

FictionFixer™ Evaluation of *Dreams From My Father* by Barack Obama and *Fugitive Days* by William Ayers

October 29, 2008 (version 2)

Introduction

FictionFixer™ is an expert system designed to track and analyze more than 250 characteristics of streams of text, in other words: books.

In the past, the software has been used to define a model representing what the public expects from successful books within a specified genre. FictionFixer can compare every corresponding aspect of an author's manuscript to the current model, a specific work, or both. Such a comparison reveals how closely a work corresponds to the current model while providing an author with information to improve the delivery of their work; he or she can adjust the *form* to better present his or her *content* making it more desirable to the reader on the basis of known model characteristics.

When two works by the same author are compared, FictionFixer can reveal whether or not the author's style is progressing toward profitability or is simply repeating the past mistakes.

FictionFixer can also compare works to settle questions of authorship.

Normally, when FictionFixer compares two works, or compares one work to a multi-work model, the user specifies a degree of tolerance to define what is the maximum acceptable deviation from the demonstrated norm. When the software examines works for the purpose of establishing authorship, the "tolerance" variable is zero.

FictionFixer currently consists of ten modules, one of which is still under development and excluded. All of the modules are relevant to fiction, however, some are less applicable to non-fiction. For example, the "Character" module may be of less significance in a non-fiction work.

One must grasp the principle of "normalization" when looking at output from FictionFixer. This is similar to normalization of an audio signal. Many of the items compared by FictionFixer are "countable." For example, counting paragraphs: If work-A is 150,000 words in length and work-B is 25,000 words in length, FictionFixer would count the paragraphs in work-A and then multiply the result by .667 in order to infer the number of paragraphs it would have if it were 100,000 words in length. Similarly, FictionFixer would multiply the number of paragraphs in work-B by 4 to "normalize" that value up to 100,000 words (25,000 words times 4 = 100,000 words). Once the values have been normalized in this fashion, they can be compared to one another. Note that many of the components FictionFixer tracks do not require or respond to normalization. Examples are average sentence length, percent passive voice, readability statistics, and the like.

Characters (module)

Normally, a FictionFixer evaluation would start with the Character module. Because of the nature of the works in this investigation, the Character module will be omitted and the analysis will commence with surface counts.

Display conventions:

The Model (in this case: *Fugitive Days*) is always on the right hand column. Numbers to the right of words in lists refer to number of occurrences. Italicized numbers are NOT normalized.

Surface Counts (module)

FictionFixer evaluates surface details of "countable" elements from large-scale to small while differentiating between dialog and narrative (non-dialog). For example, chapters, chunks, paragraphs, sentences, independent clauses, dialog blocks, multi-paragraph dialog by single characters, narrative-dialog switches, use of punctuation, quantity of dialog words, sentences, syllables, "stop-words," vs. those of non-dialog.

Attributions

Considering the fact that some authors get by with a mere three different attributions, and many with less than 20, it is interesting to note how these two books are similar in their number, choice, and proportion of usage regarding the various types of attributions.

	Dreams From My Father	Fugitive Days
Different attributions:	36	34
Total attributions:	1083	908
Primary attributions:	440 – said 118 – asked 102 – thought	359 – said 99 – thought 71 – asked
Total Secondary attributions:	422	379
Secondary attributions:	164 – told 45 - called 37 – explained (see next chart) 22 - shouted 17 - mentioned 15 - insisted 13 - wondered 13 - whispered 12 - promised 10 - reminded 10 - answered 5 - added 4 - demanded 3 - sang 3 - muttered 3 - cried 3 - apologized 3 - spat 3 - replied 3 - advised 2 - teased 2 - stammered 2 - signed 2 - remarked 2 - corrected 2 - claimed	79 - told 63 - called 28 – argued (see next chart) 24 - shouted 20 - cried 16 – wondered 16 - insisted 16 – sang 12 - added 12 – demanded 8 - mentioned 8 - whispered 8 - signed 8 - quoted (not in DFMF)

Note: *Audacity of Hope* has 43 different attributions used 461 times (less than 50% of *Dreams*)

The following table lists attributions that are only used once (thus the right column has not been normalized). During the writing process, many authors categorize certain words, phrases, similes, clichés, locals, nouns, adverbs, other text entities in a group (within their minds) that may, for all practical purposes, be called “to be used only once.”

	Dreams From My Father	Fugitive Days
Attributions of the class: “to be used only once”	1 - swore 1 - stated 1 - responded 1 - questioned 1 - pointed out 1 - noted 1 - declared 1 - begged 1 - uttered 1 - recited 1 - observed 1 - murmured 1 - lied 1 - joked 1 - inquired 1 - hooted 1 - hollered 1 - hissed 1 - disclosed 1 - confessed 1 - commented 1 - argued 1 - acknowledged	<i>1 - swore</i> <i>1 - responded</i> <i>1 - replied</i> (see previous) <i>1 - reminded</i> (see previous) <i>1 - remarked</i> (see previous) <i>1 - questioned</i> <i>1 - promised (not in DFMF)</i> <i>1 - pointed out</i> <i>1 - joked</i> <i>1 - jeered (not in DFMF)</i> <i>1 - explained</i> (see previous) <i>1 - declared</i> <i>1 - corrected</i> (see previous) <i>1 - cooed (not in DFMF)</i> <i>1 - begged</i> <i>1 - acknowledged</i>

FictionFixer tracks a total of 106 attributions. These two books use subsets of these 106 attributions: *Dreams From My Father* uses a subset of 36 and *Fugitive Days* uses a subset of 34. The remarkable thing is that these subsets differ only by 4 words, and of these 4 words, three are relegated to the “only to be used once” category.

Furthermore, the quantities are almost in the same order (arrows indicate deviations from sequential order).

Finally, the proportions are very similar. “Said” is used about 4 times as much as the next most used attribution in both cases.

The proportions of Primary to Secondary attributions are almost identical.

The one “out of place” Secondary attribution (“told”) is out of order in exactly the same way for both examples: Even though it is a secondary attribution, it occurs more times than the lowest scoring primary attribution (and this holds true for both books).

Syllables

The proportions of single syllable words through 10-syllable words is very similar in both works.

