GLOBAL ECONOMIC GOVERNANCE INITIATIVE

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Minsky and Kindleberger

FELLOW TRAVELING THEORISTS OF NATIONAL AND INTERNATIONAL FINANCIAL INSTABILITY[1]

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ABSTRACT

This paper traces the evolution of what has come to be called (by Minsky) the Kindleberger-Minsky model, starting with Kindleberger's 1978 publication of *Manias, Panics, and Crashes* and continuing thereafter. The key to understanding the affinity of the two men, it is argued, is a shared intellectual ancestry in pre-war American institutionalism, which led to shared outsider status in the post-World War II economics academy. Both also identified with the longer tradition of monetary thought that emphasizes the inherent instability of credit, and hence, the necessity for central bank management.

Keywords: financial crisis, financial instability, American institutionalism, lender of last resort

JEL Codes: B25, B26, B27

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INTRODUCTION

By his own account, Kindleberger's attention was first brought to Minsky (1919-1996) by Martin Mayer, author of *The Bankers* (1974). "Martin Mayer put me on to the Minsky model," says Kindleberger (1910-2003) in the Acknowledgments to his *Manias, Panics, and Crashes: A History of Financial Crises* (MPC), written after his mandatory retirement from the Massachusetts Institute of Technology (MIT) in 1976 at age 65 (1978, xi). For his part, Mayer (1974, 532-533) quotes extensively from Minsky (1972), and that seems to be where Kindleberger got the reference that he relied on for his initial understanding of Minsky. In the first edition of *MPC*, Kindleberger directs the reader to that 1972 paper and also to Sinai (1977, 196) for a "detailed list of Minsky's writings" (Kindleberger 1978, 15 fn 2). "The general validity of the Minsky model will be established in detail in the chapters that follow" (p. 20).

After the publication of *MPC*, Kindleberger and Minsky had repeated direct personal intellectual contact. Both were participants in a colloquium, "Financial Crises and the Lender of Last Resort", held at Bad Homburg, Germany, May 21-23, 1979 (Kindleberger and Laffargue 1982). They interacted again at a seminar on "Banking and Industry in the Inter-War Period" held at MIT October 23-24, 1981 (Minsky 1984, Kindleberger 1984). And then, after Kindleberger was elected president of the American Economic Association, he specifically asked Minsky to organize a session on "The After-Keynes Cambridge Contributions to Theory" which was published in the subsequent *AER Papers and Proceedings* (May 1985). Finally, when Minsky retired, Kindleberger wrote a paper for the festschrift conference held in St. Louis, April 20-21, 1990 (Kindleberger 1992).[2] "I owe a large intellectual debt to Hyman Minsky who got me to think about instability in financial markets" (p. 71).

So, there is no question that there is some connection between Kindleberger and Minsky, but there is less clarity on the matter of exactly what that connection is. DeLong and Eichengreen, for example, in their foreword to the 40th Anniversary Edition of Kindleberger's *World in Depression* state, "The Minsky paradigm emphasizing the possibility of self-reinforcing booms and busts is the implicit organizing framework of *The World in Depression*" (2013, 7), but this cannot be right. Kindleberger never cited Minsky in that book, nor even in the revised edition issued in 1986. Even more, Kindleberger (1984) explicitly points out the limitations of the Minsky model for explaining the Depression: "It is limited to the United States. There are no capital movements, no exchange rates, no international commodity prices, nor even any impact of price changes on bank liquidity for domestic commodities. All assets are financial" (p. 16).

But let me not single out others; I was myself for a long time under a false impression on the matter. Kindleberger, I thought, was guilty of domesticating Minsky's radical message about the inherent financial fragility of capitalism, more or less the same kind of thing that the MIT Keynesians more generally were thought guilty of with regard to Kalecki, not to mention Keynes himself. If you want the real thing, read Minsky, I thought, not Kindleberger, and so I did. And when I did, Minsky further appealed to me as an obvious heir to the American institutionalist tradition on money that I had traced in my first book (Mehrling 1997), a case I made explicitly in a biographical essay written after Minsky's death (Mehrling 1999).[3] And so it was from Minsky, not Kindleberger, that I started my subsequent project to reconstruct the "money view" (Mehrling 2000, 2015).[4]

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[2] As it happens, I was in attendance at that conference, but not invited to contribute as I was then just starting my own academic journey.

