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THE PERIODICITY OF CRISES. A SURVEY OF THE LITERATURE BEFORE 1850

BY
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This article examines the literature on the periodical recurrence of economic crises up to the 1840s, illustrating how awareness of this phenomenon was far more widespread than the few existing histories of business cycle theories indicate, that observations of this phenomenon began much earlier than previously documented, and also that early writers were more interested in emphasizing the intermittent return of crises rather than their precise timing.

1. INTRODUCTION

The awareness that economic development does not proceed smoothly is probably as old as economics itself. Speculation manias, crop failures, political troubles, natural catastrophes and other events wrought havoc well before the industrial era. Industrialization, however, brought some regularity in the recurrence of crises, which were slowly recognized to develop out of the intrinsic, normal working of the economic system in a cyclical way and with some common features. This interpretation of the phenomenon became dominant (though not universally accepted) towards the end of the nineteenth century via a gradual process of introduction of new ways of thinking, a reconceptualization of the process of change, and the acquisition and systematization of empirical information. In particular, it became necessary to switch to a theoretical system capable of encompassing crises as an endogenous phenomenon; to recognize a common path in the development of various crises, to characterize their morphology, and to look for a common explanation of these phenomena, abstracting from their specificities; and to work out models capable of explaining at once the cumulative nature of the upswing and the downswing, and the turning points—which in

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turn implied the idea that a proper explanation of the phenomenon required each phase to grow out of the preceding one.

This paper is concerned with only one of the aspects characterizing the transition from the early theories of crises to the modern theories of the cycle: the recognition of the periodicity of crises in the early stages of this process. It is easy to intuit that this was a necessary and momentous step, as it laid the basic observational information on which all other developments could be built. However, one should not forget that recognizing that crises return with some regularity does by no means provide an explanation of the phenomenon and is not even sufficient on its own to interpret the succession of crises as belonging to a cycle. For that, a reconceptualization was necessary. However, it will not be discussed in this paper.

Given the importance of the idea of periodicity in the development of the notion of 'cycle,' this aspect has naturally enough received some attention in the secondary literature. Yet the existing accounts focus on a few, although admittedly important writers and fail to show how widely early commentators (mostly pamphleteers and journalists, but also a few economists) perceived periodicity as a fundamental feature of commercial crises. Moreover, the adjective 'periodic(al)' can be employed in at least two senses in relation to cyclicality, and a discussion of its usage is still lacking. 'Periodical' and 'periodic' may refer to the regularity in the occurrence of events or the recurring at regular intervals, but may also, more generally, refer to the "recurring or reappearing intermittently" or "occasionally" (*Oxford English Dictionary*). Beginning from William Stanley Jevons in the last part of the nineteenth century there was some emphasis on the regularity in the appearance of crises, while most writers in the early part of the century were interested in stressing only the recurrence, even if some of them attempted a rough estimate of the frequency of fluctuations.

This paper aims at exploring these aspects. It begins (section 2) with a discussion of the terminology in use in the early nineteenth century to denominate crises and to ponder on the semantic differences among some of the relevant terms.

In section 3, the handful of historical treatments of periodicity in the literature on crises are examined, beginning precisely from Jevons's shift of emphasis towards an 'astronomical' understanding of the periodicity of crises. The following sections survey the primary literature up to the first half of the nineteenth century, in particular in the English and French languages.[1] I am fully aware that providing a complete catalogue is an almost impossible task, as most statements on this issue are buried in

[1]I am not aware of any early relevant literature on the topic in Italian or in German. As to German, Bergmann (1895), who is naturally otherwise very much aware of the German contributions to the theory of crises, does not cite any writers in that language other than Rodbertus (1842) in his chapter on periodicity. This is perhaps natural, in the light of several comments at the time that commercial crises are phenomena particularly evident only in countries where trade is developed; the list boiled down to Britain, France, and the United States (see e.g. Juglar 1862; Lawson 1848 added Holland). As to Italian, the few references to the periodicity of crises I have been able to find are all included in translations of, or commentaries upon, French writings (Romagnosi 1834, citing an address by some Bordeaux merchants; Duryle 1835; Sismondi 1839–40; Bianchi 1840; and Blanqui 1848).

occasional pamphlets whose titles only rarely hint at their precise contents. My aim is to render more accurately than has been done so far the atmosphere of the time, focusing on how crises were beginning to be recognized as returning with some frequency and were occasionally beginning to be interpreted as part of a more articulated phenomenon. The reader should remember, however, that the latter view remained in a minority until the end of the nineteenth century.

The reconstruction omits the writings already cited by the historical accounts discussed in section 3 (by Jevons, Bergman, and Miller) to focus on what has so far been overlooked in the literature in this context. It focuses on materials published in the first half of the nineteenth century, with the aim of showing how the semi-regular recurrence of crises gained recognition. By the 1850 the process was practically completed, and writings explicitly referring to the periodicity of crises were already becoming widespread. It is sufficient here to notice that books and articles carrying the words ‘‘crises’’ or ‘‘panics’’ in the plural were multiplying,[2] often with the explicit aim of providing a common explanation to the whole series of events.[3] Crises consistently found their way in specific entries in dictionaries and encyclopedias (although in some case they were discussed under ‘credit’),[4] and historical accounts of the previous crises were published.[5] By the end

[2]Some earlier specimens can be found, such as William Playfair’s pamphlet on the causes and remedies of agricultural distresses (1821), where the events represented by price falls are also graphically represented; two anonymous articles in the *Edinburgh Review* headed ‘‘commercial distresses of the country’’ and ‘‘Distresses of the country’’—both concerned with the current crisis, the latter also listing the previous situations of distress, namely, the scarcities of 1796 and 1800, and the speculative crisis of 1810 (p. 255); an article in the *Orleans Gazette* on ‘‘Commercial Fluctuations and Embarrassments’’ (1819); Millot’s study on the causes of periodic commercial crises (1837); Chitti’s book on financial crises (1839); Lawson’s pamphlets on commercial panics (1848; 1848a); Briaune on commercial crises (1840); Joplin on commercial embarrassments (1841); Stansfeld’s piece on monetary panics (1849); McCulloch’s article on ‘‘Commercial revulsions’’ (1826); and Duncan’s pamphlet on mercantile embarrassments (1842).

[3]See in particular an anonymous discussion of ‘‘The causes of commercial crises’’ (1850); Juglar’s articles anticipating his famous book (1857; 1857a); Joplin’s pamphlet explaining fluctuations and panics (1854); Stansfeld’s pamphlet (which I have not read) on the Currency Act of 1844 as the generator of periodic panics (1854); an anonymous article discussing ‘‘Commercial excitements and crises’’ ([Francis] 1853); Schäffle’s theory of commercial crises (1858) with his discussion of the ‘‘regular return of economic disturbances of equilibrium’’; Swiney’s note on panics and convulsions (1855); Clément’s article on commercial crises (1857); Williams’s ‘‘Observations on Money, Credit, and Panics’’ (1858); and Bonnet’s reflections on the economic and financial issues relating to crises (1859).

[4]See in particular Coquelin’s entry on ‘‘Crises commerciales’’ in the *Dictionnaire de l’économie politique* (1852); Garnier’s entry with the same title in his *Dictionnaire* (1859); and Ott’s entry on ‘‘Crise’’ in the *Dictionnaire des sciences politiques et sociales*, where it is lamented that crises recur too frequently, and it is stressed that ‘‘the importance of the study of crises lies in the fact they return at (so to speak) fixed intervals, which seem to be shortening rather than lengthening’’ (1854, p. 1388).

[5]In particular Bell’s ‘‘History of English panics’’ (1850); the account of financial panics by some ‘‘members of the New York press’’ (1857); Wirth’s history of commercial crises (1858); and Evans’s book on the 1857 crisis as compared with previous events of the century (1859). (Although only partially and in passing, Evans’s book on the 1847–48 commercial crisis published in 1849 also carried some comparison with the 1825 panic.)

of the 1850s references to the periodicity of crises were so common that people disagreeing with the idea had to deny it explicitly.[6]

My account begins from the late 1840s and proceeds backwards to better emphasize how each wave of writings on the subject was firmly based on the preceding recognitions of the phenomenon. This was so widespread that around 1810 some writers already took for granted that crises recur with some frequency. (Admittedly, the inverse chronological order also aims at preserving some suspense as to the earliest occurrences I have been able to find.) Most of the writers examined in this paper did not have very much in common besides having noted the periodicity of crises. They had advanced many and different explanations of the phenomenon, reflecting widely divergent viewpoints. It has not always been possible, therefore, to group them together in an organic way, except in two cases for which a family thread is clearly recognizable (Sections 8 and 9). Accordingly, the writings are examined either by theme or by period, the cadence being dictated by the crises themselves.

2. TERMINOLOGICAL ISSUES

Although in what follows I will often use the term 'crisis,' this is a term that entered into common use to describe such events only relatively lately. In the first three decades of the nineteenth century people more often used the locution 'distress,' sometimes associated with adjectives such as 'agricultural' or 'national.' The term indicates "The sore pressure or strain of adversity, trouble, sickness, pain, or sorrow; anguish or affliction affecting the body, spirit, or community" (*Oxford English Dictionary*). It remained in frequent use till the end of the 1840s, after which it is rarely met—like its companion term "embarrassment"[7] (often used in the plural), meaning "Something which embarrasses; an impediment, obstruction, encumbrance. In *pl.* often = 'pecuniary difficulties'" (*OED*), 'distress' characterizes the crisis in terms of one of its *effects*, stressing the financial difficulties felt by the community (but in particular traders and bankers).

The events of 1825 were sometimes described using the term 'panic,' indicating "A condition of widespread apprehension in relation to financial and commercial

[6]See in particular an article, published anonymously by Cliffe Leslie, titled "Alleged commercial decades or cycles." Leslie seems to have been worried not only by the endorsement by Jevons (1863) of the idea that crises recur periodically, but also by politicians who had started to plan their policy having in mind the decennial recurrence of panics, and argued that "besides the irregularity in our harvests, there are obviously many other uncertain vicissitudes which make it in the highest degree imprudent to reckon securely upon an easy money market and commercial prosperity throughout any year, and absolute madness to base trading speculations on the assumption of such a state of things for several years to come in succession" ([Leslie] 1864, p. 1428). Leslie contested that crises could be interpreted as having the same origin, and argued that even if decades of alternate rises and falls of prices could be identified in the past, "it would be altogether fallacious to infer that the same order of things would recur periodically for the future" (ibid.). The argument was taken up by Laveleye (1865), and Ferrara also "doubted that there is any principle in the science [of political economy] from which the periodicity of crises can be deduced as an economic dogma, and even less that it is a mathematical law." He admitted that Juglar's tables showed that they had recurred with some periodicity, but claimed that his series was too short to deduce a theory or law (1864, p. 278).

[7]'Embarrassments' is only occasionally met in the title of articles and pamphlets. It was used mainly between the 1820s and 1840s.

matters, leading to hasty measures to secure against possible loss" (*OED*). It should be recollected, however, that the financial specification of the term was new at the time, so that the word retained its more general meaning of "A sudden feeling of alarm or fear of sufficient intensity or uncontrollableness as to lead to extravagant or wildly unthinking behavior, such as that which may spread through a crowd of people" (*OED*). The emphasis was then shifted from the effects to the features of crises, stressing the suddenness of the events, the mass behavior with its irrationality, and the spreading through a community. The term 'panic' recurred in connection with crises throughout the nineteenth century and beyond, in particular in correspondence of the episodes of 1847, 1857, 1866, 1873, and 1907.

Other expressions occasionally used in the early nineteenth century are "convulsion" (a violent agitation; of medical origin, indicating "An involuntary contraction, stiffening, or 'drawing up' of a muscle, limb, etc.": *OED*), "revulsion" ("A sudden violent change of feeling; a strong reaction in sentiment or taste": *OED*), and "pressure" (this noun being accompanied by indications as to what was under pressure, in particular the money market). These locutions are found in titles of a handful of pamphlets at the outburst of every crisis between 1816 and 1873.

"Fluctuations" is a ubiquitous term. It regularly appears in the title of pamphlets at least since 1800. During the nineteenth century its usage is not too frequent, but fairly regular; it has been used more frequently from the 1920s. It indicates "The action or condition of passing more or less rapidly and suddenly from one state to another; an instance of this; repeated variation, vicissitude, and in *pl.* 'ups and downs'," or "An alternate rise and fall in amount or degree, price or value, temperature, etc." (*OED*). The emphasis is on the alternation, regardless of any regularity (or lack of it) in the amplitude, in the timing, or in the speed at which the movement is reversed.

Although it sporadically appeared before, the term 'crisis' was first generally used in English for the events of 1836 and 1837, and again more frequently in 1847 and 1857. It was the term more commonly used throughout the remainder of the century (with an exception discussed in the next paragraph), normally accompanied by the adjectives 'commercial' or, less frequently and especially in French, 'financial' (the attribute 'economic' was introduced only towards the end of the century). Such was the heading—at first in the singular, then in the plural—under which economic perturbations were discussed in encyclopedias and specialized dictionaries in English, French, German, and Italian. The term began to be generally substituted by 'cycle' in the literature only after the First World War, but kept recurring at the outburst of every major crisis. The word has a medical origin, indicating "the turning-point of a disease for better or worse"; in figurative sense, it indicates "A vitally important or decisive stage in the progress of anything; a turning-point; also, a state of affairs in which a decisive change for better or worse is imminent; now applied *esp.* to times of difficulty, insecurity, and suspense in politics or commerce" (*OED*). The emphasis is now on the process of development of the difficulties and its resolution.

