Collaborative authorship: Conrad, Ford and Rolling Delta

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Abstract

Based on Burrows's measure of stylometric difference that uses frequencies of most frequent words, Rolling Delta is a method for revealing stylometric signals of two (or more) authors in a collaborative text. It is applied here to study the texts written jointly by Joseph Conrad and Ford Madox Ford, producing results that generally confirm the usual critical consensus on the visibility of the two author's hand. It also confirms that Ford's claims to a sizeable fragment in *Nostromo* are unfounded.

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1 Introduction

The story of the notable literary collaboration between Joseph Conrad (1857-1924) and Ford Madox Ford (1873-1939) dates back at least to September 1898, the date of the first meeting between the two writers (Najder 2007, p. 271). This was a coming together of two neurotic personalities and of writers with problems: after all, Conrad, although already a published author, was writing in what was his third language (after his native Polish and his very good French); Ford, on the other hand, despite unquestionable talent, was struggling to find publishers for his work. Also, both can be said to be dealing with somewhat similar identity issues: Conrad had to simplify his Polish name from Józef Teodor Konrad Korzeniowski as part of a decision to become a British subject and, more importantly, a British writer—a decision that many of his former compatriots could not forgive¹; the other's name

changes took him from Ford Hermann Hueffer to Ford Madox Hueffer to Ford Madox Ford (1919) in an attempt to dissociate himself from his German roots after World War I—at least as suggested by Hemingway (2009, p. 200). In both cases, then, this was more than a mere assumption of pen names by writers, and these complications boded ill for the collaboration; at first, however, this seemed plain sailing and beneficial for both. According to Conrad,

When talking to Hueffer my first thought was that the man there who couldn't find a publisher had some good stuff to use and that if we worked it up together my name, probably, would get a publisher for it. On the other hand I thought that working with him would keep under the particular devil that spoils my work for me as soon as I turn it out (Najder 2007, p. 274).

Ford, too, seemed happy to help:

Before we went on that earlier night to bed Conrad confessed to the writer [Ford] that previous to suggesting a collaboration he had consulted a number of men of letters as to its advisability. He said that he had put before them his difficulties with the language, the slowness with which he wrote and the increased fluency that he might acquire in the process of going minutely into words with an acknowledged master of English (Ford 1924, p. 36).

Also, he was quite convinced of the great service he was rendering his partner: 'I was useful to Conrad as a writer and as a man in a great many subordinate ways during his early days of struggle and deep poverty...' (quoted in Demarest 1997).

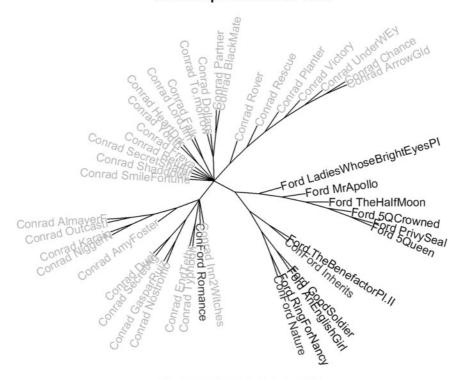
Other people had mixed feelings on the possibility and the value of the collaboration. Henry James, on hearing of it, exclaimed that it was 'inconceivable' and that the whole notion was 'like a bad dream which one relates at breakfast' (quoted in Demarest 1997). At the other extreme, Jocelyn Baines calls the work with Ford 'the most important event in Conrad's literary career' (quoted in Najder 2007, p. 273), and this is echoed by Meyers when he speaks of 'the literary friendship that had the greatest impact on [Conrad's] career' (Meyers 2001, p. 177); Najder (2007, p. 273), however, calls such a statement 'an exaggeration' and cites other, greater influences. In general, Conradian and Fordian scholars usually side with the main object of their study in this dispute, which reached its critical mass around the date of publication of the third joint work and that was also when James's 'bad dream' started to come true. As early as in 1909, Conrad complained that Ford's 'conduct is impossible. He's a megalomaniac who imagines that he is managing the Universe and that everybody treats him with the blackest ingratitude' (quoted in Meyers 2001, p. 249); this is not the only instance of Conrad lapsing into Polish turns of phrase when under emotional stress ('blackest ingratitude' is a calque of czarna niewdzięczność). Ford, on his part, went beyond simple recrimination all the way into immortalizing his feelings in literature. His creation of Bransdon in Simple Life Limited is an unveiled parody of Conrad: 'His laziness and apathy, his hairiness, his clammy hands and his drooping eyelids give him the appearance of oriental and semi-blind imbecility' (quoted in Meyers 2001, p. 249).

