

Roberto Baranzini and Daniele Besomi, eds., *Metaphors in the History of Economic Thought: Crises, Business Cycles and Equilibrium* (London: Routledge, 2023), pp. viii + 290, \$136 (hardcover). ISBN: 9780367701062.

doi: 10.1017/S1053837223000202

This book consists of contributions presented at a conference on “The Usage of Metaphors in the Theorization of Crises, Cycles and Equilibrium,” held in October 2019 at the University of Lausanne. The role of metaphors as powerful rhetorical tools in economics attracted significant attention in the 1980s to 1990s, particularly through D. McCloskey’s (1983) analysis of the way economists argue (economics as discourse) and Philip Mirowski’s (1989) critical—if controversial—version of how early neoclassical economics appropriated the energy metaphor from nineteenth-century thermodynamics. Philosophers and linguists had since the 1950s (or even before) considered metaphors in the context of the relationship between language—in its literal and non-literal usages—and the world. Willie Henderson (1982, 1994) was one of the first to provide general accounts of ways of looking at metaphors and their role in the development of economics. A conference volume, *Natural Images in Economic Thought* (Mirowski 1994)—featuring an instructive chapter by Arjo Klamer and Thomas Leonard about the meaning and several categories of economic metaphors—brought the discussion to its peak in that first wave of interest in the topic. Sure enough, historians of economics kept reflecting after that about the use of metaphors in specific contexts (e.g., John King 2012 on “microfoundations”) and investigating the history of well-known metaphorical terms such as the “veil of money” (Don Patinkin and Otto Steiger 1989).

The volume under review represents an attempt to put metaphors back as a substantial subject-matter in the agenda of historians of economics. The editors share with the 1980s literature the view that the analysis of metaphors, in economics and elsewhere, “enables researchers to disclose the most fundamental principles of scientific theories,” and that metaphorical transfers should be seen as a “guiding thread to the interpretation of the world” instead as mere ornaments of the text (p. 2). However, they make such remarks by referring mainly to philosophical works, with no mention of authors such as McCloskey or Mirowski. Indeed, with one or two exceptions (particularly in the chapter by Francisco Louçã), references to the 1980s to 1990s economic literature on metaphors are conspicuously absent throughout the book.

The intended contribution of this collection of essays is to broaden the historical data set about metaphorical transfers and how they reveal features of the economic discourse that are not apparent right away. This is accomplished by documenting how economists deployed metaphors in their accounts of economic crises and business cycles, and in some discussions of equilibrium based on the pendulum and on statistical equilibrium. The overall goal is to point out not just the rhetorical but also the heuristic role played by economic metaphors. However, historical discussions of economic crises and economic dynamics were not missing from the 1980s to 1990s literature on metaphors—see, e.g., the chapters “Qualitative Dynamics in Economics and Fluid Mechanics” and “Images of Circulation in the Victorian Money Market,” respectively by Randall Bausor and Timothy Alborn, both in Mirowski (1994)—even if they are not mentioned in the book under review. Moreover, the value added by this collection should discount the fact that several chapters (Chapter 2 on Clément Juglar; 7 on Austrian and Swedish business

cycle theories; 8 on Ragnar Frisch and real business cycles; and 10 on statistical equilibrium) are largely or even entirely based on previously published articles and book chapters by the authors, which is seldom acknowledged in the book.

The volume is divided into three parts—crises (three chapters), business cycles (five chapters), and equilibrium (two chapters)—apart from an editorial introduction that should be read together with Daniele Besomi (2019). The chapters' order in the first two sections is chronological. Crises metaphors are discussed as belonging to the nineteenth century, while business cycles are regarded as essentially a twentieth-century construct.

The very term "crisis" was originally appropriated by economists from medicine. However, as pointed out by Monika Poettinger in her informative Chapter 1 on a "cultural analysis" of the literature on economic crises in nineteenth-century Italy, at the end of this process of transfer, "crisis" lost its initial metaphorical medical connotation and kept only an economic non-metaphorical meaning. Using a concept introduced in the 1960s to 1970s philosophical literature on metaphors (by authors such as Colin Turbayne, Max Black, and Paul Ricoeur), "crisis" and other terms (e.g., "equilibrium") became "dead" metaphors due to endless repetition that drained them of their figurative sense. "Living" metaphors, on the other hand, maintain their ability to surprise and therefore to create a new meaning. That important distinction is only occasionally mentioned in the book (see below).

