where

$$k(\tau) = \frac{1}{\pi} \int_0^\infty \frac{1}{(1 + y^{2m})} \cos \tau y \, dy ,$$

illustrating the "bandwidth" role of λ. (See [1].)

Moore and Yackel [5] have made a detailed comparison of window vs. k-NN type density estimates and conclude (not surprisingly) that one does better with k-NN estimates near x where $h(x)$ is small (and presumably vice-versa). A direct comparison of practical k-NN type estimates vs. window type estimates for $E(Y \mid X = x)$ must of course include the prescription for choosing k or λ as well as for choosing the shape, e.g., uniform, triangular or quadratic examples as given by Professor Stone, or as determined by Q here. Any Q within the same equivalence class (in the sense of [9]) will give the same (asymptotic) results, so within a class, computational ease can be the criteria. To choose from among a finite number of representatives of equivalence classes compute $\min_\lambda V(\lambda)$ or $\min_\lambda \hat{R}(\lambda)$ for each representative and take the minimizer over the representatives tried.

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REPLY TO DISCUSSION

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Cover wonders why continuity requirements are not needed for consistency.