	Dreams From My Father	Fugitive Days
1	72423	70151
2	19894	19330
3	6381	7193
4	1688	2608
5	447	568
6	69	134
7	3	12
8	0	4
9	0	0
10	0	0

Stop Words

Likewise the ORDER and DISTRIBUTION of the use of “Stop Words.” Stop words are words that an indexing program doesn’t index, including articles (a, an, the) and other common words. Additionally, databases normally do not index Stop Words, and search engines ignore them.

Dreams From My Father	Fugitive Days
Percentage of Stop Words = 56.1%	Percentage of Stop Words = 53.2%
5165 - the	5094 - the
2807 - to	4486 - and
2767 - and	3239 - a
2503 - a	2462 - of
2242 - of	2340 - to
2129 - i	2198 - i
1527 - in	1661 - in
1473 - that	1622 - was
1266 - he	947 - we
1205 - was	931 - it
1031 - had	915 - that
887 - my	781 - my
874 - his	754 - he
833 - you	754 - for
790 - it	734 - on
775 - for	726 - with
773 - with	683 - but
717 - me	647 - me
609 - as	552 - his
589 - on	548 - as
585 - her	545 - were
572 - she	513 - at
571 - we	501 - had
528 - at	466 - all
495 - they	462 - from
490 - but	434 - our
482 - would	418 - be
434 - said	414 - us
402 - were	367 - would
400 - their	359 - said
398 - him	351 - or

386 - from	351 - an
383 - up	347 - one
375 - out	343 - not
368 - or	339 - up
362 - about	335 - you
352 - this	320 - out
340 - when	296 - like
340 - what	268 - when
339 - all	268 - is
336 - like	256 - then
323 - so	253 - what
317 - an	249 - this
310 - one	249 - she
306 - be	245 - so
298 - if	241 - her
296 - have	241 - by
294 - not	229 - into
290 - who	221 - they
278 - is	221 - about
275 - our	217 - who
261 - back	213 - could
260 - could	205 - no
259 - into	197 - if
257 - your	182 - now
255 - them	178 - do
233 - been	174 - there
222 - us	170 - more
221 - there	162 - some
206 - then	162 - have
206 - by	158 - their
201 - no	154 - over
199 - how	150 - only
197 - some	150 - never
190 - only	146 - every
189 - now	142 - through
186 - more	142 - each
176 - other	138 - way
175 - after	138 - other
173 - do	130 - them
173 - over	130 - him
156 - before	130 - good
155 - down	130 - are
149 - are	126 - here
146 - still	118 - first
145 - where	114 - off
140 - tell	114 - even
133 - something	110 - how
133 - way	110 - before
132 - will	107 - well
128 - two	107 - than
128 - off	107 - been
127 - even	103 - too
122 - these	103 - because
122 - first	99 - which
120 - come	99 - being
120 - can	99 - always
120 - here	95 - where
120 - away	95 - nothing

118 - came	95 - get
116 - around	91 - two
116 - few	91 - still
114 - too	91 - few
114 - through	91 - down
110 - say	91 - after
109 - than	87 - go
109 - much	87 - ever
105 - get	83 - should
104 - might	83 - most
104 - go	83 - its
99 - did	83 - away
98 - never	79 - something
97 - because	79 - say
96 - got	79 - back
95 - those	75 - will
95 - same	75 - much
94 - once	75 - got
94 - well	75 - everything
94 - its	75 - did
91 - myself	71 - might
88 - such	71 - many
85 - why	67 - later
85 - most	67 - can
84 - always	67 - any
82 - finally	67 - along
79 - very	63 - your
77 - many	63 - next
74 - any	63 - everyone
74 - again	63 - around
72 - good	59 - while
71 - another	59 - those
69 - nothing	59 - against
69 - each	55 - myself
68 - while	55 - another
67 - maybe	55 - also
65 - until	47 - come
65 - should	43 - yet
63 - between	43 - why
62 - let	43 - though
60 - must	43 - thirty
58 - next	43 - tell
58 - later	43 - sure
58 - himself	43 - soon
57 - without	43 - oh
55 - which	43 - must
53 - every	43 - anything
51 - enough	43 - again
50 - sure	39 - under
50 - has	39 - three
50 - though	39 - finally
49 - give	39 - already
49 - also	39 - above
48 - against	36 - yes
45 - three	36 - without
45 - fact	36 - once
44 - both	36 - itself
42 - already	36 - has

42 - along	36 - four
41 - last	36 - fact
41 - under	36 - except
39 - yet	36 - everywhere
39 - ever	36 - enough
39 - better	36 - doing
37 - during	36 - both
37 - beside	36 - beyond
36 - doing	32 - until
36 - soon	32 - order
35 - eventually	32 - million
35 - almost	32 - better
34 - matter	28 - upon
34 - anything	28 - twenty
33 - everything	28 - ourselves
32 - being	28 - others
32 - instead	28 - often
32 - everyone	28 - nor
30 - although	28 - last
28 - less	28 - five
28 - herself	28 - early
27 - getting	28 - came
27 - else	28 - almost
26 - since	28 - actually
25 - whether	24 - whatever
24 - often	24 - these
23 - yes	24 - ten
23 - everybody	24 - neither
23 - am	24 - near
22 - someone	24 - else
22 - far	24 - although
22 - done	20 - such
21 - whatever	20 - six
21 - certain	20 - same
21 - bring	20 - nine
21 - having	20 - matter
21 - beneath	20 - less
20 - whose	20 - hundred
20 - mine	20 - himself
20 - early	20 - example
19 - ten	20 - eventually
19 - somebody	20 - eight
19 - six	20 - between
19 - may	20 - below
19 - four	20 - anyone
18 - nobody	20 - among
18 - hundred	16 - within
18 - five	16 - whose
18 - among	16 - very
17 - themselves	16 - somewhere
17 - probably	16 - since
17 - except	16 - seven
17 - yourself	16 - second
16 - second	16 - maybe
16 - round	16 - let
15 - aside	16 - give
14 - somewhere	16 - forty
14 - near	16 - far

