PERFECT ROMAN WINDOWS

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The February 2000 issue of *Word Ways* introduced readers to the concept of *Roman windows*—text passages which coincidentally contain all seven letters used in Roman numerals [1]. A subsequent article [2] introduced a classification scheme for these windows:

- An *ideal* window has only one occurrence of each numeral.
- In a *numerically ordered* window, the numerals occur in order of least to greatest numeric value: I, V, X, L, C, D, M.
- In a *reverse numerically ordered* window, the numerals occur in reverse order of magnitude: M, D, C, L, X, V, I.
- A *perfect* Roman window is both ideal and ordered.

In the August 2003 Kickshaws [3], Mike Keith presented results of his computer-assisted search for perfect Roman windows. This logological phenomenon turned out to be exceptionally rare: Keith discovered only a single example in a collection [4] of nearly one billion letters. It was this 35-letter reverse window which occurred in the preface to the *The New McGuffey Fourth Reader* (1901):

> Revisions have since been made from time to time as the advancement in educational theories and the changes in methods of teaching seemed to de⟨*mand. No other school text-books have retai*⟩ned the popular favor so long or have exerted so general and so wholesome an influence as has this set of Readers.

In the ten years which have elapsed since Keith's report, the Project Gutenberg collection he searched has seen a twelvefold increase in size, so I thought it would be appropriate to reproduce his experiment in hopes of turning up some further perfect windows. As it turns out, I discovered another 43, which is far more than would be expected. Not having examined Keith's original corpus and computer program, it's hard to say what accounts for this disparity. Regardless, there are now enough examples of perfect Roman windows to report on some interesting and unusual cases.

Shortest windows. First, here is the shortest English-language window I found. It is eleven letters long and occurs in the index to Volume IV of *The History of Woman Suffrage* (Susan B. Anthony and Ida Husted Harper, eds., 1902):

> Colcord, Gov. Roswell K. (Nev.), recom. wom. suff. a⟨***mdt, 813.***
>
> ***Colfax, Vi***⟩ce President Schuyler, founds Daught. of Rebekah, 1069; for wom., suff., 1075.

Some may quibble that this example doesn't really count, since it's found in a list rather than running prose, and contains an abbreviation (which, if expanded to "amendment", would violate the idealness constraint). The shortest entirely unproblematic window in natural text I turned up was the following:

> A man na⟨***med Charles Fox havi***⟩ng been executed, the celebrated Charles asked Selwyn whether he had been present at the execution as usual.

This one is seventeen letters long and occurs in the article "High Life in the Last Century" from *Blackwood's Edinburgh Magazine*, Vol. 55, №340, February 1844. The article itself consists mostly of extracts from *George Selwyn and his Contemporaries, with Memoirs and Notes*, a work in four volumes by John Heneage Jesse.

Both of the above-noted perfect windows are reverse-ordered. The shortest window in ascending order is this passage of 22 letters from *The Standard Electrical Dictionary* (1892) by T. O'Conor Slone:

> In the cut B, B‴ are the terminals of the positive or hydrogen electrodes, marked H, and A, A‴ are the terminals of the negat⟨***ive or oxygen electrodes m***⟩arked O, while M, M‴ is dilute sulphuric acid.

Longest windows. The longest perfect window in ascending order which I found has 63 letters:

> ...I have rendered the name of the God of Israel as it is by the Greek and our own Versions—The Lord—which is more suitable to English verse than is e⟨***ither Yahweh or Jehovah.***
>
> *The text of the Lectures and the footnotes show how* ***m***⟩uch I owe to those who have already written on Jeremiah, as also in what details I differ from one or another of them.

This passage appears in the preface to *Jeremiah*, a 1924 theological treatise by George Adam Smith on the Biblical book of the same name.

Coincidentally, the longest reverse-ordered perfect Roman window is exactly the same length. It appears in the introduction to Grenville Kleiser's grandiloquently titled *Fifteen Thousand Useful Phrases: A Practical Handbook of Pertinent Expressions, Striking Similes, Literary, Commercial, Conversational, and Oratorical Terms, for the Embellishment of Speech and Literature, and the Improvement of the Vocabulary of Those Persons who Read, Write, and Speak English* (1919):

> Nothing is better suited to lead speakers and readers of English into an easy control of this language than the com⟨*mand of the phrase that perfectly expresses the thought. Every speaker's ai*⟩m is to be heard and understood.

Foreign-language windows. The rarity of perfect Roman windows in English can be explained at least partly by the general rarity of the letters V and X. It stands to reason that Roman windows will occur more frequently in languages where the letters used in Roman numerals occur with higher frequency. In French, for example, the relative frequencies of V and X are at least an order of magnitude greater than in English. So despite the fact that Project Gutenberg contains only around 1500 French texts (compared to nearly 25 000 English ones), twelve of the 43 perfect windows I discovered are French ones. The longest and shortest of these, for ascending and descending orders, are as follows:

... renouvela ses proposit⟨*ions. ¶ —Je veux l'arc de m*⟩on frère pour la ... (17)
...cent mille francs, le co⟨*mte de Cherlux avai*⟩t signé un testament et un... (16)
... dit le serrur⟨*ier. Je ne veux pas que l'on raconte dem*⟩ain au club que ... (30)
... et, s'ar⟨*mant d'une fourche, passer la gerbe aux ouvri*⟩ers. Ceux-ci, ... (36)

The source texts are, in order, *Les nez-percés* (1867) by Émile Chevalier, *Les loups de Paris* (1876) by William Cobb (a pseudonym of Jules Lermina), *Barnabé Rudge* (1841) translated by a Mr. Bonnomet, and *André* (1834) by George Sand (a pseudonym of Amantine Lucile Aurore Dupin).

Also among the 43 new windows was one in German, a passage of 30 letters from Gottfried Keller's *Die Leute von Seldwyla* (1874):

> Die Sage erzählt, daß zur Zeit, als Attila mit seinen Hunnen erschien, in der Nähe von Augsburg eine wegen ihrer abscheulichen Häßlichke⟨*it verbannte Hexe wohnte, welche dem*⟩ zahllosen Heere, als es über den Lech setzen

> wollte, ganz allein und nackt auf einem abgemagerten schmutzigen Pferde entgegengeritten sei...

My search did turn up some further candidate windows in Portuguese, but I discount these because they all use one or more of the seven required letters as genuine Roman numerals (e.g., "único monumento i⟨*mportante do seculo XV que possui*⟩a aquella cidade"). It's therefore an open question as to whether there exist perfect Roman windows in Portuguese literature, or for that matter that of any other language besides English, French, and German.

References

[1] Dave Morice. Kickshaws. *Word Ways*, 33(1):54–64, February 2000.

[2] David Morice. Kickshaws. *Word Ways*, 36(2):137–148, May 2003.

[3] David Morice. Kickshaws. *Word Ways*, 36(3):221–230, August 2003.

[4] *Project Gutenberg*. `http://www.gutenberg.org/`.