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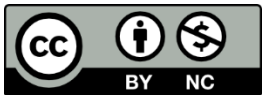

A Lifetime in Writing: Using a Linguistic Corpus to Explore Change and Continuity in Frances Burney's Adverbs

BETH MALORY

ABSTRACT: For the historical linguist of English, Burney's extraordinary body of extant prose presents an exciting opportunity to study idiolectal change and continuity in the eighteenth and nineteenth centuries. Burney's long life, consistent writing habit, and large body of digitized text have enabled an idiolectal corpus of over 3 million words of prose to be compiled. This paper reports the findings of computational linguistic research conducted using this corpus, using statistical modelling to examine Burney's use of dual-form adverbs. This modelling highlights Burney's responsiveness to targeted linguistic prescriptivism, showing that she made widespread and persistent idiolectal reforms to an adverb paradigm highlighted in a 1796 review of Camilla by the Monthly Review. The modelling also reveals that this change did not spread by analogy to other adverb paradigms. These results highlight the potential for computational research to facilitate explorations into the extent, complexity, and nuance of Burney's responsiveness to external stimuli, such as overt prescriptions or more subtle markers of sociolinguistic prestige.

This paper reports the findings of research which used a corpus linguistic methodology and a statistical modelling technique to explore grammatical change and continuity in a corpus compiled from the oeuvre of Burney. The purpose of this research was to begin to establish whether William Enfield's review of *Camilla* (1796), published in the *Monthly Review* in 1796, had a widespread and persistent impact on Burney's linguistic usage. For this purpose, a machine-readable corpus of Burney's published works of both fiction and non-fiction, as well as her journals and letters, was compiled. This corpus, known as the Burney Corpus, has enabled analysis of Burney's usage of a variety of grammatical variants over her adult lifetime (1768-1840).

Arising from this research, this case study highlights an instance of Burney's responsiveness to overtly-targeted prescriptivism through her usage of dual-form adverbs (those which can either take a *-ly* suffix or not) between 1768-1840, and the impact of Enfield's review of *Camilla* on this usage.

Using the statistical modelling technique Change Point Analysis (CPA), which allows the identification of moments where an abrupt change occurs in a data series (such as the frequency of suffixed and suffixless adverbs in a linguistic corpus), a detailed examination of the changes and continuity in Burney's use of dual-form adverbs over the course of her lifetime, as represented through her extant prose, was undertaken. The findings indicate a turning point in her usage of dual-form adverbs in the late 1790s seems to have been prompted by the *Monthly Review*'s review of *Camilla*, in 1796 (Enfield).

Data and Method

1. The Burney Corpus

The corpus used to conduct this study was compiled from digitized first editions of the six prose volumes Burney published during her lifetime, and the Oxford University Press editions of her journals and letters (Hemlow, Troide, and Cooke). The first editions comprising the published sub-corpus were accessed in machine-readable format via the Google Books' Library Project and the Chadwyck-Healey Literature Collections.

Machine-readable versions of historical primary sources are often obtained using optical character recognition (OCR) software which can introduce inaccuracy into the text, especially where volumes contain typographical conventions which deviate from the modern norms on which OCR software is typically trained. For this reason, the machine-readable text from the Burney first editions was manually checked against the digitized images from each volume, before being introduced to the published sub-corpus. Table 1 in Appendix A shows the source edition of each work included in the published sub-corpus.

The modern OUP editions of Burney's letters and journals comprising the published sub-corpus were obtained via InteLex's Past Masters series of full-text databases (Hemlow, Troide, and Cooke). These editions are considered the most reliable source of Burney's private writing; having been produced with the goal of "print[ing] the surviving manuscripts in their entirety, while recovering, as far as possible, the original texts" (Cooke and Bander xxv). They also make clear where Burney and others, such as Charlotte Barrett, have intervened and made restoration challenging or impossible.

Print editions of Burney's private letters and journals are now available for almost every year between 1768 and 1840. However, corpus compilation depends upon the availability of robust, reliable, and "clean" data in machine readable format, and at the time of corpus compilation, this was not the case for every year for which private letters and journals are extant. Table 2 in Appendix A shows the years for which such data were not available. These gaps usually result from later publication of volumes of letters and journals, and consequently delayed digitization.

Where volumes of the OUP letters and journals were available for inclusion in the private sub-corpus, any content not written by Burney herself, such as correspondence she received from others, was excluded. However, Burney's habit of using variants she considered sociolinguistic markers, for the purposes of characterization, means that her prose must be screened carefully, in order for reported speech to be distinguished from narrative. This necessitated qualitative analysis, or close reading, in order to differentiate reported speech from narrative. The findings presented throughout this paper therefore take this use of sociolinguistic markers into account.[1] Although this paper primarily reports the findings of quantitative explorations of the Burney Corpus, therefore, these have necessitated careful manual differentiation of grammatical variables in characterization.

2. Dual-form adverbs

Dual-form adverbs are adverbs which can either take a *-ly* suffix, or no ending at all (S. Tagliamonte 73). Adverbs without an ending are usually known either as "zero" adverbs (S. A.

