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A note on insufficiency and the preservation of Fisher information

David Pollard

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Kagan and Shepp (2005, Amer. Statist.) presented an elegant example of a mixture model for which an insufficient statistic preserves Fisher information. This note uses the regularity property of differentiability in quadratic mean to provide another explanation for the phenomenon they observed. Some connections with Le Cam's theory for convergence of experiments are noted.

Comments:	Contribution to a volume in honor of Jon Wellner's 65th birthday (revised)
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