In the late 1870s and during the 1880s, the expression more frequently used was 'depression.' The term occasionally occurred before, indicating either an unduly low level (of activity, prices, profits, etc.) or the years of 'bad times' as opposed to the years of prosperity; borrowing from the physiological meaning of the term, in association with 'trade,' 'depression' indicated a state of reduced vitality. The term is more appropriate than 'crisis' (normally used for the short time during which events precipitate) to describe periods of prolonged slacking of business; this explains the high frequency of the usage of the term after the difficult years in the second half of the 1870s.

The term ‘cycle’ is more problematic, as it has several meanings, of which three recur in the nineteenth-century literature on the issues discussed in this paper. The most common usage, occurring fairly frequently at least from the 1820s to the end of the century is that of ‘cycle’ as (1) “an interval of time during which a characteristic, often regularly repeated event or sequence of events occurs” (*American Heritage*: 1). For example, Petty’s reference to the average duration of the “Cycle within which Dearths and Plenties make their revolution” (Petty 1662, p. 43). More commonly, the word was loosely used to indicate an interval in time in expressions such as “cycle of prosperity,” or “cycle of depression,” as in this passage: “cycles of abundance which are supposed to alternate with cycles of dearth every five years” (Anonymous (*Economist*) 1849, p. 573). The other two notions of cycle both refer to recurring events following the same pattern. One of them, however, focuses on what happens within a *single* cycle, while the other refers to the *succession* of cycles. The former of these is defined as follows: (2) “A single complete execution of a periodically repeated phenomenon” (*American Heritage*: 2a; see also *OED*: 4 or *Grand Robert*: 2). This usage of the term ‘cycle’ stresses the *order* in which events occur within each cycle; as an example, one may consider the cycle of a washing machine, which goes through a number of phases, from pre-washing to spinning, following a constant order, but which stops after the last one, and only resumes when the button is pushed again. The other notion focuses more on the *repetition* of the sequence than on the sequence itself within a single course; this is somehow taken for granted. It is defined as follows: (3) “A recurrent round or course (of successive events, phenomena, etc.); a regular order or succession in which things recur; a round or series which returns upon itself” (*OED*: 3a; see also *American Heritage*: 2b or *Grand Robert*: 2). An example is the working of a piston in a combustion engine. The sporadic occurrence of the term ‘cycle’ during the early part of the nineteenth century normally refer to the succession of phases within a single round course, and therefore has more to do with the morphology of the sequence than with a self-sustained movement. The idea that each phase generates the following one, so that the cycle endlessly restarts and there is no real beginning and ending point, started to substitute the emphasis on crises only towards the end of the century. At that point, the object of analysis shifted from crises to cycles. Previously the focal point of reflection, crises were reduced to a phase, or even a transition point, in the cycle. However, terminology was slow to adapting to the conceptual shift. ‘Business cycles’ became a widely accepted expression after the publication of Mitchell’s book with the same title in 1913, while Lavington’s *Trade Cycle* (1922) channeled the British usage of the term.

It is important to bear in mind the distinction between meanings (2) and (3) of the term ‘cycle,’ in order to avoid the mistaken belief that some early occurrences of ‘cycle’ indicate that a corresponding ‘theory of the cycle’ was already developing at the time. The issue is much more complicated (see Section 11) and cannot be boiled down to the adoption of a specific term.[8]

[8]A fuller appreciation of the terminological issues would require a discussion of the metaphorical transfer of concepts. I have done this in a separate paper (Besomi, forthcoming), focusing on the medical metaphor. One of these metaphors, based on the simile with ‘intermittent fevers,’ is particularly relevant for the subject of periodicity, but to avoid redundancies it is not discussed in this paper.

3. THE PERIODICITY OF CRISES IN THE SECONDARY LITERATURE

The prominence of the issue of periodicity is naturally recognized in the secondary literature on the theories of crises and cycles, and in particular in the few comprehensive histories of the subject. But the actual accounts boil down to a short list of writers—the earliest instance being dated 1829—who supplied estimates of the frequency of these events. Regardless of the fact that these lists are incomplete and earlier examples can be indicated, such a rendition is surely reductive. In the early literature, the emphasis was much more on the *recurrence* of crises and the succession of events rather than on their precise *rhythm*; indeed, most writers emphasized the irregularity of the frequency of crises.

This shift of emphasis in the late 1870s was due to Jevons, who pushed the issue of the timing of crises to the forefront of the research on economic perturbations—previously this aspect was the subject of frequent but somehow casual remarks. The distinctive mark of Jevons's approach to cycles lies precisely in his belief in the regularity of the occurrence of these events, so much so that he "passed over with surprising levity" the problems in his inductive argument of which he was aware, in order to match the frequency of crises with the period of the sunspot cycle, the external ultimate cause of perturbations (Keynes 1936, p. 126).

A large part of the literature in the two decades following Jevons's statement eventually concerned the time-regularity of cycles, with the field divided among three factions: the (few) supporters of Jevons; those who admitted some regularity and were prepared to considered them as connected events but not to admit a strictly regulated timing (a view that gradually conquered the majority of writers only towards the end of the century); and those who instead denied any regularity, morphological similarity, or relationship between crises and insisted instead on their occasional and accidental nature.

The belief in a more or less decennial cycle was solidly grounded in the evidence of the crises (of various nature: commercial, financial, speculative) which occurred in Britain in 1815, 1825, 1836-39, 1847, 1857, 1866, 1878.[9] As Gerolamo Boccardo observed, "such a regularity leads in all probability (I was about to write certainty) to conjecture the existence of a law. The caprices of randomness are not suited to explain this order of [economic] disorders" (1879a, p. 411). Indeed, Jevons was not the first to suppose that there was some regularity in this series of events. The secondary literature records a number of writers who attempted to estimate the frequency of crises (all of whom, however, admitting wide irregularities between cycles). Jevons himself looked for his forerunners (1878; taken up by Boccardo 1879, Ch. 2, and 1879a). In his discussion he focused in particular on those who estimated the period to approximate a decade (Hyde Clarke 1847; Langton 1857; Mills 1868), but also mentioned earlier writers who only referred to periodicity in general (Danson 1848; Wilson 1840).

Palgrave's *Dictionary of political economy* carried an entry on the periodicity of crises (Pownall 1894), where the awareness of the recurrence of crises is attributed to

[9]It should be noted that this dating of the crises is not unanimous. Also there is the lack of an established definition of what, precisely, crises are (for a discussion see Mitchell 1927, pp. 378–81). This series is taken from Jevons (1878).

Thornton's *Paper credit of Britain* (1802) and Tooke's *History of prices* (Tooke and Newmarch 1838-1857). However, references are only to the explanations offered by these authors of the causes of some early crises rather than to specific discussions of the reasons for the recurrence, while citations to this effect include only Langton, Mills, and Jevons; Clément Juglar (1889) is referred to, but not explicitly discussed.

Eugen von Bergmann dedicated a full chapter of his unsurpassed history of crisis theories (1895)[10] to writers discussing the periodicity of crises. He focused on the authors cited by Jevons, Jevons himself, and the debates stimulated by his work[11]—including a due reference to Juglar, who had discussed the periodicity of crises in the first edition of his *Crises commerciales et leur retour périodique* (1862). In the second edition (1889), Juglar had argued against Jevons's too rigid approach. Bergman also mentioned a number of earlier writers, beginning from Blanqui (1836), Rodbertus (1842), Fullarton (1844), Coquelin (1848), J. S. Mill (1848), Ott (1851), Courcelle-Seneuil (1858), and Bonnet (1859). His earliest reference (apart from Petty's 1662 isolated allusion to a seven-years cycle of agricultural dearth and plenty) is to John Wade, whose 1833 *History of the middle and working classes* is discussed at some length.

A further inquiry on early crisis theories reporting statements on the periodicity of the phenomenon is due to Harry Miller. In his *Banking Theories in the United States before 1860* (1927), Miller cites an anonymous writer who in 1829 stated that

> an opinion is entertained by many that every fourteen years or thereabouts, there is a sort of revolution in property—that real estate especially, undergoes a speculative rise and fall, and that consequently wealth becomes transferred from one individual to another, by the mere operation of time. Without pretending to decide upon the fact, whether or no these fluctuations are as frequent as one in fourteen years, one thing we know to be certain, which is, that fluctuations do take place, and that they will only take place in countries, where paper money has been extensively introduced ([Raguet] 1829, p. 303).

Besides citing a number of authors believing in some regularity in the occurrence of crises, Miller also reports later estimates of the frequency, beginning from Rantoul (three years, 1836), Bowen (7–8 years, 1856), and Amasa Walker (seven years, 1857).

Later accounts of early theories of crises (in particular by Hutchison 1953 and Schumpeter 1954—the latter relied very much on Bergmann and Miller) do not add further names to the list. This is what I will attempt in the following sections.

4. THE COMMERCIAL DISTRESS OF 1847

This survey may be started from the comments on the commercial distress which followed the railways speculation of 1847. After the panic there was an outpouring of literature on the subject, some of which emphasized the similarity to preceding events and the apparent periodicity of their recurrence.

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[10]Bergmann's book remains surely the most detailed and systematic on the early theories of crises. Schumpeter relied heavily on it in his work *History of economic analysis*.

[11]To Bergmann's references pertaining to this debate, one could add a rather critical note in the *Economist* titled "The periodicity of panics" (1879), which opens as follows: "The observation as to the habit of panics or crises in commerce to recur at regular intervals is, of course, a very old one."

The survey may begin with an official recognition of this phenomenon. At the end of the decade, the idea of the periodicity of panics had made its way to the British Parliament. As aptly summarized by Lord Ashburton, "the recurrence at the present time of one of those visitations of commercial and financial distress of which I have, during a long life, experienced so many, has once more forced upon the consideration of the Parliament and the public the interminable subject of banking and circulation" (1847, cited from the 1867 reprint, p. 5[12]). Both houses of Parliament organized secret committees to inquire into the causes of the 1847 commercial distress. Two witnesses are of particular interest for our subject. T. C. Salt attributed the cause of the crisis to the working of the monetary system, in particular to the fact that all the failures it causes when it breaks out close or derange entire channels of trade. He attempted an evaluation of the time required for the completion of the various stages through which the panics cycle passes:

> In former times, after those panics, trade never revived within about six or eight years; we have had a depression, on the average, after every panic, of five years, and trade never revived in its ordinary modes; men were afraid of embarking in business as usual, till at last the money of the country having been lying so long perfectly unproductive in the market, some one proposes a joint stock company, and parties who dare not venture into the regular channels of business, venture to take a few shares in it; the shares rise in value upon that; other joint stock companies are formed, and money is brought into circulation, and then gradually business resumes its course; but under the present monetary system, business has never resumed its course for three years without the monetary system breaking up. Parties who have been tempted by seeing money low in the money market, at four per cent., three per cent., and two percent., have taken it up at three or at two per cent., to embark in useful speculations for the employment of industry, and as soon as they have gone into those speculations, the monetary system breaks up and they are suddenly obliged to go into the market to sell, and they lose their property when money is scarce and dear, and when interest is at eight or nine per cent! The Government have invariably,—every Chancellor of the Exchequer, without any exception, from the time of Mr. Robinson downwards, has assured the nation that it was in a most prosperous state, and that they need have no fear; this assurance has been constantly given, and within a few months, when the breaking up has come, the Government have invariably turned round upon persons who have embarked in business, and accused those very men of wild speculations (T. C. Salt 1057, in House of Commons Secret Committee on Commercial Distress 1848, p. 80).

Another witness, C. Turner, was asked to what he attributed the tendency to speculation characterizing the 1847 overtrading and the subsequent panic, and whether the previous instances of excessive speculations should not have deterred people from embarking in similar ventures. It may be noted that the idea that 'pressures' are periodical was suggested by the questioner:

> 1016. But there was a commercial pressure in 1820, and another in 1825 and 1826, and another in 1836; and another in, 1839; would not that accumulation of periodical pressures rather shake the purpose of commercial men to embark their capital in

[12]This passage, in a slightly modified form, was taken up in a review of Ashburton's pamphlet published in the *Quarterly Review* and reprinted in *The Albion* (Anonymous, 1847).

> commercial undertakings?—In nine or ten years you get a new race of commercial men; men who have not known 1825; and the probability is, that a man who is a prudent man in the first instance, hears of large profits being made on railways, till at last even the most prudent begin to think that they have been too cautious; they can hardly help being influenced by those around them; at first they stand aloof, but at last they are drawn into the same vortex, and are persuaded out of their own reason.
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> 1017. You would not attribute the disposition of commercial men to embark in railways at all, to the fact of their being deterred by the events of 1825 and 1836, from embarking in commerce?—No; at first a prudent man, when he hears of one of these railways speculations, says, "It is a bad thing, and I will not go into it;" but when he finds himself deceived in his first opinion, he is induced to go into it, on the expectation that things will rise still higher; and so he goes on, from one step into another.