2 Material

Yet, before all this happened, the duo managed to produce three acknowledged collaborative novels: The Inheritors (1901), Romance (1903), and The Nature of a Crime (1909, 1924). And their story is made even more interesting by various authorship claims by Ford, including those concerning a fragment of Nostromo (1904) and the dramatization of Conrad's To-morrow (1901–2), One Day More (1904). Of course, physical evidence about authorship is complicated by the fact that Ford (and others, including John Galsworthy) took Conrad's dictation when he was sick or indisposed or could not make a deadline; hence pages have been preserved in Ford's and others' handwriting of works of otherwise unquestioned Conrad's authorship.

The first collaborative work, The Inheritors, was, for Ford, his second published novel, coming out 9 years after The Shifting of the Fire. He did most of the writing himself, though he discussed it extensively with Conrad, whose role, he said, was 'to give each scene a final tap' (Saunders 1996, pp. 135–36). For Romance, based on Ford's earlier unfinished Seraphina, however, the consensus seems to be that it is about two-thirds Conrad and one-third Ford. According to the former, "We collaborated right through, but it may be said that the middle part of the book is mainly mine with bits by F.M.H.—while the first part is wholly out of "Seraphina": the second part is almost wholly so. The last part is certainly three quarters MS. F.M.H. with here and there a par. by me" (Karl 1997, p. 147). According to Ford, "parts one, two, three and five are a mosaic of alternately written passages, while part four is entirely Conrad's work" (Karl 1997, p. 147). Najder further comments that 'the change in numbering the parts of Seraphina has caused some trouble for Conrad's and Ford's biographers. As late as the summer of 1901, the novel

Conrad Ford Collaboration Extended Bootstrap Consensus Tree



100-1000 MFW Culled @ 100% Pronouns deleted Classic Delta distance Consensus 0.5

Fig. 1 Boostrap consensus tree of works and collaborations by Conrad and Ford

consisted of four parts, but ended, as it does now, with Kemp's trial. While continuing to write part 3, Conrad expanded it into another, which became part 4, and the last, part 5, written by Ford' (Najder 2007, p. 317). The third collaborative work, *The Nature of a Crime*, was written almost exclusively by Ford and heavily edited by Conrad.

Ford's possible contribution to *Nostromo*—mostly based on the one large part of the manuscript preserved in his hand and generally treated with a grain of salt²—is limited to the novel's second part. Brice quotes a letter from Ford to Keating (1923 or 1925), saying he wrote 10,000 words of *Nostromo* that he remembers and that he 'could place my finger on fairly substantial passages' (Brice 2004, p. 79), and another 20,000 that he only faintly remembers and would find difficult to trace.

Later, in *Return to Yesterday*, Ford himself minimizes his contribution, saying that what he 'wrote into Conrad's books was by no means great in bulk' (Brice 2004, p. 78) and was 'so frequently emended out of sight that they could not make as much difference to the completion and glory of his prose as three drops of water poured into a butt of Malmsey' (Brice 2004, p. 79). This study tries to find the drops of Ford's water in Conrad's Malmsey, or vice versa, when one looks at the dramatization of Conrad's *One Day More*.

3 Method

Burrows's 'Delta' is a popular authorship attribution algorithm (Burrows 2002). Suppose we have

