Edinburgh Magazine Vol 16 O.S. 12 N.S., 409-415 |  |  |  |
| Bl3 | Politics and Poetry: A Word from Goethe | Mar 1837 | 4405 | none |
|  | and a Word to Goethe |  |  |  |
|  | Tait's Edinburgh Magazine Vol 8 O.S., 4 N.S., 162-168 |  |  |  |
| Bl4 | Homer and his Translators | Aug 1861 | 6951 | none |
|  | Macmillan's Magazine Volume 4, 268-280 |  |  |  |
| Bl5 | The relation of metaphysics to literature and science | Aug 1873 | 5760 | none |
|  | Fraser's Magazine for Town and Country Vol 88 O.S., |  |  |  |
|  | 8 N.S. 191-200 |  |  |  |
| Bl6 | Parochial Schools of Scotland (Part I) | Aug 1844 | 4755 | B., J.S. |
|  | Tait's Edinburgh Magazine Vol 15 O.S., 11 N.S., 515-521 |  |  |  |
| Bl7 | Parochial Schools of Scotland (Part II, concl.) | Sep 1844 | 2872 | B., J.S. |
|  | Tait's Edinburgh Magazine Vol 15 O.S., 11 N.S., 565-570 |  |  |  |
| Bl8 | Protestantism | Apr 1841 | 8212 | none |
|  | Tait's Edinburgh Magazine Vol 12 O.S. 8 N.S., 205-214 |  |  |  |
| Bl9 | Rights of the Christian People - apostolical succession - | Feb 1840 | 12443 | none |
|  | lay patronage - the veto |  |  |  |
|  | Tait's Edinburgh Magazine Vol 11 O.S. 7 N.S. 69-84 |  |  |  |
| Bl10 | Frederick Schlegel | Sep 1843 | 8492 | none |
|  | Blackwoods Edinburgh Magazine Volume 54, 311-324 |  |  |  |
| Bl11 | On the Study of Languages | Nov 1842 | 8134 | none |
|  | Tait's Edinburgh Magazine Vol 13 O.S., 9 N.S., 747-754 |  |  |  |
|  |  |  |  |  |
|  | **John Hill Burton 1809-1881** |  |  |  |
| Bu1 | Celtic tenures and highland clearings | Dec 1846 | 6213 | none |
|  | Tait's Edinburgh Magazine Vol 17 O.S., 13 N.S., 493-501 |  |  |  |
| Bu2 | Celtic clearings - free sites - Highland passes | Oct 1847 | 5867 | none |
|  | The Edinburgh Review Volume 86, 499-511 |  |  |  |
| Bu3 | Language and structure of the statutes | Jul 1846 | 9795 | none |
|  | The Edinburgh Review Volume 84, 117-146 |  |  |  |
| Bu4 | History of Venice | Jul 1835 | 12310 | none |
|  | The Westminster Review Volume 23, 38-69 |  |  |  |
| Bu5 | Sir James Macintosh's History of the Revolution in 1688 | Oct 1834 | 5768 | none |
|  | The Westminster Review Volume 21, 399-427 |  |  |  |

| Bu6 | Mary Queen of Scots (Part I) | Jul 1846 | 6485 | none |
| | Tait's Edinburgh Magazine Vol 17 O.S., 13 N.S., 775-782 | | | |
| Bu7 | Mary Queen of Scots (Part II. Concl.) | Aug 1846 | 5748 | B. |
| | Tait's Edinburgh Magazine Vol 17 O.S., 13 N.S., 425-482 | | | |
| Bu8 | Memoirs of the Master of Sinclair | Oct 1860 | 11314 | none |
| | The Edinburgh Review Volume 112, 332-360 | | | |
| Bu9 | Robert Pitcairn's Criminal Trials in Scotland | Oct 1833 | 9317 | none |
| | The Westminster Review Volume 19, 332-360 | | | |
| Bu10 | Prospect of a Poor-Law for Scotland | May 1845 | 3158 | none |
| | Tait's Edinburgh Magazine Vol 16 O.S., 12 N.S., 323-326 | | | |
| Bu11 | The Statutes at large | Sep 1836 | 2266 | none |
| | Tait's Edinburgh Magazine Vol 7 O.S., 3 N.S., 17-26 | | | |
| Bu12 | The Church of Scotland and Veto question | Mar 1840 | 5918 | none |
| | Tait's Edinburgh Magazine Vol 11 O.S., 7 N.S., 138-145 | | | |
| Bu13 | Witchcraft in Scotland | Jan 1836 | 7064 | none |
| | Tait's Edinburgh Magazine Vol 7 O.S., 3 N.S., 602-606 | | | |
| | | | | |
| | **Thomas Carlyle 1795-1881** | | | |
| Ca1 | Characteristics | Dec 1831 | 15015 | none |
| | The Edinburgh Review Volume 54, 351-383 | | | |
| Ca2 | Corn-Law Rhymes | Jul 1832 | 9571 | none |
| | The Edinburgh Review Volume 55, 338-362 | | | |
| Ca3 | Thoughts on History | Nov 1830 | 4345 | none |
| | Fraser's Magazine for Town and Country Vol 2, 413-418 | | | |
| Ca4 | Memoirs of the Life of Scott [by Lockhart] | Jan 1838 | 17803 | C. |
| | The Westminster Review Volume 6 and 28, 293-345 | | | |
| Ca5 | Memoirs of Mirabeau | Jan 1837 | 22586 | C. |
| | The Westminster Review Volume 4 and 26, 382-439 | | | |
| Ca6 | Parliamentary History of the French Revolution | Apr 1837 | 3426 | C. |
| | The Westminster Review Volume 5 and 27, 233-247 | | | |
| Ca7 | Shooting Niagara: and after? | Aug 1867 | 16326 | none |
| | MacMillan's Magazine Volume 16, 319-336 | | | |
| Ca8 | Signs of the Times | Jun 1829 | 9306 | none |
| | The Edinburgh Review Volume 49, 439-459 | | | |
| Ca9 | Taylor's Historic Survey of German Poetry | Mar 1831 | 11959 | none |
| | The Edinburgh Review Volume 53, 151-180 | | | |
| | | | | |
| | **Lord Robert Cecil 1830-1903** | | | |
| Ce1 | Budget and the Reform Bill | Apr 1860 | 18186 | none |
| | The Quarterly Review Volume 107, 514-554 | | | |
| Ce2 | The change of ministry | Jul 1866 | 11159 | none |
| | The Quarterly Review Volume 120, 259-282 | | | |
| Ce3 | The Conservative surrender | Oct 1867 | 14730 | none |
| | The Quarterly Review Volume 123, 533-565 | | | |
| Ce4 | The House of Commons | Jul 1864 | 13978 | none |
| | The Quarterly Review Volume 116, 245-281 | | | |
| Ce5 | Photography | Oct 1864 | 17343 | none |
| | The Quarterly Review Volume 116, 482-519 | | | |
| Ce6 | The programme of the Radicals | Oct 1873 | 16819 | none |
| | The Quarterly Review Volume 135, 539-574 | | | |
| | | | | |
| | | | | |
| | **Frances Power Cobbe 1822-1904** | | | |
| Co1 | "Criminals, idiots, women, and minors" | Dec 1868 | 9721 | none |
| | Fraser's Magazine for Town and Country Vol 78, 777-794 | | | |
| Co2 | The Devil | Aug 1871 | 8265 | none |

