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REACHING AN EQUILIBRIUM OF PRICES AND HOLDINGS OF GOODS THROUGH DIRECT BUYING AND SELLING

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The Walras approach to equilibrium focuses on the existence of market prices at which, the total supplies match the total demands for goods. Trading activities that identify such prices by bringing agents together as potential buyers and sellers of a good are characteristically absent. Anyway, there is no money to pass from one to the other as ordinarily envisioned in buying and selling. Here, a different approach to equilibrium what it should mean and how it may be achieved is offered as a constructive alternative. Agents operate in an economic environment where adjustments to holdings have been necessary in the past and will likely be needed again in a future that is changing. Money is familiar for its role in facilitating these adjustments. Marginal utility provides relative values of goods for guidance in making incremental adjustments, and with cash incorporated into utility and taken as a numéraire, those values give money price thresholds at which an agent will be willing to buy or sell. Agents in pairs can then examine such individualized thresholds to determine whether a trade of some amount of a good for some amount of money may be mutually advantageous in leading to higher levels of utility. Iterative bilateral trades in this most basic sense, if they keep bringing all goods and agents into play, are guaranteed in the limit to reach an equilibrium state in which the agents all agree on prices and, under those prices, have no interest in further adjusting their holdings. The results of computer simulations are provided to illustrate how this process works.

Joint work with J. Deride (UAI) and R.T. Rockafellar (U. Washington).

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