In a fascinating short paper presented before the Dublin Statistical Society in 1848, James Anthony Lawson included his remarks on the periodicity of commercial panics among the presentation of 'some leading facts,' which also included the observation that "these are diseases which exhibit themselves only in a very civilized state of society, where trade and commerce flourish, where there is commercial enterprise and spirit." He wrote: "If we look at the modern history of England, we shall find these periods of commercial distress regularly and periodically recurring in cycles from five to seven years" (1848, p. 2). In another article, he insisted that "commercial panics are diseases to which the body politic is subject—not chronic diseases, but epidemics as regular in their recurrence as influenza itself, though only at longer intervals" (1848a, p. 415).

Also in 1848, William Watson suggested, in a pamphlet dedicated to a method to render the recurrence of panics impossible, that panics "must continue to occur periodically so long as capital outstrips its representative gold, and the more industrious and the more accumulative a people are the more frequent must be the recurrence of these calamities" (1848, p. 6). Still in the same year, a number of remarks hinting at the periodicity of crises are scattered in the literature. The anonymous author of an article on "Public credit" in *The Economist* (later taken up by the New York *Bankers' Magazine*) casually writes of the "periodical revulsions, which are no doubt aggravated, though not created" by public credit (Anonymous 1848, pp. 754–5)—without, however, inquiring further into their causes. Another anonymous piece for a daily paper stated that "The periodical returns of distress, and the discontent which pervades the working classes of England, are evils of menacing aspect at present, to which both legislative attention and private benevolence are seriously directed. These oscillations of a vast community like Great Britain may give a fatal shock and wrench to the pivot of society, from which it may not have elasticity to recover" (*Mississippi Free Trader* 1848, p. 2 col. B). Balfour (writing anonymously) characterized the 1847 panic as "another of those crises, which recur with apparently tidal regularity" (1848, p. 477). Finally, in a paper concerned with the "fluctuations consequent to the issue of *Paper Money*," Bonnefoux noted that "immense national debt and periodical revulsions in prices, producing bankruptcies, ruin, and misery, on a great scale, are the concomitants of *Paper Money*, such as it has been regulated to this day" (1848, p. 108).

Paper currency was often blamed as the cause of periodical distress, whether because of excessive fluctuations (e.g., by Charles Enderby, who wrote of "periodical distress" being caused by the "alternate action of expansion and contraction of the paper currency": 1847, pp. 22–23) or because of its being excessively fettered (Ichabord Wright, for instance, wrote of "periodical convulsions" in this connection: 1848, pp. 3–4). A pamphlet by John Kinnear on *Crisis and the currency* is particularly interesting. The author remarked that the crisis of 1847 was "almost without example" in Britain, in spite of people being "accustomed, as we unfortunately are, to periodical commercial crises," and added that the public, in fact, is already

> so accustomed to hear of a "scarcity of money"—"a severe pressure on the money market"—"reckless speculation of merchants," and so forth—and to find the storm passing away in a few months, and all things restored to their wonted order and regularity—that the public seem almost to have come to the conclusion that these periodical tradequakes are phenomena inherent in our commercial system—the storms by which an overcharged atmosphere is restored to its purity (1847, pp. i–ii).

Besides these more or less generic observations concerning the periodicity of crises,[13] another idea concerning their regular recurrence emerged at this time. In a book advocating social reform based on co-operative associations of workers, the Frenchman François Vidal stated (without attempting to prove it) that "Under competition and laisser-faire, crises are and must necessarily be periodical," and added: "They reappear regularly like comets,[14] at precise epochs, so that one could

[13]Several other generic references to periodical convulsions (or expressions to the same effect) are scattered in the literature, normally without further discussion—indicating that the phenomenon was considered as sufficiently appreciated by the contemporaries. See for instance Mason (1847, pp. 18–19 and 26), maintaining that "commercial convulsions and periodical public distress [are] inseparable from a state of advanced civilization"; Lestiboudois (1847, p. 194), writing of "deep and periodical crises" due to the invasion of foreign products; Bishop (1848), who suggested a plan to dispose of "such periodical panics as we have now the pain of witnessing" (p. 11); Begbie (1848), who maintained that "the periodical 'panics' which prostrate so many ... are the effect of the excess of false representation for Capital" (p. 2); Henry Carey referred to the "periodical overflows of capital" and the "periodical revulsions" afflicting England, without elaborating further (1848, pp. 123 and 459); Alison wondered "How is the constant recurrence of monetary crises, similar to that which has left such woful desolation behind, to be avoided upon every recurrence of a deficient harvest at home, and an abundant importation from abroad?" (1849, p. 645); the author of an article in the *Edinburgh Review*, submitting that while Britain would be able to undercut every other country in the world so far as manufactured products are concerned she would be undercut on agricultural produce, the abolition of import duties on the latter would open the country to "incessant commercial crises," caused by the drain of specie consequent to importation. He judged that under such policy commercial crises would continually recur, in a "perpetual repetition of ... disasters" similar to the previous monetary crises (which he dated 1839 and 1848) (Anonymous 1849, pp. 121–2); Hart maintained that "periodical panics and monetary convulsions will, from time to time, occur," and pointed at the London money market and at the Stock Exchange as their common cause (1849, pp. 3 and 9); and Ledru-Rollin, commenting on "The periodical return of commercial crises which have occurred in England since the peace of 1815," indicated that "A theory has been invented ... assuming that these interruptions are necessary to trade; and according to these theorists, crises are an advantageous means of liquidation, which enable the principal houses to rectify their accounts," and commented that "This is a truly strange remedy; it must finish by destroying the patient, under pretence of eradicating the disease" (1850, p. 283).

[14]The analogy was previously evoked by Engels 1844 in a passage cited below in this section, and later it was used as follows in an article in the *Caledonian Mercury*: "in three or four years at the most the natural course of things will bring us round to the periodical depression which marks our annals with almost as great certainty as the return of Encke's comet, or the low water at London Bridge" (Anonymous 1850).

forecast their return without fear of mistake," citing the occurrences of 1817, 1827, 1837, and 1847 (Vidal 1848, pp. 45–6). This echoes a slightly vaguer statement by another Frenchman, Jacques Coste, who had argued that "commercial crises have a periodical rhythm which enables one to predict that after the third or fourth year after a crisis, trade inevitably revives until about the sixth year, when the crisis restarts" (Coste 1841, p. 41). These suggestions anticipate developments taking place several decades later, when the interpretation of 'periodicity' in astronomical terms had gained wider acceptance. Vidal himself did not seem to take his own idea too seriously, as in the following year he suggested instead that the disruption of equilibrium between production, consumption, and population that took place 60 years earlier with the dissolution of the old corporations brought "industrial crises, at first periodical, then persistent," endemic pauperism, and finally a state of general disorder (Vidal 1849, p. 1 col. 2).[15]

While most of the writers cited so far were content with *observing* that crises recur periodically, the year 1848 witnessed two attempts to explain the phenomenon. The young Marx and Engels referred to the periodicity of crises in the discussion of the contradiction between the development of productive forces and the conditions of production, in the *Manifesto of the Communist Party*:

> It is enough to mention the commercial crises that by their periodical return put the existence of the entire bourgeois society on its trial, each time more threateningly. In these crises, a great part not only of the existing products, but also of the previously created productive forces, are periodically destroyed. In these crises, there breaks out an epidemic that, in all earlier epochs, would have seemed an absurdity—the epidemic of over-production. Society suddenly finds itself put back into a state of momentary barbarism; it appears as if a famine, a universal war of devastation, had cut off the supply of every means of subsistence; industry and commerce seem to be destroyed; and why? Because there is too much civilisation, too much means of subsistence, too much industry, too much commerce. The productive forces at the disposal of society no longer tend to further the development of the conditions of bourgeois property; on the contrary, they have become too powerful for these conditions, by which they are fettered, and so soon as they overcome these fetters, they bring disorder into the whole of bourgeois society, endanger the existence of bourgeois property. The conditions of bourgeois society are too narrow to comprise the wealth created by them. And how does the bourgeoisie get over these crises? On the one hand by enforced destruction of a mass of productive forces; on the other, by the conquest of new markets, and by the more thorough exploitation of the old ones. That is to say, by paving the way for more extensive and more destructive crises, and by diminishing the means whereby crises are prevented (Marx and Engels 1848, Ch. 1).

A possible source of this observation could have been John Wade: the third edition of his *History of the middle and working classes* (Wade 1833, 1835 edition) was earlier referred to by Engels as follows:

[15] The idea that crises recur more and more frequently, to the point of collapsing into a continuous degenerated state, had a precedent. Eugène Buret insisted that the frequency of these phenomena had increased so much that they were overlapping and becoming the "normal state of our industry" (1840, vol. 1, pp. 28 and 186; see also vol. 2, pp. 165 and 196).

> The economist comes along with his lovely theory of demand and supply, proves to you that 'one can never produce too much,' and practice replies with trade crises, which reappear as regularly as the comets, and of which we have now on the average one every five to seven years. For the last eighty years these trade crises have arrived just as regularly as the great plagues did in the past—and they have brought in their train more misery and more immorality than the latter. (Compare Wade: *History of the Middle and Working Classes*, London, 1835, p. 211.) Of course, these commercial upheavals confirm the law, confirm it exhaustively—but in a manner different from that which the economist would have us believe to be the case. What are we to think of a law which can only assert itself through periodic upheavals? (Engels 1844, p. 433–4).

While for further elaborations of Marx's explanation of the periodicity of crises we have to wait until after his death, when Volume 3 of *Capital*, the *Theories of surplus value* and the *Grundrisse* were published, a more authoritative theoretical sanction to the idea that crises recur periodically was given by John Stuart Mill.[16] Having illustrated the effects of the commercial revulsions inevitably following bouts of overtrading and speculation (Mill 1848, Book III, Ch. xii, § 3), he noted that they are not occasional but tend to recur, and advanced an explanation of the phenomenon:

> that such revulsions are almost periodical, is a consequence of the very tendency of profits which we are considering. By the time a few years have passed over without a crisis, so much additional capital has been accumulated, that it is no longer possible to invest it at the accustomed profit: all public securities rise to a high price, the rate of interest on the best mercantile security falls very low, and the complaint is general among persons in business that no money is to be made. Does not this demonstrate how speedily profit would be at the minimum, and the stationary condition of capital would be attained, if these accumulations went on without any counteracting principle? But the diminished scale of all safe gains inclines persons to give a ready ear to any projects which hold out, though at the risk of loss, the hope of a higher rate of profit; and speculations ensue, which, with the subsequent revulsions, destroy, or transfer to foreigners, a considerable amount of capital, produce a temporary rise of interest and profit, make room for fresh accumulations, and the same round is recommenced (Mill 1848, Book IV, Ch. iv, § 5).

5. DIGESTING THE CRISES OF THE LATE 1830S

It has been observed that each crisis generated an outpouring of literature discussing its causes and suggesting remedies. Although between the crises of the late 1830s (1836 and 1839 in Britain, 1837 in France and in the United States) the flow of writings on the subject did indeed slow down, nevertheless some interesting casual

[16]Mill is listed by Bergmann among the writers having recognized the periodicity of crises, but the mechanism he propounded to explain it is not referred to. The subject of the recurrence of crises was already given theoretical dignity by Mill in the *Unsettled question* (Mill 1844, Ch. 2).

contributions and occasional remarks concerning the periodical character of crises were added to the literature, which again indicates that at that time the idea of periodicity was fairly widespread.[17]

W. Cargill used 'periodical' not in the sense of rhythmically regular, but with reference to a cyclical course of events. The term appears in the title of his pamphlet, *The currency, showing how a fixed gold standard places England in permanent disadvantage and produces periodical domestic convulsions* (1845), and only twice in the text; once in a footnote summarizing his argument as concerning the "effects periodically brought about by the monopoly price of gold" (p. 53n) and again where he explains that the convertibility of sterling produced a "destructive movement" and was "a piece of mechanism which, on a self-acting principle, comes up to the periodical destruction of the peace of every town, village and hamlet of the empire—bringing confusion, vice, and demoralization in its train. A law to bring in a periodical visitation of the plague, would not harm the country so much" (1845,