Tagliamonte 217) or "flat" adverbs (Quirk et al.). Research has shown that the zero or flat form is "the earlier form while *-ly* is the newcomer which has gradually been replacing it" (S. A. Tagliamonte 217). Terttu Nevalainen has shown that that there are statistically significant differences in the frequency of flat adverbs between Late Middle and Early Modern periods of English (Nevalainen, "Processes") and that flat forms then continue to "lose ground in the Early Modern English period" (Nevalainen, "Adverbial Change" 142).

Despite the documented decline in usage of flat adverbs, however, Nevalainen notes that some "persisted well into the eighteenth century" (Nevalainen, "Social Variation" 311), when grammarians began to address the form (e.g. Lowth; Mennye; Murray). From the evidence of grammar books, it would seem that the flat adverb acquired considerable stigma during the course of the eighteenth century. Indeed, Sundby et al. demonstrate that eighteenth-century grammarians variously labelled flat adverbs "improper", "inelegant", "absurd", and "ungrammatical" (200-3), whilst Nevalainen notes that "suffixless adverbs in general, and intensifiers in particular, were condemned by prescriptive grammarians" ('Social Variation' 290). Reflecting on idiolectal data, however, Tieken-Boon van Ostade has argued that flat adverbs may have been considered inappropriate in formal writing, but "acceptable in spoken as well as informal written usage" (96). She therefore suggests that the flat adverb was perhaps "not as straightforwardly non-standard at the time as it might seem" (93).

The equivocal and evolving status of flat adverbs during Burney's lifetime make them an interesting focus for a study of this kind, which aims to examine her responsiveness to overtly-prescribed norms. In order to do this, sixteen dual-form adverbs have been selected. The first of these are the two subject to attention in Enfield's (1796) review of *Camilla* in their suffixless form: *admirable(ly)* and *scarce(ly).* Nine more are intensifiers (c.f. Quirk et al. 445), selected for this study since intensifiers are the class of adverbs found to occur most frequently in suffixless form during the Modern period (Nevalainen, "Social Variation" 297). These dual-form intensifiers are *exceeding(ly), excessive(ly), extraordinary/ily, extreme(ly), full/ly, marvellous(ly), mighty/ily, prodigious(ly),* and

terrible/ly. In order to gauge whether Nevalainen's findings on intensifiers reflect Burney's usage, three other degree adverbs and two other adverbs of any other type were randomly sampled from the paradigms documented by Sundby et al. as subject to critique by contemporary grammarians. These are *near(ly), tolerable(ly),* and *intolerable(ly)*, and *bright(ly) and clear(ly),* respectively. Burney's usage of these dual-form adverb paradigms within the Burney Corpus was then subjected to Change Point Analysis, as outlined below.

3. Change Point Analysis

Change Point Analysis (CPA) is a statistical modelling technique designed to identify changes in sequential data. In the research reported here, it has been used to determine how Burney responded to the review of *Camilla* (1796), which was published in the *Monthly Review* in October 1796 (Enfield).

In statistical terms, a change point is identified when data follow one distribution up to that point, and another distribution thereafter (Chen and Gupta). The classic model of change point study, inaugurated in the 1950s (Maguire, Pearson, and Wynn), set out to test whether statistical modelling could provide empirical evidence for a hypothesized change. This study follows this pre-existing hypothesis model, by testing whether the prescriptive comments on Burney's adverb usage in the 1796 review of *Camilla* (Enfield) had a meaningful impact on her idiolect, as has previously been claimed (Bloom).

To test this hypothesis using CPA, two types of purpose-built change point model were implemented in Python (a programming language commonly used in computational linguistic analyses). The first modelled Burney's use of paradigmatic variants in individual dual-form adverb paradigms, such as adverbial *scarce* and *scarcely*. In such cases, Burney had a choice about which of the two variants to select, meaning that the probability that she will select one variant over another can be calculated. The change point model was designed to detect the moment at which this probability is estimated to change. A second type of change point model was also used in order to group

together variants of the same kind from the different paradigms listed above. This allows deductions to be made about whether Burney's usage of flat adverbs overall declined over time. In this instance, the model did not infer the probability that she would select one variant over another, but rather the probability that when Burney selected any word, it would be a variant of interest.

Both CPA models then approximate a probability distribution for any change detected, allowing a percentage likelihood for a change occurring in any single year of the study period. The aim of the study was to identify whether any degree of correspondence existed between Burney's documented consumption of the prescriptive review in question, and a change point identified via CPA. Such correspondence, as outlined below, is unlikely to occur by chance, and provides strong indication of a causal link.

"[A] sort of broken Johnsonese": Charting Burney's evolving style

For Burney, the experience of having novels reviewed was one of youthful highs and inexorably declining fortunes thereafter. It was, to borrow Leanne Maunu's summation of the novels' reception by reviewers, a story of documented "stylistic decline" (296). This is, indeed, how John Wilson Croker characterizes Burney's career, in his review of *The Wanderer* (1814) for the *Quarterly Review* in 1814: as Burney "gradually descending from the elevation which the vigour of her youth has attained" (124). The pinnacle of her acclaim was undoubtedly the reviewers' rapturous reception of *Evelina* (1778), to which Croker here refers. According to the *Critical Review,* this first novel "would have disgraced neither the head nor the heart of Richardson" (Smollett 202). By contrast, her final novel, *The Wanderer* (1814), was savaged by critics, with the effect that hundreds of copies were ultimately pulped, unsold (Richter 129).

