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## BUSINESS CYCLES, PART I

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F. A. HAYEK

THE COLLECTED WORKS OF

F. A. Hayek

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BUSINESS CYCLES  
PART I

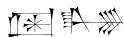
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*Edited by Hansjoerg Klausinger*



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# CONTENTS

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|  |     |
|--|-----|
| Editorial Foreword   | ix  |
| Introduction   | 1   |
| <br><i>MONETARY THEORY AND THE TRADE CYCLE</i>                                 |     |
| Introduction to the Series, by Lionel Robbins (1933)                           | 49  |
| Preface (1933)   | 52  |
| Preface to the German Edition, <i>Geldtheorie und Konjunkturtheorie</i> (1929) | 57  |
| Preface to the Reprint of the German Edition (1976)                            | 59  |
| Analytical Table of Contents   | 63  |
| One            The Problem of the Trade Cycle                                  | 67  |
| Two            Non-Monetary Theories of the Trade Cycle                        | 79  |
| Three           Monetary Theories of the Trade Cycle                           | 101 |
| Four            The Fundamental Cause of Cyclical Fluctuations                 | 119 |
| Five            Unsettled Problems of Trade Cycle Theory                       | 145 |

## CONTENTS

## PRICES AND PRODUCTION

|               |   |     |
|---------------|---|-----|
|               | Foreword to the First Edition, by Lionel Robbins (1931)   | 169 |
|               | Preface to the First Edition (1931)   | 174 |
|               | Preface to the Second Edition (1935)  | 176 |
|               | Preface to the German Edition, <i>Preise und Produktion</i> (1931)  | 181 |
|               | Preface to the Reprint of the German Edition (1976)   | 186 |
| Lecture One   | Theories of the Influence of Money on Prices  | 193 |
| Lecture Two   | The Conditions of Equilibrium between the<br>Production of Consumers' Goods and<br>the Production of Producers' Goods | 217 |
| Lecture Three | The Working of the Price Mechanism in the Course<br>of the Credit Cycle   | 242 |
|               | APPENDIX: A Note on the History of the Doctrines<br>Developed in the Preceding Lecture                                | 262 |
| Lecture Four  | The Case for and against an 'Elastic' Currency  | 266 |
|               | APPENDIX: Some Supplementary Remarks on<br>'Neutral Money'  | 281 |
|               | Index   | 285 |



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## EDITORIAL FOREWORD

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Although in my home country of Austria, Friedrich August Hayek, both as the economist and as the social philosopher, for a long time had not been recognised as a major thinker of the twentieth century, in some sense his works, first and foremost his writings on money and the cycle, were always present during my endeavours as a scholar in the history of economic thought. My first encounter with Hayek's works was when a colleague, Norbert Hentschel, to whom I am still grateful, proposed a discussion of Hayek's theory of the cycle as a theme for a doctoral thesis—a suggestion which I did not follow then, but ten years later when I chose to make a chapter on Hayek part of my habilitation. From then on my interest in Hayek never receded, and in this regard I now feel much honoured by the opportunity to present this edition of Hayek's writings on the business cycle.

The first part, in this volume, contains Hayek's two major monographs on the business cycle, *Monetary Theory and the Trade Cycle* and *Prices and Production*, while his short papers, including hitherto unpublished contributions, are collected in a companion volume (*Business Cycles, Part II*). The editorial history of both monographs necessitated the specific procedure chosen here. *Monetary Theory and the Trade Cycle* (1933) is the revised translation from the German *Geldtheorie und Konjunkturtheorie* (1929), a translation not free from shortcomings in some regards, which was highlighted recently by a novel translation of what had been in effect a preprint of the first three chapters of this monograph. Thus, in addition to reproducing the text of the 1933 translation, this edition will draw on the original German version and make use of the more recent translation for pointing out divergences—whatever their causes—between the German and the English text. *Prices and Production* was published first in 1931, in English, and then in a revised second edition in 1935; shortly after the first edition Hayek produced a German version, *Preise und Produktion* (1931). In the present volume the text will be presented as a variorum edition, based on the revised second edition and noting all deviations from the first. Where it furthers the understanding of the evolution of Hayek's thought, this edition will also supply variants taken from the German version.

