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Ways of Expressing Cardinal Numerals in the History of English: From *one and twenty* to *twenty-one*

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Abstract

In Present-day English, the number twenty-one is expressed cardinally as *twenty-one*. In the past, *one and twenty* and *twenty and one* were also available. This paper attempts to expound on the ways in which cardinal numerals from 21 to 99 have been expressed since the mid-fourteenth century to compensate for the paucity of research in this area. Examined corpora are the same as those in Nakamura (2021). Historical variants are included in the analysis of those corpora; for example, 29 alphabetic forms such as *þrytty*, *thriti*, *threty*, *thurty* and *thirty* were searched for collecting numbers from thirty-one to thirty-nine.

Evidence shows that, amongst other points, the form of *one and twenty* was the mainstream in British English until around 1600, while around 1650, *twenty-one* began to multiply and took precedence over the other variants around 1900. *Twenty and one* was rare. No example of *one twenty* occurred throughout the examined periods, perhaps because of its indistinguishableness from modes of time reference. In American English, the examined corpora have maintained a higher percentage exclusively of *twenty-one* since the founding of the United States than in its contemporary British English. Except for a couple of persons, writers in nineteenth-century America who often used *one and twenty* were those who were born in the former colonies established by Britain on the Atlantic coast of North America. Their English was, in a sense, a blood relative of British English.

Keywords: English historical philology and linguistics, morpho-syntax, cardinal numeral, corpus linguistics

I. Introduction

1.1. Previous Studies, Target Construction and Purpose of the Present Study

In Present-day English, as stated in Quirk et al. (1985: 393) and Huddleston and Pullum (2002: 385-386, 1716-1718), the number twenty-one is expressed cardinally as *twenty-one*. In the past, however, English had a different number system.

*OED*² refers to *one and twenty*, *twenty and one* and *twenty-one* as cardinal numbers (1a).

According to Jespersen (1940 [1974]), the older standard form of *one and twenty* was still used except in numerals above 50, and occasionally used in the U. S. for stylistic reasons (1b). Wagner and Pinchon (1962: 107 [cf. Hashimoto 2016: 95]) states that the middle type (*twenty and one*) was overwhelmingly used between 1600 and 1700 in French. Schibsbye (1977: 112) writes that the modern type (*twenty-one*) appeared in ME (Middle English) under French influence. Araki and Ukaji (1984: 529) describes that the old type (*one and twenty*) was predominantly used in OE (Old English), ME and EModE (Early Modern English), becoming obsolescent in the eighteenth century, and that the middle type (*twenty and one*), after the occurrence of the modern type (*twenty-one*) in the early sixteenth century, underwent rapid declination and accelerated the spread of the modern type. They also write that the middle type occurred frequently in the King James Version, especially in the Old Testament. Von Mengden (2010) provides a convenient review of theoretical issues involved in OE numerals. Hashimoto (2012) deals with the variations of *one and twenty*, *twenty and one* and *twenty-one*, which were used in ME and EModE biblical translations, and examines foreign influences such as Hebrew and Latin (1c). Recently, Hashimoto (2016) has provided variations of the ways of expressing cardinal numerals (21-99) in six biblical translations (1d & Table 1).

- (1) a. Combined with the numerals below ten (*one* to *nine*) to express the numbers between twenty and thirty; formerly (and still occasionally) ***one and twenty***, ***two and twenty***, etc. (rarely ***twenty and one***, etc.); now commonly ***twenty-one***, ***twenty-two***, etc.;

(*OED*², s.v. *twenty*, *numeral a.* and *n.*, *A. adj.*, 1b)

- b. “In additions of ‘tens’ and ‘ones’ the ‘one’ now generally follows the ‘ten’ (*twenty-one*), but originally it always preceded it: *one-and-twenty*, a word-order which is still used except in numerals above 50. Mr. Walt Arneson states: [_{Nakamura} this word-order is] ‘Used in U. S. only occasionally, for stylistic effect or facetiously. . .’” (Jespersen 1940 [1974]: 581-583)

- c. . . . in the ME and early Modern English biblical versions they (= the middle types) appear as a result of the influence of the Hebrew middle type and/or the Latin middle and modern types. On the basis of the biblical data, . . . the Hebrew middle type and the Latin modern type played an important role in inducing the English middle type, which accelerated the occurrence of the modern type in the English

Bibles. The origin of the modern type in the English Biblical translations is traceable to the Latin modern type in the Vulgate. (Hashimoto 2012: 56)

d. Table 1 Ways of expressing cardinal numerals (21-99) in six biblical translations—
Reconstructed from Hashimoto (2016: 97-99)

