

List of errors for the 1st Edition of Pawitan's *In All Likelihood* (2001) – this edition has University College Cork as my affiliation. The list is getting depressingly long, so to keep it to a manageable length I have decided to include only errors that matter, thus excluding typos. I am grateful to many readers for finding these errors, in particular to Hiroshi Okamura.

**Page 82** line 12 from the bottom: maximum likelihood function  $\rightarrow$  maximum likelihood estimate. (A Johansson)

**Page 83** last line: replace  $0.53 < \theta < 0.96 \rightarrow 0.53 < \theta < 0.90$ .

**Page 93** the t statistic in the middle of the page: the denominator  $\sqrt{1/m + 1/m} \rightarrow \sqrt{1/m + 1/n}$ .

**Page 93** line 8 from the bottom:  $\bar{y} = 840.5$ ,  $s_y^2 = 4604.8 \rightarrow \bar{y} = 838.2$ ,  $s_y^2 = 4161.5$  (S Sandin)

**Page 119** line 15:  $\theta = e^{-2\theta} \rightarrow \theta = e^{-2\mu}$

**Page 146** line 5: Exercise 5.9 has been rewritten, see the error page on the website.

**Page 155** line 3:  $\theta_1 \rightarrow \theta_i$ .

**Page 160** line 7 (line 4 of the table): 'Before' column, location=4, number of accidents should be 20 instead of 30. (The program `ex6-6.r` and the results are correct.)

**Page 167** line 9:  $\log L(\mu; y) = 1/2\dots \rightarrow \log L(\mu; y) = -1/2\dots$

**Page 169** line 14 from the bottom:  $D(y, \hat{\mu}_A)$  and  $D(y, \hat{\mu}_A) \rightarrow D(y, \hat{\mu}_A)$  and  $D(y, \hat{\mu}_B)$

**Page 171** line 16 from the bottom:  $16.26/7 \rightarrow 16.28/7$

**Page 175** line 3 from the bottom:  $\beta^1 = \beta^0 + U^{-1}S(\beta) \rightarrow \beta^1 = \beta^0 + U^{-1}S(\beta^0)$

**Page 185** Figure 6.11(b) is wrong. Please use the corrected R program `ex6-19b.r` to get the correct figure.

**Page 186** line 13: ...AIC is 177.2...  $\rightarrow$  ...AIC is 131.4... Line 14: ...pointing to the Cauchy model...  $\rightarrow$  ...pointing to the normal model... (There was a bug in the R program – pointed out by Harry Southworth.)

**Page 191** line 2: where  $\beta_i$  is negative  $\rightarrow$  where  $\beta_1$  is negative

**Page 192** line 1: iterative reweighted least squares (IRLS)  $\rightarrow$  iterative weighted least squares (IWLS).

**Page 199** line 7: Section 7.2  $\rightarrow$  Section 3.2.

**Page 208** line 14:  $P(2|H2)/P(0|H0) \rightarrow P(2|H2)/P(2|H0)$

**Page 219** line 3 from the bottom:  $\int S(\theta)^2 f_\theta(x) dx \rightarrow \int S(\theta)^2 p_\theta(x) dx$

**Page 225** line 14:  $E_\theta\{E(U|T) - U\} = 0 \rightarrow E_\theta\{E(T|U) - T\} = 0$ . Line 16:  $U - E(U|T) = 0 \rightarrow T - E(T|U) = 0$ . Line 17:  $U = g(T) \rightarrow T = g(U)$ .

**Page 249** line 11:  $I(\hat{\theta}) = \sigma^2/n \rightarrow I(\hat{\theta}) = n/\sigma^2$

**Page 250** line 18:  $|I(\hat{\theta})| \rightarrow |I(\hat{\theta})|^{1/2}$

**Page 251** line 4:  $n(\beta \log \beta/\mu - \hat{\beta} \log \hat{\beta}/\hat{\mu}) \rightarrow n(\beta \log \beta/\mu - \hat{\beta} \log \hat{\beta}/\mu)$

**Page 266** line 11: Section 3.3  $\rightarrow$  Section 3.4

**Page 267** line 2:  $y - \sigma_{yx}\sigma_{xx}(x - \mu_x) \rightarrow y - \sigma_{yx}\sigma_{xx}^{-1}(x - \mu_x)$

**Page 267** line 12: under  $H_0$ :  $\theta = \theta_{10} \rightarrow$  under  $H_0$ :  $\theta_1 = \theta_{10}$ , and assuming  $I(\hat{\theta}) = I(\hat{\theta}_0)$

**Page 276** line 1 from the bottom:  $L(\theta, \psi) \rightarrow L(\theta, \eta)$

**Page 280** line 20:  $= -\sum_i \log(\beta_0 + \beta_1 x_i) - \dots \Rightarrow \sum_i \log(\beta_0 + \beta_1 x_i) - \dots$