Apart from this, a main task for the editor consisted in the checking of ref-

erences and quotations. Here the principles of the *Collected Works* editions have been maintained with some slight modifications: The reference style keeps to the rule of citing the full reference at the first quotation and abbreviated references at the following instances, yet with the modification that the editor's introduction and the two monographs are treated as self-contained parts to which this rule applies separately. Typing errors and obvious mistakes have been silently corrected throughout; similarly, the references have been silently adapted to the style of this edition. Inaccurate quotations in Hayek's original version have been left uncorrected, with the inaccuracies pointed out differently according to whether they appear in the text or in the footnotes: inaccurate quotations in the text are pointed out in accompanying editorial notes; those in the footnotes are corrected by the use of brackets. And although incomplete references given by Hayek have been silently supplemented, brackets are used to correct references that are definitely wrong, for example, as regards the author's name, title, or pagination. Finally, if no other source is indicated, German-language writings have been translated by the editor.

At last, it is a most pleasant task to acknowledge the support of those persons and institutions without which the accomplishment of this edition would have been much more difficult if not impossible. To begin with, papers dealing with this edition, and in particular, parts of the introduction, have been presented to various audiences—the conferences of the European Society for the History of Economic Thought at Strasbourg, Prague, Thessaloniki, and Amsterdam; the meeting of the History of Economics Society at George Mason University; seminars at the University of Stuttgart-Hohenheim; the Walter Eucken Institute at Freiburg im Breisgau; in Japan at Hitotsubashi University (Tachikawa) and Yokohama National University; at the HOPE workshop of Duke University; and finally at staff seminars of the Economics Department of my home university, WU (Wirtschaftsuniversität) Vienna. I owe a debt of gratitude to the discussants and commentators at all these presentations for the immense number of useful suggestions for improvement. It is certainly impossible to give a complete list of all the individuals for whose support and help I am grateful. In any case this list must include Larry White, the editor of two capital volumes of *The Collected Works*, and Roger Garrison, from whom I took over the editor's task for these volumes; numerous useful hints and queries came from Günther Chaloupek, Susan Howson, Heinz D. Kurz, Robert Leonard, and Hans-Michael Trautwein, and from responses to queries to the SHOE mailing list by Daniele Besomi, James Forder, and Nicholas Theocarakis; among my colleagues at WU I have to mention J. Hanns Pichler, Alfred Sitz, and Herbert Walther for their support. A crucial impulse for the progress of this edition resulted from the four months I spent in 2008 at Duke University as a senior research fellow of the Center for the History of Political Economy, thanks to an invitation by Bruce Caldwell; in return Bruce

Caldwell, Harald Hagemann, and Arash Molavi Vasséi spent some time as visiting researchers at WU, and during this time commented meticulously on parts of my introduction. The comments by two anonymous readers of the original typescript proved invaluable for suggesting improvements leading to the final outcome. Ciaran Cassidy contributed the translations of the prefaces to the German editions. In addition, Bruce Caldwell, the general editor of this series, must be singled out for his inexhaustible readiness to comment on preliminary versions and for sharing his experience as an editor, and moreover for the patience with which he observed the progress of these volumes.

The preparation of this volume made use of the facilities of many libraries and archives, and I am most grateful for the assistance I have invariably experienced. In particular I visited and drew upon the cooperation of the Hoover Institution Archives at Stanford University, the Perkins Library at Duke University, the Hayek Library located at the University of Salzburg, the Austrian National Library, the library of the University of Vienna, and of course, that of my home university. For permission to quote from the unpublished correspondence and papers of Fritz Machlup I am grateful to the Hoover Institution Archives, which is the repository of the Fritz Machlup papers, and for permission to quote from the unpublished papers and correspondence of F. A. Hayek to the Estate of F. A. Hayek. Last but not least, work on both *Business Cycles* volumes has been much facilitated by financial assistance from the WU-Jubiläumsstiftung, which provided the financial means for a one-year sabbatical (*Forschungsvertrag*); and the Austrian National Bank, which I gratefully acknowledge for awarding its *Internationalisierungspreis*.

A final word of thanks is due to my family: to my wife, Claudia; and to Gerulf, Helga, Marcel, and Mario, all of whom experienced my long, drawn-out preoccupation with Hayek and its unintended consequences for private life.