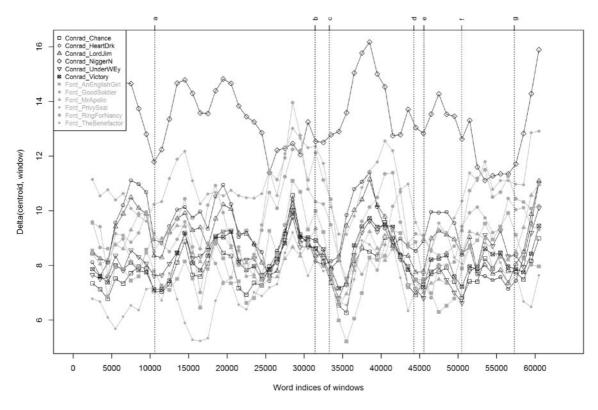


Fig. 2 Rolling Delta diagram for The Inheritors

an anonymous text that has to be attributed to one of a series of candidate authors for whom we have a number of reference samples as training material. Delta computes a dissimilarity score between the test item and all reference samples and attributes the anonymous text to the author of the sample to which it is most similar. We propose a procedure called 'Rolling Delta', reminiscent of a number of earlier applications (e.g. Van Dalen-Oskam and Van Zundert, 2007, 2012; Burrows 2010; Hoover 2012). The general goal is to visualize stylistic shifts in texts, for instance, in order to pinpoint authorial takeovers in the case of collaborative authorship. An implementation of Rolling Delta for the statistical programming environment R is freely available (Eder et al., 2013; 2014).

First, each reference text is segmented into equalsized, partially overlapping samples. If we specify a 'window size' of 5,000 and a 'step size' of 100, for example, the first sample of a text contains words 1-5,000, the second 101-5,101, etc. The procedure uses the relative frequencies of the n most frequent words in the reference collection. Subsequently, we compute a centroid (C) for each reference text, containing the mean relative frequency for each of the nunique words in the windows extracted from the reference collection. Thus, this centroid will consist of a one-dimensional vector containing the mean frequencies $\mu_1, \mu_2, \ldots, \mu_{n-2}, \mu_{n-1}, \mu_n$ for the relative frequencies of $w_1, w_2, \ldots, w_{n-2}, w_{n-1}, w_n$ in the reference samples. We additionally keep track of the *n* standard deviations $(\sigma_1, \sigma_2, \ldots, \sigma_{n-2}, \sigma_{n-1}, \sigma_n)$, corresponding to each of these n high-frequency words' relative frequencies, calculated over the windows extracted from the reference corpus. These standard deviations will be used as weighting terms for each word in the Delta formula below (cf. σ_i). Now, we divide the test text into windows

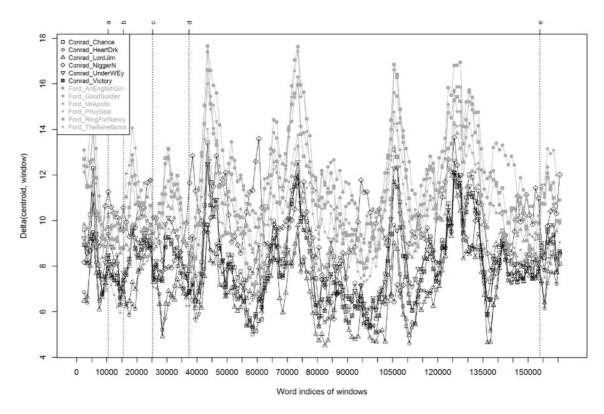


Fig. 3 Rolling Delta diagram for Romance

and compute the 'Delta' between each test window W and each reference centroid, using the following Delta-like distance formula—see Argamon (2008) for more mathematical details:

$$\Delta(C,W) = \sum_{i=1}^{n} \frac{1}{\sigma_i(C)} |\mu_i(C) - f_i(W)|$$

After 'rolling' through the test text, we plot the resulting Delta series for each reference text. The lower the Deltas for a reference text, the more similar the style in the test windows; the higher the Deltas, the less similarity. If the curve for a text shows a sudden drop, this may indicate a stylistic change in the test text, caused, for instance, by one author taking over from another. One can use vertical lines in the plot to mark the position of certain events in the test text as an aid in interpretation (e.g. chapter beginnings). In other words, the reference

text plotted nearest to the *X* axis of the graph bears the greatest similarity to the test text in that particular test window: when the procedure rolls through a test text (one of the Conrad/Ford collaborations in this case) comparing it with the reference texts (the twelve individual novels), it captures the stylometric agreement between the test and reference texts by a low line and stylometric disagreement by a high line.