14 - sometimes	16 - either
14 - actually	16 - certain
13 - quite	16 - bring
13 - order	16 - beneath
13 - itself	16 - ago
12 - within	16 - according
12 - others	12 - third
12 - thousand	12 - round
12 - either	12 - rather
12 - earlier	12 - rarely
12 - despite	12 - quite
12 - beyond	12 - mine
12 - ah	12 - may
12 - ago	12 - getting
12 - above	12 - forever
11 - neither	12 - earlier
11 - everywhere	12 - during
10 - twenty	12 - done
10 - nor	12 - aside
10 - nearby	12 - art
10 - anyone	8 - yourself
10 - rarely	8 - yesterday
10 - possible	8 - whom
10 - oh	8 - whether
10 - none	8 - unto
10 - fifteen	8 - twice
10 - example	8 - twelve
9 - unless	8 - till
9 - rather	8 - thousand
8 - ourselves	8 - themselves
8 - cannot	8 - someone
8 - whom	8 - sixteen
8 - today	8 - possibly
8 - thirty	8 - perhaps
8 - eight	8 - ought
7 - anybody	8 - nowhere
6 - welcome	8 - none
6 - upon	8 - nearby
6 - twelve	8 - likely
6 - third	8 - hundredth
6 - perhaps	8 - herself
6 - nowhere	8 - having
6 - fifty	8 - fourth
6 - sixteen	8 - fourteen
6 - seven	8 - forth
6 - million	8 - fair
6 - hers	8 - eighteen
6 - generally	8 - due
6 - forth	8 - doubtful
6 - fair	8 - cannot
6 - certainly	8 - beside
6 - below	4 - whoever
6 - afterward	4 - welcome
6 - according	4 - unlikely
5 - tomorrow	4 - unless
5 - result	4 - thirteen
4 - yesterday	4 - therefore
4 - seventeen	4 - sometimes

4 - previous	4 - shall
4 - indeed	4 - seldom
4 - definite	4 - rare
4 - dear	4 - probably
3 - yours	4 - possible
3 - twice	4 - ours
3 - till	4 - occasionally
3 - rare	4 - instead
3 - nevertheless	4 - indeed
3 - fifth	4 - however
3 - does	4 - ho
3 - bear	4 - fifty
3 - anywhere	4 - fifteen
3 - fourteen	4 - farewell
3 - forty	4 - eleven
3 - fewer	4 - definitely
3 - enter	4 - consequently
2 - thirteen	4 - besides
2 - therefore	4 - anywhere
2 - sixty	4 - afterward
2 - sixth	
2 - shall	
2 - occasionally	
2 - nine	
2 - fourth	
2 - forever	
2 - exit	
2 - due	
2 - doubtfully	
2 - bid	
2 - art	
1 - ye	
1 - whereas	
1 - resulting	
1 - however	
1 - eighteen	
1 - doubtful	
1 - whoever	
1 - unusual	
1 - twelfth	
1 - thus	
1 - seventh	
1 - prior	
1 - presumably	
1 - ours	
1 - ninth	
1 - ninety	
1 - likely	
1 - instance	
1 - hence	
1 - eleventh	
1 - eleven	
1 - eighty	
1 - definitely	
1 - comes	
1 - billion	
1 - actual	

FictionFixer recognizes 497 StopWords. *Dreams From My Father* uses 320 of these while *Fugitive Days* uses 283 of these. Only 18 of the Stop Words do not overlap (only 18 of the Stop Words found in the *Fugitive Days* list are not present in the *Dreams From My Father* list).

Proportions (module)

FictionFixer evaluates many proportions: characters per dialog word, syllables per word, words per sentence, sentences per chunk, chunks per chapter, and so forth. The same for non-dialog (narrative) words, sentence, paragraphs, and chapters, etc. As well as detailed analyses that may consist of comparisons, including minimums, maximums, averages, and means, with per-chapter, per-chunk, per-paragraph, and per-sentence breakdowns.

In the context of a non-fiction work, such as a biography or autobiography, many of the measurements are skewed because the author uses REAL dialog (often from recordings or interview notes). Because the author has no control over real dialog, the measurements that are most meaningful from this module are those that strip away the dialog sentences.

Non-dialog sentences	Dreams From My Father	Fugitive Days
Average number chars/word	4.45	4.49
Average num. syllables/word	1.44	1.47
Average num. words/sentence	17.62	17.61
Ave. num. syllables/sentence	26.48	26.27

Note: *Audacity* averages 23.24 words per sentence and 40.95 syllables per sentence.

Although the author might not have control over the lengths and syllables in the dialog sentences in these cases, the dialog is often surrounded by tags, beats, attributions, and other material over which the author exercises control. The foremost measurement uninfluenced by the number of syllables in dialog sentences, yet still includes dialog sentences is “sentences-per-paragraph.”

All sentences (dialog and non-dialog)	Dreams From My Father	Fugitive Days
Ave. num sentences/paragraph	4.29	4.66

Readability (module)

FictionFixer's readability algorithms are more accurate than any others! Includes: Flesch (ease), Flesch-Kincaid (age), SMOG (100% comprehension age), Flesch-Kincaid (grade level), SMOG (100% comprehension grade level), and Gunning-FOG. Also Moshe Koppel's Gender algorithm (including component comparisons and spread). FictionFixer employs the most accurate passive voice detection currently available. This proprietary algorithm divides passive constructions into twelve types. FictionFixer also tracks 36 varieties of introductory verbal phrases (see next section).

Traditional Readability Algorithms

Readability	Dreams From My Father	Fugitive Days
Flesch Reading Ease	73.1	64.8
Flesch-Kincaid Age	11.6	13.5
SMOG 100% comp. age	10.9	11;3
Flesch-Kincaid Grade level	6.6	8.5
SMOG 100% comp. Grade	5.9	6.3
Gunning-FOG years of school	9.1	11.2

Note: Another case in which *Dreams* differs wildly from *Audacity*: 42.1, 18.1, 12.1, 12, 7.1, 15.8

Voice, Verbs, and Gender

As part of FictionFixer’s Readability Evaluation, we also check a dozen passive voice and weak auxiliary verbal constructions and 36 varieties of introductory verbal phrases, and apply Moshe Koppel’s Gender algorithm to determine probable author gender.