	Roman number				Roman number + English alphabet number	English alphabet number + Roman number
	ixx	i and xx	xxi	xx and i	i and twenty	twenty and i
Old English Version of the Heptateuch (1st half of the 11c)	1	2	-	-	2	-
Early Wycliffite Bible (c1384), Genesis to Daniel	-	-	-	-	-	-
Tyndale's Pentateuch (1530)	-	-	95	3	-	4
Bishops' Bible (1568), Genesis to Daniel	-	-	1	-	-	-
Rheims-Douay Bible (1569), Genesis to Daniel	-	-	-	-	-	-
King James Bible (1611), Genesis to Daniel	-	-	-	-	-	-

	English alphabet number			
	one and twenty	one score and one	twenty and one	twenty(-)one
Old English Version of the Heptateuch (1st half of the 11c)	11	-	-	-
Early Wycliffite Bible (c1384), Genesis to Daniel	314	3	50	-
Tyndale's Pentateuch (1530)	-	-	-	(twenty times onehold 1)
Bishops' Bible (1568), Genesis to Daniel	60	40	271	-
Rheims-Douay Bible (1569), Genesis to Daniel	157	3	17	196
King James Bible (1611), Genesis to Daniel	87	30	257	1

An overview of these previous studies indicates that significant patterns of the expressions of cardinal numerals in the history of English are those in (2), and that a large-scale study has not been undertaken to describe and explain both the stability and change of cardinal numerals.

(2) Pattern A *one and twenty* / *one-and-twenty*

Pattern B *one twenty* / *one-twenty*

Pattern C *twenty and one* / *twenty-and-one*

Pattern D *twenty one* / *twenty-one*

Therefore, as an initial investigation, the present paper checked the variations of the

ways in which cardinal numerals were expressed in the English of Geoffrey Chaucer, William Shakespeare, the Authorized Version of the English Bible and present-day English in the U.K., the U.S., Australia and India. Table 2 suggests that Chaucer had Pattern A only, Shakespeare Patterns A and D, and the Authorized Version of the English Bible Patterns C, A and D. In stark contrast, present-day English corpora across four regional variants contain only Pattern D: British English, American English, Australian English and Indian English. Accordingly, it seems to be of much interest to discover at which stage in the history of English such a change took place.

Table 2 Variations of the ways in which cardinal numerals from 21 to 99 were expressed in the English of Geoffrey Chaucer, William Shakespeare, the Authorized Version of the English Bible and present-day English in the U.K., the U.S., Australia and India

Corpus \ Pattern	A	B	C	D
G. Chaucer (<i>Canterbury Tales</i>)	3	-	-	-
⋮	⋮	⋮	⋮	⋮
W. Shakespeare (<i>Err.</i> , <i>TGV</i> , <i>Shr.</i> , <i>LLL</i> , <i>MND</i> , <i>MV</i> , <i>Wiv.</i> , <i>Ado</i> , <i>AYL</i> , <i>AWW</i> , <i>TN</i> , <i>MM</i> , <i>WT</i> , <i>Tmp.</i>)	9	-	-	4
Authorized Version (Old Testament)	4	-	229	1
⋮	⋮	⋮	⋮	⋮
LOB <1961>	-	-	-	195
Brown <1961>	-	-	-	202
FLOB <1991-1992>	-	-	-	156
Frown <1991-1992>	-	-	-	171
ACE <1986>	-	-	-	80
Kolhapur <1978>	-	-	-	143

Incidentally, as suggested in Table 3, older forms are in fact still only occasionally used in Present-day British English, since twenty-one examples of Pattern A and one example of Pattern C are attested in the British National Corpus.

Table 3 Variations of the ways in which cardinal numerals are expressed—British National Corpus

Corpus \ Pattern	A	B	C	D
BNC <1984-1994>	21*	-	1**	almost regularly

Notes to Table 3

*(i) Four examples written in previous centuries and one example influenced by the German language were excluded from the statistics, as in the following:

1989 Brian Vickers, *Returning to Shakespeare*, BNC, CRV (domain: arts), Although at one point Lear is willing to return to Goneril, since she seems to be allowing him fifty knights, Regan only twenty-five, so that “Thy fifty yet doth double five-and-twenty, And thou art twice her love”;

This quotation seems to be modelled on W. Shakespeare, *King Lear*, Act 2, Scene 4, 262.

(ii) The twenty-one examples appear in the following domains: novels and fiction (6), leisure and travel (4), poems (3), world affairs (3), speech recorded in business contexts (2), social science (1), belief & thought (1), arts (1); seventeen out of the twenty-one examples are used as determiners in NPs, and four as heads in NPs.

** This example appears in the domain of world affairs and is used as the head in an NP.

Thus, this paper focusses on elucidating the two points defined in (3).

(3) (a) the time around which Pattern D took precedence over the other patterns, the factors which accelerated the use of Pattern D, and the reason why older patterns became obsolescent over the course of the twentieth century, with respect to cardinal numerals from 21 to 99 in British English, and

(b) the history of cardinal numerals from 21 to 99 in late eighteenth- to early twentieth-century America

1.2. Examined Corpora, Search Words and Lexical Analysis Software

Examined corpora and a lexical analysis software are the same as those in Nakamura (2021: 24, 36-37). Search words for collecting cardinal numerals are listed in (4), where historical variants are carefully selected for the present study. For example, 29 alphabetic forms including *prihti*, *prutty*, *thritte*, *thratty*, *thyrtye* and *thirty* were searched for collecting numbers from thirty-one to thirty-nine.