[17]The Frenchman Gérando pointed out that—besides seasonal fluctuations—industrial countries are subject to "irregular intervals of stagnation" due to unexpected circumstances interrupting demand, and to "periodical crises which we see appear at certain epochs"; although he specified that the latter "are born during prosperity," and referred to the propagation of over-excitement, he did not explain why such crises are somehow regular (1839, vol. 1, pp. 109–110). Mallinson believed that "Periodical panics—loss of credit and confidence, annihilation of hard-earned property—bankruptcies, and starvation of the poor" are the result of the banking system being shackled by the currency laws (1840, p. 9); similarly, an anonymous writer argued that to the most imperfect and dangerous system of currency prevailing in Britain "may clearly be traced the great fluctuations which have occurred, from time to time, in the value of property, the periodical panics which we have witnessed, and the serious distress with which the agricultural and trading interests of this country have been so often visited" (1840, p. 11). Craster maintained instead that "the periodical panics to which the commercial world is exposed" are the result of the conflicting interest between work and capital (1840, p. 14). King attributed to "Money" "those frequent and oft-recurring commercial panics, which periodically destroy the prospects and arrangements of thousands, and involves in difficulty tens of thousands beside" (1840, p. 12). An Anonymous blamed them instead to "over-trading solely" ([Cockburn] 1840, p. 3; also 1842 ed., p. 9), while Daru (1843, p. 347) and Sharp (1844, p. 8) insisted on speculation, Monitor saw them as an "inevitable consequences of abuses of power in the direction of the Bank of England" (1841, p. 35), and Enderby to an accumulation of commodities (1843, p. 77). Lord Palmerston wrote of those "periodical convulsions, which affect all transactions, and disturb the relative value of all the property of the country" and of "perpetually recurring panics and distresses (1842, pp. 15–16). Dalbiac diagnosed "that the more we depend upon other countries for our regular supply of food, the oftener we shall be exposed to those periodical panics, and pressures upon the money market, which, on several occasions, since the termination of the late war, proved so ruinous to the manufacturing, the trading and the banking interest" (1841, p. 21; see also p. 22). The author of "Commerce" used in passing the expression "periodical crises and bankrup[t]cies" (Anonymous 1845, p. 31). James Moncreiff maintained that as over-production and speculation necessarily cure themselves, they cannot be responsible for "the periodical convulsions which, since the peace, have from time to time shaken the empire to its centre. They manifestly, from whatever cause they may spring, are incapable of self-remedy; and this only the more plainly denotes that they are the offspring of inherent fundamental error, which poisons the deep wells of commercial vigour, and taints them at their source" ([Moncreiff] 1845, p. 224). Hippolite Dussard wrote, in one of the first issues of the *Journal des Economistes*, that crises are no longer a temporary illness, due to extraordinary circumstances. They are due to (so to speak) natural causes, namely, tariffs and protection, and have become periodic (1842, p. 5; further references to the periodicity of crises on pp. 19 and 29). Finally, Garnier attributes the almost periodical recurrence of crises to the fact that producers do not perfectly understand the rule that production, in order to cover production costs, must be proportioned to the consumers' needs (1845, p. 206).

pp. 58–9). Apart from the reference to the destruction of peace, Cargill's position is interesting for the discussion of the 'self-acting principle,' which—as the remainder of his argument makes clear—is meant to indicate a cyclical mechanism. The stagnation of trade makes capital of little value to its possessor; capital is thus offered at low rates of interest, which draws it into circulation. This induces a rise in prices, bringing a new epoch of prosperity; this will "run its short course" (pp. 53–4). But the convertibility of paper money into gold at a fixed price will give an advantage to foreign traders who, when the increase of price reaches a certain threshold, stop buying British products (pp. 43–44). This imbalances the proportion of paper to gold, forcing the Bank to diminish the quantity of notes in circulation, thereby bringing about a general stoppage of trade. So far as paper money is convertible at a fixed price, this cycle repeats itself; because after each prosperity, "the same causes that we have already described . . . will produce the same result, and once more we shall be plunged into the gulf" (p. 54).

A writer for the *American Review* took a more fatalistic stance: "convulsions in trade are periodical, and at times afflict every commercial country. From these we can no more hope to escape, than from the heat of midsummer or the frost of winter" (Anonymous 1845a, pp. 345–6). J. B. Turner[18] (writing anonymously) also insisted on the inescapable character of the "modern periodical revulsions," following the expansion of the currency by the banking system "as naturally and as necessarily as a shadow follows the substance." The author observed that "high prices in times of plenty and peace, are the constant forerunner of these epidemic revulsions," so that shrewd financiers can be "tolerably aware of their precise time" (1844, pp. 50–51).[19]

In a pamphlet of some interest for the idea that the similarity of crises suggests that they must have a common cause—a conclusion at odds with the prevalent approach at that time of seeking in some particular events a specific cause (or set of causes) to each crisis—Cory qualified crises as "a canker in the very heart of our trading prosperity, which is ever and anon producing the same recurrences of distress—temporary they may seem, but which, I fear, are rather of a periodical nature, like the returns of the shivering fits which precede the dissolution of the body by an internal ulcer" (1842, p. 3).

In the year 1841 Thomas Corbet published "An inquiry into the causes and modes of the wealth of individuals," where he described the phases through which trade oscillates: overproduction (or overtrading) "is necessarily followed by exhaustion, relaxation, depression, and distress—which again, after a time, are succeeded by

[18]One of these passages is already cited by Miller (1927, p. 193). I have transgressed the principle of avoiding referring to the authors mentioned in the literature on periodicity in view of the force with which Turner stresses the periodical character of the expansions and the consequent convulsions, in passages other than the one cited by Miller.

[19]It is worth mentioning an explanation of "the recurrence of hard times" entirely at odds with the prevalent accounts, focusing either on the misuse of credit or on overproduction. An anonymous writer argues that while producers in the free States are subject to the incentives of a free labor system, in the slave States half the population is non-productive, and the other half is less productive than free laborers. The consumers, on the other hand, are more wasteful and extravagant. The result is an excess of consumption over production. "Now, when it is recollected, that the free States are to a great extent dependent for a market on the slave States, and that these consume more than they produce, the conclusion is inevitable, that there must be periodical crises, when the planter will settle his debts by insolvency, so that he may begin anew" (Anonymous 1842).

a period of unusual briskness and activity." Corbet stressed the circularity of causation: "It is certain"—he writes—

> that such alternations or periods of activity and relaxation, or prosperity and depression, must ... be at all times in operation or progress, so as to return periodically, independently of war or any other cause than the irregular or unequal exertion of human industry—the overdoing of things in particular classes of the community, which again produces revulsion;—one excess, like the high and low or hot and cold fits of a fever, always giving birth to and generating another (1841, pp. 105–6).

Lord Western also wrote of the "recurring embarrassments and distresses during the last twenty years" (1841, p. 41), for an explanation of which he referred to a speech delivered before the British Parliament by William Huskisson on 23 February 1826. Huskisson blamed the calamities of the day on the fluctuations of the currency which then took place. He compared the stagnation and embarrassment of 1816-17 with the depression of 1822 leading to the speculation of 1825; both periods commenced with commercial distress and ended in overtrading, the first stage being characterized by contraction of paper circulation and accumulation of large amounts of gold, and the second by an expansion of credit (Huskisson 1826, p. 781, summarized by Western 1841 on pp. 24–25).[20] Huskisson was held in high regard in this connection also by another writer, who pointed out that "the prevalence of those periodical alternations of prosperity and distress became a topic of anxious and universal inquiry. That the evil arose from a permanent and deep-rooted cause, appeared unquestionable; but what that cause might be, was a mystery, which Mr. Huskisson alone had the merit to unravel" (Anonymous (F. C.) 1841, p. 12).

As typically happened in those years, holders of different views on banking policy disagreed on practically everything except on the recurring nature of commercial crises. It was not infrequent to see the opposite policies advocated to remedy the same phenomenon. In an 1840 pamphlet, for instance, Robert Bell blamed the "periodical return of those monetary convulsions or alarms" and of "mercantile distress" (1840, pp. 11–12 and 23) to the privileges of the Bank of England. If she were relieved "from the necessity of acting as a national holder of bullion, and if, at the same time, that bank were deprived of the privilege of being the sole bank of issue in London and its neighbourhood, and if its circulation and general banking transactions were subjected to an open and rigid competition with other banking

[20] Western had already cited Huskisson's speech on a previous occasion, reporting that he had said that "we have alternated from excessive depression to over-trading and excessive speculations; that the depression has been coincident with *contraction* of the currency, and our prosperity and speculation with its *expansion*" (Western 1826, p. 223. The quote is not verbatim from Huskisson 1826, p. 784. Huskisson's original formulation is actually more interesting for its emphasis on the mutual causation between expansion of currency, the state of trade, and the subsequent contraction of currency: "the expansion of our paper circulation, combined with an unfavourable foreign exchange, leads to over-trading, till over-trading again forces a contraction of the currency: thus, producing those alternations of extravagant excitement and of fearful depression, which this country has so often experiences of late year"). Later in the same pamphlet Western wrote of "this alternate distress and prosperity, depression and speculation" (p. 224).

establishments, there is every probability that the country would be in future be protected against the periodical recurrence of those monetary panics which heretofore have indisputably originated in the unsound and selfish principles of banking, and in the flagrant mismanagement of the Bank of England (p. 28; see also p. 32). Bell's argument was cited and discussed by Gilbart (1841, pp. 57-58).[21] McCulloch, however, advanced the opposite argument. Until "the sole power of issuing paper money be committed to the Bank of England, or to some one body, the country will necessarily be exposed to those perpetually recurring fluctuations in the quantity and value of money that are productive of the most pernicious consequences, and which go far, indeed, to impart to all industrious undertakings a sort of gambling character (1840, p. 110).[22]

The French agricultural economist Jean-Edmond Briaune qualified commercial crises as periodical (1840, p. 2), on the basis of the three crises that hit France after the Napoleonic wars in 1817, 1826-31, and 1838-40. He attributed these crises to the periodic fluctuations in the price of cereals (p. 6; on Briaune see Le Gall 2006 and Simonin 2006).[23]

At the end of 1839 an official recognition of the periodicity of crises was offered by the U.S. Secretary of the Treasury. In discussing how the sources of revenue for the budget are affected by "fluctuations not only in commercial prosperity, but in the

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[21]An earlier instance of a writer blaming the monopoly of issue of the Bank of England is cited in a survey of the causes of the 1825 crisis. A passage, abstracted from the *Leeds Intelligencer* (perhaps of 1 December 1825) runs as follows: "we are satisfied that until the monopoly of the Bank of England is destroyed, as a check thus imposed on their arbitrary reductions of the circulating medium, periodical embarrassments like the present one are inevitable" (Anonymous 1826, p. 22). A later free banking proponent also discussing the periodicity of crises was Coquelin, in 1848 and—supplying an explanation of periodicity—in 1852.

[22]Similarly, two years earlier he argued that uncontrolled issues of paper money by parties without the means "would leave the currency exposed, as at present, to all those constantly recurring fluctuations in its amount—those alternations of glut and deficiency." "Wherever there are numerous issuers, there may be, and the chances are fifty to one there will be, perpetually recurring fluctuations in the amount and value of the currency" (McCulloch [1838], p. 22).

[23]Briaune further elaborated and refined his view in 1857, updating the data in his series and adding a curious twist. He appealed to the biblical image of the seven years of abundance followed by seven years of distress (Genesis 41) to argue, in the name of the universality of the laws of nature, that the period of the agricultural cycle must be 14 years: "If such a periodicity existed in Egypt, it exists everywhere; for the very nature of the law is to be general, regardless of the initial conditions regarding the climate" (1857, p. 122). The biblical image was later taken up, but interpreted in the opposite sense, by an anonymous Political Economist, in a letter to the *Economist* dated 15 November 1864, who claimed that if the alternation of seven years of abundance and seven years of famine was not an extraordinary circumstance, Joseph's prediction would have been unnecessary ([Leslie] 1864, p. 1428; the attribution is de Laveleye's, who approvingly cited this passage: 1865, p. 291). The passage is also referred to by Juglar, who wrote: "Joseph's prediction of seven years of prosperity and [seven years] of misery proves that this was an exceptional fact" (1889, p. 162). Finally, Benner dismissed the issue as follows: "It is not upon record that Joseph had Egyptian weather statistics, or tables of production and prices, to base his prediction and interpretation of Pharaoh's dream; but he relied upon divine power to fulfill his prophecy. On our part, we base our predictions upon the records of the past, and their relation to the future, as governed by the unchangeable laws of nature, and only rely upon providence for their fulfillment to give us the continued regular progress and development of these laws, and to its usual dispensation for seasons to make large or small crops, and not on the peoples' efforts merely" (Benner 1884, 1904 ed. pp., 16–17).

crops, the banking policy, and credit systems of even foreign nations,'' he referred to the ''periodical contractions and expansions incident to the present defective system of banking, in a country so full of enterprise as ours, with such freedom in pursuit, such facilities of intercourse, and such strong temptations to rash speculation'' (Woodbury 1840, pp. 3-4).

A theoretical approach to financial crises is to be found in a book by Luigi Chitti, a Calabrese writing in French. He understood them as truly general phenomena rather than localized maladjustments; accordingly, he sought for them a unique cause as opposed to his contemporaries' quest for specific and particular causes. He qualified these phenomena as ''irresistible and almost periodical jolts carrying disorder in the industrial life of nations, and suddenly and as by enchantment paralyzing their productive forces'' (1839, p. 5).