PASSIVE VOICE	Dreams From My Father	Fugitive Days
Total Passive Clauses	283	351
Percent Passive	3.8%	5.8%
Constructions:		
Was/were verbed	191	276
Is/are verbed	37	32
Has/Had/have been verbed	37	12 ↕
To be verbed	14	28 ↕
Was/were being verbed	1	4
Will be verbed	1	0
Is/are being verbed	1	0
Could have been verbed	1	0
Can be verbed	1	0
Will have been verbed	0	0
To have been verbed	0	0
Might have been verbed	0	0

note: *Audacity of Hope* scores 8.3% passive voice, a major indication of different authorship.

The distribution of these constructions is overtly similar between the two books. *Fugitive Days* uses only 5 types of constructions, and only one transposition exists in relation to *Dreams From My Father* (see above “To be verbed” has more occurrences than “Has/Had/have been verbed”).

Introductory Verbal Phrases

1.5% of the sentences in *Dreams From My Father* contains commence with verbals, while 1.1% of the sentences in *Fugitive Days* commence with verbals.

The similarity and distribution of verbal opener TYPES is significant. In the following table, the bullet (•) character represents “any single word.” There are 36 types of verbal openers. As the table indicates, *Fugitive Days* did not use any that were excluded in *Dreams From My Father*.

Dreams From My Father	Fugitive Days
19 - Verbed •••,	20 - Verbed •••,
17 - Verbed ••••,	12 - Verbed •••••,
16 - Verbed •••••,	8 - _ing •••,
11 - _ing •••,	8 - Verbed ••,
10 - _ing ••••,	8 - Verbed •••••,
10 - _ing ••,	4 - _ing •,
10 - Verbed,	4 - Verbed,
8 - Verbed ••,	4 - Verbed •,
7 - _ing •,	
4 - _ing •••••,	
2 - Verbed •,	

Moshe Koppel's Gender algorithm determines probable author gender. While there are only two possibilities here (Male or Female), the important thing for our current study is the "SPREAD" between Masculine points and Feminine points. In some abstract way, this indicates the degree of Masculinity or Femininity of the author's writing and there is a possibility for wide variation; however the variation here is not wide at all.

Koppel's Gender Algorithm	Dreams From My Father	Fugitive Days
Masculine points	670,209	597,872
Feminine points	282,483	244,569
"Spread" (the difference)	387,726	353,303

Note: *Audacity* scored 473,378 masculine, 193,643 feminine, with a spread of 279,735 !!!

These points are calculated by giving weights to the occurrences of certain words in each work. The fact that the numbers are so similar on both sides with such large numbers involved indicates that the writers are very similar (if not identical). It is extremely difficult, if not impossible, to "fool" Koppel's Gender Algorithm.

Starters (module)

FictionFixer evaluates sentences that start with conjunctions, pronouns, transitionals, known problem starters, adverbs and adjectives, "was" and "had" phrases (with pronouns or character names), and general problems arising from habitually starting sentences with character names. Words listed below are displayed with their number of occurrences as the *first* word of sentences.

Starting with conjunctions (and "The")	Dreams From My Father	Fugitive Days
But	226	114
And	191	130
Or	29	8
Yet	3	0
However	1	0
The	437	450
Starting with pronouns		
He	346	185
She	172	71
It	189	166
They	148	51
You	191	28
I	2125	2146
We	146	312

The proportional relationships between He and She are similar, but most telling is the number of occurrences of "I" as a sentence starter: practically identical! Likewise, with "The."

Additional stylistic-dependant sentence starters. Note: in this analysis semicolon forms were included. This means independent clauses falling to the right of a semicolon were treated as equivalent to independent clauses appearing at the left of the semicolon for purposes of counting the starting word of a sentence (or independent clause in this case).

Dreams From My Father	Fugitive Days
52 - As	55 - If
46 - If	32 - There were
34 - Then	24 - Then
20 - There was	20 - Now
16 - Now	16 - There was
16 - Like	16 - Soon
12 - In fact	16 - As
11 - Still	12 - Of course
11 - Instead	8 - In fact
11 - Eventually	8 - Still
10 - There were	8 - First
8 - Of course	4 - Too
8 - Later	4 - There is
8 - Finally	4 - Second
6 - While	4 - Next
5 - Too	4 - Like
3 - First	4 - Eventually
2 - Soon	4 - Later
1 - Unfortunately	4 - Besides
1 - Second	4 - After all
1 - Next	
1 - Nevertheless	
1 - Unlike	
1 - There are	
1 - Suddenly	
1 - On the other hand	
1 - Meanwhile	
1 - However	
1 - Also	
1 - After all	
1 - Thus	
1 - There had been	
1 - In other words	
1 - In addition	
1 - Fortunately	
1 - For example	

Some starters are intermingled, but in general, a preponderance of this category of sentence starters in *Dreams From My Father* are in the same distribution *Fugitive Days*.

Character name starters were omitted from this analysis due to time constraints (FictionFixer’s use of character names requires assigning each character a character-archetype).

Vocabulary (module)

FictionFixer evaluates problematic modifiers, problem words and phrases, redundancies, clichés, similes, reflexive pronoun usage, adverbial suffixes, and more. Some of these are noted below.

Adverbial Suffixes

The proportions and distribution of the adverbial suffixes (indicating a habitual style of writing and talking) are surprisingly similar.

Adverbial Suffixes	Dreams From My Father	Fugitive Days
—ing	2861	3113
—ly	1071	1428
—ingly	6	39
—ness	89	150
—ize	26	20
—ate	174	221

Problematic Modifiers

The proportions and distribution of the problematic modifiers (indicating a habitual style of writing and talking) are uncannily similar. With a few transpositions (and omissions) their usage is in an almost identical order of frequency.

Dreams From My Father	Fugitive Days
71 - finally	43 - really
53 - really	39 - finally
32 - suddenly	32 - suddenly
23 - mostly	32 - mostly
19 - eventually	28 - simply
12 - exactly	28 - actually
12 - slightly	24 - exactly
10 - simply	16 - slightly
10 - actually	16 - eventually
6 - certainly	16 - completely
5 - completely	12 - personally
4 - truly	12 - absolutely
3 - utterly	8 - totally
2 - basically	8 - predictably
2 - absolutely	4 - truly
1 - seemingly	4 - utterly
1 - practically	4 - practically
1 - personally	4 - highly
1 - hopefully	4 - constantly
1 - highly	
1 - essentially	
1 - constantly	

Contractions

The proportions and distribution of contraction usage (indicating a habitual style of writing and talking) are strikingly similar, even when the two transpositions are taken into consideration.