It is the reviews of *The Wanderer* (1814) that are most associated with stylistic criticism of Burney. Croker's review for the *Quarterly*, for example, is notorious for its description of *The Wanderer* as "Evelina grown old", and discussion of the "defect[s]" and "deformity" (125-126) of

Burney's nineteenth-century style. On the contrary, William Hazlitt's review for the *Edinburgh Review* in early 1815 talks not of a "decay of talent, but a perversion of it" (337).

It is perhaps Thomas Babington Macauley's criticisms of *The Wanderer* which are most associated with Burney's changing style, however. In an otherwise laudatory 1854 review of Burney's posthumously published letters and diaries, Macauley brands *The Wanderer* "a book which no judicious friend to her memory will attempt to draw from the oblivion into which is has justly fallen" (558). Rather as this paper does, Macauley set out to "trace the progress" of Burney's changing linguistic style, attributing the significant change he identifies to two principal factors. The first, notoriously, is the influence of so-called 'Johnsonese', and the second is Burney's time in France. For Macauley, it was an "evil hour [when] the author of Evelina took the Rambler for her model" (564), meaning that she had "carried a bad style to France" (566). Burney's style after her return to England from France is criticized even more harshly, as "a sort of broken Johnsonese" and "barbarous patois" (566).

Macauley's 1854 essay was not the first to have explicitly linked the posited decline in Burney's stylistic performance and her association with Johnson. During Burney's lifetime, James Boswell identified her as one of the "serious imitators of Johnson's style" (Clingham and Daiches 198), whilst the *Monthly Review* commented that *Cecilia* "appears to have been formed on the best model of Dr. Johnson's" (Grau 25). It does not seem to have been until the nineteenth century that the association came to be considered unfavorably, however. In 1833, the *New Monthly Magazine* contended that Johnson's influence had "spoilt her style" (Grau 31). Since then, Burney's linguistic performance seems to have become inextricably linked with her admiration of Johnson. By 1890, when L.B. Seeley published a volume of selected passages of her private writings, along with biographical commentary, it was taken for granted that

> Fanny was schooled for writing 'Cecilia' by the critical discussions of the Streatham circle, by much intercourse with Johnson, and by some study of style – chiefly the style of the 'Ramblers' and 'Lives of the Poets' (305).

If the association between Burney's changing literary style and her acquaintance with Johnson was forged by nineteenth-century reviewers, it was cemented during the twentieth century. In 1911, a new volume containing passages from her works was published under the title *Dr Johnson & Fanny Burney: Being the Johnsonian* (Tinker). By 1969, the notion was so deeply entrenched as to appear as an aside about Burney's "slavish imitat[ion]" of Johnson, in a paper about Jane Austen (Sorensen 390). In the footnote accompanying this comment, Sorensen attributes this impression of Burney as a "slavish imitator" to the "Latinate vocabulary" of her later novels (Sorensen 390n.). However, following a corpus-based quantitative analysis of "Johnsonian features", including Latinate borrowings and long noun phrases, Randy Bax has found that "her style did become heavier once she had met, and continued to meet Johnson", but concludes that "the term 'slavish' is altogether undeserved" (175). Bax suggests that it is more accurate to talk of Johnsonian "traces and patterns" than a "blatant imitation" of Johnsonese (175). These findings suggest that characterizations of Burney's stylistic evolution in relation to Johnson are an oversimplification and that, to some extent, labelling her usage as 'Johnsonese' is a distraction.

This leaves something of a vacuum in our understanding of why Burney's style changed so dramatically over the course of her novel-writing career. If not due to "slavish imitat[ion]" of Johnson, then why? In beginning to answer this question, this paper provides empirical evidence of one highly significant turning point in Burney's usage, and situates this turning point in terms of the sociolinguistic context in which she lived and wrote. This turning point, in the late 1790s, corresponds to Enfield's linguistically prescriptive 1796 review of *Camilla* (1796) in the *Monthly Review*.

"I have no consciousness of any enemy": Burney's responsiveness to linguistic prescriptivism

Reviews of *Cecilia* (1782) and *Camilla* (1796), the novels published between the acclaimed *Evelina* (1778) and the castigated *The Wanderer* (1814), were more mixed than the extremes Burney

experienced at the beginning and end of her novel-writing career. Most reviewers were positive in their assessment of *Cecilia*, with many referring to the positive public reception it received. The *Annual Register*'s reviewer, for example, reported that it had been "universally read and admired" in the months since its publication (247). Several reviews, such as that in the *European Magazine*, on the other hand, complained that its merits had been exaggerated (23). Reviews which appeared in the market-leading *Monthly Review* and the *Critical Review* were mixed (Roper), and though broadly positive were more muted in their assessment than they had been of the runaway success *Evelina*, four years earlier.