Hansjoerg Klausinger



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# INTRODUCTION

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The early fame of Friedrich August Hayek as an economic theorist, in particular as a contributor to contemporary economic debates in the English-speaking world, derived from his ventures into the theories of money and the business cycle. With the publication of *Business Cycles, Part I* and *Part II*, all of Hayek's writings on the business cycle will be assembled. This volume contains two monographs on the subject, and the companion volume contains his shorter contributions, including some material published for the first time. The editor's introductions will necessarily overlap and regularly refer to one another. Echoing Hayek's fate as a business cycle theorist, this introduction will highlight the origins and the substance of his early achievements, while the other will concentrate on the actual and apparent problems of his approach and on its evolution in general. To begin at the beginning, however, we turn first to a brief reprise of Hayek's education as a theorist within the Austrian school of economics.

## *Hayek in Vienna, 1924–31*

Hayek's education as an economist and his eventually becoming recognised as a serious theorist of high reputation coincided with the final flourishing of the Austrian school in its centre in Vienna.<sup>1</sup> The last of the school's second gen-

<sup>1</sup>This section draws on a wealth of sources on the Austrian school in the 1920s. These include the various editor's introductions to volumes of *The Collected Works of F. A. Hayek* (Chicago: University of Chicago Press; London: Routledge); the recent biographies of Hayek and Ludwig von Mises by, respectively, Bruce Caldwell (*Hayek's Challenge: An Intellectual Biography of F. A. Hayek* [Chicago: University of Chicago Press, 2004]) and Jörg Guido Hülsmann (*Mises: The Last Knight of Liberalism* [Auburn, AL: Mises Institute, 2007]); Hayek's recollections in F. A. Hayek, "Nobel Prize–Winning Economist", ed. Armen Alchian (transcript of an interview conducted in 1978 under the auspices of the Oral History Program, University Library, University of California–Los Angeles [transcript 300/224, Department of Special Collections, Charles E. Young Research Library, UCLA]); *The Fortunes of Liberalism: Essays on Austrian Economics and the Ideal of Freedom*, ed. Peter G. Klein, vol. 4 (1992) of *The Collected Works of F. A. Hayek*, part 1; and *Hayek on Hayek: An Autobiographical Dialogue*, ed. Stephen Kresge and Leif Wenar (Chicago: University of

eration, Friedrich Wieser, died unexpectedly in 1926 after having vacated his chair at the University of Vienna in 1922. The next generation consisted of Hans Mayer, Ludwig von Mises, Joseph Schumpeter (all in their forties), and economists of minor stature like Richard Reisch, Richard Schüller, and Richard Strigl, followed by young academics like Gottfried Haberler, Fritz Machlup, Oskar Morgenstern, Paul Rosenstein-Rodan, and of course Friedrich August Hayek himself. Although these economists contributed to quite diverse fields not easily amalgamated to a homogeneous body of thought, their efforts created an atmosphere conducive to a renaissance of Austrian economics in the 1920s comparable to that of the founding era. Quite apart from the scientific achievements of this time period, the optimistic appraisal of the future resulted from favourable developments within the academic and professional sphere of economics in Austria.

Thus, when Mayer succeeded Wieser in 1923 at least one adherent of the Austrian school occupied an economics chair at the University of Vienna. At about the same time, the Nationalökonomische Gesellschaft (Austrian Economic Association) had been revived as a platform for discussion among academics and non-academics alike, comprising all the different strands of thought within the Austrian economics community. Moreover, the numerous interlocking circles of economists were sizzling with debate; to name just two, the Mises private seminar and the so-called Geist-Kreis provided forums for discussion with members recruited not only from the economics profession but also from other social sciences, law, and business. In 1927 Mises founded the Austrian Institute for Business Cycle Research, which would provide some employment opportunities for economists outside academia. Furthermore, in 1929 Austria's most important economic journal, the *Zeitschrift für Volkswirtschaft und Sozialpolitik*, was relaunched as the *Zeitschrift für Nationalökonomie*. It would soon prove

