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KARL MENDER AS SON OF CARL MENDER

BY

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Karl Menger as Son of Carl Menger

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Abstract

Little is known about the relationship between Carl Menger, founder of the Austrian School of Economics and one of the three fathers of marginal utility theory, and Karl Menger, whose Vienna Mathematical Colloquium was crucial to the development of mathematical economics. The present paper begins to fill this gap in the literature.

Keywords: Carl Menger, Karl Menger, Austrian School of Economics, Mathematical Colloquium, Vienna Circle

JEL Codes: B13, B23, B25, B31

The Menger surname holds a special place in the history of economic thought. The Mengers' contributions to economics rival those of any other family in the history of the discipline. In his groundbreaking *Grundsätze der Volkswirtschaftslehre (Principles of Economics)* (1871) Carl Menger laid much of the foundation of the modern marginal theory of value and, thus, along with two concurrent but independent co-discoverers, Léon Walras and William Stanley Jevons, was central to the so-called marginal revolution in economic theory of the 1870s. It was a unique subjectivist approach to value theory, together with a commitment to methodological

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individualism, a rejection of the then-dominant German Historical School's exclusive focus on data collection, and an appreciation for the organic development of social institutions that marked Carl Menger as the original founder and wellspring of so many of the ideas that subsequently emerged from the Austrian School of economics.

For his own part, Karl Menger, a polymath by natural inclination and a mathematician by training, made a number of direct contributions to both the theory and history of the Austrian School. His *Moral, Wille und Weltgestaltung, Grundlegung zur Logik der Sitten* (1934) (translated in 1974 as *Morality, Decision, and Social Organization*) exhibited a proto-Hayekian concern for the coordination of the moral beliefs of different individuals. Also in 1934, the younger Menger finally published, at the urging of Oskar Morgenstern, a paper that he had originally completed in 1923 and presented to the Vienna Economic Society in 1927. "Das Unsicherheitsmoment in der Wertlehre" ("The Role of Uncertainty in Economics" [1934] 1979) "solved" the infamous Petersburg Paradox by, in good Austrian-school fashion, in effect subjectivizing the underlying theory of value. His "Remarks on the Law of Diminishing Returns: A Study in Meta-Economics" ([1936] 1979) aimed to establish – against the rather wobbly dicta of Ludwig von Mises – the meta-theoretical requirements of a strictly deductive economic theory: "[t]he intent of the paper was to familiarize economists (especially of nonmathematical schools) who claimed to *prove* certain assertions...with what logicians demand of proofs" (K. Menger 1979, p. 6).

Without question, Karl Menger's most significant contribution to the history of economic science was indirect: Menger founded, promoted, and edited the *Proceedings* (or *Ergebnisse*) of the Mathematical Kolloquium at the University of Vienna. In a short span of eight years, Karl Popper, Kurt Gödel, and Alfred Tarski presented papers to the Kolloquium, and John von

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Neumann, Karl Schlesinger, and Abraham Wald offered their respective (and each in their own ways significant) contributions to the general equilibrium existence-proof literature and the concomitant development of mathematical economics. We will resist the temptation to address this history in detail as the central role that Menger and his Kolloquium played in these developments is the subject of a fairly extensive – and outstanding – literature in the history of economic thought to which we have little to add.¹ Much later in life – and perhaps surprisingly for one so intimately connected with the mathemization of economic science – Menger offered perhaps the definitive defense of the Austrians’ rejection of mathematical methods, one quite consistent with his celebrated notion of logical (or methodological) tolerance (see K. Menger [1930] 1979 and [1937] 1979): in Menger’s view, the verbal or literary, as opposed to the mathematical, method is just a language (or logic) for the expression of economic ideas. Languages and logics can be more or less useful for particular scientific problems, but are neither true nor false. The choice of methods, therefore, depends on pragmatic considerations: the Austrian approach is more appropriate for some kinds of problem and less appropriate for some others (K. Menger 1973).

Although their contributions to the history of economic thought and their scholarly reputations are firmly established, relatively little is known about the relationship between father and son, or about life in the Menger household. The present paper begins to fill this gap. Karl Menger’s diaries, held in the David M. Rubenstein Rare Book and Manuscript Library at Duke University, offer insight into the intimate relationships within the Menger clan, Karl’s work and

¹ The key references here are Weintraub (1983; 1985, Chapter 6; 2002), Leonard (1998; 2010, Chapters 7 and 8), and Düppe and Weintraub (2014; 2015).

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study habits, and the development of his uncommonly broad intellect, as well as on life in a vanquished city, Vienna, in the immediate wake of the humiliating defeat of the First World War and the disintegration of the Habsburg Empire.²

Some Background on the Menger Family

Karl Anton Emil Andermann-Menger was born on January 13, 1902 to Carl Menger and Hermine (“Mina”) Andermann, a writer whose work (under the *nom de plume* Mina Ander) stressed the so-called “woman question” (Kosel 1902, p. 224). Mina was born in Stanislau (Stanisławów; now the western Ukrainian city of Ivano-Frankivsk) in Galicia on January 4th 1869.

The elder Menger met his much younger inamorata when she was 19. The couple lived together until Carl’s death in 1921, but never married. The reasons for this remain somewhat obscure. Carl was nearly 30 years Mina’s senior. However, why this should have prevented their marriage, but not their cohabitation, is unclear. According to some reports (see, e.g., O’Connor and Robertson, 2014; Skousen 2009, p. 183), Mina was Jewish and given that all marriages in predominantly Roman Catholic Austria at the time required religious sanction, this would have sufficed to prevent an official coupling with the Catholic Menger. However, two facts augur against this explanation. First, it became possible in Austria after 1868 for couples of different religious persuasions to wed in an “emergency civil marriage.”³ Second, Mina left the Jewish

² Unless otherwise indicated, the material presented in the present paper is drawn from the three diaries that Karl Menger wrote between late 1918 and early 1923.

³ We are most grateful to Hansjörg Klausinger for this point.

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faith in 1893 (Staudacher 2009, p. 24) and, according to her son's baptismal record, converted to Catholicism the same year (quoted in Beham 2010, p. 93). It has also been suggested (Skousen 2009, p. 183) that Mina was divorced and that this might have sufficed to hinder her remarriage. However, given that her relationship with Carl began when she was only 19, she must have married very young to have been divorced by that age. Moreover, if she was previously married, then she either did not take her husband's name or returned to her maiden name immediately upon her divorce. We know from Karl's baptismal register that Andermann was Mina's birth name. A final, especially intriguing, possibility is that Carl and Mina were simply uncommonly progressive in their attitudes toward marriage. Carl once argued that marriage was obsolete and that, in the future, civil society would be based on free love (C. Menger, 1867-1868).

Whatever his reasons for remaining officially a bachelor, Carl Menger eventually appealed to the Emperor to have his son declared legitimate. Of course, the fact that Carl had once been personal tutor and intimate friend to Emperor Franz Joseph's son, the ill-fated Crown Prince Rudolf – he of the infamous Mayerling Affair – surely did not impair the prospects for acceptance of this appeal. Karl was legitimized in April 1911 (although his legal name remained Karl Andermann-Menger and his mother's surname remained Andermann until August 1921, after Carl's death [Beham, 2012, p. 95]). Karl offered his own take on the relationship between his father and mother: "Mina apparently took the decision early on to dedicate her life to her admired scholar. When his eyes subsided, she read to him a lot, cared for him devotedly when he was sick and, in the last decade of his life, maintained the economist's household. Emperor Franz

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Josef declared the child that arose from their liaison a legitimate son of the two *per rescriptum principis*” (K. Menger, n.d.[a]).⁴

Whether as a consequence of controversy over his romance with Mina, a matter of fatigue, ill health, or the desire to dedicate more time to research, his son’s birth marked the beginning of Carl’s gradual retreat from Viennese society and academic life in particular. He resigned the chair of political economy (to which Franz Joseph had appointed him in 1878) at the University of Vienna in 1903. Carl had been appointed in 1900 to the House of Lords of the Austrian Imperial Council, but his participation in the legislative activities of the *Herrenhaus* was nominal at best and, after 1903, virtually nonexistent. The extant material preserved in the Carl Menger Papers at Duke indicates that the senior Menger continued to work to advance his economic ideas over the last 18 years of his life and, in particular, to complete the long-promised, much-revised, second edition of the *Grundsätze*. However, these efforts were largely abortive, and the final decades of Carl Menger’s life revolved more around his small family than the further development of subjectivist economics.

Karl’s Prehistory

His diaries portray Karl Menger as an avid maker of lists—lists of books purchased, lists of books read, lists of books to be purchased and subsequently (one assumes) read, lists of

⁴ All translations from the original German are the authors’ own. The common-law principle of *legitmatio per rescriptum principis* permitted unmarried parents to legitimate their children via either ceremony (typical in Bavaria) or explicit approval of the sovereign (the common practice in other German-speaking states).