The decline in Burney's critical acclaim continued after the publication of *Camilla* (1796). Mary Wollstonecraft seems to have summed up the feelings of many in her review of *Camilla* in the *Analytical Review* in July 1796. Here, she opens by noting that "[t]he celebrity which miss Burney has so deservedly acquired by her two former novels, naturally roused the expectation of the public for the promised production", but goes on to rule the novel "inferior to the first-fruits of her talents" (Wollstonecraft, Butler, and Todd). As outlined in the previous section, it is the reviews of *The Wanderer* (1814) that are most associated with critique of Burney's style. The only known instance of targeted grammatical criticism of her prose in a review periodical, however, appeared in Enfield's anonymous review of *Camilla*, published in the *Monthly Review* in October 1796. Of all the periodicals to review the long-awaited third novel, the *Monthly* has been described as containing "the most detailed comment, both favourable and adverse" (Roper 166). The review is, indeed, fairly positive in its appraisal of *Camilla* overall. More importantly for the purposes of this paper, it is also painstaking in its delineation of the perceived grammatical errors in the first edition of the novel. The most relevant passage in this regard reads as follows:

> Yet we cannot but regret that *a work of such uncommon merit*, and so elaborate in its object and extent, was suffered to make its appearance, before it passed *under the correction* of some friend, who might have saved us *the pain of noticing the following verbal* and grammatical inaccuracies : — *Scarce* for *scarcely*, in almost every page. — "*Nor have I no great disposition," &c.*

> – *"A man and horse was sent off"*. — "An admirable good joke." — "Has *strove*." — "Was it me that fled?" — "Not equally adroit as Henry." — "*Almost* nothing," for *scarcely any thing;* a Scotticism. — "The owner of the horses *laid* dead." — "One of the horses *laid* dead." — "She *laid* down in her cloaths" — "Where *laid* the blame?" (*Monthly Review*, October 1796, 21; emphasis original)

Here, Enfield either directly criticizes, or implicates as incorrect, Burney's use of several grammatical constructions: the suffixless adverb forms *scarce* and *admirable*, multiple negation, a perceived error in concord, past participial *strove*, *me* in the nominative case, and intransitive *laid*. To this list, we can add his censure of "a Scotticism". In the case of some grammatical constructions, Enfield suggests paradigmatic alternatives, such as "*scarce* for *scarcely*". Elsewhere, he italicizes a variant which has an obvious paradigmatic alternative, such as "Has *strove*" and "The owner of the horses *laid* dead". Enfield's review thus affords a unique opportunity to gauge Burney's responsiveness to linguistic prescriptivism and particularly her use, before and after her exposure to this review, dual-form adverbs. Two such adverbs, adverbial *admirable* and *scarce*, are identified in Enfield's review, and Burney's prior and subsequent pattern of usage is therefore revealing. These findings have implications for modern scholarship, both in terms of Burney's sense of sociolinguistic markedness and her understanding of standard norms, such as they were, at this point in history.

The equivocal status of the flat adverb, which as outlined above appears to have been considered acceptable in informal contexts but also used as a marker of vulgarity, makes it ideally suited for research on Burney's responsiveness to grammatical prescriptivism. It has long been acknowledged that Enfield's review seemed to have prompted her to change her usage, but this subject has yet to be approached from a systematic, quantitative, sociolinguistic perspective, with nuanced understanding of the linguistic milieu in which Burney lived. Thus, whilst in a 1979 paper, Lilian Bloom documents her erasure from the second (1802) edition from *Camilla* the variants criticized by Enfield, this account is predicated upon the anachronistic assumption that an eighteenth-century standard of usage existed, and that it was uniform, cohesively codified, and

widely disseminated across all registers. Any use of variants non-standard in either a modern sense or in terms of contemporary normative grammars are therefore glossed as deviant; they are "mistakes", "infelicities", "confusions", and, often, failures to maintain "proper distinctions" between parts of speech (384-5). Bloom also claims that in the "1802 [edition] every confusion between adjective and adverb disappeared" (384). However, notwithstanding the inaccuracy of this description of dual-form adverb variation, quantitative analysis reveals that it is simply not the case that Burney altered her usage of flat adverbs, outside the paradigm singled out by Enfield.

Setting Burney's response to Enfield's linguistic criticism in its proper context also requires a broader contextual understanding of the social dynamics of eighteenth-century periodical reviewing, and the place of the Burney family within this ecology. For example, Roper regards this "judicious article" as "all the more creditable, both to reviewer and Review, in that Fanny Burney's father, Dr Charles Burney, was a contributor and a fairly close friend of Griffiths", the *Monthly*'s founder and editor (166). Charles Burney is thought to have made regular contributions to the *Critical Review* between 1771 and 1785 (Roper 33), and to the *Monthly Review* between 1788 and 1802 (Roper 21). The publication of grammatical criticism aimed at a member of the Burney family in that publication in 1796 clearly did not deter Dr Burney from continued association with the *Monthly*, and nor does it seem to have deterred his son, Burney's brother Charles, from continuing to review for the periodical. William Enfield's review was therefore at the center of an interesting social dynamic, whereby the reviewed author was the daughter and sister of two regular *Monthly* contributors, and therefore presumably known, at least by name, to its editor.