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|---|---|---|---|---|
| | The Fortnightly Review Vol 16 O.S., 10 N.S., 180-191 | | | |
| Co3 | The consciousness of dogs | Oct 1872 | 12924 | none |
| | The Quarterly Review Volume 133, 419-451 | | | |
| Co4 | Female charity - lay and monastic | Dec 1862 | 8703 | none |
| | Fraser's Magazine for Town and Country Vol 66, 774-788 | | | |
| Co5 | Mary Sommerville | Jan 1874 | 10372 | none |
| | The Quarterly Review Volume 136, 74-103 | | | |
| Co6 | The rights of man and the claims of brutes | Nov 1863 | 11275 | none |
| | Fraser's Magazine for Town and Country Vol 68, 586-602 | | | |
| Co7 | Social science congresses, and women's part in them | Dec 1861 | 8548 | none |
| | MacMillan's Magazine Volume 5, 81-94 | | | |
| Co8 | Unconscious cerebration: a psychological study | Nov 1870 | 9264 | none |
| | MacMillan's Magazine Volume 23, 24-37 | | | |
| | | | | |
| | | | | |
| | **John Wilson Croker 1780-1857** | | | |
| Cr1 | The budget and the dissolution | Jun 1841 | 16158 | none |
| | The Quarterly Review Volume 68, 239-280 | | | |
| Cr2 | Mr Macaulay's History of England | Mar 1849 | 29175 | none |
| | The Quarterly Review Volume 84, 549-630 | | | |
| Cr3 | Montalembert on the political future of England | Mar 1856 | 12699 | none |
| | The Quarterly Review Volume 98, 534-572 | | | |
| Cr4 | The Reform Bill [of Lord John Russell] | Mar 1854 | 19279 | none |
| | The Quarterly Review Volume 94, 558-605 | | | |
| Cr5 | History of Revolution in England or Revolutions | Jun 1834 | 15524 | none |
| | of 1688 and 1831 [by Sir James Mackintosh] | | | |
| | The Quarterly Review Volume 51, 493-529 | | | |
| Cr6 | Poems by AlfredTennyson | Apr 1833 | 4068 | none |
| | The Quarterly Review Volume 49, 81-96 | | | |
| | | | | |
| | **George Eliot 1819-1880** | | | |
| E1 | Evangelical Teaching:Dr Cummimg | Oct 1855 | 9887 | none |
| | The Westminster Review Vol 64 O.S., 8 N.S., 436-462 | | | |
| E2 | German Wit: Henrich Heine | Jan 1856 | 9265 | none |
| | The Westminster Review Vol 65 O.S., 9 N.S., 1-33 | | | |
| E3 | Liszt, Wagner and Weimar | Jul 1855 | 10071 | none |
| | Fraser's Magazine for Town and Country Vol 52, 48-62 | | | |
| E4 | Belles Lettres [Tennyson's Maud] | Oct 1855 | 2215 | none |
| | The Westminster Review Volume 64, 596-601 | | | |
| E5 | The natural history of German life [books by Riehl] | Jul 1856 | 12473 | none |
| | The Westminster Review Vol 66 O.S., 10 N.S., 51-79 | | | |
| E6 | Mackay's Progress of Intellect | Jan 1851 | 4540 | none |
| | The Westminster Review Volume 54, 353-368 | | | |
| E7 | The influence of rationalism [on W.E.H. Lecky's Rationalism] | May 1865 | 3897 | none |
| | The Fortnightly Review Volume 1, 43-55 | | | |
| E8 | Silly Novels by Lady Novelists | Oct 1856 | 7558 | none |
| | The Westminster Review Vol 66 O.S., 10 N.S., 442-461 | | | |
| E9 | Belles Lettres [Three Novels] | Oct 1856 | 3583 | none |
| | The Westminster Review Volume 66, 571-578 | | | |
| E10 | Three Months in Weimar | Jun 1855 | 5243 | none |
| | Fraser's Magazine for Town and Country Vol 52, 699-706 | | | |
| E11 | Belles Lettres [Westward Ho! and Constance Herbert] | Jul 1855 | 3909 | none |
| | The Westminster Review Volume 64, 288-296 | | | |
| E12 | Woman in France: Madame de Sablé | Oct 1854 | 8798 | none |
| | The Westminster Review Vol 62 O.S., 6 N.S., 448-473 | | | |
| E13 | Worldliness and other-worldliness:The poet Young | Jan 1857 | 12328 | none |