(4) Search words for collecting cardinal numerals

twenti / tuenty / tuenti / tuent / twentie / tuentie / twentye / twantie / twinti /
 tuonti / toontie / twenty / ðrittih / þrihti / þrittiz / þritti / þrittie / þrytti / þriḡti /
 þritty / þrytty / þritte / þrutty / thriti / thritte / thritti / thritty / þretti / þretty /
 threti / threiti / thretti / threty / threttie / thratty / thritti / thyrtty / thurty /
 thyrttye / thirtie / thirty / fowerti / feowerti / feouwerti / fuwerti / feuverti / fuerti /
 feowrti / fourte / fourti / vourti / vourty / forti / fourty / faurty / fourthi / fourthy /
 fourtie / fourtye / fortie / forty / fifti / fiftiḡ / vifti / fifti / fyfte / fyfty / fiftie / fiftye /
 fyvetie / fivety / fifty / sixti / zixti / sixty / sixsty / sixtye / sixtie / syxty / syxti /
 sextih / sexdeih / sexti / sixty / cexy / sextie / sexte / saxe / saxtie / saxty /
 seoventi / seofenntiḡ / seoffenntiḡ / seyventi / sewinty / zeventy / seventy / sevinte /
 ceventye / senty / seaventy / seventy / eizteti / eyḡty / eyḡty / eightie / eighty /
 niḡenti / niḡneti / neneti / nineti / nynte / ninte / nente / nynete / nynty / nyntie /
 nyntie / ninetie / ninety

A few criteria of analysis are described here. The quotations in (5) were not included in the statistics below because, in (5a), the number is not fully spelt out, the translator of this part and the period of translation are not certain in (5b), and the underlined part in (5c) is a fraction, where ‘eighty-six’ would be intended. The quotation in (5d) is a genuine example of Pattern D. It was difficult, however, to classify it into one of the following periods: 1551-1600 or 1601-1650. On the contrary, the quotation in (6), where the word ‘twentie-eight’ should have been spelt ‘twentie-eighth’, was dealt with as an example of cardinal numeral.

- (5) a. 1420-1500 Helsinki-DP, CMCAPCHR, Thirty 3 Livers for the charge he was at (1681 Newdigate 11); iiii pousand sixti and ix
- b. 1815 T. Peacock, *Letters*, InteLex IV, On account of thirty-five pounds I am perishing in prison.
- c. 1815 D. Ricardo, *Essay on Profits*, when one thousand eight hundred and eighty-sixteen and a half per cent.
- d. 1570-1640 *The Trial of Sir Walter Raleigh*, Helsinki-DP, CETRI2B, I knew of twenty five Millions he had
- (6) 1814 Waverley Scott, *Waverley*, Towards the evening of the twentie-eight December 1745, the Prince entered the town of Penrith

II. Cardinal Numerals in the History of British English

2.1. General Chronological Trends

Tables 4-11 show statistics for the four variants per corpus.

Table 4 Variations of the ways in which cardinal numerals were expressed—electronically logged British English texts (1351-1950)

Corpus \ Pattern	A	B	C	D
12c-1350	-	-	-	-
1351-1400	3	-	-	-
1401-1450	2	-	-	1
1451-1500	-	-	-	-
1501-1550	-	-	-	-
1551-1600	12	-	-	4
1601-1650	9	-	2	6
1651-1700	4	-	5	240
1701-1750	89	-	2	256
1751-1800	101	-	-	366
1801-1850	196	-	2	376
1851-1900	110	-	-	380
1901-1950	20	-	-	223

Table 5 Variations of the ways in which cardinal numerals were expressed—British English documents in ARCHER 3.2 (1600-1999)

Corpus \ Pattern	A	B	C	D
1600-1649	3	-	-	2
1650-1699	5	-	-	10
1700-1749	-	-	-	10
1750-1799	5	-	1	10
1800-1849	3	-	-	-
1850-1899	-	-	1	3
1900-1949	-	-	-	5
1950-1999	-	-	-	6

Table 6 Variations of the ways in which cardinal numerals were expressed—IntelEx (1501-1950)

Corpus \ Pattern	A	B	C	D
1501-1550	-	-	1	-
1551-1600	3	-	1	9
1601-1650	5	-	1	25
1651-1700	3	-	-	11
1701-1750	8	-	-	16
1751-1800	7	-	-	45
1801-1850	58	-	twenty & the one 1	130
1851-1900	20	-	-	96
1901-1950	-	-	-	76
1951-2000	-	-	-	1