That this social dynamic did not deter Enfield from including grammatical criticism in his review, or Griffiths from publishing such content, is notable. It is conceivable that her male relatives considered it unremarkable that Burney should have been subject to such sustained and detailed criticism, despite her family connections to the *Monthly*, because grammatical criticism of women, as the less educated sex, was considered the norm (Percy). For Burney herself, however, this does not seem to have lessened the blow dealt by Enfield's review. Clearly stung, she wrote to her father:

> What of *verbal* criticisms are fair, I shall certainly & gladly attend to in the second edition: but most of them are of another class, & mark a *desire* to find them that astonishes me; for I have no consciousness of any enemy, & yet only to enmity can attribute the possibility of supposing 'A man & Horse *was* sent off — ' could be other than an error of the press. A Chambermaid, *now adays,* would have written *were.* 'An *admirable* good joke'**,** also, is the cant of Clermont, not of the author; who might as well be accountable for the slip slops of Dubster. '*Nor* have I *no* great disposition' — must be an *invention,* I should think. Certainly I never wrote it, whether it be in the Book or not. I had not time for an errata — which might, methinks, have been observed, in some candid supposition that, otherwise, a few of the verbal errours might have been corrected. (qtd. in Crump 279)

Here, Burney makes clear that she feels victimized; accusing Enfield of "a *desire* to find" errors, and of harboring "enmity" towards her. She attributes the concord error which he noted to "the press", adverbial *admirable* to the "cant" of one of her characters, and denies the existence of the instance of multiple negation which is quoted as occurring in the text. Interestingly, although she is right that adverbial *admirable* occurs in reported speech, she misattributes its use in *Camilla*. This indicates that she knew immediately, without recourse to the volume itself, that it was a sociolinguistically marked form for her in all contexts.

Burney also emphasizes that she did not have time to complete an erratum, in which she might have corrected any mistakes found in the text. Her use of the word "errata" is interesting (notwithstanding her use of the plural form with a singular article) because the word 'erratum' usually relates to production errors rather than errors of the author, which are more often denoted by the word 'corrigendum'.

It would seem, therefore, that Burney is distancing herself as much as possible from at least some of the perceived grammatical errors which Enfield's review attributes to her. However, she does begin the extract above by saying that she "shall certainly & gladly attend to" those criticisms she considers "fair" in the second edition. It is impossible to tell which criticisms she feels are "fair",

without considering her response to the criticisms individually, and her usage of the identified constructions over the remainder of her lifetime. The corpus analysis presented here does this for suffixless adverbs, determining the extent of the effect Enfield's review had on Burney's use in one of the grammatical constructions he singles out. In singling out both adverbial *admirable* and adverbial *scarce*, indeed, Enfield provides his only example of prescriptive comment on a grammatical construction used by Burney which extends beyond a single grammatical paradigm. By giving both examples, Enfield indicates that Burney's perceived usage of nonstandard adverb forms extends beyond a single adverb paradigm. As has already been established, however, only adverbial *admirable* is addressed by Burney in her letter to her father. Here, she points out, correctly, that "[a]n *admirable* good joke" is the "cant" of one of her characters, highlighting its sociolinguistic markedness at this stage of her life. She fails, however, to address Enfield's accusation that she uses "*scarce* for *scarcely*, in almost every page". As is suggested by the alleged frequency of this usage, it is used within the narrative of *Camilla*, rather than being attributable to its characters. Enfield's review therefore highlights an interesting stratification for Burney in the status of suffixless verbs. This warrants further investigation and sheds light on her evolving idiolect over the course of her lifetime.

In order to do this, this study examines the frequency of the dual-form adverbs identified above, *scarce(ly), admirable(/ly), exceeding(ly), excessive(ly), extraordinary(ily), extreme(ly), full(y), marvellous(ly), mighty(ily), prodigious(ly), terrible(ly), near(ly), tolerable(ly), intolerable(ly)*, *bright(ly)* and *clear(ly),* has been charted over the course of Burney's lifetime, and the results run through the purpose-built change point models described above.

In the published sub-corpus, the change point model detects a single turning point in Burney's combined use of the adverbs selected for study. Because the model for the published sub-corpus deals with a non-continuous time-series (since published texts were not produced in every year of the time-period studied), it is impossible for the change point model to pinpoint a change within a specific year in the published sub-corpus of Burney's writings. Hence, it can only detect a

change point for the published sub-corpus if it occurs between two publication dates, and cannot be more any more specific than this. Relying on findings from the published sub-corpus alone, then, it would be difficult to specify a precise year in which any change occurs. The results from the published sub-corpus remain valuable, however, as in combination with those from the sub-corpus of private writings, they contribute to bettering our understanding of the changes Burney's usage undergoes.

The change identified in the published sub-corpus can be discerned in Figure 1, below, as a dramatic decline occurring between the publication of *Camilla* (1796) and that of *The Wanderer* (1814). Unusually, the probability that the change occurs here is approximated by the model to be 100%. As *Camilla* is the novel reviewed in 1796, these change point results are consistent with the hypothesized change in Burney's usage resulting from exposure to Enfield's overtly targeted prescriptive comment.

