

**The stability of general
equilibrium—what do we know
and why is it important?**

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Stages of Progress in Stability Theory

- 1. Pre-history: the Hicks Conditions**
- 2. The Introduction of time: Samuelson**
- 3. Tâtonnement: Samuelson's Equation**
- 4. Local Stability: Metzler, Samuelson and others**
- 5. Global Stability: Lyapounov's Second Method (Arrow, Hurwicz, and Block)**

Stages of Progress in Stability Theory

- 6. The Failure of Tâtonnement: Scarf**
- 7. Examining the Process: Hahn**
- 8. Trading Processes: the Edgeworth Process (Uzawa)**
- 9. Trading Processes: the Hahn Process (Hahn and Negishi)**
- 10. Implications: Path-Dependence, Predictive Values, Calculating the Walras Correspondence**

The Edgeworth Process

**Assumptions and Difficulties: Coordinating
Individuals' Behaviors**

The Hahn Process

The Functioning of Markets

BUT: (Mother Goose = Ma Mère L'oye)

Simple Simon met a Pieman Going to the Fair.

Said Simple Simon to the Pieman, "Let me taste your ware".

Said the Pieman to Simple Simon, "Show me first your penny."

Said Simple Simon to the Pieman, "Indeed, I haven't any."

Issues and Problems

Why are agents so blind?

When everyone takes prices as given, how do prices ever change?

What about no-bankruptcy assumptions?

Modeling intelligent agents

- **Point Expectations – a world of economists**
- **Interesting and sensible theorems about arbitrage in response to expected price change**
- **The role of money – even in equilibrium (Patinkin)**
- **Walras' Law**

Modeling intelligent agents

- **The nature of equilibrium – carrying out foreseen trades rather than all present and future trades resolved at the beginning**
- **But what sort of equilibrium?**

Modeling intelligent agents

- **The (expanded) Hahn Process with each seller acting on prices**
- **Market power and non-Walrasian equilibria**
- **Monopolistic competition and Liquidity traps**

What about Stability?

- **Schumpeterian shocks – real or believed (and backed up with money)**
- **Ultimately, No Favorable Surprise**
- **Logically necessary, and provably sufficient for stability, but just what does it mean to assume it?**
- **Exogenous versus endogenous shocks**

Some Conclusions

- **The goal of a reasonable theory with provable global stability under all circumstances is probably unattainable.**
- **That seems especially so if one insists on only Walrasian equilibria**
- **Obviously, more attention is needed in this area.**

Why is it important?

- **Milton Friedman's Remark**
- **What matters is whether we have an adequate stability theory.**
- **Without one, there is a major lacuna in the Theory of Value.**

Why is it important?

- **The efficiency properties and the Welfare Theorems are useless without the existence of Walrasian equilibria**
- **But they are also useless without some assurance about stability**
- **And indeed, also without some assurance about speeds of adjustment – about which we know almost nothing**

Why is it important?

- Indeed, we are dealing here with the entire foundation for Western capitalism and the reliance on free markets
- *Acting as though the problem has been solved is being an ostrich*