[3] The book followed three generations: Allyn Young, Alvin Hansen, and Edward Shaw. I consider Minsky as a fourth, following after Shaw, and Kindleberger similarly, as will become apparent.

[4] The best full-length treatment of Minsky's thought, in my view, is Neilson (2019). But see also Wray (2016) and Konings (2018).

It was a long journey but finally, in Fall 2012, in the aftermath of the global financial crisis (GFC) of 2008-9, the Institute for New Economic Thinking (INET) funded the filming of the course in which I had been pursuing that reconstruction project, and a year later that film was published on the Coursera platform. Most important for present purposes, following the Minsky path had, by that time, led me to understand the GFC as a stress test of the emerging market-based credit system, so-called "shadow banking," which it certainly was (Mehrling 2011). But it was also a stress test of the global dollar system, and for that Minsky was no help. For that it turned out that I needed Kindleberger, and once I turned my attention to him, I soon discovered that he was not at all the person I had thought he was (Mehrling 2022). In retrospect, I should have realized it sooner; it was Kindleberger's student Marcia Stigum who wrote the book that I had come to use as the text in my money course (Stigum 1990).

FELLOW TRAVELERS

In order to understand the Minsky-Kindleberger affinity, the first thing to appreciate is that Kindleberger was just as much a product of the pre-war American institutionalist tradition as was Minsky, maybe even more so. Nine years older than Minsky, Kindleberger completed his PhD well before the war, whereas war interrupted Minsky's studies and he finished only after the war. Even more, whereas Minsky was formed by the University of Chicago (Simons) and Harvard (Schumpeter), Kindleberger was a student of Willis and Angell at Columbia, then the center of institutionalism under Wesley Clair Mitchell, and he was also indirectly a student of John H. Williams (Harvard and New York Fed) through his lifelong friendship with Emile Despres. Thus, once I began to dig into Kindleberger's corpus, I quickly recognized him as another obvious heir to the American institutionalist tradition on money, albeit quite completely focused on the international dimension.

This shared pre-World War II intellectual formation meant that both Minsky and Kindleberger were increasingly outsiders in post-World War II economics, which organized itself around mathematical and statistical modelling, specifically the famous IS/LM model as a key component of the so-called "neoclassical synthesis". Both men rejected that framing of the monetary side of the economy, and both sought in their own work to build something better. In this regard, they were definitely fellow travelers. As I read their biographical intersection, Kindleberger felt some responsibility to support the home team, and that led him to hold back from open criticism of his MIT colleagues, whereas Minsky felt no such constraint, and therefore was much more of an outsider. But Kindleberger also felt some responsibility to support his fellow traveler, and that explains the multiple public engagements; in retirement, he was using his own greater academic standing to bring visibility to Minsky.[5]

A central source of misunderstanding about the Minsky-Kindleberger connection is a misreading of what Kindleberger was trying to do in *MPC*, and therefore of how he was using Minsky. Though he speaks of "the general validity of the Minsky model", he quite explicitly frames that model as "a lineal descendent of a model set out with personal variations, by a host of classical economists including John Stuart Mill, Alfred Marshall, Knut Wicksell, and Irving Fisher" (1978, p. 15). It is that *tradition* that is generally valid, not so much Minsky's own personal variation. Indeed the "Minsky model" that Kindleberger goes on to exposit is more accurately described as Kindleberger's own "personal variation" of that tradition, as will be elaborated below, inspired by Minsky perhaps but differing from him in significant ways. Minsky himself would subsequently refer to the "Minsky-Kindleberger theory" and the "Kindleberger-Minsky model" (Minsky 1987, 1342), so clearly recognizing Kindleberger's independent contribution.