Medical metaphors are central to Baranzini and Besomi's thick essay on Juglar's "epistemic use" of metaphors (Chapter 2). They argue convincingly how Juglar's background as a physician, and its change over time, strongly influenced his path-breaking treatment of economic crises as illustrated, *inter alia*, by his usage of the medical distinction between "predisposing" and "occasional" causes. Michael White's and Harro Maas's detailed chapters 3 and 4 about William Stanley Jevons and Alfred Marshall respectively—which add new insights about their usages of diagrammatic analyses of fluctuations, regardless of the metaphor issue itself—should be read against the background of the distinction between metaphors and analogies. Jevons usually referred metaphorically to economic crises as "great commercial storms." However, there was nothing metaphorical in his analysis of the influence of sunspots on meteorological conditions and by that on harvests and economic fluctuations. Interestingly enough, "sunspots" have turned into a metaphor defined in modern literature as random variables that have no direct impact on economic fundamentals over the business cycle. As White shows, there were important *analogies* between Jevons's statistical analysis of economic crises and the methods of meteorology.

Maas's discussion of material from the Marshall Archives makes clear that the Cambridge economist did not deploy—against what one might perhaps expect—biological metaphors in his incipient study of business cycles. Maas claims that Marshall's usage, in a letter dated 1899, of "organic whole"—which Marshall contrasted with both "pure theory" à la Léon Walras and the "crude collection of facts" à la German Historical School—provides the relevant metaphor to understand his approach to aggregate fluctuations. Nevertheless, the term "organic," in the sense of a set made of related parts arranged as a system, is better interpreted here as an analogy rather than a metaphor. Whereas metaphors involve a transfer of ideas without implying a comparison that can be spelled out, analogies entail a comparison and explicit parallels between the principal and subsidiary subjects (Henderson 1994; Klamer and Leonard 1994; Lagueux 1999). That distinction is bypassed in the editorial introduction (see, however, Besomi 2019 for a discussion of the similarities and differences between those figures of speech).

The concept of analogy is used by Marius Kuster in his Chapter 5 on the “biological origins” of Werner Sombart’s business cycle theory (p. 157). With reference to Mary Hesse’s (1966) work on models and analogies, Kuster claims that Sombart saw an “analogy” between Ernst Haeckel’s 1869 biological principle of differentiation and integration, on one side, and the working and technology of economic organizations, on the other, with dynamic consequences. Whether Sombart’s separation between “organic” and “inorganic” economic sectors—which, in contrast with Jevons, saw the coal industry as “inorganic” and therefore not restrictive to economic growth—makes economic sense is a moot point. He apparently did not intend them as metaphors but as literal expressions.

Juan Zabalza’s thorough discussion of Germán Bernácer’s—the most original Spanish monetary macroeconomist of the first half of the twentieth century—extensive use of medical and mechanical metaphors (Chapter 6) calls attention to the “pedagogical” role sometimes played by economic metaphors. He draws on the distinction between pedagogical, heuristic, and constitutive economic metaphors advanced by Klammer and Leonard (1994). Apart from pedagogical metaphors, deployed specially in reports produced at the Research Department of the Bank of Spain in the 1930s, Bernácer used metaphors in order to vindicate the scientific status of his contributions, which reflected his background in natural science as professor of industrial physics in the early twentieth century.

