looked at the Canadian case as an internally generated phenomenon. Rich's explanation appears far more convincing. As he sees it, the key actors were Canadian exporters. Unable to discount bills in New York during the panic, they ran down their own deposit accounts, transferring the pressure to the Canadian banking system.

In the course of his study Rich developed several new series on interest rates, the balance of payments, and the money supply that will be of interest to monetary historians. Undoubtedly, these series will prove to be among the most important contributions of the volume.

Finally, a minor complaint: There is no index, and there are no page numbers in the lists of tables and charts. These omissions make it hard to find information without a prolonged search of the text.

This book, I believe, will have a long academic life. Canadian economic historians will naturally find the book of interest. And students of the monetary history of other countries, the United States in particular, will find the additional perspective provided by this able study of Canadian money and banking during the gold standard era extremely useful.

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Money: Lectures on the Basis of General Equilibrium Theory and the Economics of Institutions
Rudolf Richter
Translated from the German by Wolfgang F. Stolper
Berlin: Springer-Verlag, 1989, 399 pp.

Systematic treatises are not so common in economics now as they were before mid-century. In the "secondary currency community" of academic economics (to apply a term of Rudolf Richter's by way of analogy), the journal article is the unchallenged unit of account; whereas, in the "primary currency community," it is the dollar; and textbooks, not monographs, are the stock in trade. Richter's lectures bow to fashion by posing as a quasi-textbook. In reality, they have been fashioned into the rare treatise on money. They are an extended effort to marry the theory of general equilibrium with the new institutionalist economics, which

attempts to derive the structures of firms, trading relations, and such like as the outcome of individual optimization in the face of transactions costs and constraints imposed by legal and political institutions.

Richter's format is in the tradition of some of the great treatises in monetary economics: Wicksell's *Lectures;* Hicks's *Value and Capital;* and Patinkin's *Money, Interest, and Prices.* Before tackling money directly, Richter reviews the rudiments of general equilibrium and capital theory. In this there is no novelty: His neat summary of the determination of relative prices is drawn from standard textbooks; and, despite the use of overlapping-generations models, his capital theory comes directly from Irving Fisher. What is unusual in these preliminaries is Richter's extensive survey of the economics of institutions. Here he lays the foundations for the central notion of his book: the *currency order.*

The currency order comprises the elements *sine qua non* of money as an institution. There is a "bookkeeping order," which defines the unit of account and the means of payment, and, in parallel form, there is a "value safeguarding order," which establishes the price target (regulating the unit of account) and the mechanism for supplying the means of payment. The currency order is a useful pedagogical device. It reminds us that abstract models (formal or informal) require adequate accounts of their institutional foundations if they are to illuminate concrete monetary problems. Richter demonstrates the power of the currency order, to take one example, in his discussion (pp. 131–32) of the Black-Fama-Hall system. He shows, contrary to Greenfield and Yeager, that the government cannot establish a working monetary system simply by declaring a particular basket of goods to be the unit of account. If a monetary system is to function, either the government must supply and regulate some general means of payment or one must arise spontaneously from the private sector. Using the currency order as a checklist prevents one from forgetting some key elements in monetary systems. Richter goes on to use the currency order as part of a comprehensive survey of monetary theory, touching on *inter alia* competitive currencies, exchange rate management, the optimal quantity of money, gold and paper standards, and the structure of banking firms. He spends a good deal of space matching the features of successive models to the currency order. Although there are no new insights proportional to the tediousness of the succession of formal models, Richter succeeds in giving a unified treatment to topics that are usually treated in a rather higgledy-piggledy manner.

The main weakness of Richter's book is that the marriage he has brokered between the economics of institutions and general equilibrium is an unhappy one. This is foreshadowed in the first chapter. There, Richter pointedly dismisses the problem of general equilibrium; he adopts index numbers as a theoretically acceptable (rather than practically necessary) shortcut to the value of money; he assumes that, for monetary theory, relative prices can be taken as given; and he dismisses

the "Patinkin controversy" as of but historical interest. The Patinkin controversy—how relative prices are determined in a monetary economy—remains *the* fundamental problem for monetary theory. Frank Hahn showed in 1965 that, unless special assumptions are made (e.g., fixed relative prices or no distribution effects), a model of money such as Patinkin's, in which money is valued only because it is valuable, has two flaws: (1) If there is a monetary equilibrium, then there is also a barter equilibrium (i.e., money is not essential); and (2) in general, there is no monetary equilibrium.

The usual story used to rationalize the general-equilibrium model is that there is an auctioneer (Walras) or an institution of recontracting (Edgeworth) so that there is no trading outside of equilibrium. These mechanisms not only determine relative prices, but ensure that there are no barriers to the execution of trade: Every buyer finds a seller and vice versa. The upshot of Hahn's attack on Patinkin is that, if money is modeled without specifying in detail *how* it acts to reduce transactions costs, the existence of equilibrium is threatened. Since Hahn's paper, an important project (largely unnoticed by Richter) in monetary theory has been to give better accounts of the mechanisms through which money facilitates trade and through which equilibrium is established. Richter takes his brief to be money in equilibrium. By concentrating on money at rest rather than on money at work, and by adopting strong assumptions (such as one-good economies) that short-circuit Hahn's criticisms, Richter skirts the really difficult problems in monetary theory. The marriage between the economics of institutions and general equilibrium theory is unhappy because it is unconsummated. Rather than being used as a checklist, the currency order should stress the interaction of its elements at a deeper level and should have been used to expose the shortcomings of the (implicit) institutional foundations of the general equilibrium model.

Reservations aside, Richter's treatise is a welcome relief from the common currencies of monetary economics. It presents a splendidly annotated guide to standard and nonstandard topics in both the English-language and the German-language literature. It is sprinkled with numerous interesting historical notes. As a readers' guide to monetary economics, Richter's *Money* is, and likely will remain, a useful book.

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The Political Economy of James Buchanan
David Reisman
College Station: Texas A&M University Press, 1990, 204 pp.

Can a quarter of a century already have passed since I first met James M. Buchanan? As his colleague at the University of Virginia when public choice (as it came to be called) was in its infancy, I was privileged to