[5] It was not the first time that he had done this kind of thing. Previous works had engaged Raul Prebisch, W. Arthur Lewis, and Stephen Hymer.

Kindleberger continues, "According to Minsky, events leading up to a crisis start with a 'displacement,' some exogenous, outside shock to the macroeconomic system." His citation is to Minsky's "Financial Instability Revisited: The Economics of Disaster", a work published in 1972 but written earlier in 1966 as the text makes clear (Minsky 1972, 96, 134).[6] The word "displacement" does appear in the paper, but Minsky's emphasis is different from Kindleberger's. "The theory developed here argues that the structural characteristics of the financial system change during periods of prolonged expansion and economic boom and that these changes cumulate to decrease the domain of stability of the system" (p. 97). "Our questions are of the form: 'What is the maximum displacement that can take place and still have the system return to a particular initial equilibrium point?'" (p. 118). For Minsky, apparently, "displacement" is the pinprick that collapses a fragile financial system at the end of an expansion, not the shock that begins an unsustainable credit expansion. The latter is Kindleberger, not Minsky, as will be elaborated below.

Indeed, at the Bad Homburg conference, it seems that Minsky (1982) did not say what Kindleberger had expected him to say. Here is Kindleberger: "Minsky, who insists on the fragility of the financial system, and *elsewhere emphasized an exogenous shock leading to euphoric expectations*, in Chapter 2 attributes the crisis to unstable debt structures built by years of tranquility…" (Kindleberger and Laffargue 1982, p. 2, my emphasis). In his own contribution, Minsky himself notes that it is Kindleberger who coined the term "Minsky model" whereas he himself always preferred "financial instability hypothesis" (Minsky 1982, 37, footnote 1). Nonetheless, Kindleberger persisted. In *Financial History of Western Europe* (1984, 270), he again points to the importance of the initial "displacement", now citing Minsky (1982) where the word does not even appear. And he does it again in his festschrift contribution (1992, 82).

It is not just a matter of words, but also of substantive concepts. Minsky's financial instability hypothesis (FIH) is about the in-built dynamic toward financial fragility—from hedge, to speculative, to Ponzi finance as he says—that comes from the premium on liquidity. Banks are more willing to lend short term than long term, and so companies that have long term capital needs are incentivized to mismatch the pattern of cash commitments and expected cash flows, ever more so as time goes by and the inevitable need to roll over short term debt repeatedly goes smoothly. Indeed, through a Kaleckian channel, the more investment rises the more profit rises, which validates the debt that financed the investment, so providing further encouragement to reduce margins of safety.

For Minsky, the boom is thus not at all a matter of irrationality but rather of profit seeking, of firms looking to reduce financing costs in competition with other firms which are also looking to reduce financing costs, and of banks accommodating them. Over time, as financing arrangements get ever more fragile, in the end it takes very little to prick the bubble and shift everything into reverse. Investment halts so profit halts; debts come due and cannot be paid, but also cannot be rolled as banks are looking to restore their own liquidity. Government spending can help to stem the downturn by supporting business profits, but in doing so prevents liquidation of debts so that each new cycle starts from a more fragile place than the one before. Minsky's financial instability hypothesis is thus a theory of business fluctuations driven by bank lending to finance private investment spending, a theory specifically devised to explain U.S. conditions (Minsky 1986).