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Chicago Press; London: Routledge, 1994). Cf. also Earlene Craver, "The Emigration of the Austrian Economists", *History of Political Economy*, vol. 18, Spring 1986, pp. 1–32; Stephan Boehm, "Austrian Economics between the Wars: Some Historiographical Problems", in *Austrian Economics: Tensions and New Directions*, ed. Bruce Caldwell and Stephan Boehm (Boston: Kluwer, 1992), pp. 1–30; Kurt R. Leube, "Über Diskontinuitäten und Kontinuitäten der österreichischen Schule der Nationalökonomie", in *Erkenntnisgewinne, Erkenntnisverluste*, ed. Karl Acham, Knut Wolfgang Knörr, and Bertram Schefold (Stuttgart: Steiner, 1998), pp. 301–24; Robert Leonard, "'Between Worlds', or an Imagined Reminiscence by Oskar Morgenstern on Equilibrium and Mathematics in the 1920s", *Journal of the History of Economic Thought*, vol. 26, September 2004, pp. 285–310, and "The Collapse of Interwar Vienna: Oskar Morgenstern's Community, 1925–1950", (ICER Working Paper 4, International Centre for Economic Research, Turin, 2010); Hauke Janssen, *Nationalökonomie und Nationalsozialismus. Die deutsche Volkswirtschaftslehre in den dreißiger Jahren*, 2nd ed. rev. (Marburg: Metropolis, 2000); and as a main source of biographical information, *Biographisches Handbuch der deutschsprachigen wirtschaftswissenschaftlichen Emigration nach 1933*, 2 vols., ed. Harald Hagemann and Claus-Dieter Krohn (Munich: Saur, 1999). Finally, on specific points the documents collected in the papers of Oskar Morgenstern and Gottfried Haberler proved invaluable.

itself as the most prestigious German-language economic journal, in particular after the decline of the German journals subsequent to Hitler's rise to power in 1933. Additionally, most of the younger Austrians benefited from studies and research abroad. Morgenstern and Haberler, and for a few months Mises, had spent time outside Austria, supported by grants from the Rockefeller Foundation, which later also sponsored Machlup and Rosenstein-Rodan. Hayek had been the first to visit the United States; he stayed for fifteen months on his own initiative and without external funding. These members of the fourth generation of the Austrian school now pursued their habilitation at the University of Vienna in order to acquire a readership (*venia docendi*) in economics.

Even with regard to the position of Austrian economics within the German-language community, there was room for optimism that the resistance from what still remained of the German Historical school would be overcome. The situation of the Verein für Sozialpolitik at the end of the 1920s was symptomatic. The Verein, founded in 1873 and thereafter the primary association of all German-speaking economists, had long been dominated by the adherents of the historicist tradition of Gustav von Schmoller and his successors, yet recently a countermovement of economists of a more theoretical orientation had developed.<sup>2</sup> This group, sometimes labeled the 'German Ricardians' and including economists of a liberal as well as of a socialist orientation,<sup>3</sup> for a time also entertained close contact with economists of the Austrian school. At the 1928 Zurich meeting of the Verein it appeared that eventually these theoretical economists would set the agenda. In the general session on business cycle research the theorists dominated the scene, and for the adherents of a monetary theory of the business cycle, and in particular of the variant advanced by Mises, this event marked the peak of their reception in Germany.<sup>4</sup> Thus there seemed ample justification for the younger Austrians to look to the future with some hope for a university career or at least for some sort of employment within their field.

However, at the same time to the perceptive observer, signals were mount-

<sup>2</sup> Cf. Janssen, *Nationalökonomie*, section 2.1.

<sup>3</sup> Janssen (*ibid.*, p. 35) lists as its members, among others, Alexander and Hanns-Joachim Rüstow, Walter Eucken, Albert Hahn, Friedrich Lutz, and Wilhelm Röpke, as well as Gerhard Colm, Adolf Löwe, Emil Lederer, and Hans Neisser. The reference to Ricardo evokes a model-theoretic, deductive approach to economic theory that would have made him an obvious adversary of the German Historical school. For a slightly different characterisation of the 'Ricardians', cf. F. A. Hayek, "The Rediscovery of Freedom: Personal Recollections", in *The Fortunes of Liberalism*, pp. 187–88.

