Aggregating data across cases permits the analysis of the impact of structural variables, but has great difficulty in accommodating the kind of perceptual data required for a valid test of the theory.[168] Huth and Russett, for example, were forced to rely on indirect measures of the critical psychological variables in their model. This is a large cost of aggregating data across cases.

Aggregation of data across cases also fails to capture many of the important changes in the critical variables affecting a deterrence relationship over time. Indeed, it treats cases of deterrence out of context and does not permit sustained analysis of the learning that may occur as a relationship evolves. A cross-case analysis may pose serious threats to valid inference even in the analysis of cases of immediate deterrence, since often these encounters are not isolated but embedded in a relationship with a past and a future as well as a present. Nor can aggregation across cases capture the complex relationships between general and immediate deterrence, or say very much about the functioning of general deterrence. In this regard, time series and longitudinal analyses seem more promising.

For all these reasons, we propose that the next step in the testing of deterrence theory is the careful, focussed comparison of cases. Central to a valid test of the theory is the identification of as many cases of immediate and general deterrence as available data permit. Scholars must cooperate in the identification and coding of cases by sharing historical data and seeking the judgments of expert historians where the data are open to multiple interpretation, as they so often are. Only through painstaking research can a valid collection of cases

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[168] See Alexander L. George, "The Causal Nexus Between 'Operational Code' Beliefs and Decision-Making Behavior: Problems of Theory and Methodology," in Lawrence Falkowski, ed. *Psychological Models and International Politics* (Boulder, Co.: Westview Press, 1979), pp.95-124. George and Smoke also note: "But in general it appears that adequate attention cannot be given with the statistical-correlational methodology to the intervening, decision-making variables in deterrence. . . . One salient reason is that these intervening variables tend to alter from case to case in complex ways which cannot readily be compressed into a small number of predefined values for coding." *Deterrence in American Foreign Policy*, p.91. See also Jack Levy, "Quantitative Studies of Deterrence."