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|---|---|---|---|---|
| | The Westminster Review Vol 67 O.S., 11 N.S., 1-42 | | | |
| | | | | |
| | **James Anthony Froude 1818-1894** | | | |
| F1 | Arnold's poems | Jan 1854 | 4520 | none |
| | The Westminster Review Vol 61 O.S., 5 N.S., 146-159 | | | |
| F2 | The Copyright Commission | Oct 1878 | 18652 | none |
| | The Edinburgh Review Volume 148, 295-343 | | | |
| F3 | England's forgotten worthies [the 16th-century voyagers] | Jul 1852 | 13137 | none |
| | The Westminster Review Vol 58 O.S., 2 N.S., 32-67 | | | |
| F4 | The Homeric Life | Jul 1851 | 8992 | none |
| | Fraser's Magazine for Town and Country Vol 44, 76-92 | | | |
| F5 | The Book of Job | Oct 1853 | 12269 | none |
| | The Westminster Review Volume 60 O.S., 4 N.S., 417-450 | | | |
| F6 | Ethical doubts concerning Reineke Fuchs [Reynard the Fox] | Sep 1852 | 7342 | none |
| | Fraser's Magazine for Town and Country, Vol 46, 321-30 | | | |
| F7 | English Policy in South Africa | Jan 1877 | 16257 | none |
| | The Quarterly Review Volume 143, 105-145 | | | |
| F8 | South Africa Once More | Oct 1879 | 12014 | none |
| | The Fortnightly Review Vol 32 O.S., 26 N.S., 449-473 | | | |
| F9 | Spinoza | Jul 1855 | 13789 | none |
| | The Westminster Review Vol 64 O.S., 8 N.S., 1-37 | | | |
| F10 | Saint Teresa | Oct 1883 | 16794 | none |
| | The Quarterly Review Volume 156, 394-435 | | | |
| F11 | The South Africa Problem | Apr 1879 | 15139 | none |
| | The Quarterly Review Volume 147, 552-584 | | | |
| | | | | |
| | **William Rathbone Greg 1809-1881** | | | |
| G1 | Alison's History of Europe | Jun 1844 | 10267 | G., W.R. |
| | The Westminster Review Volume 41, 388-416 | | | |
| G2 | False Morality of lady novelists | Jan 1859 | 10591 | none |
| | The National Review Volume 8, 144-167 | | | |
| G3 | Mr. Gladstone's apologia | Jan 1869 | 3882 | none |
| | The Quarterly Review Volume 126, 121-134 | | | |
| G4 | Highland destitution and Irish emigration | Dec 1851 | 14042 | none |
| | The Quarterly Review Volume 90, 163-205 | | | |
| G5 | Mary Barton [by Mrs. Gaskell] | Apr 1849 | 10460 | none |
| | The Edinburgh Review Volume 89, 402-435 | | | |
| G6 | Priests parliaments, and electors | Jul 1872 | 7581 | none |
| | The Quarterly Review Volume 133, 276-292 | | | |
| G7 | The proletariat on a false scent | Jan 1872 | 17404 | none |
| | The Quarterly Review Volume 132, 251-294 | | | |
| G8 | Why are women redundant? | Apr 1862 | 11422 | none |
| | The National Review Volume 14, 434-460 | | | |
| G9 | Truth versus edification [on Matthew Arnold's "The Bishop and the Philosopher"] | Apr 1863 | 6478 | none |
| | The Westminster Review Vol 79 O.S., 23 N.S., 503-516 | | | |
| G10 | Unsound social philosophy | Oct 1849 | 8159 | none |
| | The Edinburgh Review Volume 90, 496-524 | | | |
| | | | | |
| | **Abraham Hayward 1801-1884** | | | |
| Ha1 | The advertising system | Feb 1843 | 9271 | none |
| | The Edinburgh Review Volume 77, 1-43 | | | |
| Ha2 | Mr. Disraeli: his character and career | Apr 1853 | 13394 | none |
| | The Edinburgh Review Volume 97, 420-461 | | | |
| Ha3 | Harriet Martineau's Autobiography | Apr 1877 | 9552 | none |
| | The Quarterly Review Volume 143, 484-526 | | | |

| Ha4 | Parisian morals and manners | Jul 1843 | 12735 | none |
|---|---|---|---|---|
| | The Edinburgh Review Volume 78, 115-156 | | | |
| Ha5 | England and France: their customs, manners, and morality | Jul 1872 | 10173 | none |
| | The Quarterly Review Volume 133, 199-241 | | | |
| Ha6 | Thackeray's writings | Jan 1848 | 5961 | none |
| | The Edinburgh Review Volume 87, 46-67 | | | |
| Ha7 | The Republic of Venice: its rise decline, and fall | Oct 1874 | 13030 | none |
| | The Quarterly Review Volume 137, 416-458 | | | |
| | | | | |
| | **Thomas Henry Huxley 1825-1895** | | | |
| Hu1 | On the methods and results of ethnology | Jun 1865 | 8678 | none |
| | The Fortnightly Review Vol 11 O.S., 5 N.S., 257-277 | | | |
| Hu2 | Glaciers and glacier theories | Apr 1857 | 7547 | none |
| | The Westminster Review Vol 67 O.S., 11 N.S., 418-444 | | | |
| Hu3 | "On a piece of chalk": a lecture to working men | Sep 1868 | 8473 | none |
| | MacMillan's Magazine Volume 18, 396-408 | | | |
| Hu4 | Darwin on the origin of species | Apr 1860 | 12838 | none |
| | The Westminster Review Vol 73 O.S. 17 N.S., 541-570 | | | |
| Hu5 | The scientific aspects of positivism | Jun 1869 | 6121 | none |
| | The Fortnightly Review Vol 11 O.S., 5 N.S., 653-670 | | | |
| | | | | |
| | **Christian Johnstone 1781-1857** | | | |
| J1 | Miss Edgeworth's Works | Jun 1832 | 4243 | none |
| | Tait's Edinburgh Magazine Volume 1, 279-285 | | | |
| J2 | France, Social, Literary, and Political | Nov 1834 | 2822 | none |
| | by Henry Lytton Bulwer, Esq. | | | |
| | Tait's Edinburgh Magazine Vol 5 O.S., 1 N.S., 649-657 | | | |
| J3 | Light reading for June | Jun 1835 | 7081 | none |
| | Tait's Edinburgh Magazine Vol 6 O.S. 2 N.S., 407-417 | | | |
| J4 | Sir James Mackintosh's History of the Revolution of 1688 | May 1834 | 7186 | none |
| | Tait's Edinburgh Magazine Vol 5 O.S., 1 N.S., 247-258 | | | |
| J5 | Marriages are made in Heaven | Nov 1832 | 2925 | none |
| | Tait's Edinburgh Magazine Volume 2, 184-190 | | | |
| J6 | On periodical literature | Jul 1833 | 3248 | none |
| | Tait's Edinburgh Magazine Volume 3, 491-496 | | | |
| J7 | What shall we do with our young fellows? | Sep 1834 | 3338 | none |
| | Tait's Edinburgh Magazine Vol 5 O.S., 1 N.S., 527-530 | | | |
| | | | | |
| | **Charles Kingsley 1819-1875** | | | |
| K1 | A charm of birds | Jun 1867 | 4500 | none |
| | Fraser's Magazine for Town and Country Vol 75, 802-810 | | | |
| K2 | Hours with the Mystics | Sep 1856 | 8658 | none |
| | Fraser's Magazine for Town and Country Vol 54, 315-328 | | | |
| K3 | The poetry of sacred and legendary art | Mar 1849 | 8096 | none |
| | Fraser's Magazine for Town and Country Vol 39, 283-298 | | | |
| K4 | Science: a lecture delivered at the Royal Institution | Jul 1866 | 8485 | none |
| | Fraser's Magazine for Town and Country Vol 74, 15-28 | | | |
| K5 | Thoughts on Shelley and Byron | Nov 1853 | 5935 | none |
| | Fraser's Magazine for Town and Country Vol 48, 568-576 | | | |
| K6 | Alexander Smith and Alexander Pope | Oct 1853 | 10477 | none |
| | Fraser's Magazine for Town and Country Vol 48, 452-466 | | | |
| K7 | Superstition: a lecture delivered at the Royal Institution, | Jun 1866 | 7139 | none |
| | April 24, 1866 | | | |
| | Fraser's Magazine for Town and Country Vol 73, 705-716 | | | |
| K8 | Tennyson [In Memoriam, The Princess, and Poems, 1842] | Sep 1850 | 5000 | none |
| | Fraser's Magazine for Town and Country Vol 42, 245-255 | | | |