<sup>4</sup> For the reports and proceedings of the Zurich meeting see *Schriften des Vereins für Sozialpolitik*, vol. 173, part 2, *Beiträge zur Wirtschaftstheorie, Konjunkturforschung und Konjunkturtheorie*, ed. Karl Diehl (Munich and Leipzig: Duncker and Humblot, 1928); and *Schriften*, vol. 175, *Verhandlungen des Vereins für Sozialpolitik in Zürich 1928. Wandlungen des Kapitalismus. Auslandsanleihen. Kredit und Konjunktur*, ed. Franz Boese (Munich and Leipzig: Duncker and Humblot, 1929).

ing of the more sinister events to come. A case in point was the situation in the faculty of law and economics at the University of Vienna. The responsibility for the decisions affecting the subject of economics, such as concerning habilitations or the filling of vacant chairs, rested on the faculty as a whole, which beside the economists included sociologists, but predominantly professors in the diverse fields of law. Without being able to do justice to the various shades of contemporary Austrian conservatism—ranging from (and overlapping among) Catholic conservatives and those still loyal to the Habsburg monarchy to German nationalists and propagators of the *Anschluss*, the union with the German *Reich*—the members of the faculty were as a rule conservatives of some sort, by and large hostile towards liberalism (and socialism),<sup>5</sup> and many of them anti-Semitic. There existed only three chairs in economics within the faculty. Mayer, after having prevailed over both Mises and Schumpeter, had become Wieser's successor and the single heir to the Austrian tradition within the University of Vienna. However, his achievements in science as well as in academic politics were soon found wanting. Moreover, he was eager to differentiate his strand of Austrian economics from the positions represented by Mises and many of the younger generation.<sup>6</sup> With Schumpeter leaving in 1925 for Bonn, it was Mises who finally acquired the leadership of the school in the interwar period, at least in matters of theory and of actual economic policy-making, despite Mayer's prestigious position at the university.

Yet, in issues of academic politics the younger generation still had to address Mayer, such as for his support in mentoring their habilitations. The habilitation proceedings themselves were becoming ever more difficult. The reason lay in the personalities of the other two economists who occupied chairs in the faculty. The first one was Othmar Spann, who derived his rather idiosyncratic approach of universalism from German romanticism, in particular from Adam Müller, and who excelled in his enmity towards liberalism, democracy, and anything he considered modernist stuff.<sup>7</sup> Predictably, he opposed any of the habilitations for which economists close to the Austrian school applied. Moreover, at the time in question the reissue of the *Zeitschrift* had already sparked a bitter conflict between Spann and Mayer only to be settled with the outright

<sup>5</sup>Both Hayek's and Robbins's claims that the faculty would have been more ready to accommodate to a candidate with socialist than with liberal leanings is certainly incorrect for the second half of the 1920s; cf. Lionel Robbins, *Autobiography of an Economist* (London: Macmillan, 1971), p. 107, and *Hayek on Hayek*, p. 59. In fact, Hans Kelsen, the preeminent legal theorist, was in 1919 the last with a close relationship to the Socialist Party to be appointed to a chair in this faculty.

<sup>6</sup>For some time, at least until 1930, Morgenstern and Rosenstein-Rodan may be considered with some justification to have been disciples of Mayer.

<sup>7</sup>Cf. Spann's notorious attack on individualism and its consequences in *Der Wahre Staat: Vorlesungen über Abbruch und Neubau der Gesellschaft* (1921), reprinted as vol. 5 (5th ed., 1972) of the *Othmar Spann-Gesamtausgabe* (Graz: Akademische Druck- und Verlagsanstalt).