4 Results

Fig. 1 shows a bootstrap consensus tree of works and collaborations by Conrad and Ford, produced from multiple cluster analyses of the most frequent word frequencies for this collection of texts. While this procedure is described in more detail elsewhere (Eder, 2013), it might be helpful to say that such a

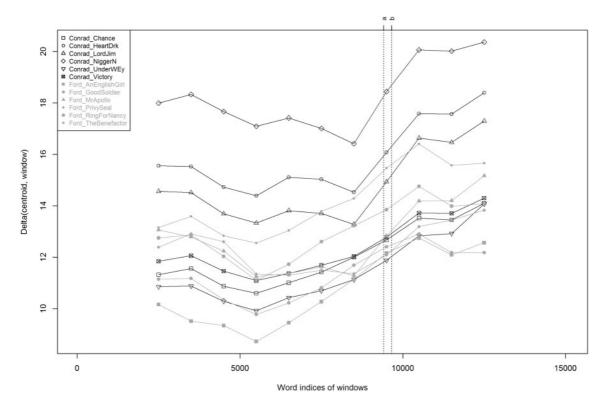


Fig. 4 Rolling Delta diagram for The Nature of a Crime

graph represents a consensus between a number of hierarchical cluster analyses performed for different values of various parameters, such as the number of the most frequent words used in the analysis or the degree of culling (automatic removal of words characteristic of single texts, which usually improves attribution); the clusters in the consensus tree represent the most frequent associations between texts for this series of simple cluster analyses for better reliability of results (Dunn et al., 2005). This particular consensus diagram places Romance decisively among works by Conrad (belying the above-mentioned fact that this work has been built on Ford's own Seraphina), but the two other collaborative texts among those by Ford. Perhaps unsurprisingly, Nostromo is situated nowhere close to any of the Fordian (or collaborative) texts.

Fig. 2 is a 'Rolling Delta' diagram produced for *The Inheritors*, which is compared with six novels by Conrad (*The Nigger of the Narcissus*, 1897; *Heart of*

Darkness, 1898-99; Lord Jim, 1900; Chance, 1913; Under Western Eyes, 1911; and Victory, 1915) and six by Ford (The Benefactor, 1905; Privy Seal, 1907; An English Girl, 1907; Mr. Apollo, 1908; Ring for Nancy, 1913; and The Good Soldier, 1915). The analysis was performed for the 1,000 most frequent words appearing in all the texts with a 'rolling window' of 5,000 words and a step size of 1,000 words between consecutive windows. As can be seen, the grey lines that represent novels by Ford come closest to the horizontal axis in all but a few small sections of the graph, where the black lines (Conrad's novels) take over. This shows that, throughout the collaborative text, Ford's style (part that of The Benefactor, part that of Ring for Nancy) dominates over that of Conrad's—with some exceptions. There are several short glimpses of Conradian style in the middle of Chapter 4, reminiscent of *Chance* (indicated by the vertical line 'a'); a section at the onset of Chapter 11 (Heart of

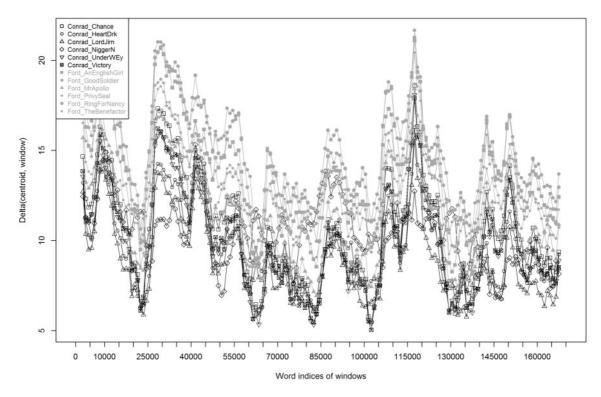


Fig. 5 Rolling Delta diagram for Nostromo

Darkness, line 'b') and another one further down in that chapter (Chance, line 'c'); and a slightly longer fragment that coincides with the asterisk-separated latter part of Chapter 14 (first Chance, then Under Western Eyes, between lines 'd' and 'e'). The only more extensive fragment in The Inheritors with a stronger Conradian signal combines Chapters 16 and 17, with, once again, the closest affinity to Under Western Eyes, Heart of Darkness, and Chance. Interestingly, however, Conrad's earliest work among the four used for comparison, The Nigger of the Narcissus, is the outlier almost invariably in The Inheritors.

