

Discussion

Russell's mathematical proofreading

by *Kenneth Blackwell*

IN MATHEMATICS EACH symbol, even the smallest, has a definite role in the formulae. Did Russell become a rigorous reader of his proofs through attention to mathematical detail in them? The editorial essay on "Textual Principles and Methods" in Vol. I of Russell's *Collected Papers* builds certain innovative procedures on his watchfulness as a proofreader, which came to him "no doubt in part because he was accustomed to the demands of proofreading mathematics" (p. 447). Direct evidence of Russell's proofreading of mathematics has turned up in the second Archives. Only a page of the manuscript of *Principia Mathematica* had been known to be extant; now added to it is a page of proof, corrected in Russell's hand.

The page, filed as 210.147501a, required special care in its drafting and proofreading, for it is the "Additional Errata to Volume I" which appeared in Vol. II of *Principia* (1912, p. [viii]). It is reproduced overleaf. Date-stamped "20 Nov. 1911" by the Cambridge University Press, it is marked "1st" (i.e. first proof) and initialled "H.S.D." It was found in Russell's copy of Vol. I, where most of the errata appear in the margin. As printed in Vol. II, the page incorporates the corrections noted as well as some others: the erratum to p. 157 had its line number altered, the period inside the closing quotes to the erratum to p. 322 is outside the quotes, and three errata are added for Vol. II. When it was time for the second edition, all the errata were incorporated, along with others submitted by readers. In compiling errata such as these, he told Lady Ottoline, he was listing things "where only a *very* careful reader would notice there was any change."¹

What can we learn about Russell's authorial habits from this intermediate page of his (and Whitehead's) greatest work? As suggested above, it is his attention to detail. All of the errata were correctly (and economically) drafted—although with that to p. 289, from the text one might expect an opening parenthesis after the identity sign. The deleted lines were so marked because they appear in the errata in Vol. I. A correction of note concerns the printing of a period where a second bold square dot was required for scope punctuation around an equivalence sign. Since the period would probably have done the job for most readers, it required both

¹ #675, pmk. 19 Jan. 1913, Morrell papers, University of Texas at Austin.

ADDITIONAL ERRATA TO VOLUME I. 2/15.14750/2

- p. 5, line 20, delete "π."
- p. 34, line 20, for "yRx" read "xRy."
- p. 36, line 7 and line 10, for "Q:R" read "R|P."
- p. 44, line 17, for "(p) . p . is false" read "(p) , p is false."
- p. 103, in #906, in place of last "p ⊃ q" read "~~p ⊃ x~~"
- p. 112, in #252, in place of "p ⊃ ~q" read "~~~p ⊃ ~q~~"
- p. 128, in #611, in place of reference to "#251" read reference to "#25."
- p. 129, in #612, in place of reference to "#252" read reference to "#251."
- p. 144, #1023 should be "⊃. (x) . φx ⊃ p . ≡ : (∃x) . φx . ⊃ . p."
- p. 157, line 12, for "#10" read "#9."
- p. 184, last line of Dem. of #14111, for second "x = c" read "x = b."
- p. 228, in #2381, for "⊃. R ∈ ⊃ S" read "⊃. S ∈ ⊃. R."
- p. 242, in #2597, for "zRw" read "zSu."
- p. 242, in #25412, for "R" read "S."
- p. 253, 2nd and 4th lines of Dem. of #3116, for "#2135" read "#2335."
- p. 259, in note to #3235, for "#322" read "#323."
- p. 263, in #3316, 4th line of Dem., for "#2034" read "#2234."
- p. 265, in #3326, 2nd line of Dem., for "#2134" read "#2334."
- p. 275, in #346, 4th line of Dem., for first "S" read "R."
- p. 289, 1st line, for " = β ↑ γ" read " = α ↑ γ."
- p. 322, in #4018, enunciation, for " = " read " = ."
- p. 329, in #4069, Dem., for " \vec{P} " read " \vec{P} " (3 times).
- p. 387, in #55224, 1st line of Dem., for "↑" read "↓" (twice).
- p. 388, in #55281, for third " = " read " = ."
- p. 410, in #6053, last line of Dem., for " $\vec{\gamma}$ " read "β."
- p. 453, in #7125, Dem., 1st line, for "zRy . zRz" read "ySx . zSx."
- " " 2nd line, for "xRy . ySu . zRz . zSu . ⊃ . y = z . ySu . zSu" read "uRy . ySx . vRz . zSx . ⊃ . y = z . uRy . vRz"
- " " 3rd line, for "ySu . ySu" read "uRy . vRy."
- " " 6th line, for "xRy . ySu" read "uRy . ySx" and for "zRz . zSu" read "vRz . zSx"
- " " 7th line, for "x(R|S)u . x(R|S)v" read "u(R|S)x . v(R|S)x"
- p. 465, in #7216, Dem., 1st line, for last "κ" read "α."
- p. 483, in #7344, Dem., 1st line, for second "y" read "z."
- p. 485, in #73511, for "β" read "α."
- ~~p. 487, line 10, for "#95" read "#94."~~
- p. 522, in #8123, enunciation and 2nd line of Dem., for " \vec{R} " read "R"
- p. 592, in #9133, Dem., 1st line, for "P" read "R."
- p. 614, in #9336, Dem., for "R" read "P" throughout.
- p. 628, in #9521, Dem., line 6, for "Q" read "T."

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an eagle eye and a certain fussiness to mark the character for correction.² Indeed, two other errata lines concern the punctuation of formulae. On p. 44 a heavy dot is to be deleted where it erroneously breaks a sentence. And on p. 144 double and single scope dots are to be increased to triple and double dots, respectively.

Russell's long experience in mathematical proofreading seems to have trained his eye to notice the smallest typographical units in the expression of his ideas. Although perhaps requiring different skills and less of his attention, his non-mathematical proofs are consistent with this conclusion. That is why the "Textual Principles and Methods" states that, when Russell probably passed proofs, it is reasonable to adopt the punctuation of the print (mechanical house-styling excepted) over that of a surviving manuscript.

The Bertrand Russell Archives

² For further discussion of the heavy dot, see my "Perhaps You Will Think Me Fussy ...": Three Myths in Editing Russell's *Collected Papers*", in *Editing Polymaths*, ed. Heather Jackson (Toronto: Committee for the Conference on Editorial Problems, 1983), p. 124 n.21.