| K9 | Women and Politics | Oct 1869 | 5988 | none |
|---|---|---|---|---|
| | MacMillan's Magazine Volume 20, 552-561 | | | |
| | | | | |
| | **George Henry Lewes 1817-1878** | | | |
| Le1 | French drama [Racine and Hugo] | Sep 1840 | 12589 | L., G.H. |
| | The Westminster Review Volume 34, 287-324 | | | |
| Le2 | The novels of Jane Austen | Jul 1859 | 7163 | none |
| | Blackwoods Edinburgh Magazine Volume 86, 99-113 | | | |
| Le3 | Recent novels: French and English [including Jane Eyre] | Dec 1847 | 2795 | none |
| | Fraser's Magazine for Town and Country Vol 36, 686-695 | | | |
| Le4 | The principles of success in literature (chapter iii): | Jul 1865 | 7421 | none |
| | of vision in art | | | |
| | The Fortnightly Review Volume 1, 572-589 | | | |
| Le5 | Phrenology in France | Dec 1857 | 6307 | none |
| | Blackwoods Edinburgh Magazine Volume 82, 665-674 | | | |
| Le6 | Percy Bysshe Shelley | Apr 1841 | 13665 | L., G.H. |
| | The Westminster Review Volume 35, 303-344 | | | |
| Le7 | Spinoza | Apr 1866 | 7311 | none |
| | The Fortnightly Review Volume 4, 385-406 | | | |
| Le8 | The principles of success in literature (chapter vi, concl.): | Nov 1865 | 5651 | none |
| | the laws of style | | | |
| | The Fortnightly Review Volume 2, 689-710 | | | |
| Le9 | The principles of success in literature (chapter v): | Sep 1865 | 7550 | none |
| | the principle of beauty | | | |
| | The Fortnightly Review Volume 2, 257-268 | | | |
| Le10 | Uncivilised Man | Jan 1861 | 5415 | none |
| | Blackwoods Edinburgh Magazine Volume 89, 27-41 | | | |
| Le11 | Ruth [by Mrs. Gaskell] and Villette [by Charlotte Bronte] | Apr 1853 | 4612 | none |
| | The Westminster Review Vol 59 O.S., 3 N.S., 474-**9 | | | |
| | | | | |
| | **Eliza Lynn Linton 1822-1898** | | | |
| Li1 | The characteristics of English women (Part I) | Feb 1889 | 5421 | none |
| | The Fortnightly Review Vol 51 O.S. 45 N.S., 245-260 | | | |
| Li2 | The characteristics of English women (Part II. concl.) | Mar 1889 | 5037 | none |
| | The Fortnightly Review Vol 51 O.S. 45 N.S., 363-376 | | | |
| Li3 | The higher education of woman | Oct 1886 | 5808 | none |
| | The Fortnightly Review Vol 46 O.S., 40 N.S., 498-510 | | | |
| Li4 | Literature: then and now | Apr 1890 | 7464 | none |
| | The Fortnightly Review Vol 53 O.S. 47 N.S., 517-531 | | | |
| Li5 | Daniele Manin | Nov 1857 | 5115 | L., E. |
| | Fraser's Magazine for Town and Country Vol 56, 106-113 | | | |
| Li6 | The modern revolt [of women] | Dec 1870 | 5352 | none |
| | MacMillan's Magazine Volume 23, 142-149 | | | |
| Li7 | Alfred de Musset | Jul 1857 | 3887 | L., E. |
| | Fraser's Magazine for Town and Country Vol 56, 612-619 | | | |
| | | | | |
| | **Thomas Babbington Macaulay 1800-1859** | | | |
| Mc1 | Barère's Memoirs | Apr 1844 | 33312 | none |
| | The Edinburgh Review Volume 79, 275-351 | | | |
| Mc2 | Church and State [by W.E. Gladstone] | Apr 1839 | 20849 | none |
| | The Edinburgh Review Volume 69, 231-280 | | | |
| Mc3 | The late Lord Holland | Jul 1841 | 3907 | none |
| | The Edinburgh Review Volume 73, 560-568 | | | |
| Mc4 | Dumont's Recollections of Mirabeau - the French Revolution | Jul 1832 | 10940 | none |
| | The Edinburgh Review Volume 55, 552-576 | | | |
| Mc5 | Moore's Life of Lord Byron | Jun 1831 | 12537 | none |

