

10. I regret that I have not had time to do the mathematical work that would, I believe, support some of the above statements.
11. It should also be remembered that the literature on the principle of conditionality is extensive.
12. A general principle, like a mathematical assertion beginning with a universal quantifier, can be refuted by a single counterexample but cannot be validated or proved by any number of special examples.

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REJOINDER¹

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Explanations, etc. Several discussants have offered supplementary explanations for the inadmissibility result of Section 3.3 (*Casella, Copas, Efron, Gleser, Morris*). Each of the explanations is somewhat different and each adds further understanding.

Gleser goes further and gives a useful extension of my results in the style of my Lemmas 3.3.1 and 3.3.3. Consider the situation discussed in my Section 4.2 where it is desired to estimate the linear function $\kappa = a\alpha + b'\beta$ in the regression setting. Then, if $r \geq 3$, *Gleser's* Theorem 1 can be applied via his formula (5) to yield a specific, useful estimator dominating $\delta_0 = a\hat{\alpha} + b'\hat{\beta}$. The existence of a dominating estimator was already established in my Theorem 4.2, even for $r = 2$, but no usable formula was given.

Lu demonstrates that the general nature of the inadmissibility phenomena here is not significantly dependent on the form of the loss function. Insofar as his results for L_c are not directly constructive (analogous to my Theorems 2.2.1 and 3.2.2 for squared error) they point to the important question of constructing estimators in the regression setting which usefully dominate δ_0 under L_c .

Limited translation estimators. *Morris* (explicitly) and *Efron* (implicitly) each raise the issue of modifying the proposed estimators to limit maximum coordinatewise risk. (This appears to be the joint occurrence of conditionally independent but marginally highly correlated events!) *Berger* also makes this suggestion. This seems reasonable, particularly in view of the numerical results *Berger* mentions. However it is important to understand the justification for this suggestion before putting it into practice.

To do so consider the usual multiple normal means estimation problem and the positive-part James–Stein estimator, which is given by d_+^* of (2.1.7) for $\Sigma = \Omega = I$ and $\rho = p - 2$. For moderate $p \geq 3$ this is known to approximate a

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