**Page 280** line 1 from the bottom:  $w_1, \dots, w_N \rightarrow \mu_1, \dots, \mu_N$

**Page 283** line 1:  $\theta_1$  and  $\theta_2 \rightarrow \theta_a$  and  $\theta_p$

**Page 283** line 4 and 7:  $n_b \theta_b \rightarrow n_p \theta_p$  and  $n_b \rightarrow n_p$

**Page 293** line 15 from the bottom:  $\sqrt{n}S(\theta_0, \eta_0) \rightarrow n^{-1/2}S(\theta_0, \eta_0)$

**Page 295** line 7:  $\dots - \eta \sum \log y_i \dots \rightarrow \dots + \eta \sum_i \log y_i \dots$

**Page 295** line 10:  $\sum_i \log y_i = n \log \hat{\eta}/\hat{\theta} - n \log \hat{\theta} - nD(\hat{\eta}) + n \rightarrow \sum_i \log y_i = n \log \hat{\eta}/\hat{\theta} - nD(\hat{\eta})$

**Page 295** line 2 from the bottom:  $-\frac{n-p}{2} \log\{2\pi\phi v(y_i)\} - \frac{1}{2\phi} D(y_i, \hat{\mu}_i) \rightarrow -\frac{n-p}{2} \log(2\pi\phi) - \frac{1}{2\phi} \sum_i D(y_i, \hat{\mu}_i)$

**Page 320** line 15 and 16:  $N(t + dt) - N(dt) \rightarrow N(t + dt) - N(t)$

**Page 333** line 15:  $\dots e^{\alpha(t_{ij}) + x'_{ij}\beta} \rightarrow \dots e^{\alpha(t_{ij}) + x'_{kj}\beta}$

**Page 339** line 13 from the bottom:  $\theta \rightarrow \beta$

**Page 353**, last equation (line 9 from the bottom):  $\dots + \frac{k+1}{2} \log w_i - \dots - \frac{w_i(y_i - \mu_i)^2}{\sigma^2} \rightarrow \dots + \frac{k-1}{2} \log w_i - \dots - \frac{w_i(y_i - \mu_i)^2}{2\sigma^2}$

**Page 355** line 2 from the bottom:  $\log(\theta; x_i) \rightarrow \log L(\theta; x_i)$

**Page 368** line 3 from the bottom:  $g(x) = (1/6)x^3 e^{-3} \rightarrow g(x) = (1/6)x^3 e^{-x}$

**Page 371** line 12 from the bottom:  $E \rightarrow e$  in the exponentiation

**Page 378** line 3 from the bottom: Section 2.6  $\rightarrow$  Section 3.5

**Page 380** line 3:  $\lambda(\theta_k) = 0 \rightarrow \lambda'(\theta_k) = 0$ .

**Page 382** line 8 and 9:  $\theta_{ik} \rightarrow \theta_{ki}$

**Page 382** line 8 from the bottom:  $\dots \frac{1}{n} \mathcal{I}_k^{-1} \dots \rightarrow \dots - \frac{1}{n} \mathcal{I}_k^{-1} \dots$

**Page 383** line 3:  $\dots$ normal model is  $4.89/n \rightarrow \dots$ log-normal model is  $4.89/n$

**Page 383** equation on line 9 from the bottom:  $x_i^p \rightarrow x_i^k$

**Page 396** line 8 and 12:  $x_i\beta \rightarrow x'_i\beta$

**Page 397** line 3 from the bottom:  $x_i\beta^0 \rightarrow x'_i\beta^0$

**Page 413**, last equation (line 6 from the bottom): on the left-hand-side:  $h(t, \theta) \rightarrow h(\theta, t)$ .

**Page 414**, line 13:  $p(\theta, t_{obs}) \rightarrow h(\theta, t_{obs})$ .

**Page 428** line 6 from the bottom:  $\text{binomial}(y, x/n) \rightarrow \text{binomial}(m, x/n)$

**Page 433** line 6 from the bottom:  $\theta^{-1}e^{x/\theta} \rightarrow \theta^{-1}e^{-x/\theta}$

**Page 450** add to the legend of Table 17.1: each measurement is the mean period between heartbeats (msec).

**Page 451** line 14:  $78 \times 19 \rightarrow 76 \times 19$

**Page 451** line 16:  $\sigma_e^2 I_{N=78} \rightarrow \sigma_e^2 I_{N=76}$

**Page 452**, line 8: in the formula for interaction: remove the divisor 2, so it should be  $(y_{i1} + y_{i4}) - (y_{i2} + y_{i3})$ . (The R program is correct.)

**Page 452**, line 15: ... average of 12.7895  $\rightarrow$  ...average of -12.7895

**Page 490**, line 11:  $V = \Sigma^2 + ZDZ' \rightarrow V = \Sigma + ZDZ'$ .