Monetary economics is also the topic of Chapter 7, by Bert Tieben, on the metaphorical content of Austrian and Swedish business cycle theories. They were both built on Knut Wicksell’s new concepts about the working of a credit economy, often expressed through mechanical metaphors such as “elasticity,” “spring,” or “cylinder on a plane.” Tieben’s brief discussion of Wicksell’s contributions is marred by inaccuracies such as the notion that the Swedish economist “advocated the introduction of a gold standard” (p. 193), which is the opposite of Wicksell’s program of monetary reform. Tieben’s main claim is that “equilibrium”—more specifically, “monetary equilibrium” as advanced by Wicksell and further elaborated by the Stockholm school and the Austrians—was the dominant or “constitutive” metaphor of neo-Wicksellian economics. After listing “equilibrium,” at the outset of the chapter, as a “dead” economic metaphor that had lost its original link with the mechanical notion of balance of forces, Tieben argues, in a confusing way, that Austrian and Swedish business cycle theories used it as a key “live” metaphor. The argument is apparently based on the notion that, by redefining (monetary) equilibrium, the neo-Wicksellians “awaken” it as a metaphor. This view—that dead economic metaphors may be brought back to life—may be found in the literature, but Tieben does not engage with it.

Constitutive metaphors and Wicksell are also the starting point of Louçã’s proposition, developed in Chapter 8, that modern business cycle analysis is built on the “rocking horse” metaphor introduced by Wicksell in 1918, further investigated mathematically by Frisch in his seminal 1933 model of economic fluctuations as the result of impulse and propagation mechanisms. Wicksell’s well-known metaphor illustrated his distinction between the “external circumstances” and the “internal structure of the economy.” Wicksell used as well other metaphors—such as the “oscillations of a violin string” and the “wave movement of the sea”—to express his idea that irregular shocks to the economy may produce regular cyclical fluctuations (see Boianovsky 1995, p. 381). According to Louçã, the “rocking horse” founding metaphor is behind the analytical

problems that beset the current dominant approach to business cycles, since the nature and origin of the exogenous shocks remain unexplained (a criticism that is not extended to Wicksell's verbal discussion). Louçã endorses Joseph Schumpeter's original critique of Frisch's formal model—that the structure of the economy is essentially stable in that framework—and, at another level, sees his own contribution as complementing Mirowski's (1989) critical account of the supposedly “founding metaphor” (energetics) of neoclassical economics.

Chapter 9, by Besomi and Sonya Marie Scott, provides a useful survey of the pendulum metaphor found in many discussions—sometimes critically—of economic equilibrium from the 1820s up to the 1970s. Interestingly enough, they conclude that the pendulum metaphor was often cited in a “naïve way” (p. 260), as most economists did not grasp the physics of the pendulum and failed to mention the influence on its movement of frictions, inertia, and movements beyond equilibrium. This is related to the broad issue of economists' “technical competence” in using metaphors from the natural world, briefly addressed in the editorial introduction (p. 11). Since this was a key issue in the first wave of the economic literature on metaphors in the 1980s and 1990s, one would expect references to such debates in that connection, to no avail. The book closes with an informative Chapter 10 by Gianfranco Tuset about how a number of Italian economists, statisticians, and mathematicians further developed Vilfredo Pareto's well-known empirical law of asymmetric distribution in formal analogy with the kinetic theory of gases, an analogy not used by Pareto himself while presenting his “law.” Tuset documents how statistical physics and statistical equilibrium were extensively discussed in Italian economics in the interwar period, before they became conspicuous in the 1980s in the new field of econophysics.

Surely, one could not expect this collection to cover the entire range of economic metaphors applied to crises, business cycles, and equilibrium throughout the history of thought. However, two omissions are noteworthy. The first ever formal business cycle model consisted of Pareto's ([1896–97] 1964, vol. 2, ch. 4; [1897] 2005) attempt to incorporate the influence of “inertia” or “frictions” by applying Jean-Baptiste le Ronde d'Alembert's principle of mechanics to economic behavior. As Wicksell noticed, Pareto's inertial model was mathematically flawed, but that should not make that early effort less interesting, especially from the perspective of the study of metaphorical transfers in economics (Boianovsky and Tarascio 1998; Boianovsky 2013). The editors reproduce (p. 15n7) a footnote by Irving Fisher describing Pareto's 1897 model as just a “mathematical treatment of the analogy” of the pendulum, a description they seem to endorse. Such a description, however, is far from accurate.