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|---|---|---|---|---|
| | The Edinburgh Review Volume 53, 544-572 | | | |
| Mc6 | Sadler's Law of Population and Disproof | Jul 1830 | 8236 | none |
| | of Human Superfecundity | | | |
| | The Edinburgh Review Volume 51, 297-321 | | | |
| Mc7 | Sadler's Refutation refuted | Jan 1831 | 8570 | none |
| | The Edinburgh Review Volume 52, 504-529 | | | |
| | | | | |
| | **Harriet Martineau 1802-1876** | | | |
| Ma1 | The brewing of the American storm | Jun 1862 | 7354 | none |
| | MacMillan's Magazine Volume 6, 97-107 | | | |
| Ma2 | Characteristics of the genius of Scott | Dec 1832 | 7835 | none |
| | Tait's Edinburgh Magazine Volume 2, 301-314 | | | |
| Ma3 | Female industry | Apr 1859 | 17588 | none |
| | The Edinburgh Review Volume 109, 293-336 | | | |
| Ma4 | Female dress in 1857 | Oct 1857 | 8750 | none |
| | The Westminster Review Vol 68 O.S., 12 N.S., 315-340 | | | |
| Ma5 | The achievements of the genius of Scott | Jan 1833 | 9578 | none |
| | Tait's Edinburgh Magazine Volume 2, 445-460 | | | |
| Ma6 | Death or life in India | Aug 1863 | 5492 | none |
| | MacMillan's Magazine Volume 8, 332-340 | | | |
| Ma7 | Life in the criminal class | Oct 1864 | 12144 | none |
| | The Edinburgh Review Volume 122, 203-242 | | | |
| Ma8 | The negro race in America | Jan 1864 | 17123 | none |
| | The Edinburgh Review Volume 119, 337-371 | | | |
| Ma9 | Miss Nightingale's Notes on Nursing | Apr 1860 | 9659 | none |
| | The Quarterly Review Volume 107, 392-422 | | | |
| Ma10 | Nurses wanted | Apr 1865 | 9694 | none |
| | The Cornhill Magazine Volume 11, 409-425 | | | |
| | | | | |
| | **Anne Mozley 1809-1891** | | | |
| Mo1 | Adam Bede and recent novels | Jul 1859 | 8867 | none |
| | Bentleys Quarterly Review Volume 1, 433-472 | | | |
| Mo2 | Convent life | May 1869 | 7963 | none |
| | Blackwood's Edinburgh Magazine Volume 105, 607-621 | | | |
| Mo3 | On fiction as an educator | Oct 1870 | 5952 | none |
| | Blackwood's Edinburgh Magazine Volume 108, 449-459 | | | |
| Mo4 | Tennyson - Idylls of the King | Oct 1859 | 10819 | none |
| | Bentleys Quarterly Review Volume 2, 159-94 | | | |
| Mo5 | Novels by Sir Edward Bulwer Lytton | Mar 1859 | 15023 | none |
| | Bentleys Quarterly Review Volume 1, 73-105 | | | |
| Mo6 | Mr. Mill On the Subjection of Women | Sep 1869 | 6621 | none |
| | Blackwood's Edinburgh Magazine Volume 106, 309-319 | | | |
| Mo7 | On Manners | Aug 1861 | 7735 | none |
| | Blackwood's Edinburgh Magazine Volume 90, 154-165 | | | |
| Mo8 | Récit d'une Soeur | Aug 1868 | 10539 | none |
| | Blackwood's Edinburgh Magazine Volume 104, 165-186 | | | |
| Mo9 | A religious novel | Mar 1866 | 6338 | none |
| | Blackwood's Edinburgh Magazine Volume 99, 275-286 | | | |
| | | | | |
| | **Margaret Oliphant 1828-1897** | | | |
| O1 | Mr. Browning's Balaustion | Jan 1872 | 9337 | none |
| | The Edinburgh Review Volume 135, 221-249 | | | |
| O2 | Charles Dickens | Apr 1855 | 11822 | none |
| | Blackwood's Edinburgh Magazine Volume 77, 451-466 | | | |
| O3 | Clerical Life in Scotland | Jul 1863 | 7044 | none |
| | MacMillan's Magazine Volume 8, 208-219 | | | |