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economists, politicians, and other acquaintances who did (and did not) send personal regards upon Carl's death in 1921, etc.⁵ In keeping with this predilection, and after noting in a characteristically dour personal epigram that the diaries are a product not of an idle hand, but of a sentimental mind that likes to recall past memories, fond or otherwise, Karl lists both all of his past home addresses and each of the family's summer holidays going back to 1902, the year of his birth. In keeping with the circumstances of a middle-class Viennese family of the time, it is perhaps unsurprising that several of these summers were passed either in various hamlets surrounding Vienna proper (Baden bei Wien, Puchberg am Schneeberg, Hinterbrühl) or in some spa town in or around the Austrian Alps (Reichenau an der Rax, Bad Ischl, Teufenbach, Scheifling, Schneedorf).

Karl then proceeds to detail his teachers, educational experiences, and academic accomplishments to date. We are told that (from 1907 through 1912) Karl attended a private elementary school (*Privatvolksschule*) in Hörlgasse 10 in Vienna's 9th district, where he was considered a very diligent student.⁶ By his fourth year of formal education, Karl had thoroughly absorbed – at his father's knee – the canon of Austrian economics as it then was. By his fifth and

⁵ For reasons of brevity, we will not document all of Karl's very extensive readings over the period covered by the diaries. Suffice it to say that his reading – in fields as diverse as economics, sociology, ethnography, physics, chemistry, biology, mathematics, statistics, geometry, logic, philosophy, and belle lettres – was astoundingly broad and deep for anyone, much less a young man just emerging from his teen years, suffering the trials of frequent illnesses, occasional familial calamity, and the ravages of postwar Vienna.

⁶ Beham (2012, p. 98) provides further details.

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final year at the *Privatvolksschule* in Hörlgasse 10, Karl was taking French lessons from a private tutor and further investigating political economy. As a prize for passing his Gymnasium entrance exams, Karl received a copy of his father's (1883) *Untersuchungen über die Methode der Sozialwissenschaften, und der politischen Oekonomie insbesondere* from the personal library of his uncle, Max Menger, Carl's older brother, a prominent Viennese political figure, who died in August 1911.⁷

In the fall of 1912, Karl entered the Döblinger Gymnasium, a public high school in the Döbling district of northwest Vienna. The coursework at the Gymnasium covered languages, mathematics, history, geography, philosophy, drawing, writing, physical education, religion, and – to the delight of the precocious and scientifically-inclined Karl Menger – physics and chemistry (Weissensteiner 1985, pp. 14-15). However, his formal education left him unchallenged and he regularly looked forward to holidays when he could pursue his academic interests outside a formal setting. The diaries make plain that Karl Menger's education, at least through his Gymnasium and undergraduate years at the University of Vienna, was primarily self-directed.

The desolation of the First World War makes its initial appearance in Karl's diaries when he indicates that, in the fall of 1914, the premises of the Döblinger Gymnasium were converted to a hospital for injured soldiers returning from the two fronts. For the next eighteen months, classes were held in an auxiliary location in the Krottenbachstraße. The war hospital closed in December 1915 and the Gymnasium building reverted to its original purpose in late February 1916 (Weissensteiner 1985, p. 16). However, these dislocations and disruptions seem to have borne little consequence for Karl's intellectual growth. It was during this time that the future

⁷ See Dekker (2016, 51-52) for a discussion of Max Menger's political activities

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mathematician first mastered differential and integral calculus, and embarked on self-directed investigations of the problems of both theoretical and experimental physics, and the history of philosophy. He also (re)read his father's writings as well as those of his uncle, the influential socialist theorist, Anton Menger (Carl's younger brother, who died in 1906), Werner Sombart, and, much to his loathing, Marx and Engels' *Communist Manifesto*.

Finally, before beginning his regular diary entries, Karl saw fit to catalog his medical history in a list of all of the illnesses that he had suffered at one time or another. Karl had whopping cough and rubella (once or twice) before entering school, chicken pox in 1908, an elevated temperature accompanied by neck discomfort that lasted for some two months in 1915/16, and, in 1918, an apparently severe case of influenza. Karl further indicates, rather furtively, that in the winter of 1917/18, he came down with a disease that he described with the single letter "P" (followed by two exclamation points). As we will see, in the spring of 1921, Karl developed pleurisy, a respiratory disorder that soon devolved into full-blown tuberculosis so severe that it necessitated his removal from Vienna for a year-long retreat at a sanatorium in the Styrian Alps. One wonders whether this "P" disease was either pneumonia or an earlier case of pleurisy and – perhaps – the first sign of the respiratory infections that would plague Karl more or less continuously for the next several years.

Karl's editorial work on the second edition of his father's *Grundsätze der Volkswirtschaftslehre* began earlier than has been previously noted and, indeed, well before his father's passing in February 1921. The first entry in Karl's diary, dated December 29, 1918, indicates that he had spent the days after Christmas compiling, organizing, and sifting through his father's notes for the second edition of the *Grundsätze*. What is not known is the intended division of labor between father and son. Carl's eyesight was in an advanced state of decline at

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this late date, but his mind remained active and he continued to read, albeit with Mina's assistance. Did Carl consider the second edition complete at this point and his son's task was meant to be merely that of compiling the existing material—or was Carl still developing his ideas, writing (and perhaps also dictating to Mina and / or Karl) on a regular basis, and Karl's task was to maintain some sort of order over the development of Carl's new ideas? The available evidence seems to indicate that Karl was more actively involved in the ongoing development of the second edition than has been previously understood. Father and son spoke often about economics, but it is not always clear from the diaries whether these discussions concerned material meant to be included in the second edition of the *Grundsätze*. What is clear is that the extant material intended for the second edition was in a state of utter disarray in late 1918. Several chapters remained incomplete. A number of chapters that Carl considered finished were missing or – as they would eventually turn up in surprising places – had been misplaced. Some ideas were expressed as sentence fragments or, worse yet, as nothing more than keywords. It seems that Karl's task was to sort and, when necessary, reformulate this material.

Carl and Mina's attentive supervision of his editorial work caused their son "awful toils and troubles," as Karl expressed it in late 1918, but he saw in these labors the potential for a valuable addition to intellectual history perhaps surpassing the mark set by the first edition of the *Grundsätze*. He believed himself on the verge of contributing "a great thing for science, perhaps even for humankind." He hoped to finish his work on the second edition by February 23, 1920, his father's 80th birthday. Beside the sentimentality of presenting his father with a completed manuscript on this date, Karl worried that the potential for further deterioration of political

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conditions in Vienna, which could leave the manuscripts pillaged, made quick work advisable.⁸

As it happened, Karl was to be disappointed both in his ability to meet his own deadlines and in the eventual impact of the second edition of the *Grundsätze*.

1919

The first days of 1919 found Karl Menger depressed and discontented. No specific reason is given for Karl's malaise, but the absence of a functioning typewriter to facilitate his work on the second edition of the *Grundsätze* was an annoyance. It is also noted that Karl's Aunt Marie, the widow of Max Menger and daughter of the astronomer and mathematician Franz Schaub, had taken ill with some combination of influenza, coronary disease, and kidney infection. The Menger family would be frequent visitors to Marie's bedside over the course of the first two months of 1919.⁹ Karl seems to have been fond of Marie, who would send him books as gifts, often from Max Menger's library. When she passed in late February, Karl received a bequest of

⁸ In his diaries, he describes how he and his mother walked into a "bloodstained battlefield" at the Hörlgasse on June 15, 1919. This was the bloody end of a large communist demonstration. Among the demonstrators was Karl Popper, who, though unharmed, soon turned his back on the Communist party (Popper 1974, p. 25).

⁹ It was during the inventory of her belongings that Karl came to acquire Virgil and Cicero out of his deceased uncle's library. After Max's death, Marie Menger donated his library of scientific texts to the Silesian Chamber of Commerce in Troppau, where it was made available to the public (Handels- und Gewerbekammer für Schlesien 1912, p. 6, 44-45, 96).

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the perhaps deceptively generous sum of 25,000 Kronen.¹⁰ He also received some family memorabilia, in particular, a ring with the family seal and a walking stick inlaid with his grandfather's name and coat of arms.

The extended Menger clan seems to have been quite close. Several of Karl's aunts and uncles make frequent appearances in his diary, especially his aunt Emilie, (probably) Mina's half-sister, who was his godmother (Beham 2012, p. 94), and her husband Arthur Glaser, a journalist who also wrote books on social welfare.¹¹ The Glasers were active in the local Society for the Prevention of Poverty and Begging, and have been described by more recent authors as the "Webbs of Vienna" (Janik/Veigl 1998, pp. 68-69). The Glaser family was related to the Wittgensteins and it was Emilie who first introduced Karl Menger to certain peripheral members of the famous Viennese family (Janik/Veigl 1998, pp. 68-9; Menger 1994 pp. 75-6). Karl was

¹⁰ It is difficult to determine how much 25,000 Austrian Kronen at the end of February 1919 would be worth today. However, it can be said with some certainty that this sum was worth far more in the spring of 1919 than it would be at the end of the same year: the supply of Austrian crowns was at the end of 1919 fifteen times what it had been in March (Ebeling, 2006). The Austrian strain of the infamous postwar hyperinflation was well in motion.