Dreams From My Father		Fugitive Days
Total contractions = 1536		Total contractions = 1231
638 - 't	→	438 - 't
384 - 's	→	304 - 'd
202 - 'd	→	221 - 's
104 - 're	→	83 - 'm
101 - 'm	→	75 - 're
55 - 'll	→	71 - 'll
53 - 've	→	39 - 've

Problematic Phrases and Redundancies

The proportions and distribution of problematic phrases and redundancies (indicating a habitual style of writing and talking) are strikingly similar, even when the transpositions are considers.

Dreams From My Father		Fugitive Days
Problem Phrases a		
23 - a little	→	103 - a little
17 - sort of	→	67 - kind of
14 - a bit	→	16 - in order to
11 - the fact that	→	16 - a bit
8 - close to	→	8 - close to
8 - a pair of	→	8 - all too
6 - kind of	→	4 - the fact that
6 - to share	→	4 - seem to
6 - seem to	→	4 - I feel
6 - I feel	→	4 - that that
6 - that that	→	4 - had had
4 - would of	→	4 - as per
4 - had had	→	4 - and also
3 - seems to	→	4 - reaching out
3 - far from	→	4 - each and every
2 - so fun	→	
2 - for the children	→	
2 - as per	→	
2 - and also	→	
1 - reaching out	→	
1 - each and every	→	

The most popular phrase (“a little”) is identical, and most of the other phrases that are common to both books are in the same order of frequency. Note that FictionFixer recognizes 342 problem phrases and 47 redundancies (397 total). The fact that 13 of the 15 found in *Fugitive Days* should be identical to those found in *Dreams From My Father* seems to go beyond coincidence.

Clichés

Clichés are not always bad when used artistically; however, authors tend to use the same clichés repeatedly. Thus, tracking cliché usage can be an aid to identifying authorship. FictionFixer currently tracks 3,072 clichés. Note: to save space, the following table lists only clichés that intersect both book’s lists.

Striking to observe is that out of 3,072 clichés, one of these books uses 5% of the available list while the other uses 2% of the list, nonetheless 49% of the clichés found in *Fugitive Days* are common to those in *Dreams From My Father*.

Dreams From My Father	Fugitive Days
Total Clichés = 168	Total Clichés = 51
Clichés common to both books = 25 (i.e. 49% of those in FD)	
<ul style="list-style-type: none"> 12 - instead of 10 - of course 9 - right now 8 - come back 7 - handful 6 - all the time 5 - going on 4 - my way 3 - up and down 3 - no idea 3 - good thing 2 - as usual 1 - who knows 1 - pretty good 1 - over and over 1 - one off 1 - on the spot 1 - move on 1 - each and every 1 - around the corner 1 - why not 1 - to and fro 1 - on the other hand 1 - long run 1 - green light 	<ul style="list-style-type: none"> 67 - of course 20 - no idea 20 - handful 12 - on the other hand 12 - my way 8 - who knows 8 - up and down 8 - right now 8 - good thing 8 - as usual 4 - why not 4 - to and fro 4 - pretty good 4 - over and over 4 - one off 4 - on the spot 4 - move on 4 - long run 4 - instead of 4 - green light 4 - going on 4 - each and every 4 - come back 4 - around the corner 4 - all the time

[note: Throughout this analysis, “control” books have been used at times, to assure that similarities between *Fugitive Days* and *Dreams From My Father* were greater than a book chosen at random. In the first version of this analysis, the right-hand column data above was left over from one of those control checks. This error was noticed when a reader pointed out that the number of occurrences of “of course” in the Cliché list differed from those in the “stylistic-dependant sentence starters” list. These differed because the data (inadvertently) had not been normalized, although the two lists could legitimately differ because the first list concerns occurrences at the *start* of a sentence only, while the cliché list looks at the entire text. Examining that reader’s concerns lead to discovering the other error. In any event, both lists have been corrected.]

Simile indicators

Writers form habits when it comes to indicating that the reader is in a simile. They use the following 14 phrases to indicate the simile. Notice the similarity of order and distribution.

Dreams From My Father	Fugitive Days
438 - as a	568 - as a
182 - as the	154 - as the
110 - as if	87 - as an
70 - as an	24 - as if
26 - was as	12 - was like
14 - as one	8 - were like
6 - was like	8 - was as
5 - were like	8 - as one
4 - been like	4 - were as
4 - be like	4 - be like
2 - were as	0 - is like
2 - as though	0 - being like
1 - is like	0 - been like
	0 - as though

Structure (module)

FictionFixer tracks 100 paragraph characteristics contributing to rhythm. Each paragraph is encoded into a 32-character descriptor representing its type, actor-archetypes, stylistic features, and interrelationship with preceding and following paragraphs, plus a number of quantitative statistics. From this data, the software identifies patterns and progressions, both recurrent and unique. Most perceivable structural elements are displayed from the standpoint of zeroeth-, first-, and second-order entropy and redundancy, in eleven "views" of subsets of the data descriptors. In simple terms: this answers questions like, "should I follow that multi-sentence non-dialog paragraph about the antagonist with a single sentence of dialog by the protagonist, and should it include a tag or a "special feature" and should the paragraph contain a question or a statement? This "Structure" option can seem complex to first-time users.

It does not make sense to apply this module to the Obama/Ayers problem for two reasons: 1) The entire Ayers work is not complete and this module requires a complete manuscript (normalization upward does not make sense in this module), and 2) this feature only yields usable information when all character archetypes are known, identified, and assigned. A future version of FictionFixer could have an option to use the Structure Module without considering the functional categories of the characters (cast or actor list) if such a demand warranted development in this direction.

Flow (module)

FictionFixer evaluates dialog and narrative (non-dialog) "runs" from the standpoint of average run-length, minimum, maximum, and mean, as well as providing a breakdown by runlength. Additionally, a color "run" map of each work is created, differentiating between single and multiple sentence dialog runs, vs. single and multiple sentence narrative runs (and also flagging chunks in first person). Can be very helpful for visualizing large-scale structures to which you gravitate out of habit or otherwise unconsciously.

