CHAPTER 4

SPECULATIVE BUBBLES AND CRASHES I: IRRATIONAL

"Impovements of the booble by the bauble for the bubble."

James Joyce, 1939

Finnegan's Wake, p. 273

4.1. Introduction

The most dramatic and compelling of all economic discontinuities have been the crashes of great speculative bubbles. The most extreme of these have triggered immense political and social transformations. In the United States, the stock market crash of 1929 serves as a cataclysmic divide between one world and another. Even today, the remote echoes of the crash of the Mississippi bubble in 1720 reverberate in the hankering after gold standards and fixed exchange rates by France in international financial negotiations. Thus it is not surprising that the first application of catastrophe theory to economics was a model of stock market crashes developed by Zeeman (1974).

Although speculative bubbles and their respective crashes have been long and widely studied, they remain among the most poorly understood and mysterious of all economic phenomena. They raise a conflict between the core economic concept of rationality and the irrational forces of darkness apparently lurking in speculative bubbles. For defenders of the faith, the sun of rationality shines even in the apparent midnight of the most hysterical of panics.

There is no resolution of this conflict. Are the enthusiasts of an extravagant boom the rational beneficiaries of a self-fulfilling prophecy? Or are they deluded lunatics rushing like lemmings to their doom? A simple answer would seem to depend on the timing of their respective entrances and exits. And we shall use this criterion later in an attempted synthesis of approaches. But we must recognize that neither this criterion nor the apparent psychological atmospherics of the market participants provide a definitive answer to the question.

Debates about speculation are quite old in economics. According to Schumpeter (1954) it was the Dutchman Graswinckel (1651) who first clearly articulated the idea that speculation can stabilize commodity markets, only fourteen
years after the collapse of the tulipmania. Milton Friedman (1953) used this idea as the centerpiece of his defense of floating exchange rates, arguing that profit-maximizing speculators must "buy low and sell high" thereby leading to stabilization. Sarris (1984) presents an updated version of Graswinckel's arguments for storable commodities. Tirole (1982) has argued that in a world of infinitely-lived rational speculators with infinite horizon futures markets, speculative bubbles are impossible, where a bubble is defined as a sustained price equilibrium away from a price determined by "market fundamentals."

That speculation can be destabilizing has also long been argued. Especially impressed by the excesses of the British South Sea bubble and the French Mississippi bubble, both of which burst in 1720, the widespread classical discussion focused upon such things as looseness of credit, gullibility and foolishness of speculators, fraud and chicanery by key insiders, and the general mob psychology of mania and panic. Responding to the problem of credit looseness Richard Cantillon (1755, Chap. 17) urged a strict monetarism in order to restrain speculation, even though he personally made a fortune from the Mississippi bubble. Referring to the managers of the South Sea Company, Adam Smith (1776, pp. 703-704) declared, "They had an immense capital dividend among an immense number of proprietors. It was naturally to be expected, therefore, that folly, negligence, and profusion should prevail in the whole management of their affairs. The knavery and extravagance of their stock-jobbing operations are sufficiently known [as are] the negligence, profusion and malversation of the servants of the company." MacKay (1852) and Bagehot (1873) also presented extended and widely cited arguments along these lines.

The view that irrational destabilizing speculation can occur has been defended more recently also. Responding to Friedman's argument that destabilizing speculation cannot be profitable, Baumol (1957), Telser (1959), and Farrell (1966) all presented examples of profitable but destabilizing speculation. Following the classical tradition these examples involved either imperfectly competitive speculators or irrational expectations among nonspeculators (sucker outsiders). The key to all these examples is that speculators will buy when the chances for price appreciation are high and that this does not necessarily coincide with prices being low. This point was more explicitly made in the context of rational competitive speculation by Kohn (1978). More recently the possibility of irrational speculation has been defended by Kindleberger (1978, 1989), Shiller (1984, 1989), and Black (1986).

Although implicit in Keynes (1936, Chap. 12), the first explicit discussion of the idea of a rational speculative bubble is due to Paul Samuelson (1957). He suggested that it was possible in theory for a speculative bubble to last forever. "The market literally lives on its own dreams, and each individual at every moment of time is perfectly rational to be doing what he is doing." (ibid, p. 215) He continues by noting that in history "all tulip manias have ended in finite time," (ibid) but that there is nothing in theory to say when exactly or even if at all. "Why do some manias end when prices have become ridiculous by 10 percent, while others persist to the tune of hundreds of percents?" (ibid, p. 216)