| O4 | Englishmen and Frenchmen | Aug 1878 | 9340 | none |
|---|---|---|---|---|
|  | Blackwood's Edinburgh Magazine Volume 124, 219-237 |  |  |  |
| O5 | The epic of Arthur | Apr 1870 | 12942 | none |
|  | The Edinburgh Review Volume 131, 502-539 |  |  |  |
| O6 | Evelyn and Pepys | Jul 1854 | 11374 | none |
|  | Blackwood's Edinburgh Magazine Volume 76, 35-52 |  |  |  |
| O7 | Hamlet | Apr 1879 | 11212 | none |
|  | Blackwood's Edinburgh Magazine Volume 125, 462-481 |  |  |  |
| O8 | The laws concerning women | Apr 1856 | 6159 | none |
|  | Blackwood's Edinburgh Magazine Volume 79, 379-387 |  |  |  |
| O9 | Modern novelists - great and small | May 1855 | 10861 | none |
|  | Blackwood's Edinburgh Magazine Volume 77, 554-569 |  |  |  |
| O10 | Mill's The Subjection of Women | Oct 1869 | 14027 | none |
|  | The Edinburgh Review Volume 130, 572-602 |  |  |  |
| O11 | New Books (No. XXI) | Jul 1879 | 10399 | none |
|  | Blackwood's Edinburgh Magazine Volume 126, 88-107 |  |  |  |
| O12 | Novels (No. II) | Sep 1867 | 10594 | none |
|  | Blackwood's Edinburgh Magazine, Vol. 102, 257-280 |  |  |  |
| O13 | Macaulay | Aug 1856 | 10238 | none |
|  | Blackwood's Edinburgh Magazine Volume 80, 127-141 |  |  |  |
| O14 | Sensation Novels | May 1862 | 9906 | none |
|  | Blackwood's Edinburgh Magazine Volume 91, 564-584 |  |  |  |
|  |  |  |  |  |
|  | **Elizabeth (née Rigby) Lady Eastlake 1809-1893** |  |  |  |
| R1 | The two Amperes | Jan 1876 | 10159 | none |
|  | The Edinburgh Review Volume 143, 74-101 |  |  |  |
| R2 | Children's Books | Jun 1844 | 8323 | none |
|  | The Quarterly Review Volume 71, 1-19 |  |  |  |
| R3 | Crowe and Cavalcaselle on the history of painting | Jan 1872 | 11142 | none |
|  | The Edinburgh Review Volume 135, 122-149 |  |  |  |
| R4 | The Englishwoman at school | Jul 1878 | 10305 | none |
|  | The Quarterly Review Volume 146, 40-69 |  |  |  |
| R5 | Governess' Benevolent Institution - Report for 1847 | Dec 1848 | 3689 | none |
|  | The Quarterly Review Volume 84, 176-185 |  |  |  |
| R6 | Leonardo da Vinci | Jan 1875 | 14767 | none |
|  | The Edinburgh Review Volume 141, 89-126 |  |  |  |
| R7 | London alms, and London pauperism | Oct 1876 | 11715 | none |
|  | The Quarterly Review Volume 142, 374-402 |  |  |  |
| R8 | Madame de Staël: a Study of her Life and Times | Jul 1881 | 18778 | none |
|  | The Quarterly Review Volume 152, 1-49 |  |  |  |
| R9 | Physionomy | Dec 1851 | 13809 | none |
|  | The Quarterly Review Volume 90, 62-91 |  |  |  |
| R10 | Vanity Fair and Jane Eyre | Dec 1848 | 9493 | none |
|  | The Quarterly Review Volume 84, 153-176 |  |  |  |
| R11 | Venice defended | Jul 1877 | 13927 | none |
|  | The Edinburgh Review Volume 146, 165-198 |  |  |  |
|  |  |  |  |  |
|  | **Leslie Stephen 1832-1904** |  |  |  |
| S1 | An agnostic's apology | Jun 1876 | 10246 | none |
|  | The Fortnightly Review Vol 25 O.S., 19 N.S. |  |  |  |
| S2 | Hours in a library (No. XVII): Charlotte Bronte | Dec 1877 | 8896 | none |
|  | The Cornhill Magazine Volume 36, 723-739 |  |  |  |
| S3 | Dreams and realities | Sep 1878 | 9860 | none |
|  | The Fortnightly Review Vol 30 O.S. 24 N.S. |  |  |  |
| S4 | George Eliot | Feb 1881 | 8790 | none |
|  | The Cornhill Magazine Volume 43, 152-168 |  |  |  |

| S5 | Hours in a library (No. XIV): Fielding's novels | Feb 1877 | 8927 | none |
|----|------------------------------------------------|----------|------|------|
|    | The Cornhill Magazine Volume 35, 154-171 | | | |
| S6 | Dr. Newman's theory of belief | Nov 1877 | 16516 | none |
|    | The Fortnightly Review Vol 28 O.S., 22 N.S. | | | |
|    | Dr. Newman's theory of belief (Part II conc.) | Dec 1877 | | none |
|    | The Fortnightly Review Vol 28 O.S., 22 N.S. | | | |
| S7 | Richardson's novels | Jan 1868 | 13389 | none |
|    | The Cornhill Magazine Volume 17, 48-69 | | | |
| S8 | The scepticism of believers | Sep 1877 | 10974 | none |
|    | The Fortnightly Review Vol 28 O.S. 22 N.S. | | | |
| S9 | Taine's History of English Literature | Dec 1873 | 10166 | none |
|    | The Fortnightly Review Vol 20 O.S., 14 N.S. | | | |

## Appendix 2.3: 200 most common function words

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| the | 1 | him | 51 | nothing | 101 | since | 151 |
| of | 2 | may | 52 | against | 102 | ourselves | 152 |
| and | 3 | what | 53 | cannot | 103 | beyond | 153 |
| to | 4 | such | 54 | I | 104 | anything | 154 |
| a | 5 | she | 55 | between | 105 | instead | 155 |
| in | 6 | when | 56 | themselves | 106 | towards | 156 |
| is | 7 | only | 57 | because | 107 | during | 157 |
| that | 8 | can | 58 | itself | 108 | your | 158 |
| it | 9 | any | 59 | while | 109 | no-one | 159 |
| as | 10 | most | 60 | another | 110 | none | 160 |
| which | 11 | these | 61 | you | 111 | round | 161 |
| be | 12 | us | 62 | through | 112 | everything | 162 |
| his | 13 | into | 63 | whom | 113 | used | 163 |
| for | 14 | some | 64 | ever | 114 | past | 164 |
| with | 15 | other | 65 | among | 115 | my | 165 |
| we | 16 | very | 66 | did | 116 | unless | 166 |
| he | 17 | must | 67 | however | 117 | several | 167 |
| not | 18 | those | 68 | nor | 118 | doing | 168 |
| by | 19 | upon | 69 | whose | 119 | somewhat | 169 |
| but | 20 | even | 70 | both | 120 | anyone | 170 |
| was | 21 | much | 71 | few | 121 | me | 171 |
| are | 22 | do | 72 | thus | 122 | throughout | 172 |
| have | 23 | out | 73 | perhaps | 123 | along | 173 |
| or | 24 | should | 74 | also | 124 | behind | 174 |
| this | 25 | could | 75 | always | 125 | nevertheless | 175 |
| on | 26 | many | 76 | shall | 126 | until | 176 |
| their | 27 | like | 77 | here | 127 | although | 177 |
| they | 28 | every | 78 | rather | 128 | opposite | 178 |
| all | 29 | same | 79 | each | 129 | besides | 179 |
| at | 30 | without | 80 | again | 130 | amongst | 180 |
| from | 31 | yet | 81 | enough | 131 | everywhere | 181 |
| has | 32 | how | 82 | having | 132 | around | 182 |
| an | 33 | himself | 83 | least | 133 | hence | 183 |
| her | 34 | up | 84 | down | 134 | everyone | 184 |
| who | 35 | being | 85 | done | 135 | below | 185 |
| so | 36 | too | 86 | often | 136 | wherever | 186 |
| no | 37 | might | 87 | almost | 137 | am | 187 |
| had | 38 | under | 88 | either | 138 | everybody | 188 |
| more | 39 | before | 89 | something | 139 | ours | 189 |
| one | 40 | after | 90 | just | 140 | nobody | 190 |
| been | 41 | then | 91 | within | 141 | outside | 191 |
| were | 42 | still | 92 | why | 142 | whenever | 192 |
| if | 43 | never | 93 | quite | 143 | whilst | 193 |
| there | 44 | though | 94 | till | 144 | across | 194 |
| our | 45 | well | 95 | ought | 145 | beside | 195 |
| them | 46 | less | 96 | neither | 146 | amid | 196 |
| would | 47 | where | 97 | herself | 147 | amidst | 197 |
| will | 48 | over | 98 | above | 148 | beneath | 198 |
| its | 49 | about | 99 | off | 149 | nowhere | 199 |
| than | 50 | does | 100 | whatever | 150 | theirs | 200 |