elimination of Spann from the editorial board.<sup>8</sup> The other person was Ferdinand Degenfeld-Schonburg, a conservative economic historian and from a scientific point of view a nonentity. Yet, in matters concerning the chairs in economics, in order to establish a majority within the faculty Mayer had to win over Degenfeld. Indeed, Mayer regularly succeeded in persuading Degenfeld to approve the habilitation of Austrian liberals provided they were not Jewish, and in return economists of a more conservative stance were habilitated, too. Nevertheless, the habilitations of Haberler and Morgenstern in 1928 were anything but easy. In both cases Mayer accomplished by some manoeuvring a majority within the faculty to counter the opposition of Spann, yet with regard to Morgenstern, Spann was able to delay the necessary confirmation by the Ministry of Education by interventions and intrigues for almost a year, until April 1929. At the same time followers of Spann's universalism or of some variety of Catholic social teaching (for example, Walter Heinrich in 1928, and Josef Dobretsberger in 1929) were able to manage their habilitations more swiftly. In the years following, Machlup and Rosenstein-Rodan were forced to surrender in the face of insurmountable obstacles for Jews hoping to secure habilitation.<sup>9</sup> These experiences foreshadowed the dismal prospects for economists associated with the Austrian school applying for vacant chairs within the German-language area. Haberler and Morgenstern tried, but did not get beyond becoming listed for professorships in Prague and Königsberg, and Königsberg and the Vienna Hochschule für Welthandel, respectively, where eventually other candidates were appointed. In Austria in the course of the next several years economists of little distinction like Dobretsberger (in Graz) or Heinrich and Richard Kerschagl (at the Welthandel) became tenured as (extraordinary) professors, but no one close to the Austrian school did.<sup>10</sup>

Now how did Hayek fare in all this turmoil? He had received his doctorates from the University of Vienna, the first in law and then a second one in political science (*Staatswissenschaften*). Although very early as a student he had been for a short spell under the influence of Spann, he soon turned to Wieser as his teacher, whose impact is clearly visible in Hayek's thesis on the problem of imputation.<sup>11</sup> After Hayek had left university, Mises helped him to obtain

<sup>8</sup> Eventually, Reisch and Schüller became the co-editors, with Mayer, while the day-to-day work of the managing editor was to be placed upon Morgenstern (and for a while Rosenstein).

<sup>9</sup> Anti-Semitism had already played a role as a weapon against Morgenstern, as rumours had been spread of his allegedly non-Aryan origin. Cf., e.g., Rosenstein-Rodan to Morgenstern, undated [July? 1928], in Oskar Morgenstern Papers, Rare Book, Manuscript, and Special Collections Library, Duke University, box 3.

<sup>10</sup> Mises, Strigl, and Morgenstern ended up as 'extraordinary professors', too, yet in their case this was just a title without a remuneration.

<sup>11</sup> Hayek's thesis has been preserved in the Friedrich A. von Hayek Papers, box 104, folder 27, Hoover Institution Archives, Stanford University.

a job in a public office (*Abrechnungsamt*) to earn a living, and indeed Mises became an important influence on Hayek's economics.<sup>12</sup> In 1923–24 Hayek embarked on a trip to the United States, where he became acquainted with American economics, in particular with the type of institutionalism propagated by Wesley Clair Mitchell. Back in Vienna, he discussed this type of theory, including its relation to monetary policy, rather critically in a two-part article.<sup>13</sup> It was Mises who, in 1927, was responsible for Hayek's appointment as the first director of the Institute for Business Cycle Research. Although the Institute started on a rather small scale, during Hayek's directorship it became possible to hire additional personnel; thus at the end of 1928 Morgenstern joined Hayek, whom he was eventually to succeed as director in 1931.<sup>14</sup>

Concerning the Institute, Hayek's position was somewhat awkward.<sup>15</sup> For the Institute's task was not prescribed as a scientific one, but as the practical one of providing information and decision-making support to the public, in particular, serving businessmen and policy makers. In its emphasis on practical business cycle research, the Austrian Institute followed the precedent set by institutes for economic research like the Harvard Economic Service, and in Germany the recently founded institutes in Berlin and Kiel. Thus Hayek, and later on Morgenstern, was primarily occupied with the writing of monthly bulletins (the *Monatsberichte*), which included statistical tables arranged in accordance with the classification of the famous Harvard barometer. Although the Institute refrained from making its own predictions, it regularly reprinted those of the Harvard Service. However, while compelled to comply with the demands of the public in this regard, both Hayek and Morgenstern expressed their scepticism towards an empirically based type of practical business cycle research. In his habilitation thesis Hayek devoted a whole chapter to defending the primacy of theory, and he rejected "the oft-repeated assertion that statistical examination of the Trade Cycle should be undertaken without any theoretical prejudice" as "always based on self-deception".<sup>16</sup> From a different

<sup>12</sup> On Hayek and Mises cf. the editor's introduction to F. A. Hayek, *The Fortunes of Liberalism*, pp. 9–13.

