have

$$|f(x) - \bar{f}^{(k)}(x)| \le (2\pi)^{-d/2} \int |f(x) - f(x - \sigma_k y)| e^{-\|y\|^2/2}\, dy$$

$$(8) \qquad \le (2\pi)^{-d/2} \left\{ 2 \sup_x f(x) \int_{\|y\|>R} e^{-\|y\|^2/2}\, dy + \int_{\|y\|\le R} |f(x) - f(x - \sigma_k y)| e^{-\|y\|^2/2}\, dy \right\},$$

whose first term can be made arbitrarily small by choosing a large R since $\sup_x f(x) < \infty$ follows from the uniform continuity of f, and whose second term, for fixed R, can be made arbitrarily small (uniformly in x) by choosing a small σ_k (k large) again from the uniform continuity of f. This and (3) imply the uniform convergence of $\bar{g}^{(k)}$ to f. □

The uniform continuity condition on f is much weaker than the condition in Proposition 14.3 that f can be deconvoluted with a normal density.

Our last remark concerns the choice of σ_k in the smoother (1), which depends on the knowledge of τ_k. An *optimal* choice of σ_k can be obtained by equating the convergence rates of $\bar{g}^{(k)} - \bar{f}^{(k)}$ and $\bar{f}^{(k)} - f$. Let us further assume that f satisfies the Lipschitz condition of order λ

$$|f(x_1) - f(x_2)| \le C|x_1 - x_2|^\lambda,$$

where C is independent of x_1, x_2. Then $|f(x) - \bar{f}^{(k)}(x)|$ in (8) is bounded above by $C'\sigma_k^\lambda$. This and the rate $\tau_k^{1/2}\sigma_k^{-d}$ in (3) are of the same order if

$$\sigma_k = c\tau_k^{1/2(d+\lambda)}.$$

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Dr. Huber's scholarly paper invests the impressive techniques of projection pursuit with a halo of mathematical formalism. Key questions clearly concern the choice of properties that it is *scientifically* fruitful to pursue. My judgment, based on totally inadequate experience, is that, except in fairly extreme cases, peculiarities of univariate distributional form are often of fairly fleeting interest