

Arnold Faden

April 1978

Research Activities Since June 1977

- a. Book: Economics of Space and Time: The Measure-Theoretic Foundations of Social Science (ISU Press, October, 1977) 700 pp.
- b. Master's thesis supervised. Gail Jensen, Applied Forecasting with an Autoregressive Integrated Moving Average (ARIMA) Model, (1977).
- c. Further developments growing out of my book:
 - (i) Completed manuscript on axiomatic basis for unbounded bernoullian utility on a general measurable space.
 - (ii) Completed proof for existence of a potential in the measure-theoretic transshipment problem.
 - (iii) Found several measure-theoretic generalizations for network flow theory, including the min-cut-max-flow theorem. (Talk to Mathematics Department, Feb. 7, 1978)
- d. Preliminary work with Karl Fox on the general subject of the growth of knowledge over space and time (temporarily in abeyance).
- e. Preliminary work on the general subject of natural selection in social life (seminar to be given to Economics Department this Spring).

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Report on Research Activities since September 1976

1. Seeing my book, Economics of Space and Time, through the press.
(We are now at the page proof stage.) I have also developed some of its ideas further, in particular the theory of pseudomeasures and Bernoullian utility.
2. Further work on Post-Bayesian econometrics:
 - a. revision of paper "Post-Bayesian Statistical Inference" (with Gordon Rausser).
 - b. development of a third paper, showing that the F-test falls out as a crude approximation in the Post-Bayesian approach.
 - c. beginning some related work on Inductive Logic (I gave a lecture on this topic to the Math Department in October).
3. Some minor work in international trade:
 - a. least squares approximation to equilibrium exchange rates in a disequilibrium situation.
 - b. the relation between comparative advantage and the LP transportation problem.
(I gave a lecture on these topics to the Economics Department last week)

Publication:

- A. M. Faden and G. C. Rausser, "Econometric Policy-Model Construction: The Post-Bayesian Approach" Annals of Economic and Social Measurement 5/3, 1976, pp. 349-361.