<sup>13</sup> F. A. Hayek, "Die Währungspolitik der Vereinigten Staaten seit der Überwindung der Krise von 1920", *Zeitschrift für Volkswirtschaft und Sozialpolitik*, n.s., vol. 5, nos. 1 and 2, 1925, pp. 25–63 and 254–317, translated as "Monetary Policy in the United States after the Recovery from the Crisis of 1920", and reprinted as chapter 2 of *Good Money, Part I: The New World*, ed. Stephen Kresge, vol. 5 (1999) of *The Collected Works of F. A. Hayek*.

<sup>14</sup> The Institute resided in the same building as the Vienna Chamber of Commerce, so Hayek and Morgenstern were close to Mises, the Chamber's secretary, and to Haberler, who worked there as a librarian for a while.

<sup>15</sup> Cf. for the following Hansjoerg Klausinger, "Hayek on Practical Business Cycle Research: A Note", in *Austrian Economics in Transition: From Carl Menger to Friedrich Hayek*, ed. Harald Hagemann, Tamotsu Nishizawa, and Yukihiko Ikeda (London: Palgrave Macmillan, 2010), pp. 218–34.

<sup>16</sup> F. A. Hayek, *Monetary Theory and the Trade Cycle* (London: Cape, 1933), p. 38, reprinted in this volume, p. 72.

perspective Morgenstern, too, voiced criticism of economic predictions, maintaining that successful prediction was in principle impossible because of the inevitable feedback from predictions to actual behaviour.<sup>17</sup> Significantly, when the publisher Julius Springer in 1931 floated the idea of introducing a *Journal of Business Cycle Research* (*Zeitschrift für Konjunkturforschung*), both Hayek and Morgenstern rejected the proposal insofar as such a journal might transgress the narrow boundaries of statistics and intrude into the field of economics proper. Before this project came to naught, it was even suggested that Hayek be placed on the editorial board in order to prevent such transgressions of statisticians into economic theory.<sup>18</sup> In this respect, the Austrian Institute's focus on the necessity of theoretical foundations for any fruitful research on business cycles differed sharply from the approach as practiced in the Berlin Institute under the auspices of Ernst Wagemann, which was much closer to the tradition of the German Historical school and in fact the main target of the Austrians' attacks. What an irony of history that it was the same Wagemann, who after the *Anschluss* in 1938 would be commissioned with the task of directing what then was to remain of the Austrian Institute.

Thus with his directorship Hayek had finally arrived at a position that for some time at least allowed him to immerse himself deeper into economic theory. His first venture was a theoretical investigation into the fields of money and the cycle that would finally result in his habilitation.<sup>19</sup> In the next years this broadened into a wide-ranging and ambitious project inquiring into the theory of a money economy and the proper goals for monetary policy. Its basic idea had been outlined before, during Hayek's visit in the United States, and is captured in the title of a planned but unrealised PhD thesis: "Is the function of money consistent with an artificial stabilisation of its purchasing power?"<sup>20</sup> Work on this inquiry progressed for several years, possibly from 1925 onwards up to 1929. At the core of it lay the development of the notion of intertemporal equilibrium as a special case of 'static theory' and its application to a monetary capital-using economy. In 1928 Hayek's inquiry culminated in a path-breaking first statement of the concept of intertemporal equilibrium, which, even if incomplete, still stands out as a unique achievement,

<sup>17</sup> Morgenstern considered his famous Holmes-Moriarty paradox an effective refutation of the possibility of economic predictions; cf. Oskar Morgenstern, *Wirtschaftsprognose: Eine Untersuchung ihrer Voraussetzungen und Möglichkeiten* (Vienna: Springer, 1928), p. 98, and "Vollkommene Voraussicht und wirtschaftliches Gleichgewicht", *Zeitschrift für Nationalökonomie*, vol. 6, no. 3, 1935, pp. 343–44, translated as "Perfect Foresight and Economic Equilibrium", trans. Frank H. Knight, in *Selected Economic Writings of Oskar Morgenstern*, ed. Andrew Schotter (New York: New York University Press, 1976), pp. 173–74.

<sup>18</sup> See Morgenstern's letter to Otto Lange, director of the Vienna branch of the publishing house Springer, June 18, 1931, Morgenstern Papers, box 6.