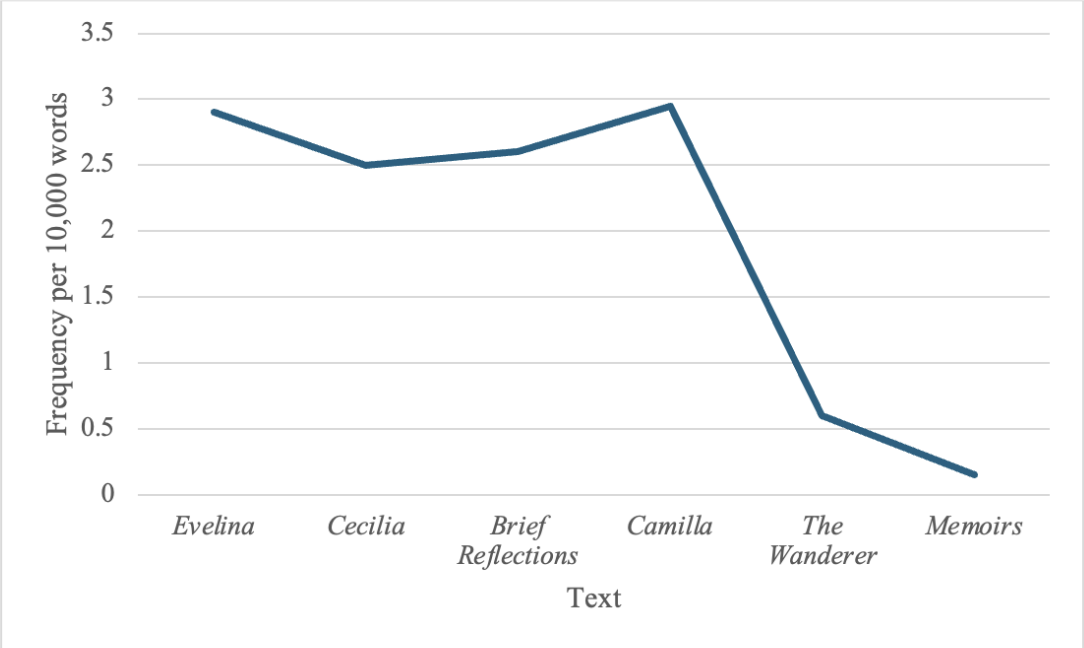

Figure 1. **Normalized frequency of flat adverb occurrence in the published sub-corpus.**

As Burney produced diary entries and/or correspondence in most years of the study period, and most were extant and digitized[2] at the time of corpus construction, the change point model deals with a near-continuous time-series in the private sub-corpus. This allows for more precise detection of a change point, to within a period of a few years. As was the case in the published sub-corpus, a single change in Burney's usage of the selected adverbs is detected within the private sub-corpus. As Figure 2, below, shows, however, unlike the change in the published sub-corpus, this change is not easily discernible from a graph of normalized frequency. The dotted line therefore shows where the change point is located.

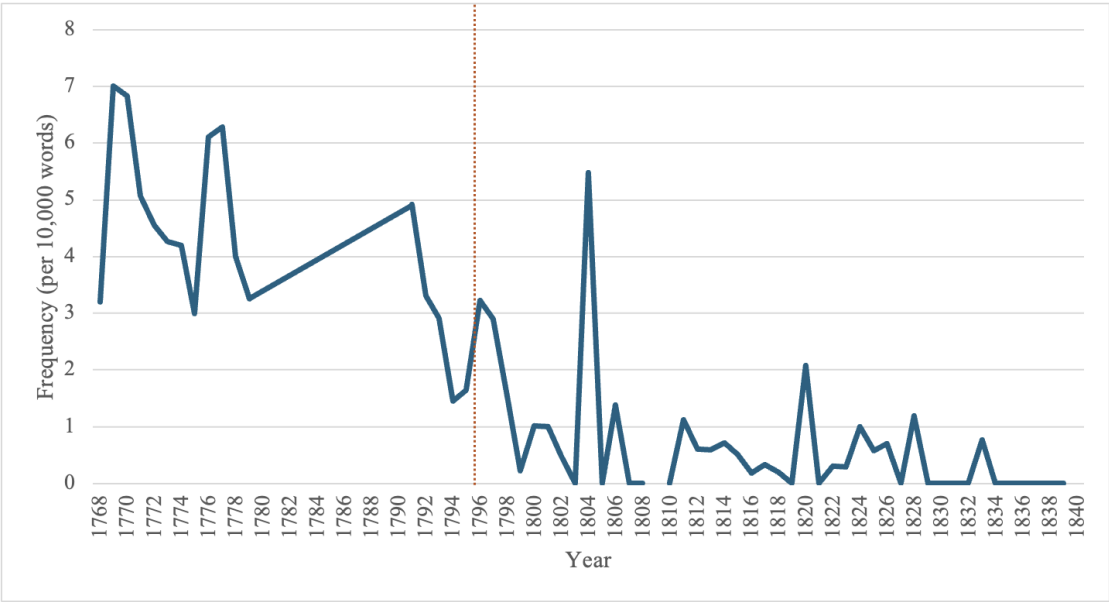

Figure 2. **Normalized frequency of flat adverb occurrence in the private sub-corpus, with change point marked by dashed line.**

Change point models are, however, designed to detect what may not be perceivable to the human eye. In this instance, the model approximates the probability that a change occurs in 1796, 1797, or 1799 to be 99.7%. Of these years, it calculates 1797 to be the mode, meaning that this is the year in which the change detected most probably occurred. The probability that this is the case is approximated to be 57.58%. As Enfield's review of *Camilla* was published in late 1796, these

results are consistent with a change resulting from the criticism it contained. The question now is whether this change can be discerned across all the flat adverb paradigms included. As is indicated by Burney's response to the review, quoted above, *admirable* occurs only in reported speech in her novels and is clearly sociolinguistically marked throughout her life. Apart from *admirable,* only adverbial "*scarce* for *scarcely*" is criticized as a "grammatical inaccurac[y]" by the *Monthly*'s review of October 1796 (Enfield 162).