In the Flow diagram, extracted recurrent patterns use the following conventions: Nondialog paragraphs are indicated with the letter ‘N’ in blue (upper case for multi-sentence paragraphs, lower case for single sentence paragraphs). Dialog paragraphs are indicated with the letter ‘D’ in red. Paragraphs dedicated to narrators speaking in the first person (with “I” or “me”) are indicated with the letter ‘F’ in green (upper case for multi-sentence paragraphs, lower case for single sentence paragraphs, in all cases).

It does not make sense to apply this module to the Obama/Ayers problem because this module requires a complete manuscript (normalization upward does not make sense in this module).

Senses (module)

FictionFixer tracks more than 5,000 "sensory-trigger" words in five categories: sight, sound, touch, taste, and smell. The software evaluates the richness of sensory vocabulary as well as the rate of delivery (per thousand words) of words triggering sensory reactions.

The data generated by the Senses Module is voluminous. For example, normalized *Dreams From My Father* yielded 5999 triggers (911 unique), with delivery-per-thousand-words rates of 18, 10, 9, 3, and 1 (respectively: sight, sound, touch, taste, and smell). Normalized *Fugitive Days* yielded 6471 triggers (669 unique) with delivery-per-thousand-words rates of 24, 17, 17, 6, and 2.

With such a vast amount of information concerning sensory triggers and because neither book uses more than 16% of the available sensory triggers, I’ve decided to take the same approach as with Clichés (above) and list only the triggers that the books have in common with an indication of what percentage this represents of the total triggers used (which is already a small percent of the total triggers tracked). When examining the lists, notice the similarities in distributions (triggers occur in the same general place indicating a hierarchy of sensory triggers in the mind of the writer).

SIGHT sensory triggers

Dreams From My Father	Fugitive Days
192 out of 248 triggers in common (77%)	
245 - black	75 - saw
168 - see	75 - looked
102 - looked	71 - see
89 - seemed	67 - look
85 - look	67 - black
82 - saw	55 - seemed
58 - looking	47 - seen
45 - gone	43 - looking
39 - seen	36 - smoke
37 - passed	36 - morning
35 - watched	28 - outside
35 - inside	28 - inside
32 - seem	28 - brilliant
30 - picture	28 - beautiful
29 - outside	24 - pretty
29 - image	24 - neck
28 - meet	20 - watch
28 - eyes	20 - showed
27 - noticed	20 - moon
26 - morning	20 - miss
25 - lost	20 - gray
23 - watching	20 - gone
23 - pass	20 - gold

22 - show	20 - eyes
22 - figure	20 - brown
22 - evening	16 - sun
19 - watch	16 - spirit
19 - imagine	16 - scout
19 - beautiful	16 - regard
18 - showed	16 - presence
18 - brown	16 - passed
17 - study	16 - paint
17 - spirit	16 - mouth
16 - miss	16 - lovely
16 - imagined	16 - finger
16 - dream	16 - film
16 - clear	16 - faded
15 - sun	16 - dull
14 - smoke	16 - drew
14 - photograph	16 - dream
14 - seeing	16 - clear
14 - mouth	16 - arms
14 - bright	12 - watched
13 - ruby	12 - teeth
12 - pretty	12 - sparkling
11 - presence	12 - show
11 - gray	12 - present
10 - nose	12 - picture
10 - message	12 - photograph
10 - neck	12 - passing
10 - emerged	12 - obvious
9 - discovered	12 - missed
8 - passing	12 - lost
8 - handsome	12 - knee
7 - knee	12 - intense
7 - drew	12 - imagine
7 - chest	12 - imagination
6 - shape	12 - image
6 - rising	12 - golden
6 - present	12 - gleaming
6 - cast	12 - figure
6 - naked	12 - eyebrow
6 - lamp	12 - evening
6 - gold	12 - demonstration
6 - finger	12 - chest
6 - fair	12 - bright
6 - faded	12 - bloody
6 - disappeared	8 - wobbly
5 - wobbly	8 - vivid
5 - steel	8 - thigh
5 - model	8 - symbol
5 - mirror	8 - showing
5 - invisible	8 - seem
5 - hidden	8 - seeing
5 - dirty	8 - rising
5 - bare	8 - pitched
5 - arms	8 - photo
4 - teeth	8 - pass
4 - showing	8 - mirror
4 - orange	8 - meet
4 - obvious	8 - lamp
4 - missed	8 - invisible
4 - forehead	8 - imagined
4 - film	8 - hidden
4 - exposed	8 - glowing
4 - belly	8 - glimpsed
4 - bay	8 - glare

3 - smoked	8 - forehead
3 - moon	8 - focus
3 - focus	8 - flush
3 - fingers	8 - fair
3 - eyebrow	8 - exposed
3 - dusk	8 - dusk
3 - dull	8 - display
3 - dreamed	8 - disappeared
3 - beam	8 - dirty
3 - vague	8 - crow
3 - reflected	8 - cloudy
3 - pink	8 - cast
3 - murky	8 - candle
3 - legs	8 - butt
3 - gesture	8 - bosom
3 - flash	8 - belly
3 - fading	8 - beaming
3 - discover	8 - bare
3 - cue	8 - banner
3 - bosom	4 - watching
3 - blur	4 - vague
2 - twilight	4 - unfolding
2 - trace	4 - twinkling
2 - survey	4 - twilight
2 - sparkling	4 - trace
2 - seeming	4 - surveyed
2 - mysterious	4 - survey
2 - lovely	4 - sunny
2 - imagination	4 - study
2 - golden	4 - streak
2 - glowing	4 - steel
2 - flush	4 - spark
2 - flame	4 - sophisticated
2 - feature	4 - smoked
2 - emerald	4 - shiny
2 - elbow	4 - shining
2 - display	4 - shimmering
2 - decorated	4 - shape
2 - crow	4 - serene
2 - cloudy	4 - seeming
2 - candle	4 - ruby
2 - banner	4 - risen
1 - sunny	4 - revealing
1 - spark	4 - reflected
1 - shiny	4 - profile
1 - shining	4 - polished
1 - shimmering	4 - pink
1 - scout	4 - perspective
1 - risen	4 - peaking
1 - profile	4 - painted
1 - perspective	4 - orange
1 - peaking	4 - opaque
1 - painted	4 - obviously
1 - paint	4 - noticed
1 - opaque	4 - nostril
1 - obviously	4 - nose
1 - lookout	4 - naked
1 - halo	4 - mysterious
1 - glare	4 - murky
1 - flickering	4 - model
1 - ebony	4 - message
1 - dreamy	4 - marble
1 - dotted	4 - lookout
1 - distortion	4 - legs