¹¹ Karl had previously noted the passing in early 1917 of his beloved aunt Karoline, who, our evidence suggests, was Carl Menger's sister. We have not been able to determine whether Karoline was older or younger than Carl, whose parents had ten children, four of whom died at young ages.

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also close to his Aunt Bertha (Carl's older sister)¹² and Uncle Mansuet Kosel, who Karl describes as an intellectual. Mansuet Kosel was a career civil servant, who succeeded Eugen Böhm-Bawerk as Austria's Minister of Finance from October 1904 to June 1906.

On Karl's 17th birthday, January 13, 1919, the family ate a fine meal (well, *relatively* fine, one presumes, given Vienna's infamously impoverished circumstances in the months following the armistice) and Karl received as a gift a wristwatch—a hand-me-down, albeit one with a lovely sentimental history: it was the first gift that his mother gave to his father. Karl celebrated his birthday with one of his favorite pastimes: a night at the *Wiener Volksoper*. On those seemingly rare occasions when he allowed his attention to wander from autodidactic pursuits, Karl would typically enjoy an evening at the opera or theater, or a night out with friends at a local dancehall. He started taking dance classes in early 1919 and the diaries include humorous disparaging remarks about his foxtrot, polonaise, and one-step.

The problem of the typewriter – or the problem of its absence – continued over the course of the spring, but Karl pushed forward on the *Grundsätze* with intermittent success. By February, the first two parts of the revised edition, concerning the theory of goods, had been completed, and Karl looked forward to the Mengerian theory of value proper. However, a change of plans

¹² We struggled to determine the exact ages of some of Carl Menger's less famous siblings.

Thanks to Hansjörg Klausinger for tracking down Bertha Kosel's birth year (i.e., 1835).

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led him to tackle price theory first. He also started, but never finished, French and English translations of the chapter on goods.¹³

Karl's economic inquiries at this time were not limited to his editorial responsibilities on the *Grundsätze*. His diaries indicate that he read parts of Marx's *Kapital*, Eugen Philippovich's *Grundriß der politischen Ökonomie* and re-read parts of his father's *Untersuchungen*. He also re-read Böhm-Bawerk on value and capital, and claimed to discover several deficiencies.

Karl's melancholy extended throughout the spring of 1919, but ultimately gave way to concerns more physical than emotional, in particular, persistent stomach upset and the common cold, which Karl sought to nip by various home remedies (documented in the diaries in some detail). Later in the spring, a pain in the left foot that lasted for eleven days, combined with the symptoms – fever, cough, sore throat – of a burgeoning respiratory infection forced Karl to miss five days from school. These respiratory issues returned in force in April and again in varying degrees of severity, occasionally, throughout the year. These trials left Karl depressed, in large part, because they impaired his ability to work.¹⁴ However, as the diaries make plain, at least during this period of his life, when left to decide for himself, Karl Menger always prioritized

¹³ The French translation was prompted by an article published by Siegmund Feilbogen (1911-3), one of Carl's former students, that included a purported mistranslation of the Mengerian theory of goods.

¹⁴ In March 1919, he would express this despair in an aphorism: "The ideal world would be one in which sickness were the punishment for idleness and good health the reward for hard work. But, even the industrious get sick. For the diligent, this is a double misfortune, as he is both sick and agonizes over the inactivity to which his sickness has condemned him."

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work over well-being. Indeed, during the years immediately following the Great War, whenever some combination of hunger, disease, politics, inflation, and teen angst overwhelmed Karl's disposition, he dove headlong into work.

Karl's technical work was greatly abetted when, in May, he managed to procure a borrowed typewriter, which, of course, promptly broke down. However, the malfunction was resolved in a few days and Karl was back at work on the *Grundsätze*, making considerable progress as compared to the sluggish pace he had been making previously. His diary indicates that some of the typing was done by his mother, whose assistance he acknowledged in the foreword to the second edition. His uncle Arthur Glaser also supported him (K. Menger 1923, p. XVIII). However, all work on the *Grundsätze* seems to have ceased during the summer holiday, not to resume again until winter.

The Mengers spent the summer of 1919 sharing a rented vacation home in Lower Austria with some friends, the Tislowitz family. Holidays in Lower Austria meant occasional trips back to Vienna proper for this occasion or that. Father and son returned to the capital in late July to attend the unveiling of a bust of Anton Menger at the University.¹⁵ It was at this unveiling that Karl first met Friedrich von Wieser, with whom he would develop a correspondence following his father's passing. Karl celebrated his uncle's legacy in his own unique way: by re-reading the published canon of Anton Menger. The family returned to Vienna again later in the summer following the sad and surprising death of Karl's uncle Mansuet Kosel.

¹⁵ The bust currently resides in the Arkadenhof at the University of Vienna. According to Karl, it was generally agreed among Anton's friends and relations that the bust is a poor representation.

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In August, father and son sat down to discuss the Austrian political crisis. We have no details of this conversation concerning the politics of the nascent Austrian republic, but we know that talk soon turned to the elder Menger's relationship with Crown Prince Rudolf. It was during this conversation that Carl revealed the existence of a political pamphlet against the Austrian nobility that he and Rudolf had co-authored and published anonymously. Carl instructed his son to secure his authorial rights and pursue the pamphlet's publication after his passing, which Karl – the ever-dutiful son – did in June 1921, when he deposited the pamphlet along with a sealed letter attesting to his father's authorship with the Vienna Academy of Sciences (Beham 2012, p. 156-7). The true authorship was made public in the pages of *Neues Wiener Journal* in May 1923 (see Szeps 1923a; 1923b). Soon after this conversation in the summer of 1919, Karl accompanied his father on what was Carl's first and, as it would turn out, last visit to the cinema.

Karl's initial plans for the summer holiday included preparing a first draft of a planned critical history of philosophy. Descartes was considered; Malebranche and Leibniz were read, as was Gassendi (and, perhaps not surprisingly for a future logical positivist, preferred to both Descartes and Malebranche). His initial plan was to dedicate the work to his father and present a finished version on Carl's 80th birthday in February 1920. His father supported this work, encouraging him after having read a draft page. However, these plans were scotched when (as has happened to so many clear minds before and since) Karl's research bogged down in the perilous swamps of Kant's *Critique of Pure Reason*. Karl started the *Critique* in May and struggled with it through August, at which point he immediately reread (and then re-reread) the central parts of the book. Alongside multiple attempts to get at Kant, he investigated post-Kantians Johann Gottlieb Fichte, Arthur Schopenhauer and Johann Friedrich Herbart, as well as

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Friedrich Nietzsche and Max Stirner. But, little progress was made on the project beyond this research and its prospects soon foundered.¹⁶

As a young man, Carl Menger had tried his hand at writing comedic plays. In April 1919, Karl stumbled across a number of his father's early manuscripts. These included fully-developed plays (and, apparently, short novels as well), though pages were missing from a few, and others were mere sketches.¹⁷ Seemingly inspired, Karl develop outlines for plays based on his father's drafts. Nothing ever came of these outlines, but Karl was moved to once again pursue his own literary ambitions, which had apparently lain dormant for some time. He had started a stageplay about Alexander the Great in the fall of 1917, which he picked up again in 1919 and continued to develop through the remainder of the year. Unfortunately, the diaries provide no insight into its content or storyline. During the summer of 1919, Karl also worked on a libretto for an opera titled "Raimund." He had ideas for similar works from time to time, but the literary project that most occupied his attention in 1919 and for several years to come was his play *Päpstin Johanna*, an attempt at a comedic rendering of the popular legend of the apocryphal Pope Joan, who had,

¹⁶ Preparatory material concerning Karl's critical history of philosophy can be found in Box 46 of the Karl Menger Papers at the David M. Rubenstein Rare Book & Manuscript Library, Duke University.

¹⁷ It is possible that some of Carl's literary works were anonymously published as serials in newspapers. Before entering academia, the elder Menger worked as a journalist and editor, founding the *Wiener Tagblatt* newspaper in the 1860s. Karl expended some considerable effort over the course of 1919 trying to find past copies of *Wiener Tagblatt* in the library of the University of Vienna, apparently, in order to read some of his father's literary works.

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according to myth, masqueraded as a man and ruled as Pope for several years during the Middle Ages. Karl began developing ideas and gathering “jokes” intended for the play late in the summer of 1919, and began writing the first act in earnest before returning to Vienna in the fall. The seriousness with which he approached this new project is reflected in the relative paucity of references in the latter third of 1919 to his several other projects.

One aspect of this project that apparently appealed to the younger Menger was its irreligious – one might say, anti-religious – nature. In early 1919, Karl had scrawled in his diary, “God has outlived himself.” In this, he seemingly followed his father, who as a committed man of science, tried to live a life free of prejudice (Hamann 2005, p. 82), especially of a religious kind. Karl similarly opposed all manner of superstition be it occult, mystical, or merely religious.