## Appendix 7.1:     8 Victorian Novelists     40 Fictional "Histories"

| Code | Author and Novel and Copy Text edition page numbers | Historian | Words |
|---|---|---|---|
| | **Anne Bronte** | | |
| AB1 | *Wuthering Heights and Agnes Grey* . Haworth, Harper, 1899-1903, | Agnes | 8849 |
| | *Life and Works of the Sisters Bronte* , Vol. V. | | |
| | New York: AMS, 1982, 355-387. | | |
| AB2 | *The Tenant of Wildfell Hall.* Haworth, Harper, 1899-1903, *Life and* | Helen | 7044 |
| | Works of the Sisters Bronte, Vol. VI. New York: AMS, 1982, 132-165. | | |
| AB3 | *The Tenant of Wildfell Hall.* Haworth, Harper, 1899-1903, *Life and* | Markham | 6867 |
| | *Works of the Sisters Bronte* , Vol. VI. New York: AMS, 1982, 471-502. | | |
| | **Charlotte Bronte** | | |
| CB1 | *The Professor.* Haworth, Harper, 1899-1903, *Life and Works of the* | Crimsworth | 5370 |
| | *Sisters Bronte* , Vol IV. New York: AMS, 1982, 15-39. | | |
| CB2 | *Shirley* . Haworth, Harper, 1899-1903, *Life and Works of theSisters* | Louis Moore | 1616 |
| | *Bronte* , Vol. II. New York: AMS, 1982, 643-650. | | |
| CB3 | *Villette.* Haworth, Harper, 1899-1903, *Life and Works of the Sisters* | Lucy Snowe | 2610 |
| | *Bronte,* Vol. III.  New York: AMS,  1982, 545-551. | | |
| CB4 | *Shirley.* Haworth, Harper, 1899-1903, *Life and Works of the Sisters* | Robert Moore | 1662 |
| | Bronte, Vol. II.  New York: AMS, 1982, 46-54. | | |
| CB5 | *Jane Eyre.* | Rochester | 4470 |
| | London: Oxford University Press, 1973, 309-320. | | |
| | **Wilkie Collins** | | |
| C1 | *The Moonstone* . Modern Library edition. | Betteridge | 9677 |
| | New York: Random House, 1937, 11-32. | | |
| C2 | *Woman in White* .Oxford English Novel Series. | Fairlie | 5092 |
| | London: Oxford University Press, 1975, 309-327. | | |
| C3 | *Woman in White* .Oxford English Novel Series. | Gilmore | 8748 |
| | London: Oxford University Press, 1975, 112-144.. | | |
| C4 | *Woman in White* .Oxford English Novel Series. | Halcombe | 16048 |
| | London: Oxford University Press, 1975, 22-60. | | |
| C5 | *Woman in White* .Oxford English Novel Series. | Hartright | 11189 |
| | London: Oxford University Press, 1975, 161-203. | | |
| C6 | *Woman in White* .Oxford English Novel Series. | Michelson | 11731 |
| | London: Oxford University Press, 1975, 327-366. | | |
| | **Charles Dickens** | | |
| D1 | *The Posthumous Papers of the Pickwick Club* . | Convict | 3190 |
| | New York: Oxford University Press, 74-81. | | |
| D2 | *The Posthumous Papers of the Pickwick Club* . | Stroller | 2150 |
| | New York: Oxford University Press, 35-41. | | |
| D3 | *Little Dorrit* . | Wade | 3187 |
| | Oxford: Clarendon  Press, 1979, 644-651. | | |
| | **Emily  Bronte** | | |
| EB1 | *Wuthering Heights.* | Isabella | 3076 |
| | Oxford: Clarendon Press, 1976, 209-225. | | |
| EB2 | *Wuthering Heights* . | Lockwood | 6917 |
| | Oxford: Clarendon Press, 1976, 3-39. | | |
| EB3 | *Wuthering Heights* . | Nelly | 5826 |
| | Oxford: Clarendon Press, 1976, 43-76. | | |