1 - demonstration	4 - lackluster
1 - clear-eyed	4 - irregular
1 - bust	4 - handsome
1 - bronze	4 - halo
1 - brilliant	4 - gesture
1 - bloody	4 - flickering
1 - vivid	4 - flash
1 - unfolding	4 - flame
1 - twinkling	4 - fingers
1 - thigh	4 - feature
1 - symbol	4 - fading
1 - surveyed	4 - evaporated
1 - streak	4 - emerging
1 - sophisticated	4 - emerged
1 - serene	4 - emerald
1 - revealing	4 - elbow
1 - regard	4 - ebony
1 - polished	4 - dreamy
1 - pitched	4 - dreamed
1 - photo	4 - dotted
1 - nostril	4 - dizzy
1 - marble	4 - distortion
1 - lackluster	4 - distorted
1 - irregular	4 - distinguish
1 - intense	4 - discovered
1 - glimpsed	4 - discover
1 - gleaming	4 - delusion
1 - evaporated	4 - decorated
1 - emerging	4 - cue
1 - dizzy	4 - clarity
1 - distorted	4 - bust
1 - distinguish	4 - bronze
1 - delusion	4 - braid
1 - clarity	4 - blur
1 - butt	4 - bloodied
1 - braid	4 - blinking
1 - bloodied	4 - blinding
1 - blinking	4 - beam
1 - blinding	4 - bay
1 - beaming	4 - animated

SOUND sensory triggers

Dreams From My Father	Fugitive Days
104 out of 156 triggers in common (67%)	
110 - say	79 - say
67 - talk	63 - called
67 - voice	55 - peace
52 - heard	55 - heard
51 - shook	32 - talked
45 - called	32 - laughed
41 - talking	32 - hear
41 - call	32 - fire
40 - hear	32 - calling
38 - spoke	28 - voice
36 - laughed	28 - spoke
29 - saying	28 - singing
24 - speak	24 - talking
23 - laugh	24 - shouted
22 - shouted	24 - saying
21 - silence	24 - pound
19 - listening	24 - pipe

18 - talked	24 - noisy
18 - quiet	20 - cried
18 - barely	20 - call
17 - laughter	16 - telephone
15 - fire	16 - speaking
14 - shaking	16 - shook
14 - laughing	16 - sang
13 - whispered	16 - quiet
10 - listened	16 - march
10 - speaking	16 - horn
10 - cry	16 - hearing
10 - calling	16 - ear
10 - announced	16 - cry
9 - music	12 - talk
9 - hearing	12 - speech
9 - beat	12 - shell
8 - spoken	12 - noise
8 - speech	12 - laughter
8 - pipe	12 - crack
7 - unspoken	12 - calm
6 - peace	12 - boom
6 - calm	8 - whispered
5 - poetry	8 - tick
5 - ear	8 - shattered
5 - cracked	8 - shaking
5 - beating	8 - root
5 - band	8 - puffing
4 - singing	8 - pop
4 - overheard	8 - listened
4 - bay	8 - laugh
3 - sang	8 - knock
3 - puff	8 - instrument
3 - noise	8 - humming
3 - knock	8 - crow
3 - gentle	8 - cracking
3 - cried	8 - cheered
3 - crack	8 - cheer
3 - telephone	8 - bombing
3 - silently	8 - beat
3 - root	8 - barely
3 - popped	4 - unspoken
3 - noisy	4 - turmoil
3 - march	4 - tune
3 - knocked	4 - sputtered
3 - guitar	4 - spoken
3 - drum	4 - speak
3 - audience	4 - snort
2 - tick	4 - smothered
2 - slammed	4 - slammed
2 - pop	4 - silently
2 - instrument	4 - silence
2 - humming	4 - sigh
2 - crow	4 - serene
2 - cheered	4 - scream
1 - sputtered	4 - rhyme
1 - sigh	4 - puff
1 - shell	4 - popped
1 - shattered	4 - poetry
1 - pound	4 - overheard
1 - jar	4 - noisily
1 - howl	4 - music
1 - horn	4 - marching
1 - declared	4 - listening
1 - cheer	4 - laughing

1 - boom	4 - knocked
1 - bombing	4 - jar
1 - turmoil	4 - howl
1 - tune	4 - harmony
1 - snort	4 - gust
1 - smothered	4 - guitar
1 - serene	4 - grunt
1 - scream	4 - gentle
1 - rhyme	4 - fiddle
1 - puffing	4 - drum
1 - noisily	4 - declared
1 - marching	4 - deafening
1 - harmony	4 - cracked
1 - gust	4 - concert
1 - grunt	4 - chorus
1 - fiddle	4 - chanted
1 - deafening	4 - buzz
1 - cracking	4 - beating
1 - concert	4 - bay
1 - chorus	4 - barking
1 - chanted	4 - band
1 - buzz	4 - audience
1 - barking	4 - announced

TOUCH sensory triggers

Dreams From My Father	Fugitive Days
113 out of 166 triggers in common (68%)	
112 - hand	162 - felt
93 - long	95 - long
74 - felt	67 - hand
51 - shook	59 - love
39 - feel	43 - held
37 - arm	32 - loved
31 - sense	32 - hold
28 - feeling	32 - dead
25 - held	28 - water
23 - reached	28 - singing
22 - bit	28 - bit
21 - cut	28 - arm
21 - love	24 - pound
20 - water	24 - neck
14 - shaking	24 - feeling
14 - handed	24 - cut
13 - hold	20 - feel
12 - dead	20 - cold
11 - reach	16 - shook
11 - caught	16 - sense
10 - cool	16 - reached
10 - neck	16 - reach
10 - holding	16 - kiss
9 - grabbed	16 - finger
9 - cold	16 - cool
8 - touch	12 - touch
8 - stupid	12 - stupid
7 - sweat	12 - strike
7 - loved	12 - loving
7 - hit	12 - ice
7 - catch	12 - holding
6 - touched	12 - embraced
6 - swept	12 - embrace
6 - wash	12 - burned