In keeping with his literary turn, Karl’s reading during these months turned belletristic. He was particularly fond of the novels of Emile Zola. Ibsen’s poetry was read, as was Edmond Rostand’s (1897) *Cyrano de Bergerac*, Tolstoy’s (1889) *The Kreutzer Sonata*, and several of the literary works of Friedrich Schiller and Johann Wolfgang von Goethe, whom Karl deemed “tremendously overrated.”

Carl Menger fell seriously ill with a bladder infection in the fall of 1919 and was left listless and bed-ridden for several weeks. Indeed, the episode was so serious that he saw fit to review his will.

The end of 1919 found Karl Menger in a reflective mood. Much had been learned over the course of the year, and Karl found himself in a supportive intellectual environment that made his work enjoyable, despite school (!) and the terrible physical sufferings to be endured in Vienna. It would prove impossible to maintain this relatively sunny disposition over the course of the next few years.

1920-1921

The festering danger of illness and disease continued to cloud Vienna, and the Mengers were not immune. Karl developed a series of headaches severe enough to keep him bedridden throughout much of January. In February, Karl suffered a catarrhal inflammation that immobilized him yet again. This catarrh returned in March, accompanied by a cough and sore throat.¹⁸ Mina suffered from a gastric disorder throughout much of the spring at the same time that the elder Menger was seriously ill, sleeping poorly, and barely eating. In April, Karl came down with influenza and a high fever, and was again bedridden for several days. During the spring of 1920, Karl would occasionally take his meals at the American food outlet where handouts consisted of either vegetables and white bread, or a dairy dish and hot chocolate. This seems to have been one of Vienna's few reliable food sources at the time.

In celebration of his 80th birthday on February 23, 1920, Carl Menger was feted by the University of Vienna. Unfortunately, the honoree could not attend the ceremony due to ill health. Karl too was feverish all day leading up to the event, but effectively concealed his sickness from his parents so he could attend. Also present at the ceremony were several of Carl's former colleagues and students. The University of Vienna was represented by economics faculty members Othmar Spann, Friedrich von Wieser, Carl Grünberg, as well as representatives of

¹⁸ "Catarrh" is a word rarely used in modern medicine, though it has a long history. It typically marks an inflammation of the mucous membranes in the throat or sinuses, and is considered symptomatic of other disorders (cold, cough, sore throat, inflamed adenoids, tonsilitis, and sinusitis) of the respiratory system.

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other departments. Ludwig von Mises, then a *Privatdozent*, also attended. Among Carl's former students were Joseph Schumpeter, Victor Mataja, Wilhelm Rosenberg, Gustav Seidler, and Richard Schüller. Wieser surprised the Mengers, who, for reasons that are not entirely clear, were expecting some harsh criticism of the family sire, with a mostly honorific dedication.¹⁹ Schüller, a regular visitor to the Menger home, also sang Menger's praises as a teacher. Paula von Böhm-Bawerk, widow of Eugen and sister of Wieser, sent a lovely letter of congratulations.

The day before his birthday, Carl had been visited at home by Ernst Ritter Seidler von Feuchtenegg, the former (1917-1918) Minister-President of Austria. A delegation of the Austrian Academy of Sciences visited the Menger home on Carl's birthday, as well as a committee from

¹⁹ Karl's diaries leave the impression, without providing much detail of its nature, that there was considerable disagreement between the senior Menger and Wieser during Carl's later years. In addition to attending the celebration at the University, Wieser (apparently accompanied by Grünberg) had also visited the Menger home earlier on Carl's 80th birthday. Karl noted that Wieser made a peculiar impression during this visit. It was Karl's opinion that Wieser had arrived at the conclusion that his contribution to economic science was insignificant and that the discipline itself had reached something of an impasse that he was powerless to resolve.

It also seems that Carl Menger had a somewhat strained relationship with certain unspecified members of the Austrian School's third generation. This may have been connected with the choice to make his teenage son editor of the second edition of the *Grundsätze*. Apart from Schüller who, as we will see, offered much assistance to the younger Menger, no member of the Austrian School was willing to help with, or even contribute a foreword to, the new edition, despite Carl's death in 1921, well before the second edition was ready for publication.

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the University of Vienna to present him with a honorary doctorate of political science (*Staatswissenschaften*). In his inimitable way, this celebration of the Mengerian legacy in economics prompted Karl to reread the original *Grundsätze* yet again, and to consider modifications to the theory of value for the second edition.

Around this time, at his son's urging, Carl Menger reached out to his Swedish friends, Professors Knut Wicksell of the University of Stockholm and David Davidson of the University of Uppsala, about the possibility of Karl visiting Sweden in the summer of 1920. Wicksell and Davidson sent formal invitations within days of this initial contact, and Karl's summer holiday was arranged.²⁰

Karl underwent his *Matura* examinations at the Döblinger Gymnasium in mid-June and received his diploma with honors on July 2nd. He received the highest marks possible in all subjects except Latin, Greek, and history, in which he received the second highest grade. Given his interests and autodidactic pursuits, it was probably not surprising when his examiners noted particularly outstanding achievements in mathematics and "philosophical propaedeutics."

²⁰ In conversation, Robert Leonard raised the possibility that Karl's trip to Sweden was connected with his ongoing respiratory problems. In the years following the war, it was not uncommon for Viennese suffering from various respiratory ailments – at least, those who could afford to do so – to escape the perilous circumstances of the city for more healthful climes. Sweden was apparently a popular destination. In any case, though we cannot rule out the possibility, the diaries provide no explicit evidence of a connection between Karl's health and his Swedish summer holiday.

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Karl arrived in Stockholm on July 6, 1920, and was met on the platform by Professor Knut Wicksell. Karl stayed in Stockholm for nearly seven weeks, but made a number of extended jaunts from the Swedish capital. He visited the economist Eli Heckscher on the island of Utö on the eastern side of the Stockholm archipelago. In early August, Knut Wicksell traveled alone to Copenhagen, while his wife, Anna Wicksell Bugge, accompanied Karl to Tokerov to visit the Wicksell's son, Sven, and his two children. The Wicksells introduced Karl to several Swedish intellectuals, including Anna Whitlock, the journalist and suffragette—Anna Wicksell Bugge was herself quite active in the women's movement (Wisselgren 2012). He was also introduced to the Scottish liberal politician and feminist Chrystal Macmillan.

On the 24th of August, Karl traveled with Knut Wicksell to Nynäshamn south of Stockholm, where he met Professor David Davidson and family, who escorted him to their home in Uppsala. Much of his time in Uppsala was spent discussing economic theory, especially certain value-theoretical problems, with Davidson. According to his diary, these discussions encouraged Karl to write two essays on economics, one concerning relative values titled “On the Analogy between Value Fluctuations and Motions,” and another (whose title is lost) that addressed the question, “If a commodity becomes scarcer and at the same time money becomes dearer, how much of the subsequent price rise is due to each cause?” While in Uppsala, he twice visited Róbert Bárány, recipient of the 1914 Nobel Prize in Medicine and former colleague of his father's at the University of Vienna. He and Bárány would maintain a correspondence for several years to come.²¹

²¹ Indeed, in a letter sent in August 1921, Bárány worried about Karl's health (he would soon be officially diagnosed with tuberculosis) and advised him to rest and avoid work. Bárány also

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During his time in Sweden, Karl continued to milk his *Päpstin Johanna* project for new jokes, apparently with some success – the diaries assert the hilarity of the revised first act – and recommenced much of his self-directed scientific, mathematical, and philosophical investigations. For a time in 1920 (and beyond), Einsteinian relativity became an obsession—Karl being convinced, at least initially, that he had discovered some terminal flaw in Einstein’s presentation. In Uppsala, Karl attended lectures on physics and geometry at the University. Of course, the bulk of the trip was dedicated to less academic pursuits and Karl spent much time hiking and sailing. In Haga, Karl and the Wicksells enjoyed an evening of Swedish folk songs and dances. While in Stockholm, Menger visited the Swedish *Nationalmuseum*. He made sure to maintain regular communication with his parents in Vienna, obediently writing and mailing briefs every Monday.

By all appearances, Karl enjoyed Sweden and the company of his (father’s) economist friends immensely. Davidson even invited Karl to stay with the family through the winter and spring, but the prospect of his first semester as an official student at the University of Vienna beckoned, and Karl returned to his hometown in the first week of September 1920 (but not before stopping again in Stockholm to receive a ham as a gift from the Wicksells). For several years to follow, Karl maintained correspondences with Professors Wicksell and Davidson – both of whom provided much needed sympathy in the wake of Carl’s passing in 1921 – as well as gift exchanges with both families. Reflecting on this journey in his diary two years later, Karl wrote,

recommended a retreat and a physician in Yugoslavia. Suffice it to say that, then as today, few 19-year-old college students received medical advice from Nobel laureates.

