

Corrections to *Analysis of Human Genetic Linkage* 1991

Below, the currently known corrections to the revised edition of this book (1991, second printing, Johns Hopkins University Press, Baltimore) are listed. I am grateful to the many readers who made me aware of errors and inaccuracies. In some of the most recently reprinted books, many of the corrections listed below have been implemented.

Note: the word "up" after a line number is shorthand for "from the bottom".

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*Page 14, line 4 up:* Replace "assumptions" by "assumption".

*Page 16, line 8 up:* Replace "crossover" by "chiasma". *Line 7 up:* Replace "crossovers" by "chiasmata".

*Page 34, lines 17 and 18 up,* are clearer when formulated as follows: "... often used before linkage analysis as a preliminary test of paternity."

*Page 41, equation (3.2):* on line 2, the condition should read "if  $\theta = 0$  and  $k = 0$ ". Add the following third line: " $-\infty$  if  $\theta = 0$  and  $k > 0$ ".

*Page 44, line 8 below table 3.1* should read: "Generally, for phase known data, if  $T = k/n$  is the value of...". Also, line 12 below table 3.1 should read: "Since  $T$  is unbiased, ..."

*Page 47, lines 68* should read: "...example of one recombinant and four nonrecombinants and test  $H_0: \theta = 1/2$  against  $H_1: \theta = 0.1$ . For these data, ..."

*Page 52, Table 3.3, footnote a:* replace "columns" by "rows".

*Page 59, line 3 from the bottom:* ...,  $P(0 \leq \theta < 1/2) = 1/22$ , ... (not  $1/22$ )

*Page 60, lines 6 and 7* should read: The  $i$ th segment ( $i = 1 \dots s$ ), of length  $b_i$ , then contains the likelihood ratio,  $L^*(\theta_i)$ , where  $b_1 = 1/2(\theta_2 + \theta_1)$ ,  $b_i = 1/2(\theta_{i+1} + \theta_i) - 1/2(\theta_i + \theta_{i-1}) = 1/2(\theta_{i+1} - \theta_{i-1})$ ,  $b_s = 1/2 - 1/2(\theta_s + \theta_{s-1})$ ;  $\sum b_i = 0.5$ .

*Pages 93 and 94:* Arguments referring to linear independence of probabilities are incorrect and will be corrected in the new book edition. Formulas are correct.

*Page 95, top line* should read: "..., the maximum of the expected lod score, the ELOD, must occur at  $\theta = r$ .

*Page 105, line 2 after equation (5.21):* replace 11.10 by 11.9

Page 115, equation (6.7): Subscript "J" should be "j".

Page 116, line 19 up: Add reference as follows: "... than does twopoint analysis (Fisher 1954)."

Page 119, second line up from formula (6.10):  $= 2 \theta_{AB} (1 - \theta_{AB})$ .

Page 126, table 6.6, column "Kosambi", line 4: 0.0600 should read 0.0060.

Page 151: In equation (7.1), there should be two summation signs, one in the numerator and one in the denominator. Thus, the numerator should read  $\sum_i (k_i - 1)$ , and the denominator should read  $\sum_i (n_i - 1)$ . Also, 2 lines above (7.1), replace (1912) by (1927).

Page 169, line 13 up: Replace "figure 6.1" by "figure 8.1".

Page 171, line 12: Insert "be" after "has to".

Page 171, lines 4 and 6 up:  $P(x^{(i)}|g^{(j)})$  (first superscript is  $i$ ; twice).

Page 183, line 5 up: After 0.4343, insert the following: [for  $\log_e(\theta)$  rather than  $Z(\theta)$ , replace  $m$  by  $l$  in equations (8.8) (8.13)].

Page 184, equation (8.13): Replace  $\sigma^2$  by  $\sigma$ .

Page 195, line 3 up: Replace 6.48 by 6.84.

Page 196, line 13: Replace "then" by "than".

Page 220, line 16: Replace  $d = 0.073$  by  $b = 0.073$ .

Page 233, line 21, should be: "measure may be derived from Rice ..."

Page 234, line 9: At the end of this paragraph, add the sentence, "With Rice et al.'s (1987) index of caseness,  $I = P(A|A^*)$ , one has  $c = I[1P(A)]/[I(12P(a)) + P(A)]$ ."

Page 234, line 5 up: Delete one of the "is"-s.

Page 239, Table 11.1, first line, change to: "Increase,  $\delta$ , in ..."

Page 250, last two sentences of the top paragraph should read: "In practice, this means that one evaluates  $Z(\alpha, x)$  at each map position,  $x$ , where  $\alpha$  is determined by the maximum of  $Z(\alpha, x)$  at the given  $x$  value. Only those points  $x$  are then excluded for which  $Z(\alpha, x) < 2$  and  $Z(x) > -2$ ."

Page 266, body of table in Solution 5.6: In " $\frac{1}{2}(1\theta)^2$ " and " $\frac{1}{2}\theta^2$ ", replace  $\frac{1}{2}$  by  $\frac{1}{4}$  (twice).

Page 277: Add reference: Fisher, R.A. 1954. The experimental study of multiple crossingover. *Caryologia*, Supp. to Vol. 6:22731.

*Page 294:* Replace the Weinberg (1912) reference by: Weinberg, W. 1927. Mathematische Grundlagen der Probandenmethode. *Z. Indukt. Abstamm. u. Vererb. Lehre* 48:179228.

*Page 300, Multilocus feasible:* Replace 267 by 126.