6 - slipping	12 - blow
6 - rubbed	12 - blew
6 - jumped	8 - touching
6 - finger	8 - tongue
6 - effect	8 - swept
5 - reaching	8 - sweating
5 - rage	8 - sticky
5 - grip	8 - squeeze
4 - trembling	8 - snow
4 - strike	8 - shattered
4 - singing	8 - shaking
4 - blew	8 - rubbed
3 - wet	8 - reaching
3 - tongue	8 - longing
3 - smoked	8 - knock
3 - knock	8 - kissed
3 - ice	8 - hit
3 - embraced	8 - handle
3 - burned	8 - flush
3 - brushed	8 - effect
3 - bite	8 - clinging
3 - tag	8 - caught
3 - shaken	4 - wet
3 - knocked	4 - wash
3 - hugged	4 - tropical
3 - embrace	4 - trembling
3 - clutching	4 - trembled
3 - burning	4 - trace
3 - blow	4 - touched
2 - trace	4 - thumb
2 - sweating	4 - thrilled
2 - squeeze	4 - tag
2 - slammed	4 - sweat
2 - punch	4 - sunny
2 - kiss	4 - sucking
2 - handle	4 - squeezed
2 - flush	4 - soaked
2 - flame	4 - smoked
2 - brush	4 - smack
1 - trembled	4 - slipping
1 - thumb	4 - slammed
1 - thrilled	4 - shaky
1 - sunny	4 - shaken
1 - shattered	4 - sensation
1 - scratch	4 - scratch
1 - pound	4 - roasting
1 - nudged	4 - rage
1 - kissed	4 - punching
1 - jerked	4 - punch
1 - icy	4 - pulsing
1 - clinging	4 - pinch
1 - tropical	4 - oppressed
1 - touching	4 - nudged
1 - sucking	4 - longed
1 - sticky	4 - licking
1 - squeezed	4 - knocked
1 - soaked	4 - kissing
1 - snow	4 - jumped
1 - smack	4 - jerked
1 - shaky	4 - icy
1 - sensation	4 - hugged
1 - roasting	4 - huddled
1 - punching	4 - handed
1 - pulsing	4 - gust

1 - pinch	4 - gripped
1 - oppressed	4 - grip
1 - loving	4 - grabbed
1 - longing	4 - fried
1 - longed	4 - flame
1 - licking	4 - clutching
1 - kissing	4 - choked
1 - huddled	4 - catch
1 - gust	4 - burning
1 - gripped	4 - brushed
1 - fried	4 - brush
1 - choked	4 - bite
1 - bake	4 - bake
1 - anguish	4 - anguish
1 - ached	4 - ached

TASTE sensory triggers

Dreams From My Father	Fugitive Days
50 out of 73 triggers in common (69%)	
91 - turned	43 - turned
25 - food	36 - dinner
24 - beer	32 - nice
22 - dinner	16 - sharp
14 - mouth	16 - mouth
14 - eat	16 - food
12 - meal	16 - desire
12 - lunch	16 - delicate
12 - strong	16 - butter
11 - nice	12 - teeth
9 - flat	12 - bread
9 - desire	12 - beer
8 - eating	8 - wine
8 - meat	8 - swallowed
7 - rich	8 - rich
6 - weak	8 - restaurant
6 - rough	8 - milk
6 - restaurant	8 - lunch
6 - feed	8 - flat
5 - sharp	8 - eating
4 - teeth	8 - eat
3 - puff	8 - breakfast
3 - bite	4 - weak
3 - fed	4 - tooth
2 - wine	4 - swallowing
2 - tooth	4 - swallow
2 - swallowed	4 - sucking
2 - soup	4 - strong
2 - sauce	4 - stale
2 - honey	4 - soup
2 - feeding	4 - smack
2 - disgust	4 - sauce
2 - break fast	4 - sample
1 - pepper	4 - salt
1 - nurse	4 - rough
1 - mildly	4 - puff
1 - lips	4 - pepper
1 - candy	4 - nurse
1 - swallowing	4 - nasty
1 - swallow	4 - mildly
1 - sucking	4 - meat
1 - stale	4 - meal

1 - smack	4 - lips
1 - sample	4 - honey
1 - salt	4 - feeding
1 - nasty	4 - feed
1 - milk	4 - fed
1 - delicate	4 - disgust
1 - butter	4 - candy
1 - bread	4 - bite

SMELL sensory triggers

Dreams From My Father	Fugitive Days
13 out of 26 triggers in common (50%)	
23 - air	39 - air
14 - breath	20 - breath
12 - strong	16 - sharp
10 - nose	16 - delicate
7 - rich	8 - rich
5 - sharp	4 - strong
1 - blossom	4 - stale
1 - atmosphere	4 - nostril
1 - stale	4 - nose
1 - nostril	4 - decaying
1 - delicate	4 - choked
1 - decaying	4 - blossom
1 - choked	4 - atmosphere

Conclusion: This analysis makes a strong case for the likelihood that the author of *Fugitive Days* ghostwrote *Dreams From My Father*. The possible constraint of having to use recordings of dialog (either tape recordings or notes) could account for discrepancies related to dialog passages not exhibiting personal stylistic features that are evident in non-dialog material and other works by the presumed author.

Alternatively, another scenario might be possible: the author of *Fugitive Days* might have served as a “book doctor” for *Dreams From my Father* and given extreme license to edit and rewrite. Again, the dialog would remain intact and would exert the same impact upon analysis.

Caveat: Normally, FictionFixer works with text samples of 50,000-words or greater (the closer to 100,000, the better; remember, many of FictionFixer’s calculations require data to be normalized to a 100,000-word standard). We decided to work with Ayer’s *Fugitive Days* even though only 25,344 words were available as electronic text simply because of time constraints. Further, we had complete electronic versions of both *Dreams From My Father* (145,374 words) and *The Audacity of Hope* (118,499 words) with which to work. If a reader of this document has a sample of Ayer’s work that is closer to 100,000 words in length, we would greatly appreciate a copy of it to run through FictionFixer for the purpose of generating a more accurate analysis.