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“Sweden gave me a new perspective, especially the Wicksells, who are utter internationalists. To my irreligion was added anationalism.”

Karl entered the University of Vienna as a physics student in the fall of 1920.

Unfortunately for our purposes, his diary keeping became somewhat less frequent at the same time. Karl’s coursework in the fall semester included algebra with Philip Furtwängler, a brilliant and influential German number theorist, paralyzed from the neck down, who would eventually serve on Karl’s doctoral thesis committee, and a mechanics course (originally announced as “general relativity”) taught by Hans Thirring (Beham, 2012, p. 171). Throughout his studies at the University, Karl would attend Thirring’s seminar every semester, either as a formal registrant or an unofficial participant (Beham, 2012, p. 172). However, apart from his enthusiasm for the courses taught by Furtwängler and Thirring, the diaries indicate that Karl was somewhat disappointed by his initial experiences at the University. His reflections upon 1920, made at year-end, seem to indicate that only Furtwängler’s course represented a true challenge, but that algebra – whatever interest it may have held – was less than essential, given his other interests. However, by the end of 1920, these disaffected impressions notwithstanding, Karl had made an important personal connection. Otto Schreier’s name makes its first appearance in Karl’s New Year’s Eve reflections on 1920. Schreier, who was a year older than Menger and also a graduate of Döblinger Gymnasium, was, by all accounts, something of a mathematical *savant*, and would soon become a sounding board for Karl’s burgeoning ideas concerning the mathematical treatment of both curve and dimension.

Schoolwork did not prevent Karl from pursuing his literary interests. One of Karl’s closest friends at Döblinger Gymnasium was Heinrich “Heini” Schnitzler (1902 – 1982), who later became a well-known actor and director both in Austria and, for a time following the

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Anschluss, on Broadway. Heini was the son of the even more famous dramatist and author Arthur Schnitzler (1862-1931), who would suffer Karl's misguided pretensions to a career as a writer of stage dramas.²² The Schnitzlers, especially Arthur, would occasionally read and comment upon Karl's drafts of *Päpstin Johanna*. Suffice it to say that, though the senior Schnitzler liked the premise of the play, he often expressed brusque criticisms of Karl's writing ability. Schnitzler occasionally recorded his impressions of Karl's unique personality, and sporadic thoughts of suicide, in his own diary: "In reply to my question about his actual plans [Menger replied]: 'I actually would prefer to kill myself'." Arthur Schnitzler concluded that Menger was "undoubtedly very talented, but perhaps not quite a normal young man" (Schnitzler [1920-2] 1993, p. 107).

The last stage of Carl's uremic disease began in early February 1921. To complicate matters, the family maid had recently left the Mengers' employ and Mina fell ill around the same time. In the week leading up to his passing, Carl was frequently incoherent and often muttered the word "abracadabra" senselessly. He slept little and could breathe only with difficulty. On the night of February 21st, after a severe attack the evening before, Carl was left unconsciously gasping in pain and the family doctor gave him only a few hours to live. However, he unexpectedly recovered the next day, started again responding to his bedside entourage, and, by the morning of the 24th, was speaking merrily and listening attentively to a reading of the newspaper. Sadly though, he was worse again by the afternoon and, the following day, was again

²² Schnitzler was among the belletrists that Menger most admired. During the years covered by the diaries, Karl read 14 of Schnitzler's works, some of which were gifts from the author himself, and saw a number of of Schnitzler's plays performed in theater.

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in a deep state of unconsciousness. In the early hours of Saturday, February 26, 1921, Carl Menger stopped breathing.

In his diaries, Karl tracked the condolences received – and not received (including former students Schumpeter, Mataja, and Robert Zuckerkandl) – from correspondents around Europe. Carl’s remaining assets (which is to say, books) were distributed between his partner and their son. Mina inherited her partner’s scientific library, but Karl retained the library’s collection of philosophical works (“a comparatively small philosophical annex of about 1,500 volumes” [K. Menger 1994, 71]).²³ Karl would later reflect in his diaries upon this period immediately following his father’s death as the “unhappiest time of my life.”

²³ This “annex” of philosophical texts “included the collected works of practically all great philosophers from Bacon and Descartes to about 1900. In my last two pre-university years I made extensive use of this philosophical library: in fact, I wrote abstracts of the main works from Bacon to Fichte.” We believe that Menger refers here to his abandoned history of philosophy project. “[A]fter my father’s death...I retained the philosophical annex, completed it during the next 10 years by acquiring the complete works of the few classical authors that had been missing (such as Pierre Gassendi and Pierre Bayle), and brought it up to date especially along the lines of logic and philosophy of science, which interested me more and more” (K. Menger 1994, 71). In a letter written sometime in the decade before his own passing, Karl stated that this philosophical library “includes most important philosophical books published since 1600 in English, French, and German” (K. Menger, n.d.[b]). We do not know the current whereabouts of the Menger philosophical library. It is not part of the collections gifted by the descendants of the Menger family to Duke University, nor does it appear to have ever been delivered to Hitotsubashi

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However, it does seem to have fortified Karl to resume serious work on the second edition of the *Grundsätze*. His mother would assist yet again. By Easter, Karl's editorial introduction was written, though he later extended it, and the chapters on needs (*Bedürfnisse*) and goods were near completion.²⁴ The chapters on value and capital theory had been completed in 1919. Karl expected the chapters on price, exchange, and commodities to be easy to complete. All that remained were the chapters on the economy and on money. The former chapter seems to have been in a serious state of disrepair and Karl ultimately decided to simply follow the original edition as closely as possible. After completing his work on the *Grundsätze* in the first half of 1921, he noted that organizing the chapter on the economy was his greatest accomplishment as editor of the second edition.

Richard Schüller, who, in addition to holding the title of professor extraordinarius (i.e., a “professor without chair”) at the University of Vienna, held a prominent position in the Austrian Foreign Ministry at the time, had by then agreed to write the book's preface. Schüller had been one of Carl Menger's “best students” (Ehs 2014, p. 556) and served from 1930 to 1938 as editor of the *Zeitschrift für Nationalökonomie*.²⁵ According to Karl's diaries, Schüller was the sole follower of Mengerian economics to have accepted with grace and munificence the junior

University in Tokyo, where Carl Menger's vast library of texts related to economics and the social sciences resides. See below (pp. 36-37) for a discussion of the circumstances that led to the sale of Menger's economics library to Hitotsubashi.

²⁴ Karl soon discovered a previously-unknown section on needs, which he ultimately decided not to incorporate into the second edition.

²⁵ Additional biographical material on Richard Schüller can be found in Craver (1986)

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Menger's stewardship of the second edition. He would prove a valuable ally during Karl's imminent health crisis, completing negotiations with the publisher, Hölder-Pichler-Tempsky.²⁶

The spring of 1921 found Karl once again in Hans Thirring's seminar, this time on elasticity theory and hydromechanics, and in Philip Furtwängler's advanced number theory seminar. However, the most important academic event of the semester was Karl's first meeting with Hans Hahn, who had arrived in Vienna from Bonn in the winter of 1920/1921 to occupy the chair left vacant by the retirement of mathematics professor (and former University president) Gustav von Escherich. A native of Vienna and graduate of the University, Hahn started his academic career in Czernowitz in 1909 and was severely wounded in battle in 1916, at which time he joined the mathematics faculty at Bonn. Karl Menger's first encounter with Hahn would be life changing and, as it turned out, ultimately lead him to the recognition he so clearly desired.

The subject of Hahn's first seminar at the University – *Neueres über den Kurvenbegriff* (Recent developments concerning the concept of a curve) – was, according to Menger's testimony, a pedagogical *tour de force*:

“Hahn went right to the heart of the problem. Everyone, he began, has an intuitive idea of curves [...] But anyone who would make that idea precise, Hahn said, would encounter great difficulties. In this seminar we would examine attempts by several eminent geometers to define the curve concept, only to find that some of their definitions were too

²⁶ Another publisher, Rikola, was originally supposed to publish the second edition, but negotiations between editor and would-be publisher broke down over the summer of 1921.

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wide, others too narrow and still others altogether unsatisfactory, so that at the end of the seminar we should see that the problem was not yet solved” (K. Menger, 1994, 38-39).

Menger was inspired like never before. He spent the following weekend absorbed in the problem of a mathematical definition of the curve concept, and emerged with what seemed an elegant solution, which he immediately took to Otto Schreier, who pointed out, “‘if an idea as simple as yours could solve the problem, why would several great geometers have given unsatisfactory solutions and why would Hahn say that after discussing all previous attempts we should see that the problem was still unsolved?’ I admitted that this thought had also crossed my mind. [...] ‘Yet as you will agree’, I said in keeping with a general penchant of mine for simplicity, ‘one should never reason that an idea is too simple to be correct. I shall tell my solution to Hahn’” (K. Menger, 1994, 41-42).