Table 7 Variations of the ways in which cardinal numerals were expressed—Helsinki-DP (c750-1710)

Corpus \ Pattern	A	B	C	D
-1500	46	-	5	-
1501-1550	1	-	-	-
1551-1600	4	-	-	-
1601-1650	11	-	1	5
1651-1700	11	-	17	23
1701-1710	5	-	-	-

Table 8 Variations of the ways in which cardinal numerals were expressed—ICAMET (1386-1688)

Corpus \ Pattern	A	B	C	D
-1500	28	-	7	1
1501-1550	-	-	-	5
1551-1600	-	-	-	-
1601-1650	2	-	-	2
1651-1688	-	-	-	1

Table 9 Variations of the ways in which cardinal numerals were expressed—CEECS (1418-1680)

Corpus \ Pattern	A	B	C	D
1418-1550	-	-	-	-
1551-1600	-	-	-	-
1601-1650	5	-	-	3
1651-1680	1	-	-	-

Table 10 Variations of the ways in which cardinal numerals were expressed—Lampeter (1640-1740)

Corpus \ Pattern	A	B	C	D
1640-1650	-	-	-	6
1651-1700	-	-	3	47
1701-1740	-	-	-	18

Table 11 Variations of the ways in which cardinal numerals were expressed—Newdigate (1674-1692)

Corpus \ Pattern	A	B	C	D
1674-1692	-	-	-	7

Table 12 Integration of Tables 4-11

Corpus \ Pattern	A	B	C	D
-1500	79	-	12	2
1501-1550	1	-	1	5
1551-1600	19	-	1	13
1601-1650	35	-	4	49
1651-1700	24	-	25	339
1701-1750	102	-	2	300
1751-1800	113	-	1	421
1801-1850	257	-	3	506
1851-1900	130	-	1	479
1901-1950	20	-	-	304
1951-2000	-	-	-	7

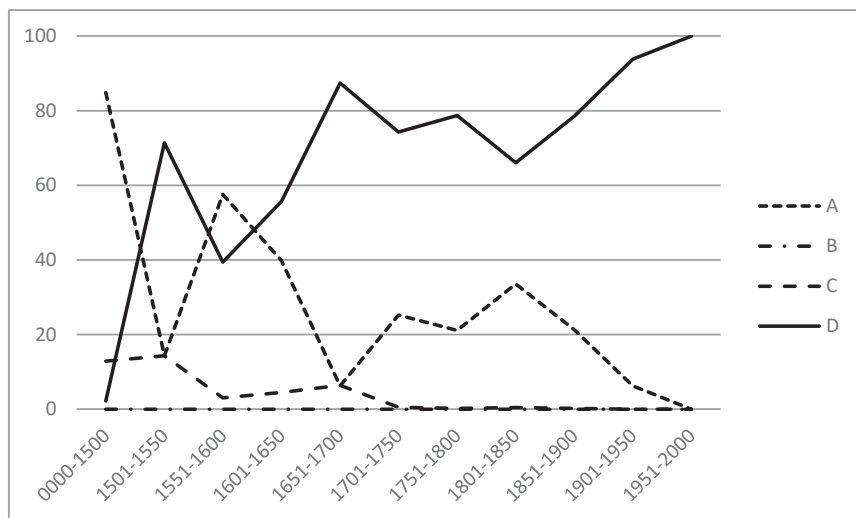


Figure 1 Figuration of Table 12

Integrated statistics in Table 12 and its corresponding Figure 1 above indicate the chronological process in which Pattern D (*twenty-one*) became predominant (in other words, Patterns A and C became obsolescent). First, until around 1600, Pattern A (*one and twenty*) was the mainstream in British English. The use of French by the upper class in Middle English did not affect the way of expressing cardinal numbers. Second, during the three hundred years between 1600 and 1900, Pattern D continued to vie with Pattern A for complete predominance as an obligatory cardinal numerical form, until at last Pattern D gained predominance over the other patterns around the turn of the twentieth century.¹ Third, as expected, no example of Pattern B occurred throughout the periods examined. Pattern B (*one twenty / one-twenty*) was and still is an important way of expressing time. In answer to the question “What time is it now?”, one will say, “It’s *one-twenty* [= ‘twenty minutes past one o’clock’]”. When asked, “How old is your goldfish?” one could say, “It’s *one-twenty* [= ‘twenty-one years old’]. A rather elderly fish.” Perhaps people desired to avoid the confusion between time reference and a cardinal numeral because ways of expressing cardinal numerals were superficially indistinctive from those of time reference. Fourthly, these syntactic synonyms, Patterns A, C and D, showed no distinctions as to whether the numerals were used as heads or determiners in NPs. Morphologically, syntactically, and semantically they showed free alternation.