The second omission in the book is the absence of references to a key metaphor in the history of monetary macroeconomics and economic fluctuations: the “veil of money,” a representation of the quantity-theory-of-money proposition that in the long run, changes in money supply affect only the absolute price level, not relative prices, the rate of interest, and output. According to that view, in equilibrium money is just a “veil” that does not interfere with real variables and should therefore be removed in order to investigate the real economy. That term was apparently introduced (in its German equivalent) by Eugen von Böhm-Bawerk in 1889, and became widespread in the English language after Irving Fisher, Dennis H. Robertson, and others used it (Boianovsky 1993). Its meaning is very close to “neutral money” (Patinkin and Steiger 1989), a term cited by Tieben in Chapter 7 (p. 203). Notwithstanding references to the “veil of money”

in his 2012 book on the concept of equilibrium, Tieben refrains from mentioning it in his 2023 chapter, despite the fact that Wicksell used a similar expression (“cloak”) and Bertil Ohlin cited “veil” critically.

That should not distract the reader from the overall qualities of this stimulating collection, which should not fail to bring the broad issue of metaphors back to the agenda of historians of economics and economic methodologists alike.

Mauro Boianovsky
Universidade de Brasília

COMPETING INTERESTS

The author declares no competing interests exist.

REFERENCES

- Besomi, Daniele. 2019. “The Metaphors of Crises.” *Journal of Cultural Economy* 12 (5): 361–381.
- Boianovsky, Mauro. 1993. “Böhm-Bawerk, Irving Fisher, and the Term ‘Veil of Money’: A Note.” *History of Political Economy* 25 (4): 725–738.
- . 1995. “Wicksell’s Business Cycle.” *European Journal of the History of Economic Thought* 2 (2): 375–411.
- . 2013. “Before Macroeconomics: Pareto and the Dynamics of the Economic Aggregate.” *Revue Européenne des Sciences Sociales* 51 (2): 103–131.
- Boianovsky, Mauro, and Vincent Tarascio. 1998. “Mechanical Inertia and Economic Dynamics: Pareto on Business Cycles.” *Journal of the History of Economic Thought* 20 (1): 5–23.
- Henderson, Willie. 1982. “Metaphor in Economics.” *Economics* (Winter): 147–153.
- . 1994. “Metaphor and Economics.” In Roger Backhouse, ed., *New Directions in Economic Methodology*. London: Routledge, pp. 343–367.
- Hesse, Mary. 1966. *Models and Analogies in Science*. Notre Dame: University of Notre Dame Press.
- King, John E. 2012. *The Microfoundations Illusion: Metaphor and Dogma in the History of Macroeconomics*. Cheltenham: Edward Elgar.
- Klamer, Arjo, and Thomas Leonard. 1994. “So What’s an Economic Metaphor?” In Philip Mirowski, ed., *Natural Images in Economic Thought*. Cambridge: Cambridge University Press, pp. 20–51.
- Lagueux, Maurice. 1999. “Do Metaphors Affect Economic Theory?” *Economics and Philosophy* 15 (1): 1–22.
- McCloskey, D. 1983. “The Rhetoric of Economics.” *Journal of Economic Literature* 21: 481–517.
- Mirowski, Philip. 1989. *More Heat than Light: Economics as Social Physics, Physics as Nature’s Economics*. Cambridge: Cambridge University Press.
- , ed. 1994. *Natural Images in Economic Thought*. Cambridge: Cambridge University Press.
- Pareto, Vilfredo. [1896–97] 1964. *Cours D’Économie Politique*. Geneva: Droz.
- . [1897] 2005. “Economic Crises.” Translated by R. Leverdier. In Mauro Boianovsky, ed., *Business Cycle Theory—Selected Texts 1860–1939*. Volume 8. London: Pickering & Chatto, pp. 3–22.
- Patinkin, Don, and Otto Steiger. 1989. “In Search of the ‘Veil of Money’ and the ‘Neutrality of Money’: A Note on the Origins of Terms.” *Scandinavian Journal of Economics* 91: 131–146.