在幾何學上的污染下使用發散性測量局部敏感性

The sensitivity of Bayes procedures to the choice of a priordistribution is a major concern for many Bayesians. Traditionally, thesensitivity analysis or the robustness issues in Bayesian inferencecan be classified into two broad categories, global and localsensitivity. In global analysis, one considers a class of reasonablepriors and studies the variations of posterior features, whereas inlocal analysis, the effects of minor perturbations around someelicited priors are studied. However, a Bayesian analysis stronglydepends on modeling assumptions which make use of both prior andlikelihood. In this paper we investigate the effects of dualperturbations (prior and/or likelihood) on the posterior inference. Inparticular, we develop local sensitivity measures to detect howsensitive the posterior is with respect to simultaneous perturbationsin both prior and likelihood. Local sensitivity measures are obtainedusing the notion of divergence measures for geometric type ofperturbations with weighted distribution problems.