Fig. 3 presents the same comparison for *Romance*, with very different results. This novel, in good agreement with Fig. 1, exhibits a domination of Conradian style (mostly that of *Lord Jim, Victory, Heart of Darkness*, and *Chance*), as the grey lines usually run closer to the horizontal axis. Ford's idiom (this time, in its *The Benefactor* variety)

makes itself seen in a single long fragment: Part 1, Chapter 4 (between lines 'a' and 'b'), immediately after the turbulent and uncertain past of Castro is discussed; because this discussion includes a reference to 'Polish lancers' and 'a Polish peasant' as the two alternative causes of that character's infirmity, this too seems to confirm, albeit less directly, Conrad's authorship of the preceding section. Even earlier on, in what the diagram shows to be Conrad's territory (Part 1, Chapter 3), there is some presumably Conradian talk of going 'across the sea, and to the West Indies.' One can also observe a shorter, yet double burst of the Fordian signal in Part 2, Chapter 3, both left and right of line 'c'; the style is that of The Benefactor and Ring for Nancy. Two more timid outbreaks of Ford appear at the end of Chapter 6 in Part 2 (d) and at the close of Chapter 4 in Part 5 (e).

Fig. 4 shows the two authorial signals in *The Nature of a Crime*, and their respective strengths

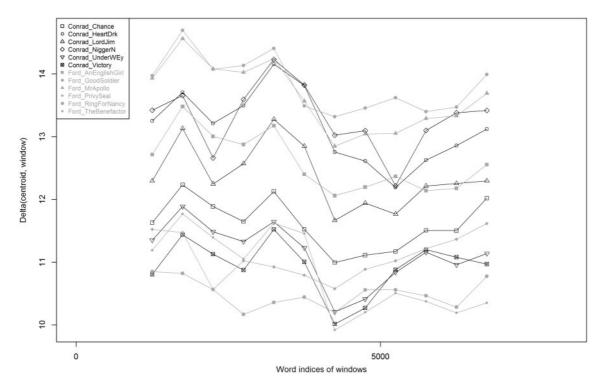


Fig. 6 Rolling Delta diagram for One Day More

strongly diverge from the situation in the previous collaboration. Ford's style (mostly that of *The Good Soldier*) dominates the final joint effort of the two writers as the line plotted for that text comes lowest, with a single intervention of Conrad's style (in its *Under Western Eyes* variety) at the end of Chapter V (between lines 'a' and 'b').

Fig. 5 tests the hypothesis that Ford did indeed contribute in any significant way to Conrad's *Nostromo* but provides little to support it: Conrad's style dominates Ford's throughout. This time, contrarily to the diagrams for *The Inheritors* and *The Nature of a Crime*, and in a much stronger way that in *Romance*, the signal of almost all Conradian texts is stronger than that of almost all texts by Ford throughout the course of the novel: the black lines combine to create a thick layer separating the rival grey lines from the horizontal axis of this plot.

On the other hand, Ford seems to be the dominating partner in *One Day More*, the dramatization of Conrad's story *To-morrow*. This is very clear from Fig. 6, where two texts by Ford are closest to the horizontal axis and thus to the style of the drama (*The Benefactor* for the most part, but also *Ring for Nancy*). Conrad's style (that of *Victory*) only shows itself (and quite insignificantly at that) at the very beginning of the test text.

5 Conclusion

The application above of Rolling Delta produces interesting results. Chief among them is a confirmation of the usual (if uncertain) consensus about the proportions of the styles of both writers in their three collaborations. The decisive domination of Ford's style over Conrad's in *The Inheritors* and *The Nature of a Crime* is interesting, as it seems to

have survived Conrad's extensive editing that is confirmed by biographical evidence. A similar stylometric visibility of the underlying authorial personality that persists despite the subsequent editing has been reported in a study of an edited translation (Rybicki and Heydel, 2013). From a methodological point of view, 'Rolling Delta' for R (devised by Kestemont) is a welcome addition to the latest stylometric tools, with its potential to pinpoint the change(s) from author to author in collaborative works. Perhaps of the greatest interest here is not the fact that this or that passage in the collaborative works has been shown to bear one or the other writer's fingerprint, but, rather, the fact that the two authorial signals are so mixed in the collaborations, while works of undoubted individual authorship, such as Nostromo (Ford's claims notwithstanding), show a clear preponderance of one signal over the other.

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Notes

1. Two major Polish writers of the time, Eliza Orzeszkowa and Henryk Sienkiewicz (the literary

- Nobel Prize winner of 1905), accused Conrad of 'selling out' to a more profitable publishing market and denounced him both privately and publicly; Conrad repaid in kind (cf. Rybicki, 2012).
- 2. In an angry letter to Gertrude Stein and Alice Toklas, Hemingway called Ford 'an absolute liar and crook' (quoted in Lynn 1987, p. 233).