Fifthly, writers who used Pattern A more than three times in 1701-1850 were Daniel Defoe (58), Jonathan Swift (13), John C. Marlborough (7), Colley Cibber, George Farquhar (5 respectively), Henry Fielding, William Cadogan, Richard Steele (4 respectively) during 1701-1750; Adam Smith (49), Laurence Sterne (21), James Boswell (8), Mary Wollstonecraft (6), Samuel Johnson (5) during 1751-1800; and Charles Dickens (82), Jane Austen (84), Robert Southey (33), Mary Brunton (11), Walter Scott (7), Maria Edgeworth, William Hazlitt (5 respectively), Charles & Mary A. Lamb (4) during 1801-1850. Considering that many of them are novelists, this older form may have been utilised for rhetorical colouring of characters’ speech in dialogue in fiction and drama, though it is not easy to testify to the proof of this intuition. However, taking into consideration the fact that Type A was frequently used in non-fiction by the learned of the day such as Lord J. C. Marlborough, C. Cibber, W. Cadogan, A. Smith, J. Boswell, M. Wollstonecraft, Dr Johnson, R. Southey, M. Edgeworth and W. Hazlitt, it would be advisable to conclude that the use of Pattern A in the eighteenth and nineteenth centuries was not necessarily for rhetorical colouring of character’s speech. Sixthly, contrary to the usage in biblical translations, Pattern C (*twenty and one*) was infrequent in ordinary

prose. Seventhly, as expected, no example of Pattern B (*one twenty*) occurred throughout the examined periods, perhaps because this form was indistinguishable from time-reference.

Given the size of the data collection, it is not possible to cite all of the examples in the present paper. Therefore, instead, essence of the sixty-five earliest examples of Pattern D (*twenty-one*) and that of the one hundred and fifty latest examples of Pattern A (*one and twenty*) are summarised in 2.2. and in 2.3. respectively.

2.2. Sixty-five Earliest Examples of Pattern D (*twenty-one*)

The examples in (7a-d) are the 65 earliest examples of Pattern D (*twenty-one*).

(7) a. Before 1500 [2 examples]

1430-50 *Two 15th-century Cookery-books*, having previously made forty-six new Knights of the Bath | 1481 W. Caxton, trans., *The History of Reynard the Fox*, ICAMET, HISTREYN. TXT, 162, his wounds which were well twenty-five

b. 1501-1550 [5]

1521 W. Caxton, trans., *The Life of S. Thomas of Canterbury*, II, ICAMET, CAXTTHO.TXT, 184, he was twenty-four years old his mother passed out of this world | 1521 W. Caxton, (forty-four | sixty-four | seventy-one | fifty-three)

c. 1551-1600 [12]

1589-1600 H. Wotton, *Letters*, as having been there a resident courtier twenty-five years | 1589-1600 H. Wotton, *ibid.*, those which were of twenty-five days' fresher date | 1589-1600 H. Wotton (thirty-six | Forty-Eight | fifty-five | twenty-six | twenty-six | Twenty-five | twenty-three | 1591 T. Cockaine (fiftie two | fiftie two) | 1595 Sir W. Raleigh (Eighty-eight)

d. 1601-1650 [46]

1601-1613 T. Bodley (twentie one) | 1601-1611 H. Wotton (twenty-four | twenty-seven | twenty-five or thirty | twenty-four | thirty-five | fifty-four and less | sixty-four | seventy-five) | 1605 F. Bacon (twenty-five hundred | forty-five) | 1612 Coverte (The 20. day ... The twenty one day | twenty fieve) | 1612-1639 H. Wotton (twenty-five | twenty-five | twenty-four | twenty-four | twenty-five | twenty-two | twenty-five | thirty-three | thirty-one | thirty-nine | forty-one | forty-one | forty-one | forty-one | forty-one | forty-one) | 1626 F. Bacon (thirty-seven) | 1628 Anon (twenty two) | 1630 J. Taylor (twenty one | twenty eight) | thirty six) | 1641 East India Company (Forty one) | 1641 W.

Cavendish (twenty one's) | 1642 B. Wharton (twenty-three) | (twenty-eight) | (twenty-eight) | 1643 O. Cromwell (Thirty-four | Thirty-four) | 1646 Commissioners of the Navy (twenty eight | thirty nine) | 1649 John Gregorie (twentie four) | 1649 William Prynne (twenty two | forty five thousand)

Regarding users, nature of documents and syntactic traits of the examples in (7a-d), findings worthy of note can be summarised as follows. First, Pattern D began to occur in clusters in the writings of the learned of the time such as William Caxton, Henry Wotton and Francis Bacon. According to the references such as the *Oxford Dictionary of National Biography* and [www.\(global.\)britannica.com](http://www.global.britannica.com), they seem to have had a good knowledge of French, as indicated in Appendix C of the PDF datasheets for the present writer's oral presentation read at the 48th Poznań Linguistic Meeting (pp. 16, right to 17, right), which is uploaded as '2018a' on his researchmap website (<https://researchmap.jp/read0020179/presentations?start=51&lang=en&limit=100>). Considering that they were familiar with the French language, they may have adopted the French ways of expressing cardinals, and the use of Pattern D may have been accelerated by French numerical systems.² Second, Pattern D had no bias towards a particular type of documents. Third, Pattern D was used as both head and determiner in NP without discrimination, as shown in Table 13. They showed free syntactic alternation.