In 1840, Mountifort Longfield ascribed the fluctuations of trade to the liberty of banks to issue banknotes, of which they take advantage when trade is prosperous and by which trade is further stimulated to excess. Imports increase, more transactions are conducted on credit, until the exchange turns adverse; gold leaves the country, and bankers are forced to contract their discounts. This paralyses trade, for debtors cannot repay their debts or are forced to hurriedly sell at low prices to fulfill their engagement. The distress spreads, banks stop payments and cause a panic; the currency contracts, gold is no longer exported but is hoarded. ''It is like a plague, or any other infectious disease which may cease of itself, although no human power can arrest its progress.'' After a few months, trade recommences, and some time later confidence revives, trade becomes more lively, and the bankers resume their issues. As long as they are permitted to do so, ''there will be a perpetual vicissitude of trade,'' which Longfield graphically represented as a cycle of 10 phases: Liveliness — Overtrading — Great apparent prosperity — Sudden cessation — Paralysis — Distrust — Panic — Bankruptcies — Caution — Confidence. He estimated that ''the period of this circle is about five years'' (1840, pp. 222–3).[24]

6. THE 1836–39 CRISES

Similarly to the aftermath of the 1847 panic, also the crises of 1836 and 1839 in the UK, and of 1837 in France and in the United States gave rise to a vast topical literature of pamphlets, articles in periodicals and also in the daily press, some of which concerned the causes and consequences of the possible (or unavoidable)

[24]A division of the cycle in phases was not a novelty. Most early writers were satisfied with the opposition of 'prosperity and depression' (the earliest occurrence of these words in the title of an essay precedes Haberler's famous book by over a century: it was Matthew Carey's *The Crisis ... With a comparison between the extraordinary prosperity of Great Britain, and the general depression in the United States,* 1823)—or some similar denomination (Dupont de Nemours, for instance, wrote of ''disturbance or prosperity'' and ''times of inactivity and happy times'' (1806, pp. 65 and 66), while Matthias Attwood wrote of ''advancing or declining prosperity of the country'' (1817, p. 11)). In 1840, Briaune provided an analytically more useful distinction in three phases: crisis, recovery, commercial development (p. 13). Overstone's 10-phases morphology is discussed below.

repetition of similar events.[25] An anonymous writer in the *United States Magazine*, for example, diagnosed that crises result from the superposition of an unstable measure of value onto the natural fluctuations of commerce. These "are bad enough in a healthy system," and changes in the value of money constitute a gratuitous aggravation of their effects. The basis of all contracts and all calculations are thereby unsettled, and business acquires a specious character, like that of gambling. The ensuing inflation presses upon the poor men and the working classes by increasing prices above wages, exposing workers "to frequent vicissitudes, with the disasters with which the periodical revulsions attendant on the system agitate and derange all the movements of society." Moreover, it simulates an unhealthy spirit of speculation. If this from time to time accelerates enterprise and industry, "it is but the morbid overaction of intoxication, and, in addition to the loss of the actual waste of luxury, the country is thrown back by every periodical revulsion to a point less advanced than it would have reached within the same time in a more healthy and natural progress" (1839, p. 229). The author insisted on the inevitable character of the alternation of expansion and contraction: "Our system of bank-note currency we regard as about the very worst possible; being not only in a state of constant fluctuation, ever tending to expansion, followed necessarily by severe contraction" (p. 231).

1838 saw the periodicity of crises first sanctioned in an entry in an English-language encyclopedia, albeit under the heading of "credit." The *Encyclopædia Americana*[26] stated that "The history of every industrious and commercial community, under a stable government, will present successive alternate periods of credit and distrust, following each other with a good deal of regularity." The optimism prevailing during prosperity requires and facilitates the extension of credit, which is used to expand the stock of machinery and raw materials. If such a stock becomes excessive, or if distrust prevails, these materials would be withdrawn from use. This would cause a reduction in their price, so that the owners grow poorer day after day.

[25]Again some writings of a more occasional character can be found in this period. The anonymous author of the *Strictures on the report of the Secret Committee on joint stock banks*, maintaining that unless the Bank of England be deprived of the privilege of being the sole bank of issue "panics—periodical panics—cannot cease," remarked that "The word 'panic' has been used, like the word 'cholera,' as if something in the air occasioned it, or it arose from some cause over which mankind has no power; and as naturally do merchants calculate on periodical panics as physicians do on cholera appearing in the fruit season" (Anonymous 1836, pp. 16–17). Similarly, the free-banking writer William Leggett stated that attempts to control credit are responsible for the periodical distress in the money market, "more or less severe, as the period has been hastened or delayed by accidental causes (1836, pp. 105–6); two years earlier, the same writer was more explicit in stating that "those constantly recurring commercial revulsions, . . . are some of the evil fruits" of the present banking system (1834, p. 98). John Taylor attributed the "periodical visitations of commercial distress" to disparities in value between paper and precious metals (1836, p. 20; the same expression occurs in Taylor 1843, p. 28). Crawford, joining those blaming the crisis on the conduct of the Bank of England, wrote of "those recurring 'panics' to which we are now, by our monetary system, necessarily and unavoidably subject [causing] a stagnation of trade" (1837, p. 7). The anonymous author of an address to the people of the Southern States complained that "periodical disorders and convulsions are the unavoidable consequence of such an unnatural and unhealthy condition of our commerce," namely, the fact that the commerce of the Southern states is carried out only indirectly through the city of New York (Anonymous 1838, p. 30; republished anonymously in *The Commercial Review of the South and West,* 1847, p. 225).

[26]The *Encyclopædia Americana* was based on the 7th edition of the German *Conversations-Lexikon* (Killy 1827). This passage, however, does not seem to appear in the *Conversations-Lexikon*.

When prices have reached the lowest point and begin to rise, everybody becomes optimistic again, credit can expand, and each entrepreneur's success feeds on the success of others, "until a surplus and a stagnation are again produced." The author did not explain why the tide turns, either upwards or downwards, and confidence and distrust successively give place to each other, but the evidence of this happening led him to state that "The affairs of every industrious country and active community are always revolving in this circle, in traversing which, general credit passes through its periodical ebbs and flows" (Lieber 1838[27]).[28]

John Horsley Palmer, reflecting on the causes and consequences of the pressure upon the money market, pointed out that unless measures preventing the formation of new banks and regulating the management of the existing ones "be adopted with firmness on the part of the Government, a repetition of the pressure [upon the money market] will no doubt recur with increasing violence" (1837, p. 49). He cited a communication from the Treasury to the Bank of England, dated 1826, illustrating how the problem of the recurrence of panics was already on the agenda after the 1825 crisis:

> The Panic in the money-market having subsided, and the pecuniary transactions of the country having reverted to their accustomed course, it becomes important to lose no time in considering whether any measures can be adopted to prevent the recurrence in future of such evils as we have recently experienced (p. 54).

Overstone's reply to Palmer is sometimes seen as a landmark in the theory of cycles, in spite of not containing any further discussion besides this passage:

> The history of what we are in the habit of calling the 'state of trade' is an instructive lesson. We find it subject to various conditions which are periodically returning; it revolves apparently in an established cycle. First, we find it in a state of quiescence, — next improvement, — growing confidence, — prosperity, — excitement, — over-trading, — convulsion, — pressure, — stagnation, — distress, — ending again in quiescence"(Loyd 1837, p. 31).

The division in 10 phases is similar to Longfield's (cited above), without, however, Longfield's elaboration and clarification of the connection between stages. It also

[27]The entry was also incorporated verbatim in Whitelaw's *The popular encyclopaedia* (1841).

[28]The periodicity of crises was recorded in an earlier encyclopedia in French, under the entry "crise commerciale." Blanqui wrote that "commercial crises have become true periodical diseases." His meaning of periodical, however, was rather peculiar. He added, in fact: "every day we witness new ones arising and other ones terminating" (1836, p. 258). Another entry on the subject was written in 1836 (but published in 1839) by a certain Michel, who also observed that commercial crises seem to recur periodically: 1811, 1819, 1825, 1830. "After some years of calm, order and growing prosperity, the commercial world easily forgets the experience of the years of distress, and again it unjudiciously plunges in adventurous enterprises, so that new embarrassments eventually halt prosperity." The author estimated, however, that the causes of perturbation were growing weaker: peace was consolidating public credit, the effects of the new steam engines had come to an end while the daily technological progress did not have large effects on working conditions. Moreover, the experience of the past was bearing fruits: the Bank of England was trying to avert the excessive impulse of credit by raising the discount rate and reducing the circulation of notes, so that everything indicated to him that the crisis that has been menacing England for several months was going to abort (Michel 1839, p. 758). In 1839, a French Law encyclopedia carried an entry on banks, referring to "those numerous and almost periodical crises the sole cause of which is the abuse of credit and in the fictitious expansion in warrants to industrial enterprises" (Gautier 1839, p. 34).

emphasized periodicity and used the term ‘cycle’—not, however, in the sense of a self-sustained movement but in the sense of a round course of events.[29] This passage, however, was cited by several writers in the following years,[30] and the entire pamphlet was reprinted in various periodicals,[31] witnessing that the times were ripe for an understanding of crises as recurring following a common pattern.

Immediately after the crisis, a number of writers seemed to take for granted that similar events recur periodically. In Britain, for instance, David Salomons regarded as a matter of interest “the means by which the periodical derangements of the circulation may be avoided,” although he considered speculative theories on the subject as most pernicious (1837, p. 4).[32] Similarly, on the other side of the Ocean, the anonymous author of an article in the *New-Yorker* described a plan proposed by Ingersoll and Benton which, it “is contended, will go far to prevent periodical revulsions and troubles, and render certain the employment and the recompense of industry” (1837). Again, the authors of the Minority Report on the Currency in the Pennsylvania Convention stated that “The committee feel painfully relieved from the necessity of proving this reality [the simple truth that inconvertible banknotes are good for nothing], by the prevailing recurrence of one of those periodical convulsions, which have grown in frequency and intensity, with the spread of the paper system” (1837, p. 216, col. B).

In an interesting pamphlet, Robert Rantoul discussed at some length the causes of crises and of their periodical return. He blamed crises on the excesses of issues of paper money by the banks (‘overbanking’), and their periodicity on the fluctuations of the issuing activity. Issues of paper money cheapen the currency and thereby raise prices; this tempts speculators, thereby driving prices even higher, at the expenses of consumers and in particular of recipients of fixed and rigid incomes.

> There must, however, be a pause in this progress. Either from the depreciation of the currency, specie becomes of less value here than abroad, and is therefore exported; or the market is so glutted with products, that buyers are indifferent about taking them off the hands of holders, in which case a competition arises among the sellers which runs down prices; or a suspicion springs up in the minds of capitalists, or of the bankers themselves, and finally of the whole community, that prices artificially high are unsafe, and must fall. From whatever cause it happens, when once confidence is shaken, the banks, willing or unwilling, must contract. They find themselves in a precarious situation, and to fortify themselves, they call in their paper, and diminish their discounts. Contraction once begun, must go on, by a necessity as irresistible as the decree of fate, for every bank sends home the paper of every other bank. By the contraction, money is restored to its true value, prices are reduced again, and the improvident, surprised with large stocks on hand, are ruined.

[29]See section 2.
[30]Anonymous (H.B. & Co) 1837, [Renny] 1840, Whytock 1842, Francis 1847, Anonymous (Pactolus) 1849a and 1849b, Duncan 1849, Anonymous (*Morning Chronicle*) 1849.
[31]Loyd 1837a, 1837b, 1837c.
[32]Later in his text he noted that “periodical ‘embarrassments’ have invariably followed every Government operation, where the aid of the Bank has been required” (Salomons 1837, p. 36).

Confidence slowly returns. "Prices, from the mere fact that, they had fallen too low, begin to rise. This gives business an impulse, and disposes dealers to borrow money and make purchases." Banks, in turn, feel safe, they enlarge their discounts and start again issuing money. Rantoul thus emphasized the periodical nature of these

> *fluctuations* in the money market, which follow each other at intervals of about three years, rising and falling with as much regularity as the billows of the ocean, and having always a smaller series of intermediate waves between the billows. These fluctuations are the natural result of the banking system, and will always grow out of it (Rantoul 1837, pp. 26–30).

Two other books written around this time choose to emphasize the periodicity of crises by using the adjective in the title. Samuel Jackson, criticizing the views of those who saw the cause of crises in the distorting effects of restrictions in the importation of corn (on which see below), wrote a pamphlet on *Commercial distress temporary; arising from natural and periodical causes, and not from the effects of the Corn Law* (1839; I have not been able to get hold of this work, and I do not therefore know which were the "periodical causes"). In his *Études sur les principales causes des crises commerciales et périodiques*, Louis Millot attributed the causes of "the commercial and financial crises which, since the beginning of the century, periodically terrify the industrial world" (1837, p. 3) to political interference with the natural order of commercial affairs:

> If trade undergoes periodic disturbances, it is because human industry, so fragile in its designs and its specializations, aspires at intervening by means of the capricious formula of its economic laws, thereby disturbing the natural balance of agricultural, manufacturing and commercial activities, i.e. of the movement of the freedom of circulation of trade, this political blood of the nations, which must be as well preserved as that of the arterial or venous blood of a man (p. 4).

At the time of the outburst of the panic in the United States, an anonymous writer for the *Richmond Enquirer* felt confident enough that the crisis was predictable:

> The commercial affairs of this country have now reached a crisis that was foreseen would happen as soon as the revulsion came round which must follow a general system of overtrading.—Mankind appear to us to travel in a perpetual circle of error. The same truths established by universal experience are forced on their conviction repeatedly—yet are they forgotten or unheeded in the scramble to acquire riches by rapid than by slow accumulations. The bitter fruit of the year 1825, reaped in the almost general bankruptcy of Commercial men, seems to have left little or no salutary impressions, in the way of admonitory example. It appears as if the events of that period had been blotted from the records of commerce (Anonymous 1837).

