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Professor Huber's stimulating paper has greatly advanced our knowledge of the projection pursuit methodology. Our discussion will be confined to the convergence of the projection pursuit density approximation method (PPDA). In Proposition 14.3 he proved the uniform and $L_1$-convergence of the PPDA by assuming that the density $f$ can be deconvoluted with a Gaussian component. This is a very strong smoothness condition on $f$. Our original attempt was to prove his conjecture that the convergence still holds under more general smoothness condition on $f$. Failing this, we have instead found a smoothed version of the PPDA that converges uniformly and in $L_1$ to $f$ with no smoothness condition required on $f$. Our modification is described as follows.

Let $\{g^{(k)}\}$ be the sequence of approximating densities defined in Proposition 14.3. Define the *smoothed* approximating density $\bar{g}^{(k)}$ by convoluting $g^{(k)}$ with a normal density

$$\bar{g}^{(k)} = g^{(k)} * N(0, \sigma_k^2 I_d), \tag{1}$$

where $\sigma_k$ satisfies

$$\tau_k \sigma_k^{-2d} \to 0 \quad \text{and} \quad \sigma_k \to 0 \quad \text{as} \quad k \to \infty \tag{2}$$