Kindleberger, by contrast, is centrally trying to understand international financial crises, and the operation of the international lender of last resort. Most histories of crisis (including Minsky) are national histories, simply because historians typically specialize in the experience of their own countries, but the phenomena are quite typically international, because capital and money markets are

[6] Significantly, this early piece makes no mention at all of the "financial instability hypothesis" which Minsky himself considered to be the centerpiece of his contribution. That would come later (Minsky 1975). In 1966, Minsky was still trying to work within the confines of the standard multiplier-accelerator model.

international. A further difference from Minsky, the swings that interest Kindleberger are not so much swings in income and output as they are swings in asset prices, driven up by the inherent instability of credit, and then down again when the bubble bursts.[7] *MPC* is organized around the stages of that process: "Speculative Manias," "Fueling the Flames: Monetary Expansion," "The Emergence of Swindles," "The Critical Stage," and "International Propagation."[8]

The pattern is this: some kind of "displacement" gets the thing going initially; the ensuing "mania" is then a speculative bubble fueled by credit expansion, with "financial distress" emerging at the peak, followed possibly by "panic" in which the bubble bursts and credit contracts. The monetary dimension of the process comes from the fact that typically some of the credit expansion involves creation of money substitutes, and typically the panic then involves a flight from speculative assets and also from the new forms of money into money proper issued by a central bank. On the bright side, it is this feature of financial crisis that offers the central bank an opportunity to allay the panic by timely and forceful lender-of-last resort intervention, basically by taking the other side of the panic trade.

For Kindleberger, the central point is that *international* crisis requires an *international* lender of last resort, and that is much less reliable than lender of last resort at the national level, which is why the crises we observe are so commonly international. If the crises were merely national, they could more easily be nipped in the bud. In this vein, Kindleberger's *Financial History of Western Europe* (1984) can be read as a story of the co-evolution of international money and capital markets with the institution of international lender of last resort. In Kindleberger's telling of that story the most significant displacement is war, and sometimes also its financial aftermath in the form of indemnities or reparations.

It's a see-saw story, of successive expansion and collapse, but the overall tendency is expansion. The part of the story that happened in Kindleberger's own lifetime was primarily about connecting the United States and Europe (1984, Parts 4 and 5). If Kindleberger were writing today, he would likely point to the subsequent expansion of the dollar system to Asia, an expansion punctuated by the Asian financial crises. And he would point also to the post-GFC expansion to the Global South, an expansion currently being tested by tight money at the center (McCauley 2021). Zero interest rates in the Global North, the policy response to the GFC and then also COVID-19, cut new channels for capital flow to the Global South, many of which will remain even after the current stress test, which will also likely produce innovation in the institutional arrangements that presently serve as international lender of last resort (Mehrling 2022).

Apparently, Minsky and Kindleberger are not at all the same, and the difference goes beyond national versus international. But they are recognizably in the same family, even more by contrast to standard economics, and that is centrally Kindleberger's point. The pattern Kindleberger finds in the history of financial crises is not so much a vindication of the specifics of the Minsky model, but rather of an entire tradition of economic thought, "held by many economists prior to 1940 [i.e. the period of Kindleberger's own intellectual formation], that has unaccountably slipped into disrepute during the Keynesian revolution and then monetarist counterrevolution. A notable up-to-date exception is Hyman Minsky" (1978, 72).

That said, DeLong and Eichengreen quite correctly sense a link between *MPC* and *World in Depression*; it is not Minsky, but it is definitely there and worth further attention. Kindleberger's *World in Depression* had been explicitly intended to bring the Friedman-Schwartz explanation (i.e. "the Fed did it") into contact with the actual facts, in order to discard it (Friedman and Schwartz 1963). And in the second edition of *The World in Depression* (1986), the standard Keynesian explanation also comes in

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[7] In Kindleberger, demand fluctuations are a consequence of these price fluctuations.

[8] This sentence and the following paragraph are lifted bodily from Mehrling (2022, 204-5).

for scrutiny, the purpose being to discard it as well (Temin 1976). This is the background we need to understand *MPC*. Having discarded standard monetarist and Keynesian accounts, there was room for non-standard accounts, such as the one Kindleberger himself offered, which emphasized "the communication of the collapse of stock market prices to commodity markets between September and December 1929" and "the further pressure on United States, German and gold-bloc prices from the depreciation of sterling in September 1931" (Kindleberger 1984, 16; 1985, 302).