Indeed, another writer *had* predicted it as imminent:

> We are very unwilling to excite unnecessary alarm by any statement on the subject of the Money Market which might effect the general prosperity by which we are surrounded; but a variety of circumstances lead us to apprehend, that a mercantile convulsion is not very remote. It is most certain, both from the present high rate of discount and the restrictions which she is imposing on the prevalent facilities for

obtaining pecuniary accommodation, that the Bank of England is laboring under some such apprehension. There can be no doubt that money is becoming scarce, and consequently dear, throughout England; but the circumstance that strikes us as of most consequence, is the fact, that bills are forwarded both from London, the centre of all wealth, and several of the largest English towns, to Glasgow for discount—that is, from the cheapest to the dearest market. Our excellent banking system, it is true, gives us many advantages; but it is inconceivable, were not the first wave of pressure approaching, that a great mercantile principle should be so obviously contravened. There is no commodity, the supply of which is liable to such fatal fluctuations as money; and it appears plain to us, that the feeling in the higher mercantile circles in England is, that it is about to sustain one of its periodic oscillations. We shall be glad to discover that we are wrong, but entertaining the opinions that we have now expressed, we consider ourselves bound to communicate them to the public (Anonymous, article in the *Connecticut Courant*, 1836).

7. THE AFTERMATH OF THE 1825 PANIC

Climbing further back, we find more references to the periodicity of crises. In 1832, the editors of the *Bankers' Circular and Monetary Times* stated that "our present monetary system is pregnant with danger. It places power in the hands of disappointed demagogues ... to convulse the whole frame of society, in any period of great public excitement and agitation. It not only places power in such hands, but it furnishes the occasion for its repeated exercise, by creating constantly recurring periods of depression and distress, which must ever form the basis of their operations" (Anonymous (HB & Co) 1832, p. 403). In 1830, the Frenchman J.-J. Fazy devoted a chapter of his book on the principles of industrial organization to the "commercial crises periodically carrying dreadful perturbation in the general production, violently halting the progressive spirit, misguiding all the calculation of the best theory" (1830, p. 219; also p. 224). In the same year, William Huskisson wrote (anonymously) of the states of commercial distress which "at frequent intervals" have prevailed in Britain since the French revolution, which he ascribed to the fluctuating value of the currency ultimately caused by "the operation of the law restricting the Bank of England from paying its notes in coin" (1830a, pp. 144–5, and 448–50). Also in a speech delivered before the House of Commons on the same year, Huskisson wrote of the "frequent recurrences of public embarrassments" (1830, p. 11) and of the means for preventing "a recurrence of the dreadful effects of such a panic as that of 1825" (p. 41). As to the timing of these events, Huskisson professed agnosticism: "There is no saying how soon, should trade revive with more than its usual activity, we may again witness another season of excitement, and extravagant speculation"—the prelude to the next crisis (p. 41).

In a book on Charity, Duchâtel discussed the causes of the suffering of the working class in terms of the alternation of good and bad crops, but also of commercial crises. These are on the one hand "the inevitable result of the laws of our nature, bringing us to overestimate the chances of gain and underestimating the chances of loss," so that a number of entrepreneurs become overoptimistic and produce in excess with respect to the possibility of consumption; on the other hand, the complexity and extension of exchanges make miscalculations of demand and supply likely. Therefore,

> commercial prosperity is acquired at a terrible price! Judging from our past, trade cannot multiply the wealth of people with the power which excites the admiration of everybody without passing through almost periodical crises of distress and of splendour. Languor succeeds to vitality, and in turn from languor life emerges again with renewed force (1829, pp. 224–5).

In the same year, Tooke ascribed periodical crises to the exuberant temper of traders and producers. Having discussed the current stagnation, he added:

> I should accordingly be prepared to expect a reduced rate of revenue as long as the stagnation lasts. But I am equally prepared to expect that, at no distant period, it will recover to at least the amount from which it has recently declined. For I feel strongly persuaded that the sources from which the national revenue flows are unimpaired; and that our progress in the career of commercial and manufacturing prosperity will be resumed with fresh vigour, and upon more solid grounds, after the severe but sanatory process which our tendency to too sanguine an anticipation, inseparable, perhaps, from a spirit of commercial enterprise, obliges us periodically to undergo (1829, p. 109).

J. R. Elmore argued that "monopolies, bounties, and restrictions, . . . and these alone, are the causes of the dreadful fluctuations in trade." They increase the price of goods, so that "those periodical seasons of distress [eventually arise] from want of consumers" (1828, p. 87). John Ashton Yates came to the conclusion that while every country with extensive traffic and large exports is naturally subject to large fluctuations in prices, their amplitude is greatly increased by the use of paper money, which promotes extravagant speculation and permits overtrading expanded to a ruinous length at the expense of the steady pursuit of industry. For this reason, "the periodical revulsions and panics which occurred in 1810, in 1816 and in 1819, as well as in 1826, have been without parallel in their nature" (Yates 1827, pp. 108–15). Also in 1827, William Jerdan felt no need to supply any justification for his plan of establishing a sterling currency as "The certain periodical return of national panics, national distresses, and national convulsions; the knowledge that they have occurred, and must in the nature of things occur and occur again, render it unnecessary for us to insist upon the expediency of establishing a new and better system, if such can be devised and carried practically into execution" (Jerdan 1827, lines 1837–44).

A pamphlet titled *Observations on paper money, banking and overtrading*, by Henry Parnell, deserves to be mentioned in spite of not mentioning periodicity explicitly. He described how

> when trade is in an unusually prosperous state, . . . the temptation to increase productions to an excess is so strong, that it is seldom suffered by merchants and manufacturers to revert quietly to an ordinary state, without first passing into a state of over-trading. It is, therefore, just when trade is in the most prosperous state, that there exists the greatest danger of speculation, and of its becoming exceedingly depressed.

Parnell maintains that it is up to the merchant's judgment whether trade will settle down smoothly or goes into a state of overtrading. Although there is no logical necessity of this happening and markets becoming glutted,

> the history of the trade of England for the last thirty years shows, that her merchants and manufacturers have uniformly adopted the latter course of conduct; they have on every occasion displayed a negligence of inquiry into the causes of high prices, and have acted with great imprudence in always calculating upon their continuing high, merely in consequence of their being high at the time of their making their calculations (1827, pp. 42–44).

In an anonymous pamphlet discussing Ricardo's theory of rent, T. P. Thompson also rejected Say's law (John Stuart Mill's "theory of 'No General Gluts' "), arguing that while there is a general limit to what can be produced (namely, what can be sold at what is perceived by capitalists as a 'living profit'), some producers do not foresee the consequences of trading on credit beyond that limit. This creates a glut.

> And this tendency to plethora is kept down from time to time by evacuations in the Gazette; which do not however take place with perfect continuity,—any more than a bleeding at the nose spread over every minute of every hour;—but appear by fits and starts, as circumstances direct the eruption of the process. There appears therefore reason to suspect, that the habit of giving credit, which in earlier stages of society may be a useful stimulant, is in more advanced states a principal agent in producing something like a periodical return of commercial distress ([Thompson] 1826, pp. 57–59).

Although the examples of writers explicitly recognizing the periodicity of crises were rarer at this point with respect to the numerous instances found of crisis after crisis, there seems to have been a widespread sentiment that the alternation of good and bad states of trade was in the nature of things.[33] This, at least, is the impression one draws from this passage by Edward West in 1826:

[33] Some writings published before the outbreak of the 1825 panic are worth citing at this point, as they do not fit into the two thematic categories discussed in the two following sections. Beecher, discussing the situation in the United States, argued that the opening of the country's markets to cheap foreign goods caused a drainage of specie to pay for them, which in turn induces to substitute it with paper credit. This tempts to adventurous speculations, increasing prices, reduces purchasing power of fixed incomes, and embarrasses domestic industry. He thus advocated the imposition of duties as "the only adequate encouragement to manufactures, and safeguard against periodical embarrassments" (1820, pp. 268–70). John Rooke, in a chapter on "the self-adjusting principles which regulate the distribution of wealth," maintains that while the outlines of our science are determined by the laws of providence, their actual working does not always match the perfection of providence. While the atmosphere retains its balance notwithstanding a number of perturbations to which it is subject, this is not so with the circulating medium, so that "we may be unable to completely restrain or prevent periodical fluctuations in the value of currency" (1824, p. 254). John Wheatley blamed the small notes issued by country banks for "all the calamity that has periodically harrassed us," and argued that unless the government learned how to control not only the excesses of money but also its scarcity, "our periodical bankruptices will recur as usual" (1819, pp. 57–8).

> With respect to the alternation of luxury and distress of the manufacturing population, the fact is too recent and too notorious to require proof. It would however be most desirable to mark particularly the periods of those alternations, and the degrees of their elevation and depression, and particularly the gross sums expended in payment of wages during that period. . . . Some of the proofs of this alternation must have made an impression even upon those who might not attend particularly to these subjects (p. 49).[34]

8. THE ASSOCIATIONISTS AND EARLY SOCIALISTS

We also find reflections on the periodicity of crises in the writings of some early socialists and associationists. Some of them just recorded the fact, stressing the suffering of the working classes as a consequence of distress. Others attempted to provide an explanation; generally—especially in the early years—we find here a shift of emphasis with respect to views that were largely majoritarian, based on overproduction or on the peculiarities of the banking system, in favor of views stressing the lack of balance between demand and supply of goods, in particular as a consequence of machinery.

Later writers, however, tried to combine both perspectives. An anonymous contributor to *The Herald of Co-operation*, for instance, described the 'monstrous absurdity' of recurring distress as follows: after a crisis,

> a gleam of commercial prosperity will set in—the money-market will be easier—trade will revive; with the disappearance of the storm men will forget its terrors and devastations; every body's scrip (except the laborer's) will rise immensely; speculators will be in high feather; and we shall go on, without one instructive lesson from the past, for seven years more (for these panics are as periodical as our parliaments), when the old tragedy will be re-enacted (Anonymous 1847, p. 42).

The American author of "Over-production and distress" adopted in 1844 a syncretistic approach, admitting that all the explanations of the distress supplied by the various parties are correct, albeit only partially. Among the reasons for "periodical distress" he mentioned the substitution of labor by machinery: "Increase of trade, as things are now arranged, involves an increase of machinery." This "may at first and for a while increase the number of hands employed," but "after the first fever of reaction or revival of trade is over, increase of machinery involves the increase of unemployed operatives, which, in its turn, creates an increase of destitution and distress. It is a vicious circle we are winding in, at present in society." Overproduction—a situation in which too many goods "are produced for the steady equilibrium of commerce"—throws "people out of employment, and under-production, with the

[34]West illustrated how the "most extraordinary" "fluctuations of our trade and manufacturers" have increased in size and frequency by means of a diagram depicting the yearly average price of wheat from 1744 to 1821, showing well-marked peaks in 1801, 1812–13, and 1817 (in the 1993 reprint of West's essay, which includes other writings of the epoch, the graph is misplaced and gives the wrong impression of belonging to a different pamphlet).

help of destitution, must restore the equilibrium'' (Anonymous 1844, pp. 140–1). Another source of distress lies in ''the periodical fluctuations of the currency.'' Again, the author has in mind a mechanism based on action and consequent re-action: ''an over-abundance of money has proved the prelude to an undue contraction. . . . The satisfaction of the temporary prosperity caused by such abundance is as nothing compared to the fears of sudden reaction. It is steadiness in the currency that can alone confer a real benefit on commerce, and all violent fluctuations, whether upwards or downwards, are in themselves injurious, although almost as a matter of necessity they produce at times an appearance of the greatest prosperity.'' These ''periodical expansions of the currency'' are driven by the profit that the Bank of England realizes by means of it. The author compares the operation to ''dipping an immense sponge into the sea of wealth produced in the country,'' while the subsequent ''contractions are like squeezing out the quantity imbibed, by the difference created universally in prices'' (pp. 142-3).

Also in 1844, Charles Bray published a neo-Owenite essay where he maintained that in the two previous decades the tendency in the commercial world of trading for smaller profits has become prevalent; in such condition, any small cause would be sufficient to generate losses, thereby bringing round ''periods in which all the known channels for the disposal of our goods shall be blocked up with our stock: thus we experience alternately times of progression and retrogression, of prosperity and distress.'' During prosperity employment is high, workers become good consumers, manufacturers and merchants realize profits. Production is increased further, until it is forced beyond demand by any disturbance originating either in the home or foreign trade. Even a small reduction in the rate of profits is enough to disrupt the entire system, for producers try to make up for it by increasing production further. This eventually produces a commercial crisis. Workers lose their jobs and consumption power, in a downward spiral ending only when production comes to a halt. At that point demand again goes ahead of supply, and drives the system back to prosperity.