Scarce data are illuminating, showing that the suffixless form of this adverb disappears entirely from Burney's usage after 1797. The change point model approximates a 100% probability that the change point for this change lies in 1797. Figure 3 plots Burney's proportional usage of the two forms in the private sub-corpus, showing the locus of this change very strikingly.

Figure 3. **Normalized frequency of *scarce* and *scarcely* occurrences in the private sub-corpus.**

Prior to 1797, as Figure 3 shows, *scarce* is clearly predominant. However, a dramatic change in the distribution of the two forms is discernible after that year, with the suffixed form then being used 100% of the time. This pattern is also reflected in the published sub-corpus, where Burney likewise radically alters her distribution of the two forms. This is shown in Figure 4, which charts

the proportional usage of *scarce* and *scarcely* in Burney's published prose. As was the case for the selected variants combined, the lack of a continuous time-series renders the change point less easily discernible. Nevertheless, it is clear from Figure 4, below, that suffixless *scarce* disappears after 1797, supplanted completely by suffixed *scarcely*.

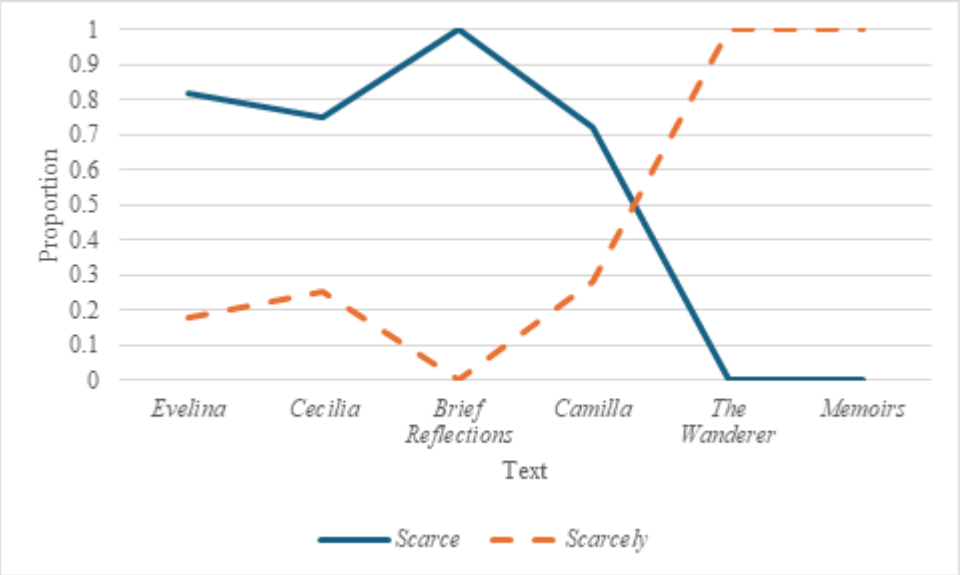

Figure 4. **Normalized proportional frequency of *scarce* and *scarcely* occurrences in the published sub- corpus.**

As was noted by Lilian Bloom, revisions made to the text of *Camilla* prior to the publication of its second edition in 1802 suggest that Burney systematically replaced the suffixless form with the suffixed:

a. whose own benign countenance could **scarce** refrain from a smile (1796, p.37)

b. whose own benign countenance could **scarcely** refrain from a smile (1802, p.59)

a. cried she, **scarce** conscious she answered at all (1796, p.539)

b. cried she, **scarcely** conscious she answered at all (1802, p.312)

It is clear, then, that Burney does not appear to have considered adverbial *scarce* to be a sociolinguistically marked form prior to her exposure to the *Monthly*'s 1796 review. She seems rather to have regarded the suffixless variant as acceptable in any syntactic environment. That she abandons this form completely following the review's publication therefore indicates that where one

of two directly competing variants is targeted for criticism, it is possible for that variant, even if previously dominant, to become marked for Burney very quickly. The effect of this acquired perception of markedness is stark, as she abandons the suffixless variant entirely in extant documents after 1797. This finding has implications for our understanding of Burney's sense of identity, in relation to sociolinguistic prestige and a perceived standard of English usage.

Questions remain, however, as to whether this reform was confined to the targeted paradigms, or whether it also occurred by analogy in other paradigms, as Bloom surmised (384). In fact, only one other paradigm exhibits a change point in the late 1790s; the change point model for *near(ly)* detects a change point in the year following that for *scarce(ly)*, in 1798, with a probability of 64%. This is a relatively low approximated probability, and it is not bolstered by significant probability levels that the change occurred in adjacent or nearby years. This relatively low probability level is attributable to the retention of the variant in Burney's idiolect into the nineteenth century. All in all, therefore, the *near/ly* paradigm provides only limited evidence of a change by analogy in Burney's idiolectal usage of dual-form adverbs.

Indeed, data show that if the *scarce/ly* paradigm, in which Enfield's review of 1796 has been determined to prompt a wholesale idiolectal reform for Burney, is excluded from consideration, a very different pattern of usage appears over her adult lifetime. This pattern indicates a much earlier movement away from suffixless adverbs, indicating that the form *scarce*, to which Enfield took such exception, was in fact vestigial for Burney. Far from vindicating Bloom's conclusion that, in the "1802 [edition] every confusion between adjective and adverb disappeared" (Bloom 384), these findings in fact indicate that the continued use of *scarce* into the 1790s was the exception.