Table 13 Use of Pattern D (*twenty-one*) in its 65 earliest examples

	as head in NP	as determiner in NP
-1500	1	1
1501-1550	3	2
1551-1600	4	8
1601-1650	15	31

Furthermore, Pattern D was used evenly with *twenty-X* and with numerals which were not *twenty-X*, as Table 14 indicates.

Table 14 Links of Pattern D (*twenty-one*) with *-ty* numerals

	<i>twenty-x</i>	<i>thirty-x</i>	<i>forty-x</i>	<i>fifty-x</i>	<i>sixty-x</i>	<i>seventy-x</i>	<i>eighty-x</i>	<i>ninety-x</i>
-1500	1	-	1	-	-	-	-	-
1501-1550	1	-	1	1	1	1	-	-
1551-1600	6	1	1	3	-	-	1	-
1601-1650	25	9	9	1	1	1	-	-
	33	10	12	5	2	2	1	-

2.3. One Hundred and Fifty Latest Examples of Pattern A (*one and twenty*)

The examples in (8a, b) are the 150 latest examples of Pattern A (*one and twenty*).

(8) a. 1851-1900

1852 C. Dickens, *A child's history of England*, Queen Elizabeth was five-and-twenty years of age | 1852 C. Dickens (three-and-twenty | four-and-twenty | four-and-twenty | four-and-twenty | Eight-and-twenty | five-and-twenty thousand | two-and-twenty | four-and-twenty | five-and-twenty | five-and-twenty | three-and-twenty | four-and-twenty | eight and thirty | two-and-thirty | six-and-thirty | six-and-thirty | five-and-forty | five-and-forty | eight-and-forty | five-and-forty) | 1853 D. G. Rossetti (four and twenty) | 1853 W. M. Thackeray (two and forty) | 1854 W. M. Thackeray (five & twenty | five and twenty | six & thirty | 1855 W. M. Thackeray (three-and-twenty | Five-and-twenty | five-and-twenty | 1856 W. M. Thackeray (five and forty) | 1857 H. Martineau (five-&-twenty) | 1859 W. M. Thackeray (five-and-twenty) | 1859 E. Gaskell (five-and-twenty) | 1859 C. Dickens (Five-and-Twenty Thousand | five-and-twenty | four-and-twenty | five-and-forty)

1861 C. Dickens (three-and-twenty) | 1861 G. Eliot (three-and-twenty | four-and-twenty | five-and-twenty | six-and-twenty | five-and-fifty) | 1863 A. Trollope (Five-and-thirty) | 1863 G. Meredith (five and twenty) | 1864 G. Meredith (four and twenty) | 1867-69 A. Trollope (four-and-twenty | three-and-twenty | five-and-twenty | five-and-twenty | eight-and-twenty | three-and-twenty | three-and-twenty | five-and-thirty)

1870 C. Dickens (six-and-twenty | five-and-twenty | eight-and-twenty | Five-and-forty | 1871 G. Eliot (five-and-twenty | five-and-twenty | one-and-twenty | four-and-twenty | four-and-twenty | four-and-twenty | five-and-twenty | nine-and-twenty | seven-and-twenty | seven-and-twenty | seven-and-twenty | three-and-twenty | five-and-twenty | five-and-twenty | four-and-twenty | three-and-twenty | two-and-twenty | seven-and-twenty | five-and-twenty | two or three and thirty | one-and-thirty | three-and-thirty | five-and-forty) | 1872 S. Butler (four-and-twenty | five-and-twenty | four-and-twenty) | 1873 R. L. Stevenson (two and twenty) | 1873 A. Trollope (one-and-twenty | five-and-twenty thousand | four-and-twenty | two and thirty | 1874 A. Trollope (four and twenty) | 1876 C. Dickens (five-and-twenty | four-and-twenty | five-and-twenty | four-and-twenty | five-and-twenty | five-and-fifty | one-and-twenty | four-and-twenty | five and thirty | Five and thirty | Five and thirty | seven or eight and forty) | 1878 T.