> We do not mean to assert that these advancing and retrograding states of trade alternate in precisely the methodical, regular order described: there may be frequent checks and partial disturbances of particular branches of trade; but that we have prosperous times, and times of adversity, more or less severe, occurring at almost regular intervals, all who are acquainted with the trade and commerce of the country will admit. We continue to advance until the supply greatly exceeds the demand; then we retrograde, the demand becoming less and less, the distress greater and greater, until production is greatly checked, the markets are cleared, and demand is again in advance of supply.[35]

In an address to the British Parliament, Robert Owen attributed the poverty in Britain to ''an excess of production, unaccompanied by a knowledge of the means by which that excess may be advantageously distributed.'' This overproduction was due to the introduction of machinery in the last half century, which eventually in 1810 caused

[35]C. Bray (1844), pp. 47–51; the long quote is cited from p. 50. Bray also maintains that the corn laws, making scarcity of food harder at times of bad crops, further decrease consumption of manufactured goods, while on the other hand the action of joint stock banks could delay the onset of prosperity. See also pp. 95–96, where Bray explicitly refers to 'periodical distress.'

supply to overtake demand. "Since that eventful year, the distress which has arisen in Great Britain, in the United States of North America, and in many other civilized countries, has uniformly arisen from an excess, continually increasing, of supply over demand. In consequence, a necessity at that period commenced for a change in the commercial policy of society; that necessity daily increased, producing periodical distress among the industrial classes" (Owen 1836). In his comment on Owen's piece, John Francis Bray stressed that "the productive power had latterly been so greatly in excess of the powers of demand, that gluts of merchandise in all foreign markets were of periodical recurrence. ... Wages had been reduced in consequence, which still more lessened the demand" ([J. F. Bray] 1836).[36]

The sentiment that crises recur periodically, however, had earlier roots in socialist writings. In 1829, *The Associate* congratulated "one body of working-men, determined by every legal means to raise themselves from their state of dependence on the good-will, and good fortune of their employers, to the possession of a capital sufficient to employ themselves, and shield them from the ever-recurring fluctuations of the markets for labour" (Anonymous 1829, p. 3). Two years earlier, William Thompson introduced his *Labour rewarded*—a book aimed at "bringing about a total change in the *principle* of society regarding the production, accumulation, and distribution of wealth"—by pointing out that "as long as the present principle of action remains, *crisis* will succeed to *crisis*, at interval more or less distant"; he also insisted that "The *periodical* periods of crisis, recurring at irregular intervals, inseparable from the present principle of action, strike every vulgar eye" (1827, p. v).

9. COBWEB FLUCTUATIONS

The Corn Laws, approved by the British Parliament in 1815, were explicitly aimed at preventing periodical fluctuations in "corn" [wheat] prices.[37] Soon, however, a number of writers argued that the restrictions of importation when the price of corn was below a certain threshold would have given rise to a cycle of increase and decrease in prices, which they explained on the basis of a sort of cobweb mechanism.[38] Thomas Malthus, among the first to propound such a view, described it as follows:

[36]Machinery was a frequently discussed topic, and it has naturally been associated with periodicity. For instance, Walker argued that new inventions supersede manual labor, induce over-production, and generate pauperism and "those commercial convulsions which agitate the commercial world" ([1831], p. 10); the Rational Tract Society referred to the "frequently-recurring shocks of the 'gluts,' 'panics' &c., which arise out of the present application of mechanical power and manufacturing industry" ([1843], p. 4); and Kay maintained that "Times of terrible distress must necessarily recur at regular intervals, owing, partly, to the gluts of foreign and of home markets, produced by the ever-increasing rapidity of production by machines, and partly, also, to the disturbance of the markets by bad harvests, by wars, and by periodical speculations" (1850, pp. 460–1).

[37]As stated by Huskisson during the parliamentary debates, as reported in the *Agricultural Magazine* in 1814 (Anonymous 1814, p. 828).

[38]So far as price fluctuations are concerned this is the most interesting argument, but not the only one. Other writers argued that corn laws increase the amplitude of price oscillations due to natural fluctuations in crops by enabling prices to raise more than proportionately to reductions in quantities produced in bad seasons (see e.g. Anderson 1826, pp. 35–39, where expressions such as 'perpetual fluctuations,' 'recurrence of distress and embarrassments,' and 'periodical dearths' are used; Fernley [1841], pp. 26–27).

> very high duties upon importation, operating alone, are peculiarly liable to occasion great fluctuations of price. It has been already stated, that after they have succeeded in producing an independent supply by steady high prices, an abundant crop which cannot be relieved by exportation, must occasion a very sudden fall. Should this continue a second or third year, it would unquestionably discourage cultivation, and the country would again become partially dependent. The necessity of importing foreign corn would of course again raise the price to the price of importation, and the same causes might make a similar fall and a subsequent rise recur; and thus prices would tend to vibrate between the high prices occasioned by the high duties on importation, and the low prices occasioned by a glut which could not be relieved by exportation (Malthus 1814, pp. 42-3; see also p. 24).

Although Malthus did not explicitly refer to the periodicity of such swinging between high and low prices (this is the sense of the term 'fluctuation' as commonly used at that epoch), McCulloch went further in this direction, adding the implication of some regularity in such alternations and specifying that low prices are the "precursor" of high prices, which in turn carry "in their bosom the seeds of future mischief!" (1822, pp. 461-463); he wrote of "ascending and descending progression" and of "a constant alternation of oppressively high and ruinously low prices" (454). In a later article, McCulloch inquired on the "causes of those sudden and ruinous revulsions which occasionally occur in highly commercial and manufacturing countries"; in so far as they can be attributed to the above-mentioned cobweb mechanism (McCulloch 1826a, p. 72), the author noted that the establishment of free trade "would tend so much to lessen their frequency and violence" (p. 74). He added that due to the occasions of miscalculation on the part of the producers, leading to partial mismatches between supply and demand, "revulsions ... will necessarily continue to occur, to a greater or less extent, under any system of public economy" (p. 74). Elsewhere he argued that so long as "the system on which the business of banking is conducted in England ... is continued, we shall unavoidably be subject to ... revulsions" similar to the one taking place in 1825-26 (McCulloch 1826, p. 296).[39]

Torrens was instead very much more explicit.[40] Already in the subtitle of his *Letter to the Earl of Liverpool on the State of the Agriculture of the United Kingdom* he mentioned *the recurrence of similar embarrassment*. In the text, he explained

> that the present distress is not the result of a casual glut, or of a temporary loss of confidence; but, on the contrary, is the consequence of an artificial and forced state of things, and that it must, under our existing laws, be of frequent and periodic recurrence (1816, p. 11; see also p. 32),

[39]McCulloch also used the expression "endless recurrence of the most ruinous revulsions" (1826, p. 296).

[40]Later, Torrens attributed the periodicity of crises to other factors. In 1833 he wrote that "a low rate of profit predisposes industry to periodical paroxysms of distress" (p. 72); in 1840 he estimated that "while the Directors of the Bank of England continue to act upon a rule which violates the only sound principle upon which paper money can be issued, commercial revulsions, arising out of derangements in the money market, will periodically arrest the prosperity of the country" (p. 21); in 1841 he blamed "taxation falling on productive classes[, that] lowers considerably the maximum of profit, and becomes thereby the primary predisposing cause of periodical distress" (p. 156), while a few years later he argued that "Periodical panics and commercial revulsions" are one of the "results which it would be reasonable to anticipate from the adoption of Mr. Tooke's arrangements for the regulation of the currency" (1844, p. 38).

which will cause capital to "melt periodically" (pp. 16, 23, 31) and determine "periodical fluctuations in the value of produce" (p. 18). Torrens also promised to explain the duration of the rise (and presumably the fall) or prices (p. 9), but unfortunately did not deliver.[41]

Earlier on, Malthus had already resorted to a cobweb-like mechanism in his *Essay on the principle of population*. Having identified in population statistics "the periodical, though irregular, returns of sickly seasons," he suggested that their cause lies in an overreaction to a previous state of prosperity, which encourages marriages. Births will continue for some time after a balance has been reached between population and resources growth, determining an overcrowding of room and scarcity of food eventually starving people and facilitating the insurgence of "periodical epidemics," "periodical plagues," "periodical pestilences or famines," decimating population and thereby lowering its rate of growth below that of resources (Malthus 1798, Ch. VII and passim). Two years later he took up the matter again, and (with reference to his previous work) he discussed again the "periodical returns of such seasons of distress as we have of late experienced" as a consequence of the pressure of population (Malthus 1800, p. 27).

Another cobweb mechanism is worth citing in this connection for two reasons: one is that it was not limited to agriculture but was applicable to trade in general; the second is that its author supplied an estimate of the period of the cycle three years before the earliest statement so far on record. The writer, John Wade, was already cited by Bergman, but only in connection with his 1833 book. However, he had already expounded his views (by means of a similar but different model) in a booklet published anonymously in 1826. There Wade analyzed the crises of 1763, 1773, 1793, 1811, 1815-16, and 1825-26, which he described as "commercial vicissitudes, which, like a plague or a pestilence, visit the country at regular intervals of five, seven or nine years" (1826, p. 39) and provide an "indubitable proof of the existence of radical defects in the principles and practice of mercantile transactions" (p. 101). Wade's argument was that price movements trigger changes both in demand and in production, which in turn react against the original movement. The reaction, however, is not immediate: only after a certain threshold is passed, the price increase induces a demand fall and an increase in production. Supply then outpaces demand, and prices immediately[42] fall, setting off the opposite movement. The mechanism is a sort of cobweb, where reactions are lagged not by the slowness in response but by the time necessary to reach a certain

[41]When agitation against the corn laws gained intensity, in particular in the early 1840s, cobweb mechanisms were resurrected. For instance, in a speech before the House of Lords Radnor argued as follows. High prices stimulate production, the stimulus will last some 3–4 years. Corn becomes abundant and cheap, the duty high, no foreign corn is imported, imports arrangements are discontinued. If production falls again due to natural causes, the same demand of corn from abroad will recur, draining gold and producing commercial and manufacturing distress. The mechanism working at home also works abroad, "so that all the evils of this alternation of high and low prices, of great abundance at home and of great demands for supply from abroad, are felt both here and in foreign countries; and the suffering in each country aggravates those of the other. . . ." The sliding scale of duties "has the effect of alternating depressing and raising prices" (1842, pp. 8–9).

[42]In a passage repeating the exposition of the working of his mechanism, Wade added that these two effects "immediately check the development of capital and industry, and produce that loss and embarrassment, which is significantly denominated a *re-action*" (1826, p. 93).

size, presumably beyond the threshold of visibility of the disproportion between supply and demand.

A similar argument, but less detailed, was advanced by William Anderson a few years before:

> any great or rapid increase [in the amount of currency] by encouraging speculation, occasions the fabrication of a much larger quantity of commodities than what can be immediately disposed of to advantage: the consequence of which is a sudden check to the usual demand for labour, and a material deterioration in the situation of the labourer. But the stock being reduced, and prices consequently rising, all hands are again set to work; when the supply being again carried far beyond the regular demand, wages are again reduced, and a number of hands are thrown out of employment; and thus a redundant or variable amount of the currency, and, consequently, of the credit given by bankers to manufacturers or other producers, occasions perpetual fluctuations in the demand for labour, and periodical distress among the labourers ([Anderson] 1821, pp. 38–39).

10. THE TURN OF THE CENTURY

A few years before the introduction of the Corn Law, British intellectuals and pamphleteers were excited by another product of the Parliament, or more precisely by one of its commissions: the *Bullion Report*. Regarding the periodicity of crises, three pieces of interest followed in its wake. First, a pamphlet by one of the report's authors, William Huskisson, expounding and further defending the committee's conclusions. A part of this essay was dedicated to the issue of crises. After having expounded an endogenous mechanism explaining such events, based on the inducement to overtrade intrinsic to prosperity and the subsequent collapse, Huskisson did not go as far as to claim periodicity but reminded his readers of "many recent occurrences" justifying his use of the term 'mercantile delusion' (Huskisson 1810, p. 137).

John Sinclair's very critical *Observations on the Report of the Bullion Committee* pointed out that if the medium of exchange fails to increase in proportion to the increase of commerce, stability cannot be maintained, and a market outlet and a rapid sale of the goods produced cannot be secured (1810, pp. 60, 57). If so, commerce experiences, and must experience, frequent checks (p. 57), and the country undergoes "periodical returns of commercial distresses" (p. 64). The reason why distresses return periodically is not explicitly stated, but seems to be due to the banking system failing to supply currency at the appropriate pace. In spite of disagreeing with the bullionists on the causes of the phenomenon, Sinclair, like Huskisson, seemed to take for granted that commerce is subject to frequent interruptions.

Interestingly, this view was criticized by John Raithby. Huskisson's idea that prosperity contains the seeds of its own reversal by way of an overexcitement of its own specific features, as well as Sinclair's interpretation of crises as periodically returning, must have appeared quite strange to him. While admitting that recently there had been very numerous failures, Raithby insisted that they had to be understood as "individual imbecility" misguiding the spirit of enterprise, "individual calamities" incapable of producing "neither national poverty nor national distrust," as witnessed by "the splendor of [British] mercantile establishments," "the eagerness with which each every fresh opening for trade, however unpromising or precarious, is seized by the British merchants," and "the extent and eagerness of our adventures." What appears to be a national "mercantile delusion" is "nothing more than a great number of individuals, labouring under a mercantile delusion, each of them, be their number ever so great, having interests, more or less distinct, and separate from the interest of all other men; pursuing, separately, those interests, and feeling, separately, the consequences of their own folly, in the deterioration of those interests." Raithby thus denied that crises are somehow coordinate in their appearance, let alone periodic, and accordingly warned that one cannot interpret "every list of bankrupts in the gazette, and every failure in the stock exchange" as "evidence of national poverty, and the harbinger of public ruin."[43] If bankruptcies are numerous, it is because a magnificent trade brings several occasions for individual miscalculations; but the speculations are fully voluntary, not "forced" (Raithby 1811, pp. 96-101; the latter reference—not literal—is to Huskisson 1810, p. 135).[44]

The idea that crises are a recurring phenomenon, however, was in the air.[45] Since the late 1780s, in fact, the idea that even in normal conditions commerce is subject to frequent reversals can be found in the literature. Adam Anderson, for instance, maintained that those "fluctuations of commerce which happen frequently in the best of times" were a possible cause of part of the distress of labor in Ireland (1789, p. 243). Shortly a number of reflections along this line were formulated. In his *Thoughts and details on scarcity* of provisions, written in 1795 but published posthumously in 1800, Edmund Burke observed that "In our history, and when 'the labour of England is said to have been once happy,' we find constantly, after certain intervals, a period of real famine; by which, a melancholy havoc was made among the human race" (Burke 1800, p. 44). He thought, however, that the scarcity and high prices he was witnessing were not as intense as the previous occurrences:

[43]Similarly, almost a decade later an anonymous writer observed: "What used to be deemed commercial enterprise, it is now fashion to call over trading, and to impute it to over issues of Bank Paper; than which nothing can be more unfounded. . . . Ever since the time of Fordyce (and no doubt the same was the case before) we have had periodical convulsions in the commercial world, but it was not till lately that the insolvency of a few individuals has been considered an object of great *National importance*" (Anonymous 1820, p. 24).