It was unusual at the time for undergraduate students to seek out personal meetings with University of Vienna professors. But, of course, setting aside the fact that he was the scion of a famous and recently deceased Viennese professor, Karl was not a standard-issue freshman. So, undeterred by time-honored convention, Karl found himself in Hahn’s office before the second meeting of the seminar.

“Hahn, who had hardly looked up from the book he was reading when I entered, became more and more attentive as I went on. At the end, after some thought, he said that this would be indeed a workable definition, and asked me where I had learned so much about point sets and topology. I replied that I was a physics student at the end of my first semester and had not heard about topology; but that my definition used only concepts

defined the week before in the first meeting of the seminar, which was all that I had ever heard about point sets. Hahn had not realized that two hours of his excellent presentation of basic concepts were sufficient to make them operative even in the mind of someone totally unfamiliar with the field. He nodded rather encouragingly and I left” (K. Menger, 1994, 43).

For the next few months, with the exception of the relatively minor cleanup work left to bring the second edition of the *Grundsätze* to press, projects unrelated to the definitions of curve and dimension were mostly set aside.²⁷ He had at last discovered the problem that would eventually lead to his first publications as sole author—a problem, moreover, that could not be tied back to Carl Menger’s legacy and which would allow the younger Menger to make his own name. However, there were still several trials to be overcome.

Conditions in Vienna had apparently improved to some degree by 1921 (K. Menger, 1994, 1). However, this improvement in the city’s living conditions does not seem to have positively affected Karl’s physical (and, consequently, emotional) state. He again suffered respiratory problems, but continued his relentless pace until, finally, one day in late June, he could no longer stand up. According to his diary, Karl received a diagnosis of pleurisy around this time, which meant three and a half weeks confined to his bedroom.²⁸ However, in what had

²⁷ Even *Päpstin Johanna* was overshadowed by the curve and dimension problems, though Karl still hoped to finish the play.

²⁸ However, his later *Reminiscences* place the diagnosis a bit earlier in the year: after “long studies in unheated libraries during the winter of 1921 and weakened by post-war malnutrition

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become his customary fashion, Menger refused to give up work on his latest obsession while the potential promise of publication remained in view and continued “to work feverishly in the literal as well as in the metaphorical sense [...] During the spring and summer of 1921, I elaborated the principle of my definition of curves” (K. Menger, 1994, 45-46).

Menger’s illness kept him out of the University’s seminar rooms for several weeks. He corresponded with Thirring, Hahn, and his other professors during this time, while Schreier kept him abreast of coursework. Indeed, to Karl’s delight, his friend informed him that in the most recent meeting of Hahn’s curve seminar, the professor himself had expounded a definition of curve drawn from Karl’s own.

Later in the summer, Menger joined his mother and the Tislowitz family²⁹ for a two-month stay in the resort town of Bad Ischl in Upper Austria. The trip was meant to finally cure Karl’s pleurisy, but the mountain air and sunshine – not to mention the excessive intimacy of the domestic environment, did little to improve his physical or emotional disposition. Indeed, the diaries depict the vacation as something just short of plain hell for the bookish Menger. He could not get well – or away from people – long enough to advance his reading or any of his critical research projects.

and overwork, I succumbed, in May 1921, to a serious respiratory infection” (K. Menger, 1994, 45).

²⁹ The Tislowitz family appears often in Karl’s diary and they seem to have been quite close to the Mengers. Fanny and Fryderyk would be victims of the holocaust. Their children, Richard and Eduard, escaped their parents’ fate (Raghavan 1998).

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In mid-September, Karl made a solo trip to Amsterdam by way of Salzburg, Munich, Cologne, and Frankfurt, “with the hope of finishing *Johanna* [...] and then, possibly, to die.” He had received an invitation to Wageningen from Lizzy van Dorp, a Dutch liberal politician, economist and feminist.³⁰ Van Dorp, whom he met in Bloemedaal, was very welcoming, “even though she is a tremendous Germanophobe.” Van Dorp introduced him to Hendrik Antoon Lorentz and Karl was delighted to spend an hour talking physics with the 1902 Nobel laureate. Karl had grappled with Lorentz’s aether theory, the foundation of special relativity, with which Karl continued to struggle. On the evening of the same day that he met Lorentz (September 27th), Karl traveled to The Hague for two days to visit the Dutch liberal economist and former Treasurer-General Anton van Gijn. The two spent several hours discussing the international economic situation. In his diaries, Karl would describe van Gijn as “downright brilliant.” In early October, Karl traveled to Utrecht to visit Prof. Conrad Alexander Verrijn Stuart, an economist and jurist, who he described as “very educated, but not very likeable.” In Wageningen, Karl visited the mathematics professor Marie Johan van Uven (Kruit 2015, p. 512; Maat 2001, p. 190), who was also working on relativity. He left Holland on October 15th, arriving in Vienna the next day.

According to the diaries, at this point in his life, Karl’s overarching ambitions were twofold: 1) to complete at least one of his unfinished projects and 2) to die as painlessly and comfortably – and, preferably, as soon – as possible. He almost managed both feats.

³⁰ Van Dorp was an acquaintance of the Mengers; she had written a letter of condolence after Carl’s death.

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By the fall, what was once merely pleurisy had degenerated into full-blown tuberculosis, but still Karl kept working. Indeed, far from taking a much-needed and well-deserved rest, Karl developed a new project wholly unrelated to his coursework in physics and mathematics. He became preoccupied with the pressing problems of the Austrian economy and focused for several weeks on the preparation of an editorial entitled “Lebensmittelzuschüsse und Noteninflation” (“Food Subsidies and Paper Inflation”) that was published in *Neue Freie Presse* on November 17, 1921. Any reader of Mises or Hayek would recognize in Menger’s overarching argument a permanent Austrian (school) theme: printing money is rarely, if ever, a solution to economic problems of the kind then confronting Austria, Hungary, and Germany. Karl labels printing money the “fundamental evil.” The need to print money was a consequence of the Austrian budget deficit, itself a result of food subsidies, or so Karl argued. These subsidies could not realistically be abolished all at once. Besides the potentially appalling consequences for a hungry populace, such a measure would only lead to higher prices and, thus, very likely, to the printing of yet more money. Therefore, Menger argued, subsidies should be reduced gradually, over a three-month period, while at the same time, government revenue would be raised by a sizable tax on currency speculation and a considerable increase in the interest rate in order to attract investors to government bonds. Furthermore, Karl suggested the government make a meaningful declaration of its intent to stop printing money. Through these measures, Karl hoped that inflation could be halted, the Austrian Krone stabilized, and modest economic growth achieved.

Mina again helped with the preparation of the essay, which, though well received by those who paid attention, made little impression on the Austrian public. One who did notice was Wilhelm Rosenberg (1869-1923), who invited the younger Menger to lunch. Rosenberg, whose own plan was the target of Karl’s essay, had been a student of Carl Menger and was then Vice

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President of the Anglo-Austrian Bank (and especially well connected to the Austrian Finance Ministry).³¹

Knut Wicksell celebrated his 70th birthday in December 1921 and Karl sent along copies of two letters for inclusion in Wicksell's *Festschrift* in *Ekonomisk Tidskrift*. The first letter was written by Eugen Böhm-Bawerk ([1907] 1921) and was originally sent to Wicksell on July 5, 1907 (how it came into the Mengers' possession is a mystery). It was published in the *Tidskrift* as "Zur Zinstheorie Marshall's" ("On Marshall's Theory of Interest"). The second letter, from Carl Menger ([1884] 1921) to Böhm-Bawerk, was dated November 13, 1884, and published as "Zur Theorie des Capitalzinsens" ("On the Theory of Interest on Capital"). These contributions seem to have greatly pleased Karl's Swedish friends. David Davidson, also a contributor to the *Festschrift*, returned a lovely thank-you note along with some butter and sugar, while Wicksell himself sent 50 (presumably, Swedish) Krona and a letter of gratitude.

1922

³¹ Rosenberg's view was that curing Austria's budgetary and economic ills required an immediate cessation of all food subsidies. Suffice it to say that he was far more optimistic than Menger regarding the inherent resilience of the Austrian economy. Many thanks again to Hansjörg Klausinger for providing us with some information regarding Rosenberg's position on the food subsidies issue. A short overview of the debate on food subsidies in Austria at the time can be found in Exner (2016, pp. 174-176).

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Karl's work on the theories of curve and dimension continued through the fall and winter.