<sup>19</sup> The nucleus of his theory of the cycle, inspired by Mises, can be found already in 1925. See Hayek, "Monetary Policy in the United States", pp. 105–6n.

<sup>20</sup> Cf. the outline in the Hayek Papers, Incremental Material, box 104, folder 26.

quite apart from its importance for his theory of the cycle.<sup>21</sup> In the same year, he concluded a contract with the German publisher Gustav Fischer in Jena on a planned book, to be titled *Geldtheoretische Untersuchungen* (Investigations into monetary theory), from which the article had been drawn.<sup>22</sup> The unfinished typescript of the first part (of three planned), on price formation in a money economy, has been preserved among Hayek's papers; even though it contains some revisions, it had not yet been brought into the final form for publication.<sup>23</sup> The main thrust of the existing chapters lies in the integration of the elements of time, money, and capital within an equilibrium framework, yet with a distinct focus on the complications immanent in the adjustment processes, which may (or may not) tend towards equilibrium.

Hayek remained occupied with this project well into 1929, although in parallel he directed his efforts towards his habilitation. In 1928 he had presented at the Zurich meeting of the Verein für Sozialpolitik a report and a contribution to the discussion on the relationship between monetary theory and business cycle theory. These were to become the first four chapters of his habilitation thesis, *Geldtheorie und Konjunkturtheorie*, published in 1929.<sup>24</sup> In spite of the difficult environment, pointed out above, Hayek and his mentor Mayer were able to overcome the usual obstacles to his habilitation. Spann again had been the main adversary. Yet his diatribe in the faculty meeting proved to be in vain after Mayer had persuaded the rather reluctant Degenfeld, who in the

<sup>21</sup> F. A. Hayek, "Das intertemporale Gleichgewichtssystem der Preise und die Bewegungen des 'Geldwertes'", *Weltwirtschaftliches Archiv*, vol. 28, July 1928, pp. 33–76, translated as "Intertemporal Price Equilibrium and Movements in the Value of Money", chapter 5 of F. A. Hayek, *Good Money, Part I: The New World*. For an evaluation in the context of modern developments cf. Murray Milgate, "On the Origin of the Notion of 'Intertemporal Equilibrium'", *Economica*, n.s., vol. 46, February 1979, pp. 1–10.

<sup>22</sup> Cf. Hayek to Morgenstern, March 16 and October 12, 1928, Morgenstern Papers, box 3. For a more detailed account see Hansjoerg Klausinger, "Hayek's *Geldtheoretische Untersuchungen*: New Insights from a 1925–29 Typescript", *European Journal of the History of Economic Thought*, vol. 18, October 2011, pp. 579–600.

<sup>23</sup> Cf. Hayek Papers, box 105, folders 1–4. A translation of the previously unpublished typescript appears as "Investigations into Monetary Theory", chapter 1 of *Business Cycles, Part II*, ed. Hansjoerg Klausinger, vol. 8 (2012) of *The Collected Works of F. A. Hayek*.

<sup>24</sup> The report (F. A. Hayek, "Einige Bemerkungen über das Verhältnis der Geldtheorie zur Konjunkturtheorie", in *Schriften des Vereins für Sozialpolitik*, vol. 173, part 2, pp. 247–94) is almost identical to the first three chapters of *Geldtheorie und Konjunkturtheorie*. Beiträge zur Konjunkturforschung, vol. 1, ed. Österreichisches Institut für Konjunkturforschung (Vienna: Springer, 1929; reprinted, Salzburg: Neugebauer, 1976). The discussion ("Redebeitrag", in *Schriften des Vereins für Sozialpolitik*, vol. 175, pp. 369–74) is a summary of its fourth chapter; the fifth chapter was added afterwards. Hayek's *Geldtheorie* was translated by Nicholas Kaldor and Honoria R. M. Croome as *Monetary Theory and the Trade Cycle*; there is also an independent English translation of Hayek's report as "Some Remarks on the Relation of Monetary Theory to Business Cycle Theory", trans. Vincent Homolka, in *Business Cycle Theory: Selected Texts 1860–1939*, vol. 3: *Monetary Theories of the Business Cycle*, ed. Harald Hagemann (London: Pickering and Chatto, 2002), pp. 161–97.