[44]A Member of the British Parliament had already ironically denied in 1792 the idea that prosperity may contain the germs of the successive depression, indicating that a suggestion to the contrary must have been already advanced. Mr. Sheridan said that "to assert that the distress of commercial credit was owing to the greater prosperity of the country might make for a very sonorous period, but would not be much relished in the city. It would be considered as but a poor compliment to congratulate a man on his having proved himself one of the most industrious manufacturers, or enterprising merchants, by getting into the Gazette as a bankrupt." Mr. Rose, however, countered: "That the time of the greatest prosperity of a country might be the time of greatest distress to commercial credit, appeared from what happened in this country in 1772" (Great Britain, House of Commons, 1793, pp. 31 and 33).

[45]An example successive to those cited in the text adds evidence of the idea of recurrence being widespread in the 1810s.

> The price of provisions fluctuated dreadfully, demonstrating a deficiency very different from the worst failure of the present moment. Never since I have known England, have I known more than a comparative scarcity. The price of wheat, taking a number of years together, has had no very considerable fluctuation, nor has it risen exceedingly until within this twelvemonth (p. 44).

The anonymous writer of the preface to this pamphlet, however, informs us that Burke, "fearing a long cycle of scarcity to come," had planned to elaborate upon his *Thoughts* in a series of further pamphlets, which he failed to complete.

While Burke was concerned with the scarcities due to the caprices of nature coupled with the noxious interference of governments, others focused instead on human causes. William Anderson wrote (anonymously) in 1797 that speculative crises are not occasional phenomena but have their roots in the instability of the credit system and of the speculation it facilitates and generates. Credit, being based on mutual confidence, is not globally stable but "rests upon [a] sandy foundation": "There can be no doubt, that any serious shock given to public credit"—such as "an insurrection, a threatened invasion, a defalcation in the revenues, or ... great bankruptcies"—"would infallibly ruin them all," as if the public starts a general run on the banks, they must all stop payments. The public has a limited trust in paper money, and is always prepared to cash their paper as soon as any suspicion arises. "[B]ut if ever they should have occasion to try, they will find themselves woefully mistaken. The moment suspicion begins, the whole paper system will tumble to the ground; and all those concerned will inevitably lose their property" (pp. 45-46). Anderson thus concluded that "there is no doubt that, while this nefarious system is continued, as no bounds can be set to speculation, distresses and embarrassments will be felt at irregular periods" (p. 39).

Shortly before these passages were written, in one of his volumes of statistical accounts of Scotland John Sinclair implicitly suggested that besides the interruptions of commerce caused by various factors, there is a permanent cause of recurrent crises. In fact, after listing the "commotions of 1745 and 1746" and the war of 1755, he pointed out that, following the introduction of manufacture, trade in Scotland "has been progressively advancing for 15 years, without suffering any other interruption, than that periodical stagnation, which is introduced in times of prosperity by *overtrading*" (1796, p. 23).

An earlier statement, however, is even more intriguing, for it provides the earliest estimate of the frequency of crises of which I am aware. James Currie (writing under the pseudonym of Jasper Wilson[46]) argued that the state of distress in Britain consequent to the war with France "has been aggravated by the imprudence of individuals in over-trading their capitals, and resorting in several instances to the system of drawing and redrawing for supporting their credit. This however is a disease which has a constant tendency to arise in seasons of great prosperity" (Currie 1793, p. 19). He put the blame on "a spirit of very unjustifiable speculation"

[46]Chalmers was enough impressed by Currie's pamphlet to preface the 1794 edition of his *Comparative strength of Great Britain* with a 130-page "Dedication to Dr. James Currie, the reputed author of 'Jasper Wilson's letter'."

arising out of individual imprudence, which was felt in England more than elsewhere because she is the most advanced commercial country. But if prosperity occasions imprudence and eventually speculation and overtrading, it is not its ultimate cause: "Mr. Dundas told us, in the House of Commons, that our commercial distresses arose from our extraordinary prosperity. . . . This assertion is a poor sophism" (p. 65). Only the war can have caused the "absolute stagnation" he was witnessing; yet he maintained that overtrading is responsible for the "temporary check[s that arise] every sixth or seventh year of peace" (p. 16).

11. CONCLUSION: PERIODICITY, CRISES, AND CYCLES

This survey shows that the perception that crises have a tendency to recur at intervals had already taken roots at the end of the eighteenth century, and spread at an accelerating speed in the following decades. Just after the middle of the nineteenth century it was taken almost as an established fact, recognized in official documents and widely acknowledged in the literature. By the 1860s, it was also fairly widely agreed that crises occur at approximate decennial frequency. By this time, those who wished to deny the fact had to produce solid arguments.

The adjective 'periodic(al)' was more and more frequently used (as crises succeeded crises) to qualify panics and embarrassments. However, only rarely was it meant to indicate that the phenomenon repeats with absolute regularity. True, on a few occasions it was accompanied with astronomical metaphors, such as the comets or the tides, but upon a closer look a number of these analogical uses were meant to emphasize the inevitability of the recurrence rather than its chronological regularity. Even those who attempted an estimate of the frequency of crises toned down the rigidity of their guesses with qualifiers such as 'ordinarily,' 'on average,' or 'about,' and did not supply precise figures but intervals. Many writers coupled the adjective 'periodical' with qualifiers such as 'irregular.'

What mattered to the writers surveyed here was not, therefore, the regularity of the return of crises, but the very fact of their recurrence. And this was to become the factual basis on which the theories of crises first, and of cycles later, were to be built. This development, however, was gradual and did not follow from a logical necessity. The mere circumstance of the recurrence of crises, in fact, does not by itself imply that these events are related to each other. They may arise out of completely independent incidents, and indeed the mainstream interpretation of crises in the first half of the nineteenth century was precisely in these terms.[47] Each crisis was seen to have its own specific causes, disturbing the smooth flow of production or circulation. The repeated occurrence of crises, however, kept suggesting with increasing insistence the question, whether the systematic character of the recurrence could be related to some circumstance (or set of circumstances) causing or at least favoring the occurrence of crises. Moreover, the accumulation of instances enabled observers to note similarities in the pattern of the phenomenon. Nevertheless, the emphasis on the common

[47]It should be remembered that the writings *not* espousing the idea of periodicity of crises, which are *not* surveyed here, were still in the majority albeit a decreasing one as time went by.

features of crises was the result of a specific decision, for one could always choose instead to stress the differences (and, indeed, a number of writers did so).

The recurrence of crises thus supplied the raw materials on which theories of crises and cycles could be built, but not the logical necessity for a unified vision. It can be safely said, however, that the accumulation of instances made the case more and more probable for crises to be interpreted as events belonging to the same class of phenomena, and thus induced to look for a common cause to the entire series.[48] The apparent decennial regularity surely further helped the case.

If this prepared the ground for theories of *recurrent crises*—as opposed to specific explanations of individual events—theories of *cycles*[49] required additional steps—again, not rooted in logical necessity but demanding a switch to a different interpretation of the phenomenon. Most of those who rejected the view that crises are caused by occasional and exogenous disturbances to the working of the economic system, maintaining instead that they are the inevitable result of some of its features, still treated crises as extraneous to the normal (in the sense of 'theoretically normal'), 'healthy' state of the economy. The focus of their analysis was thus on crises, which were the events to be explained, while much less attention was dedicated to the return to prosperity, which was considered simply as the 'natural' return to the healthy state of progress. This reflected in the morphological characterization of the phenomenon, which included an odd number of phases (most commonly three, but sometimes five) centered around the crisis, and normally lacking the phase of 'recovery.'

The interpretation of the system's dynamic as cyclical implies instead that the theoretical focus is shifted from crises to the overall movement. Crises are then interpreted as phases of the cycle with no special privileged status, except perhaps for their dramatic character that the early cycle theorists were still prepared to grant but was eliminated when the cycle became mathematically symmetrical at the hands of the 'econometricians'. This is not just a matter of emphasis: it is the very understanding of the phenomenon that is turned upside down.

These developments, however, took place much later.[50] Most of the observations of periodicity discussed in the present paper are rather casual, and only a few of them are accompanied by tentative explanations, most of which concerned the speculation-overtrading process and subsequent collapse, while it was taken more or less for granted that after the crisis liquidated the 'excesses' the economy would revert to a state of prosperity, which was seen as the normal and healthy condition of the system. The idea that the cycle, rather than prosperity, is the normal form of development of capitalism, and as such should be incorporated in the description of

[48]This is not to say that occasional events were denied any role. It only means that this changed, from the fundamental cause of the crisis to a modifier (accelerating or retarding, amplifying or smoothing) of the actual path. Rather than explaining crises, such events were thus called to explain the differences between crises. For a discussion of causation in this context see Besomi (2010), section 3.8.

[49]On the different meanings of the term 'cycle' see Section 2.

[50]There are, naturally, some exceptions. John Wade's cobweb cycle, for instance, was conceived as a cycle at the outset, while speculations only aggravate fluctuations and are responsible for the violence of crises (Besomi 2008, pp. 627–29).

the theoretical norm, took a long time to win acceptance after it was first formulated by John Mills in 1868.[51]

The range of implications drawn by these early writers is nevertheless instructive, as it anticipates lines of approach to the problem of economic fluctuations analogous to those that emerged in the twentieth century and are still thriving nowadays. The commentators associating the recurrence of crises to some institutional setting (the corn laws or other tariffs, the convertibility or inconvertibility of paper money, the working of the banking system) obviously suggested the removal of the impediment.[52] Some maintained that if fluctuations are regular, then they are predictable, so that workers should prepare themselves for times of distress by saving up in times of prosperity and entrepreneurs and merchants should work out their production and trading plans accordingly.[53] The socialists, who thought that crises and the consequent distress are intrinsic to the working of industrial societies, advocated a drastic change of the social structure or at least invited workers to associate and eschew the distributional and organizational problems affecting capitalist production. Finally, the optimists maintained that periodic crises are like storms cleaning the air (Kinnear) or a severe but healing process.

To these positions respectively correspond the views of those who interpreted crises as the result of interferences and tampering with 'natural' economic laws; to those who interpreted them as the result of technical frictions or periodic external events, the consequences of which can be mitigated if not avoided; to those who saw their roots in the specificities of capitalism (to the extent of interpreting them as the outburst and the temporary resolution of the contradictions of the capitalistic mode of production); and to those who saw crises as a temporary set-back due to the elimination of the excess of enthusiasm and imprudence that characterize the progressive spirit of the economic system. Interestingly the latter two views—at the opposite extremes of the range—share the belief in the transitoriness of each phase, the ultimate culprit of the periodical recurrence of crises. When, at the end of the nineteenth century the emphasis moved from crises to cycles, and when in the 1930s the approach turned mathematical and the movement was described in fully symmetrical terms, these two views could be composed into one: a cycle where the upward phase is intrinsically similar to the downward one, following it with mathematical certainty, thus guaranteeing the survival and even the progress of

[51]The course of events followed exactly the reverse order than suggested in the NBER's 27th *Report*, where it was stated that "Once economists began to think of 'crises' as a phase of a recurring movement, explorations of periodicity in business fluctuations followed naturally" (NBER 1947, p. 3). This survey clearly demonstrates that the awareness of the periodicity of fluctuations preceded any idea that crises are part of a more complex phenomenon (for a discussion of the latter process see Besomi 2006).

[52]P. H. Muntz, giving his testimony before the House of Commons Secret Committee on Commercial Distress, denied, however, that any system of currency could prevent occasional periods of commercial distress (in House of Commons Secret Committee on Commercial Distress 1848, reply to Question 1530 to Muntz, p. 117).

[53]Later, Boccardo stressed the same point: "If we could determine *a priori* the periodicity governing bad crops of food or of the scarce production of some raw materials such as cotton; and if we could predict the return of important monetary and banking crises, how many calamities could humanity be spared with! How this would help both individual and collective preventive measures!" (1879a, p. 385).

capitalistic economies but also permitting an interpretation of the cycle as the form taken by the contradictions of capitalism.[54]

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[54]The latter view was expressed by Kalecki: see for a discussion Besomi 2006a.

[55]All translations from French and Italian are mine. Author's names in square brackets indicate attributions of anonymous writings or publications written under pseudonym.

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