

There are three “current versions” of the paper. The revised tech report <http://www.stat.umn.edu/geyer/lecam/tr643r.pdf> and single spaced and double spaced versions submitted to *Statistical Science* which differ only in spacing, not in wording. Thus we have three sets of line numbers. For short, we denote these versions by TR, 1S, and 2S, respectively.

1. [TR: p. 6, l. 16; 1S: p. 7, l. 12; 2S: p. 10, l. –7] delete “and then”
2. [all: Sec 1.5, l. 3] change y to Y
3. [TR: p. 7, l. –2; 1S: p. 8, l. –1; 2S: p. 13, ll. 8–9] change “random effects” to “variance components”
4. [all: Lemma B.2] change “Newton limit map” to “infinite-step Newton map”
5. [all: equation (3.15)] change

$$\liminf_{n \rightarrow \infty} \Pr \left\{ \hat{\delta}'_n (-\nabla^2 q_n(\hat{\delta}_n)) \hat{\delta}_n < \kappa \text{ and } \tilde{\delta}_n \in W \right\} \geq 1 - \alpha - \Pr(\tilde{\delta} \notin W) \quad (3.15)$$

to

$$\liminf_{n \rightarrow \infty} \Pr \left\{ \hat{\delta}'_n (-\nabla^2 q_n(\hat{\delta}_n)) \hat{\delta}_n < \kappa \text{ and } \tilde{\delta}_n \in W \text{ and } \hat{\delta}_n \in W \right\} \geq 1 - \alpha - \Pr(\tilde{\delta} \notin W \text{ or } \hat{\delta} \notin W) \quad (3.15)$$

6. [all: the two lines following equation (3.15)] change “only evaluate ∇q_n and $\nabla^2 q_n$ at $\tilde{\delta}_n$ ” to “only evaluate ∇q_n and $\nabla^2 q_n$ at $\tilde{\delta}_n$ and $\hat{\delta}_n$ ”
7. [TR: next to last line of Sec 3] change “ W may need to be very large for $\Pr(\tilde{\delta}_n \notin W)$ to be small” to “ W may need to be very large for $\Pr(\tilde{\delta}_n \notin W \text{ or } \hat{\delta} \notin W)$ to be small”
8. [1S and 2S: next to last line of Sec 3] change “ W may need to be very large to simultaneously have $\Pr(\hat{\delta}_n \in W) \geq 1 - \alpha$ and $\Pr(\tilde{\delta}_n \notin W)$ very small” to the correction in the preceding item.

Comment: Obviously I wrote Section 3.6 a little too fast (the last bit written is always the buggiest). The TR as it stands makes no sense at all because $\nabla^2 q_n$ is clearly evaluated at $\hat{\delta}_n$ in (3.15). Hence changes 5 and 6. Clearly, something about this was bothering me, because I made a last minute change between putting up the TR and submitting the paper, but

the change didn't fix the problem. The logic requires that we have both $\tilde{\delta}_n \in W$ and $\hat{\delta}_n \in W$. If that's what we need, then that's what we must require.

I think this also fixes the next to last paragraph of Appendix B (with no changes in its wording). Although the argument there is only vaguely sketched, it clearly envisages us evaluating ∇q_n and $\nabla^2 q_n$ at $\tilde{\delta}_n$ and at an infinite sequence of points contained in a small neighborhood of $\hat{\delta}_n$. Hence we *really* need $\hat{\delta}_n \in W$ for convergence in $C^2(W) \times W$ to be worth anything.