## Appendix 7.1:    8 Victorian Novelists    40 Fictional "Histories"

| Code | Author and Novel and Copy Text edition page numbers | Historian | Words |
|---|---|---|---|
| | **George Eliot** | | |
| E1 | *Middlemarch*. Oxford World's Classics. OUP: Oxford, 1998. | Casaubon | 1986 |
| | 16-17, 39-40, 59-60, 186-7, 348-352, 396-7, 448-9. | | |
| E2 | *Adam Bede*. The Works of George Eliot, Vol II. | Hetty | 1609 |
| | Blackwood: Edinburgh, 1896? 247-253. | | |
| E3 | *Silas Marner The Lifted Veil Brother Jacob*. "The Lifted Veil." | Latimer | 15427 |
| | Blackwood: Edinburgh, 1907, 280-341. | | |
| E4 | *Daniel Deronda*. Oxford World's Classics. OUP: Oxford, 1998. | Leonora | 5132 |
| | 529-48, 565-71. | | |
| E5 | *Daniel Deronda*. | Mirah | 5698 |
| | Blackwood: Edinburgh, 1881, 13-37. | | |
| E6 | *Daniel Deronda*. Oxford World's Classics. OUP: Oxford, 1998. | Mordecai | 3636 |
| | 423-33, 444-64. | | |
| E7 | *Scenes of Clerical Life*. "Janet's Repentence." | Tryan | 1597 |
| | Clarendon Press: Oxford, 1985. 288-292. | | |
| | **Elizabeth Gaskell** | | |
| G1 | "Cynthia's Confession." *Wives and Daughters*. | Cynthia | 2876 |
| | Smith Elder: London, 542-552. | | |
| G2 | "The Half-Brothers." "Round the Sofa." *My Lady Ludlow and Othe*r | HalfBrother | 4594 |
| | *Tales*. Smith Elder: London, 391-402. | | |
| G3 | *Mary Barton* | Job | 3198 |
| | Smith Elder: London, 115-124. | | |
| G4 | "My Lady Ludlow.*" My Lady Ludlow and other Tales.* | Ludlow | 19917 |
| | Smith Elder: London, 60-124. | | |
| G5 | "Poor Peter." *Cranford and Other Tales*. | Matty | 3117 |
| | Smith Elder: London, 60-72. | | |
| G6 | "The Heart of John Middleton." *Cranford and Other Tales.* | Middleton | 8880 |
| | Smith Elder: London, 384-409. | | |
| G7 | "The Old Nurses Story." *Cranford and Other Tales*. | Nurse | 7948 |
| | Smith Elder: London, 422-445. | | |
| G8 | "Ruth and Other Tales." *The Works of Mrs Gaskell,* Vol. III | Sally | 1984 |
| | Smith Elder: London, 163-169. | | |
| | **Thomas Hardy** | | |
| H1 | "The Lady Icenway." *A group of Noble Dames*. | Icenway | 3310 |
| | MacMillan: London, 1952, 137-149. | | |
| H2 | *Desperate Remedies*. | Marston | 2307 |
| | Macmillan: London, 1960, 432-438. | | |
| H3 | "Squire Petrick's Lady." *A Group of Noble Dames*. | Petrick | 3245 |
| | MacMillan: London,1952, 153-163. | | |
| H4 | *The Well Beloved A Sketch of a Temperament*. | Pierson | 1619 |
| | MacMillan: London, 1960, 33-38. | | |
| H5 | "A Tradition of Eighteen Hundred and Four." *The Wessex Tales*. | Selby | 2464 |
| | MacMillan: London, 1960, 33-41. | | |

Appendix 8.1: Other authors' articles used in Figure 8.4

| Author | Article title | Date | Journal |
|---|---|---|---|
| Cecil | The change of ministry | 1866 | Quarterly Review |
| | The Conservative surrender | 1867 | Quarterly Review |
| | The House of Commons | 1864 | Quarterly Review |
| | The programme of the Radicals | 1873 | Quarterly Review |
| Macaulay | Barère's memoirs | 1844 | Edinburgh Review |
| | The late Lord Holland | 1841 | Edinburgh Review |
| | Dumont's Recollections of Mirabeau | 1832 | Edinburgh Review |
| | Moore's Life of Lord Byron | 1831 | Edinburgh Review |
| Rigby | The two Ampères | 1876 | Edinburgh Review |
| | Crowe and Cavalcaselle | 1872 | Edinburgh Review |
| | Leonardo da Vinci | 1875 | Edinburgh Review |
| | Venice defended | 1877 | Edinburgh Review |

Appendix 8.2: Articles used in Burton versus World tests

| Author | Article | Date | Journal |
|---|---|---|---|
| Eliot | Evangelical teaching: Dr. Cumming | 1855 | Westminster Review |
| | German Wit: Heinrich Heine | 1856 | Westminster Review |
| | The Natural History of German life | 1856 | Westminster Review |
| | Westward Ho! Constance Herbert | 1855 | Westminster Review |
| Macaulay | Barère's Memoirs | 1844 | Edinburgh Review |
| | The late Lord Holland | 1841 | Edinburgh Review |
| | Dumont's Recollections of Mirabeau | 1832 | Edinburgh Review |
| | Moore's Life of Lord Byron | 1831 | Edinburgh Review |
| Rigby | The two Ampères | 1876 | Edinburgh Review |
| | Crowe and Cavalcaselle | 1872 | Edinburgh Review |
| | Leonardo da Vinci | 1875 | Edinburgh Review |
| | Venice Defended | 1877 | Edinburgh Review |

Appendix 8.3: Articles used in Blackie versus World texts

| Author | Article | Date | Journal |
|---|---|---|---|
| Carlyle | Memoirs of Mirabeau | 1837 | Westminster Review |
| | Parliamentary History of French Revolution | 1837 | Westminster Review |
| | Signs of the Times | 1829 | Edinburgh Review |
| | Taylor's Historic Survey German Poetry | 1831 | Edinburgh Review |
| Hayward | The Advertising System | 1843 | Edinburgh Review |
| | Mr. Disraeli: character and career | 1853 | Edinburgh Review |
| | Parisian Morals and Manners | 1843 | Edinburgh Review |
| | England and France: customs manners ... | 1872 | Quarterly Review |
| Macaulay | Barère's Memoirs | 1844 | Edinburgh Review |
| | The late Lord Holland | 1841 | Edinburgh Review |
| | Dumont's Recollections of Mirabeau | 1832 | Edinburgh Review |
| | Moore's Life of Lord Byron | 1831 | Edinburgh Review |
| Rigby | The two Ampères | 1876 | Edinburgh Review |
| | Crowe and Cavalcaselle | 1872 | Edinburgh Review |
| | Leonardo da Vinci | 1875 | Edinburgh Review |
| | Venice Defended | 1877 | Edinburgh Review |