



Francqui Foundation Conference

Long-Term Quantification in Ancient Mediterranean History

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There is generally very little quantitative data for ancient economies in the sources, particularly for the long term. What little there is, however, can be usefully treated by a computer model to generate considerably more useful information. A general model has been developed which consists of parameters and relationships expressed in simple modules of different types and a network of linkages between the modules. For example, a parameter may be externally input into a module and a second parameter then calculated, which in turn becomes the input of other modules, e.g. population calculation to food consumption and tax calculations. A module may have 'depth' by being repeated for different occurrences, e.g. provinces of an empire, with different data and the ability to automatically compute a total. External module input will also usually have a 'time' element that expresses how it is to change within a generally designated time period. The modules, linkages and time elements making up the model are specified by the historian interactively. Data is entered and desired results obtained in a computer-aided dialogue, which can be indefinitely repeated as the data is modified. As an example, a model has been created for the economy of the Seleukid empire (312-64 BC), which can now be extended to the earlier Achaemenid and later Parthian periods.