Hardy (one-and-twenty | five and twenty | five and twenty | five-and-twenty)

1880 G. Meredith (four and twenty) | 1881 A. Trollope (eight-and-twenty | four-and-twenty | four-and-twenty | four-and-twenty) | 1883 R. L. Stevenson (five and thirty | eight and forty) | 1884 R. L. Stevenson (four and twenty) | 1884 G. Meredith (five and thirty) | 1886 R. L. Stevenson (seven and thirty) | 1887 R. L. Stevenson (one-and-twenty) | 1888 G. Meredith (four and twenty) | 1888; 1886-87 W. Morris (five-and-forty) | 1889-98 R. Kipling (seven-and-thirty) | 1893 R. L. Stevenson (four and twenty) | 1894-95 T. Hardy (four-and-twenty | five-and-twenty | one-and-twenty | four-and-twenty | FOUR-AND-TWENTY | five-and-forty) | 1897 H. G. Wells (two and twenty | two and twenty | three or four and twenty)

b. 1901-1950

1905 R. L. Stevenson (four-and-twenty) | 1909 H. G. Wells (two-and-twenty | two-and-twenty | five-and-twenty | eight-and-twenty | two-and-twenty | Two-and-twenty | three-and-twenty | eight-or nine-and-twenty | seven-and-thirty | five-and-thirty | two or three-and-thirty) | 1911 R. Kipling (six an' twenty | seven-and-thirty) | 1911 H. G. Wells (three-and-fifty) | 1914 H. G. Wells (four-and-twenty) | 1915 V. Woolf (six-and-twenty) | six-and-twenty) | 1920 V. Woolf (four-and-twenty | five-and-twenty)

From the examples in (8a, b), the following points are worthy of note. First, Pattern A continued to be used in the second half of the nineteenth century and even in the early twentieth century, particularly by novelists such as Charles Dickens (42 times), George Eliot (28), William M. Thackeray (22), Anthony Trollope (18) and Herbert G. Wells (17), Thomas Hardy (10), Robert L. B. Stevenson (8), Virginia Woolf (6), Rudyard Kipling, George Meredith (5 respectively) and Thomas L. Peacock (4). Second, Pattern A seems to have been favoured for rhetorical colouring of characters' speech in dialogue in fiction and drama, although it is not easy to testify to the proof of this intuition. Third, in terms of grammar, Pattern A was retained as both head and determiner in NP without discrimination, as Table 15 shows.

Table 15 Use of Pattern A (*one and twenty*) in its 150 latest examples

	as head in NP	as determiner in NP
1851-1900	55	75
1901-1950	9	11

Fourthly, Pattern A was retained particularly with *twenty* as the statistics in Table 16 show,³ whereas Pattern D had links evenly with *twenty-X* and with numerals which were not *twenty-X* as Table 14 above indicates.

Table 16 Links of Pattern A (*one and twenty*) with *-ty* numerals

	1851-1900	1901-1950	Total
<i>X and twenty</i>	96	15	111
<i>X and thirty</i>	19	4	23
<i>X and forty</i>	13	-	13
<i>X and fifty</i>	2	1	3
<i>X and sixty / seventy / eighty / ninety</i>			-

III. Cardinal Numerals in the History of American English

3.1. General Chronological Trends

Variations of the ways in which cardinal numerals were expressed in examined American English corpora are represented in Tables 17, 18, 19 and its corresponding Figure 2. From these tables and figure it is clear that, since the founding of the United States, American English has maintained a higher percentage exclusively of Pattern D (*twenty-one*) than its contemporary British English.

Table 17 Variations of the ways in which cardinal numerals were expressed—electronically logged American English texts (1750-1950)

Corpus \ Pattern	A	B	C	D
before 1750	-	-	-	4
1751-1800	3	-	-	130
1801-1850	109	-	2	555
1851-1900	102	-	8	1,702
1901-1950	13	-	3	992

Table 18 Variations of the ways in which cardinal numerals were expressed—American English documents in ARCHER 3.2 (1650-1999)

Corpus \ Pattern	A	B	C	D
1750-1799	1	-	-	22
1800-1849	2	-	-	13
1850-1899	-	-	-	10
1900-1949	1	-	-	4
1950-1999	-	-	-	3

Table 19 Integration of Tables 17 and 18

Corpus \ Pattern	A	B	C	D
before 1750	-	-	-	4
1751-1800	4	-	-	152
1801-1850	111	-	2	568
1851-1900	102	-	8	1,712
1901-1950	14	-	3	996
1951-2000	-	-	-	3

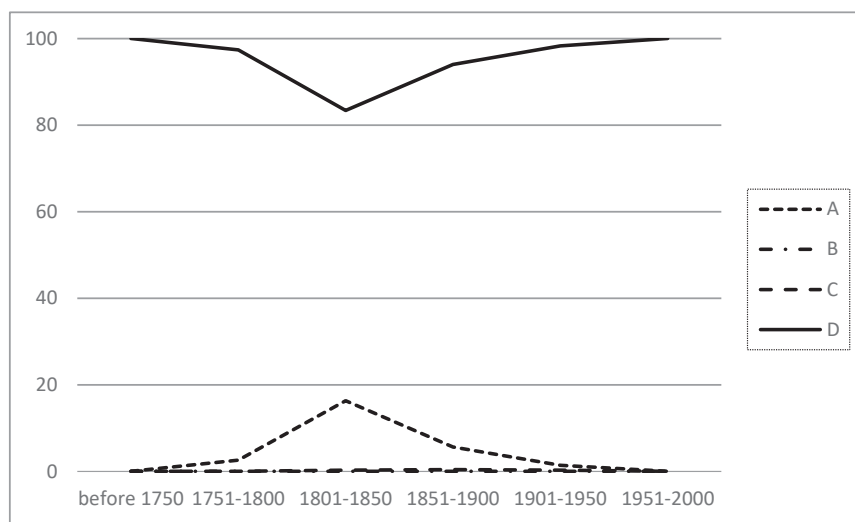


Figure 2 Figuration of Table 19

3.2. People who Continued to Use Pattern A (*one and twenty*)

Nineteenth-century people who used Pattern A more than three times in the corpus documents written during 1801-1900 were as follows:

James F. Cooper (57 times; writer; born at Burlington, New Jersey) | Catharine M. Sedgwick (42; writer; b. Stockbridge, Massachusetts) | Herman Merville (24; writer; b. New York City, Mass.) | Samuel L. Clemens, pseud. 'M. Twain' (13; writer; Florida, Missouri) | Louisa M. Alcott (12; writer; Germantown, Pennsylvania) | Nathaniel Hawthorne (8; writer; Salem, Mass.) | Edgar A. Poe (7; writer; Boston, Mass.) | Joseph H. Ingraham (5; writer; Portland, Maine) | Ralph W. Emerson (4; writer; Boston, Mass.) | Harriet E. B. Stowe (4; writer; Litchfield, Connecticut) | John T. Trowbridge (4; writer; Ogden, New York)

Except for Clemens and Ingraham, all of the above writers were born in the thirteen colonies established by Britain on the Atlantic coast of North America, which were dominated by Protestant English-speakers.

IV. Conclusion

Based upon the evidence presented above, the conclusions can be itemized as follows:

Regarding the objective in (3a):

- a. Until around 1600, Pattern A (*one and twenty*) was the principal way in which cardinal numerals were expressed in British English.
- b. Between 1600 and 1900, Pattern D (*twenty-one*) continued to vie with Pattern A for complete predominance as an obligatory cardinal numerical form.
- c. Pattern D began to occur in clusters in the writings of W. Caxton, H. Wotton and F. Bacon, of whose familiarity with the French language conclusive evidence exists. This means that the use of Pattern D may have been accelerated by French (or of Romance languages) numerical systems.
- d. Pattern A continued to be used in the second half of the nineteenth century and even in the early twentieth century, particularly by C. Dickens, G. Eliot, W. M. Thackeray, A. Trollope, H. G. Wells, T. Hardy and R. L. B. Stevenson. This pattern seems to have been favoured partly for rhetorical colouring of characters' speech in dialogue in fiction and drama.
- e. Pattern D took precedence over the other forms around the turn of the twentieth century.
- f. Patterns A and D had no bias towards a particular nature of documents, nor the function of whether they were used as the head or determiner in NP.
- g. Contrary to the usage in biblical translations, Pattern C (*twenty and one*) was very rare in the present ordinary prose corpora.
- h. No example of Pattern B (*one twenty*) occurred throughout the examined periods, perhaps because this form was indistinctive from time-reference.

Regarding objective (3b):

- a. Since the founding of the United States, American English has maintained a higher

percentage exclusively of Pattern D (*twenty-one*) than its contemporary British English.

- b. Except for a couple of persons, writers in nineteenth-century America who often used Pattern A were those who were born in the thirteen former colonies established by Britain on the Atlantic coast of North America. Their English was, in a sense, a blood relative of British English.

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Notes

Due to limitations of space in the present publication, the explanation regarding the polarisation into Pattern D will be dealt with on another occasion to avoid speculative reasoning, except for briefly stating that this polarisation seems to have something to do with economy of language in terms of an internal factor, and with foreign influence externally.

1. Simultaneously with the regularisation of Pattern D (*twenty-one*), ways of expressing odd numerals such as *twenty odd* _, *twenty and odd* _, *twenty and some odd* _, *twenty some odd* _, *twenty round* _, *twenty any* _ and *twenty so* began to occur in English. They emerged in the first half of the seventeenth century and increased a century later.
2. Similarities are detected between Pattern D and a part of the present-day French cardinal numeral system. Regrettably, information on the cardinal numeral system in Old and Middle French is unknown to me, however, as to comment on the origin and development of Pattern D.
3. I thought that the specified and fossilised phrase such as *four and twenty hours* instead of *one day*

or *eight and forty hours* instead of *two days / a couple of days* delayed the generalisation of Pattern D. This was not the case, however. In one hundred and fifty examples of Pattern A which persisted in the second half of the nineteenth century and the twentieth century, *four and twenty hours* and *eight and forty hours* occurred only eighteen and two times respectively, though, as indicated in Table 14, it was true that Pattern A had strong links with *twenty* in particular.

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The details are omitted here. Please visit Nakamura (2021: 36-37).

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