Against this background, it is possible to understand *MPC* as doing exactly the same thing as *The World in Depression*, bringing a theory into contact with the facts. Now it is not just the facts of the Great Depression but also of the entire history of all the international crises Kindleberger could find. And now the theory is the one he had learned from his teachers, a theory that today apparently only Minsky espouses. In *MPC*, by contrast to *The World in Depression*, the facts are found to be consistent with the theory, and it is this that would create room for the book that Kindleberger considered his own "chef d'oeuvre", *A Financial History of Western Europe* (1984).

In economics, the saying goes, you need a model to beat a model. Given the reception of *The World in Depression*, which mostly ignored Kindleberger's own proposed alternative to monetarist and Keynesian orthodoxy, Kindleberger seems to have realized that he needed a model, and Minsky fit the bill. Obviously Kindleberger must have recognized that the "model" he presented in *MPC* was not the same as Minsky's—it is entirely literary, for one, and hence would not be recognized as a model by most economists. No matter. Minsky was a way for Kindleberger to get his foot in the door, to get an audience for his own "personal variation" of the theory.

There is, however, a sense in which Kindleberger can be said to have helped domesticate Minsky. By emphasizing the *initial* displacement, as Minsky did not, he opened the possible interpretation that we are dealing here with a shock to a previous equilibrium situation, suggesting that the problem arises from dynamics out of equilibrium. There is an enormous academic literature exploring formal models of that sort, some of it by Kindleberger's MIT colleagues (see DeRosa 2021). But it is that literature that attempts to domesticate Minsky, not Kindleberger. Equilibrium was never a part of his toolkit; as an American institutionalist he saw the economy quite generally as an open-ended process of Darwinian institutional evolution, and credit as a central feature of this process. The displacement of war is especially important because of war finance, which he sees as a "hothouse" for financial innovation (1984, 5).

AFTER *MANIAS, PANICS AND CRASHES*

I have emphasized that, in the first edition of *MPC*, Kindleberger invoked an early work of Minsky which he proceeded to reformulate for his own purposes as what he called the "Minsky model". At Bad Homburg, however, he learned that Minsky had moved on from that early work and was now pushing something that he called the financial instability hypothesis. The question therefore arises: How did Kindleberger incorporate his new understanding of Minsky the *man* in subsequent editions of *MPC* which continue to give central billing to Minsky the *model*?

A comparison of the subsequent editions reveals revisions of three kinds.[9] First, the footnote to the "Minsky model". In subsequent revisions, starting with the second, Kindleberger updates his reference to Minsky, replacing Minsky (1972) with Minsky (1975) and Minsky (1982): (Kindleberger 1989, 260; 1996, 215; 2000, 234).[10] But he does not revise the "Minsky model" at all.

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[9] I thank my colleague Kevin Gallagher for drawing my attention to the existence of substantive changes and for providing his own personal copies of successive editions.

[10] In the 2000 edition, he also revises the footnote to add a reference to my biographical essay on Minsky (Mehrling 1999), a revision of which I was unaware until the occasion of writing this paper.

Second, and more substantive, in a later chapter in the book he adds a new section in effect on Minsky the man, under the subheading "The Quality of Debt", in which he interprets Minsky's hedge/speculative/Ponzi frame as a classification of debts of different qualities.[11] Starting in the second edition of *MPC* and continuing on through the fourth, we find in this section of the book the additional passage: "The model set forth in the previous chapters emphasizes that in periods of euphoria, the quality of debt deteriorates, even though the quantity of money may be growing at some appropriate, limited rate" (Kindleberger 1989, 66; 1996, 50; 2000, 55). I take this to be a fair thumbnail summary of Minsky's FIH, now explicitly conjoined with Kindleberger's own personal variation.

Third, in the second and subsequent editions, Kindleberger also adds an Appendix on "Irrationality in Economics" (1989, 243-248; 1996, 198-202; 2000, 217-221), to which he draws the reader's attention in a new Preface:

> A good number of economic theorists have dismissed this sort of work as being outside the bounds of economics: it conveys suggestions of irrationality, whereas for them economics rests solidly on the axiom that man is rational, knows his mind, and maximizes, or at least optimizes, his utility or well-being" (Kindleberger 1989, xii).