Concluding remarks

This paper has reported the findings of research which used a corpus linguistic methodology and the statistical modelling technique Change Point Analysis to explore grammatical change and

continuity in a corpus compiled from the oeuvre of Burney. This research has shown that William Enfield's review of *Camilla* (1796), published in the *Monthly Review* in 1796, had a specific and persistent impact on Burney's linguistic usage across the remainder of her life.

The case study presented here has highlighted Burney's responsiveness to overtly-targeted prescriptivism. It has demonstrated that Enfield's review of *Camilla* affected a long-term change in her usage of the dual-form adverb paradigm *scarce(ly)*. This change consisted of the paradigmatic substitution of *scarcely* for adverbial *scarce* in all syntactic environments after 1797, despite the apparent acceptability of *scarce* for Burney prior to her exposure to Enfield's review.

The use of a purpose-built machine-readable corpus of Burney's published works of both fiction and non-fiction, as well as her journals and letters, The Burney Corpus, has enabled preliminary analysis of Burney's usage of a variety of grammatical variants over her adult lifetime (1768-1840), and it is hoped that this work can continue. One limitation of this study is that the Burney Corpus does not currently contain data for the 1780s, but as digitized text for this period becomes more readily available, it is hoped that this gap can be rectified. Notwithstanding this limitation, the Burney corpus and Change Point Analysis have allowed a corpus linguistic methodology and a computational approach to shed light on the changes in Burney's use of dual-form adverbs over the course of her lifetime, complicating established literary-critical narratives about the nature and chronology of changes in her literary style. This work therefore showcases the value of utilizing corpus linguistic and computational approaches in exploring the large body of extant text available to Burney scholars.

NOTES

[1] It is also for this reason that the Burney Corpus contains only prose and not dramatic writing; since the latter makes it much more difficult to differentiate marked and unmarked linguistic variants.

[2] See Table 2 in Appendix A.

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Appendix

Table 1. Word count per text in the published sub-corpus.

Source edition	Published text	Word count
First edition, 1778	*Evelina*	154,266
First edition, 1782	*Cecilia*	331,319
First edition, 1793	*Brief Reflections*	3,851
First edition, 1796	*Camilla*	358,499
First edition, 1814	*The Wanderer*	323,776
First edition, 1832	*Memoirs of Doctor Burney*	255,914
	Total	**1,427,624**

Table 2: Word count per year in the private sub-corpus, with source editions listed.
(Italics indicate data unavailable in suitable format for corpus analysis at the time of corpus compilation.)

Source edition	Year of writing	Word count
The Early Journals and Letters of Fanny Burney, Volume I: 1768-1773, edited by Lars E. Troide	1768	15,147
	1769	12,852
	1770	14,827
	1771	9836
	1772	15,172
	1773	30,258
The Early Journals and Letters of Fanny Burney, Volume II: 1774-1777, edited by Lars E. Troide	1774	19,276
	1775	42,797
	1776	4858
	1777	23,198

The Early Journals and Letters of Fanny Burney, Volume III: The Streatham Years Part I, 1778-1779, edited by Lars E. Troide and Stewart J. Cooke	1778	63,527
	1779	72,439
The Early Journals and Letters of Fanny Burney, Volume IV: The Streatham Years Part II, 1780-1781, edited by Betty Rizzo	1780	0
	1781	0
The Early Journals and Letters of Fanny Burney, Volume V:1782-1783, edited by Lars E. Troide and Stewart J. Cooke	1782	0
	1783	0
The Additional Journals and Letters of Frances Burney, Volume I: 1784-1786, edited by Stewart Cooke	1784	0
	1785	0
The Court Journals and Letters of Frances Burney, Volume I: 1786, edited by Peter Sabor	1786	0
The Court Journals and Letters of Frances Burney, Volume II: 1787, edited by Stewart Cooke	1787	0
The Court Journals and Letters of Frances Burney, Volume III & IV: 1788, edited by Lorna Clark	1788	0
The Court Journals and Letters of Frances Burney, Volume V: 1789, edited by Geoffrey Sill	1789	0
The Court Journals and Letters of Frances Burney, Volume VI: 1790-1791, edited by Nancy E. Johnson	1790	0
The Additional Journals and Letters of Frances Burney, Volume II: 1791-1840, edited by Peter Sabor	1791	30,884
	1792	49,849
	1793	46,231
	1794	20,637
	1795	16,949
	1796	29,961

	1797	37,277
	1798	78,214
	1799	49,326
	1800	29,045
	1801	29,188
	1802	84,910
	1803	12,726
	1804	5443
	1805	3193
	1806	14,104
	1807	948
	1808	372
	1809	0
	1810	2,746
	1811	8,334
	1812	33,906
	1813	34,179
	1814	53,504
	1815	158,832
	1816	57,204
	1817	100,103
	1818	55,003
	1819	29,625
	1820	14,660
	1821	33,494
	1822	20,032

	1823	22,670
	1824	29,001
	1825	18,957
	1826	12,595
	1827	3951
	1828	8871
	1829	2913
	1830	2139
	1831	1030
	1832	2622
	1833	12,021
	1834	7794
	1835	8391
	1836	5191
	1837	9143
	1838	2853
	1839	2257
	1840	0
	Total	**1,617,758**