However, he was at his most maudlin in February 1922, bemoaning not only his lack of friends and poor health, but also the fact that he was no longer enjoying his mathematical and scientific research. Hahn was nevertheless very encouraging about the work Menger had recently forwarded to him, telling Karl that perseverance would surely lead to publishable – and important – results.³²

Of course, Karl's refusal or (perhaps better) congenital inability to slow down had no beneficial effect on his health. Although it is impossible to support this point with documentary evidence, given that at this point in his life Karl wanted nothing more than to both publish *and* perish, it seems reasonable to think that his mother must have asserted her influence at some point. If he was not to quite prematurely go the way of his namesake, certain decisions had to be taken out of Karl's hands. His condition was such that by late winter – the 1921-1922 winter was apparently an especially harsh one in Vienna – he could barely follow a simple lecture. Never the most stout young man, Karl also found himself unexpectedly dropping kilos during the first days of February. By the second week of the month, he was breathing only with considerable pain and planned to stay bedridden for several days. However, his fever remained dangerously elevated after ten days. Indeed, according to the diaries, his temperature remained at hyperthermic levels ($\sim 38.3^{\circ}\text{C}$) for two and a half months. The family brought in a number of physicians. At one

³² The clouds parted briefly when, in early 1922, at the suggestion of mathematics professor Tonio Rella and physics professor Josef Lense, Karl (along with Schreier) was made a member of the *Mathematische Gesellschaft in Wien*—later renamed *Österreichische Mathematische Gesellschaft* (Austrian Mathematical Society).

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point in January, a doctor by the name of Pineles advised what from a modern perspective seems like a quackery – arsenic treatment – which temporarily warded off a few symptoms but did nothing to cure the underlying tubercular infection. Further specialists were consulted, several of whom recommended an extended recreational stay.

So it was that in May 1922 Karl entered the sanatorium Am Hofacker in Aflenz in the Styrian Alps.³³ To make matters worse, the Mengers seemed to suffer a degree of (greater?) financial hardship that, perhaps not accidentally, coincided with Karl's retreat to the clean air and comparative serenity of the mountains. In December 1921, Mina had been forced to rent out the family dining room to a young Greek boarder, who had fled Greece to avoid being drafted. But, the nadir came with the sale of Carl's vast economics library to, of all places, Hitotsubashi

³³ It is difficult to determine exactly when Karl entered the Aflenz sanatorium. His *Reminiscences*, written in the late 1970s, give no specific date, but seem to indicate he was admitted in late 1921. The diaries do not support this. Karl wrote relatively few entries in 1922, but the entries he did write indicate he was still in Vienna in early February and definitely in Aflenz by the end of May. The Schreier-Menger correspondence corroborates this.

Whatever the case may be, before leaving the capital, Karl deposited another sealed envelope with the Vienna Academy of Sciences. This letter, which contained his results on curve and dimension, such as they were in early 1922, was eventually opened according to the Academy's protocol in April 1926 and subsequently published in 1929 in Hahn's *Monatshefte der Mathematik und Physik* as part of "Zur Dimensions- und Kurventheorie: unveröffentlichte Aufsätze aus den Jahren 1921-1923" ("On Dimension and Curve Theory: Unpublished Papers of the Years 1921-1923") (K. Menger, 1929).

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University in Tokyo. Beham (2012, p. 27) speculates that the decision to sell the library must have been connected with the need to fund Karl's tuberculosis treatments. It is difficult to see how this decision could have been made except under some duress. The economics library of Carl Menger currently resides not with any of his direct descendants (familial or intellectual), or even in the country forever linked with his name, but in a university library some 9,000 miles from his final resting place. Given the reverence in which both Mina and Karl held not only the family patriarch but also *books*, this cannot be a decision that was taken lightly.

Whatever might have compelled the sale of Carl's economics library, it is clear that the retreat to Aflenz served its purpose. Indeed, as it turned out, it was exactly what Karl Menger needed not only to heal his weakened respiratory system but also to finally produce the definitive results on curve and dimension he had been practically killing himself to find in Vienna. It was Schreier who provided the lifeline between Menger, isolated in the Styrian Alps, and Hahn, Furtwängler, Thirring and others in Vienna. Schreier maintained a constant correspondence with his sick friend, commented on his work, and visited him once for several days at the sanatorium.³⁴ Indeed, so effective was Schreier in keeping his friend abreast that Karl was able to maintain his university studies without pause during the year in Aflenz (Beham, 2012, p. 242).³⁵ Karl also completed his dissertation manuscript during the sanatorium retreat.

³⁴ Karl's letters to Schreier have apparently been lost. Schreier's letters to Karl are held at the Rubenstein Library at Duke. Most, but not all, of these letters have been edited and published in Odefey (2014).

³⁵ Mina visited the sanatorium often and would transport correspondence between Menger and Schreier. Another visitor was Maria "Mizzi" Feßler, later Maria Zach, who, in the 1930s, would

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Richard Schüller continued to prove his loyalty to the Mengerian cause. The manuscript of the *Grundsätze* had been delivered to Hölder-Pichler-Tempsky in April, but it was Schüller who negotiated the final contract with the publisher. 5,000 copies would be printed and remuneration was set at 1,667 “Mark” per print sheet.³⁶ This was a meager sum, according to Karl, but he was able to retain translation rights, which he thought (wrongly, as it turned out)

emigrate to the Soviet Union, where she and her husband, Karl Zach, eventually became victims of Stalin’s Great Purge (McLoughlin/Vogl 2013, pp. 563-4). Mizzi was the same age as Karl and, as a fellow math student, offered another connection to the University. Though the details are unclear, their relationship seems to have been quite close. They maintained contact for some time. Karl would write to her, probably in late 1926, from Laren in the Netherlands, where he was living at the time while working at the University of Amsterdam. Robert Leonard (1998, p. 2; 2010, p. 110), and subsequently Beham (2012, pp. 244-5) and Taschner (2015, p. 96), suggests that this same correspondence was with his future wife, Hilda Axamit, but we believe this is a mistake. Axamit, who Karl married in 1934, was his student at the University of Vienna in the early 1930s. The Karl Menger Papers at Duke include books of notes written by Axamit from courses taught by Menger and Hahn in the 1933-34 school year. It seems unlikely that they knew each other, much less were in constant correspondence, in the early- to mid-1920s.

³⁶ We are a bit confused by this. In his diary, Karl stated the contractual terms in “Mark.”

However, the Krone was the currency of Austria at the time. We assume that Karl means the German Papiermark, which the Weimar Republic was printing (far too much of) at the time.

However, it is not clear why a contract between two Austrian parties would be written in terms of German currency.

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might bring some future revenue.³⁷ Schüller also made the trip to Aflenz and kept Karl current concerning the *Grundsätze*.

There was still some minor work to be completed after the first manuscript was delivered. Karl was not satisfied with the presentation of the theory of capital and interest, and these chapters, together with a planned appendix, were dropped from the second edition.³⁸ At the time, Karl intended a multivolume anthology of his father's unpublished works – the second edition of the *Grundsätze* was meant to be the initial installment (K. Menger 1923, pp. IX-X) – and he intended to include these chapters, but this plan never materialized.

In his penultimate journal entry, dated Silvester 1922, a much healthier – in both body and spirit – Karl Menger reflected upon the trials of the year then ending. In a marked change of attitude and despite the not inconsiderable sufferings he had endured, Karl was able to recognize, even then, that his illness and, especially, the retreat to Styria, had led to certain insights, personal as well as mathematical, that he otherwise might never have realized. At the same time, he saw further trials in his future and was not quite certain that the Reaper might not yet find him in 1923. But, at least he was no longer hoping for such an encounter.

1923 and Beyond

Karl left Aflenz in late February or early March 1923 as a “happy and healthy young man” (Schreier 1923). In his last journal entry, dated March 22, 1923, and posted from the Hotel Pension Hohl, Gardone Rivera, Italy, where he traveled after leaving Styria and before returning

³⁷ On the reception of the second edition and its relationship to the original, see Becchio 2014.

³⁸ A chapter on income was also apparently omitted from the second edition.

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to Vienna, Karl set a three-year plan – after which he sincerely hoped to still be alive – for realizing certain research goals. Although it would take longer than expected to check off each item on the list, check them he eventually did. Indeed, the list reads like it could have been written as a retrospective ten or twelve years later. Karl's projects are grouped into three broad categories: mathematics, epistemology, and ethics. It was in fact in these three fields – one could add economics as well – that Karl made his most important contributions over the course of the next decade.

Karl's mathematical research throughout the 1920s furthered his early work on the problem of dimension, so closely connected with the curve problem he would soon solve once and for all. Unfortunately, Karl's work on curve and dimension also led him into a tendentious priority dispute with the Soviet Russian mathematician Pavel Alexandroff, who defended the priority of the results of his deceased friend, Paul Urysohn, against Menger's claim of originality.³⁹

³⁹ Urysohn had published his results in 1922, while Menger was secluded in Styria, in *The Proceedings of the Paris Academy of Sciences*. It was Otto Schreier who had the unhappy task of informing Menger of Urysohn's publication, which came to Schreier's attention at a meeting of mathematicians (Schreier, Otto. [1923] 2014). However, it was always Menger's position that the sealed letter he had deposited with the Vienna Academy of Sciences in early 1922, prior to the publication of Urysohn's results, secured his priority. Whatever the case may be on the question of priority, it is agreed that "Menger's definition is undoubtedly simpler and more general than Urysohn's" (Temple, 1981, p. 132; quoted in Golland, McGuinness, and Sklar, 1994, p. ix).