He might be talking here about his own MIT colleagues, perhaps specifically his former student Ben Bernanke who had written, in the paper subsequently cited by the Nobel Prize Committee: "Hyman Minsky (1977) and Charles Kindleberger (1978) have in several places argued for the inherent instability of the financial system, but in doing so have had to depart from the assumption of rational economic behavior" (Bernanke 1983, 258).[12] As against the economic theorists, in *MPC* Kindleberger was explicitly proposing the contribution of economic history as a useful *analytical* corrective, and he wanted to make sure that readers knew it.

The fourth edition of *MPC* was the last in Kindleberger's lifetime, and subsequent editions were instead the work of Robert Aliber, who made some rather significant changes in these same three areas. While retaining the footnote from the fourth edition, he nonetheless revised the associated text, adding a box on "Minsky's three-part taxonomy", thus more or less aligning Minsky the model with Minsky the man, but in doing so somewhat veiling the independent contribution of Kindleberger. In effect, he is suggesting that Kindleberger actually *used* the Minsky taxonomy, which he did not, indeed could not have done since in the original edition he was unaware of it.

Even more, in the later section still titled "Quality of Debt", Aliber replaces Kindleberger's thumbnail summary (quoted above) with the following:

> In periods of economic euphoria the quantity of debt increases because the lenders and investors become less risk-averse and more willing – or less unwilling – to make loans that had previously seemed too risky. During economic slowdown, many firms experience less rapid increases in their revenues than they had anticipated, with the result that some firms that had been in the hedge finance group are shunted into the speculative finance group while some firms that had been in the speculative finance group move into the Ponzi group (Kindleberger and Aliber 2005, 73; 2011, 70).

This, I would suggest, is not a fair thumbnail summary of either Minsky or Kindleberger. The emphasis on deteriorating *quality* of debt in the boom has been shifted to merely *quantitative* expansion of

[11] Kindleberger (1992) places Minsky in the context of other authors concerned with the spectrum of debt quality, but nowhere treats the specific dynamic mechanism that Minsky emphasized.

[12] For more on the Bernanke connection see Carre and LeMaux (forthcoming).

credit, which is now attributed to shifts in preferences, while Kindleberger's explicit contrast between the behavior of credit and money has completely disappeared.[13] Further, the emphasis on deteriorating quality in the *boom*, so central to Minsky (as Kindleberger came to recognize), has been replaced by deteriorating quality in the *slowdown*. It is here, in the Aliber revisions of the fifth and subsequent editions, that we find the domestication of Minsky, and of Kindleberger as well.

Third, Kindleberger's Appendix A "Irrationality in Economics" has completely disappeared from the Aliber editions. The overall effect of this, as well as the revisions noted above, is a shift in the emphasis of the book. Kindleberger's *MPC* was trying to make an intervention in economic theory. Kindleberger and Aliber's *MPC* is instead more of a natural history of financial crises, as Kindleberger's colleague Robert Solow himself emphasizes in a new Foreword to the book:

> Manias, panics and crashes had the advantage over rodents, birds and beetles that they were accompanied by the rhetoric of contemporaries, sometimes with insight, something just blather...What caught [Kindleberger's] eye especially were the irrationalities that seemed so often to enmesh those directly or indirectly enmeshed in the events themselves....It seems to me that the Aliber version preserves this basic Kindleberger orientation but imposes a little more order on CPK's occasionally wayward path through his specimen cabinets. (Solow 2005, vii-viii)

CONCLUSION

In his magnum opus *Stabilizing an Unstable Economy* (1986), Minsky concludes with a chapter titled "An Agenda for Reform" (Ch. 13). In biographical context, we might consider this to be his attempt to reconsider and update the agenda proposed by his early influence Henry C. Simons (1948). It was Simons who got him started thinking about the business-banking nexus as the source of economic instability, but Simons went too far in proposing the elimination of business credit entirely. What Minsky proposes instead is a far-reaching attempt to implement what he calls "to-the-asset" financing, which is to say forms of financing in which promised future payments are more or less lined up with future expected cash flows from the asset being financed, i.e. what he calls "hedge financing". But that is only the third element of his agenda.

The first two Agenda elements are "Big Government" and "An Employment Strategy". Unlike Simons, Minsky advocates for a government approximately 20 percent of the economy, in order that government spending be of sufficient scale to compensate for fluctuating investment spending, and he advocates further for government to be a kind of employer of last resort as a way of achieving full employment. His target in all three of these Agenda elements is the standard economist's IS/LM frame, which seeks to use discretionary fiscal and monetary policy to stabilize the cycle without really confronting the business-banking nexus that is the underlying cause. By contrast, Minsky himself proposes to confront the underlying cause by means of structural reforms. His whole point is to make room for a return to genuinely competitive capitalism, small business not large business and small banks not large banks, hence the fourth element of the Agenda, "Industrial Policy."

Kindleberger, by contrast, concludes *The World in Depression* (1973) with the observation that the world needs "a stabilizer, one stabilizer" (p. 304). In biographical context, we might consider this to be his attempt to reconsider and update Bagehot's *Lombard Street* (1873). The central message of that book had been that the central bank needs to act visibly and intentionally as lender of last resort. "Money will not manage itself, and Lombard Street has a great deal of money to manage" (p. 20). What Kindleberger is grappling with is the need, revealed in the dynamics of the Great Depression,

[13] Providing further evidence on this latter point, Chapter 4 has been retitled: from "Fueling the Flames: Monetary Expansion" (Kindleberger 2000) to "Fueling the Flames: The Expansion of Credit" (Kindleberger and Aliber 2005).

for an *international* lender of last resort. But that is just the third element on his list, "discounting in a crisis." The Depression taught us also that central banking, while crucial, is not enough. Commodity markets and long-term capital flows also need stabilizers, respectively a buyer of last resort and a creditor of last resort.[14]

In biographical context, we can understand the Minsky-Kindleberger connection as one of mutual support. Kindleberger, finally free to go his own way after 1976 retirement, used Minsky as a steppingstone for his own renewed scholarly agenda. And then Minsky subsequently used Kindleberger as a respectable ally for his own activist agenda of structural reform. Both men shared origins in pre-war American institutionalism, and indeed both also were New Dealers of a kind, representing respectively the anti-globalist (Minsky) and globalist (Kindleberger) wings of that movement. Even more, both shared the long ancestry of authors who identify the inherent instability of credit as a central feature of the market economy, a feature that had become invisible to the orthodoxy that dominated economic discourse after World War II. Both were outsiders to that dominant discourse, working separately for most of their lives to construct their own alternatives. Late in life, once they learned of one another, they immediately recognized a fellow traveler, albeit one with a different "personal variation" on the intellectual tradition they shared. From then on, they travelled in parallel, outsiders together.

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[14] In the revised 1986 edition he adds two more elements: "(3) Policing a relatively stable system of exchange rates; (4) Ensuring the coordination of macroeconomic policies" (p. 289). In biographical context, this can be understood as a response to the monetary instability of the flexible exchange rate period of the 1970s.

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APPENDIX

Table 1: Minsky and Kindleberger Compared

	Minsky	Kindleberger
Scope	Domestic	International
Character	Activist	Scholar
Mechanism of Instability	Fiscal: investment spending From robust to fragile finance	Monetary: credit expansion Speculative asset price boom and bust
New Deal	Anti-globalist	Globalist
Stabilizing an Unstable System	Minsky (1986, Ch. 13): Big Government An Employment Strategy **Financial Reform** Industrial Policy	Kindleberger (1973, 292): (a) maintaining a relatively open market for distress goods; (b) providing countercyclical long-term lending; and (c) **discounting in a crisis**

Source: Compiled by author.