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Another priority dispute erupted later in the 1920s that posed both Menger and Urysohn against the famous and eccentric Dutch mathematician L.E.J. Brouwer. After Menger completed his Ph.D. in 1924, Brouwer, with whom he had been in correspondence, invited him to the University of Amsterdam. Karl worked as Brouwer's assistant from March 1925 and was named a *docent* (i.e., lecturer) at the University in the fall. His first seminar was, unsurprisingly, on the theories of curve and dimension. He completed his *habilitation* and was named Assistant Professor at the University in May 1926.

Menger's relationship with Brouwer had been quite close. When Mina unexpectedly passed away from a sudden kidney infection in June of 1925, Brouwer offered much needed sympathy and actually sponsored Menger's return trip to Vienna to attend the funeral. However, the relationship had soured by 1927, by which time Karl had discerned Brouwer's purported tendency to confuse the ideas of others for his own. The circumstances that led to the disintegration of their relationship are documented in detail in Menger's ([1978] 1979) "My Memories of L.E.J. Brouwer" and need not be recapitulated at length. Suffice it to say that, in his seemingly self-appointed role as "trustee" of Urysohn's legacy, Brouwer was – if Menger's summary of the story is accurate – apparently in a position to insert into the manuscript of Urysohn's posthumously published autobiographical *Mémoire* certain references that attributed to Brouwer's own early work a greater role in the development of dimension theory than was warranted from Menger's (and, apparently, Urysohn's) perspective (see Menger, [1978] 1979, pp. 244-247 and esp. pp. 253-254, footnote 17). In any case, when Hahn presented the opportunity to take over Kurt Reidemeister's vacated geometry chair in 1927, Karl jumped at the chance to leave Amsterdam for his *alma mater*. A year later, Menger published *Dimensionstheorie*, the capstone of his long researches on the problem of dimension.

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The philosopher Moritz Schlick had arrived in Vienna in the fall of 1922 to take over the same chair in the philosophy of inductive sciences that had been previously occupied, in turn, by Ernst Mach, Ludwig Boltzmann, and Adolf Stöhr. Schlick's work focused largely on the epistemological problems of the theory of relativity and his arguments were soon adopted by Einstein himself, with whom he developed a long correspondence. Schlick's *Allgemeine Erkenntnislehre* (*General Theory of Knowledge*), published in 1918 – Karl had searched without success for a copy of the first edition while investigating the philosophical foundations of Einsteinian relativity in the spring of 1920 – and later revised in 1925, is the founding document of (pre-Wittgensteinian) logical positivism. In the fall of 1923, his first semester back in Vienna after the sanatorium, Karl attended Schlick's lectures on epistemology. Also in attendance were Herbert Feigl and Friedrich Waismann, soon – like Karl – to be invited to the burgeoning Vienna Circle of logical positivism (or, as it was known in Vienna, *der Schlick-Kreis* [Menger 1974, 93]).⁴⁰

Karl had actually been invited by an earlier incarnation of the Schlick-Kreis to lecture on the topic of Brouwer's *intuitionism* about the foundations of mathematics, which he did, in the fall of 1924 (Beham, 2012, p. 32). In this respect, it is important to keep in mind that it was epistemology more than mathematics that had drawn Menger to L.E.J. Brouwer in the first place (Menger 2009, 66). It is not necessary here to recapitulate the details of the early twentieth century debates over the philosophical foundations of mathematics. Suffice it to say that Brouwer's intuitionism is the view that, with respect to infinite sets, only constructive proofs – i.e., mental constructions that prove the positive truth of some mathematical statement – are

⁴⁰ On Karl's invitation to join the *Kreis*, see K. Menger 1994, p. 17

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legitimate. The intuitionistic thesis implies that the law of excluded middle may not be valid with respect to infinite sets. More exactly, since the elements of an infinite set of propositions cannot *all* be either proved or negated via constructive means, there may be propositions in such infinite sets with respect to which neither P nor $\sim P$ holds.

Menger found himself drawn to intuitionism for a time, but ultimately rejected it on the grounds that no adequate definition of *constructivity* had been put forward, either by Brouwer or anyone else.⁴¹ During the summer of 1926, while Brouwer was away from the University, Menger “pondered again over intuitionism, for the sake of which I had come to Amsterdam [...] But I had not clarified my thoughts on the nature of construction. Various possibilities for defining it occurred to me and the idea of *logical tolerance* began to take shape in my mind” (K. Menger, [1978] 1979, p. 246, emphasis added). What Menger describes here as logical tolerance is the view that there is no such thing as a univocally true or “correct” logic or language. Indeed, logics and languages are not the sorts of things that can be true or false. Brouwer’s notion that there is only one legitimate way to do mathematics is specious on such a philosophy. The positive content of logical tolerance is that one is free to adopt – either by deliberate choice or tacit convention – whatever language serves the purposes of the user.

Karl Menger is commonly portrayed as a peripheral member of the Schlick-Kreis and is never counted among the core members of the Circle, i.e., Schlick, Hahn, Rudolf Carnap, and Otto Neurath. There are a number of possible reasons for this. In the first place, Menger explicitly rejected the *Wissenschaftliche Weltauffassung* pamphlet prepared by Carnap, Hahn,

⁴¹ More exactly, Menger (2009, 66-67) – an undogmatic scholar, if ever there was one – rejected intuitionism for both its dogmatism and its vagueness with respect to constructivity.

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and Neurath in 1929 as a “manifesto” for the Vienna Circle. He was in good company: Schlick himself rejected much of the substance of the piece.⁴² Menger insisted that the authors list him as someone “close to” the Circle rather than an official member. Moreover, in his own *Reminiscences*, Menger indicated that he and Kurt Gödel were among the quieter members of the Circle, preferring to observe rather than engage in the discussion.⁴³

⁴² The “pamphlet is the product of teamwork; [Otto] Neurath did the writing, [Hans] Hahn and [Rudolf] Carnap edited the text with him; other members of the Circle were asked for their comments and contributions” (Carnap, Hahn, and Neurath, 1929). However, several regular members of the *Kreis* rejected the image of the Circle presented by Carnap, Hahn, and Neurath. According to Menger (1994, p. 210), his student and close friend, Kurt Gödel, was disturbed by the manifesto “to the point that he came to the meetings less and less frequently.” Indeed, Schlick himself, “to whom the manifesto was dedicated, was less than satisfied with the result. This was first of all because he was not taken by the conception of the circle as a ‘movement’ of any sort, favouring a more modest and more narrowly scientific approach...But it was also because he was distressed by the political tone of the piece, and more specifically by those portions which suggested some sort of alignment of logical positivism with socialism and with the movement for workers’ education in Vienna at the time” (Smith, 1994, 9–10).

⁴³ “We usually went away together from the sessions that we both attended, since we had the first stretch of our ways home in common. After one session in which Schlick, Hahn, Neurath and Waismann had talked about language, but in which neither Gödel nor I had spoken a word, I said on the way home: ‘Today we have once again out-Wittgensteined these Wittgensteinians: we

The notion that Karl Menger was a mere fringe member of the Schick-Kreis is perhaps in need of some reconsideration. Indeed, a case could be made that his influence on the epistemology of Rudolf Carnap was such that he should be ranked not only among the central figures of the group, but also among the most important philosophers of science of the century. When Menger joined the group in 1927, Otto Neurath's methodological monism dominated the attitudes of virtually all of the members of the group, with the exception of Menger himself and Gödel. However, by the time Menger immigrated to the United States in 1937, Rudolf Carnap had published his *magnum opus*, *Logische Syntax der Sprache* ([1934] 2002) (*The Logical Syntax of Language*) in which the *Principle of Tolerance* is stated (and attributed to Karl Menger, esp. [1930] 1979):

"It is not our business to set up prohibitions, but to arrive at conclusions. [...] In logic, there are no morals. Everyone is at liberty to build his own logic, i.e. his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments" (Carnap, [1934] 2002, pp. 51-52).

This is nothing more than logical – and, thus, methodological – pluralism. To the extent that Carnap's acceptance of the principle of tolerance contributed to the death of Neurath's monistic, reductionist, project and was a precursor to the pluralistic – occasionally anarchistic –

kept silent'. 'The more I think about language', Gödel replied, 'the more it amazes me that people ever understand each other'" (K. Menger 1994, p. 210).

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philosophies of science of later twentieth century thinkers like Thomas Kuhn, Imre Lakatos, and Paul Feyerabend, Karl Menger deserves much of the credit.⁴⁴

The last of the research projects proposed in Karl's final diary entry concerned an axiomatic treatment of ethics. This project Menger completed in 1934 when he published *Moral, Wille und Weltgestaltung, Grundlegung zur Logik der Sitten* (1934).

"What I had been looking for [...] was a *theory* of ethics – an application of exact thinking that would bear to traditional ethics a relation somewhat comparable to that of mathematical to traditional logic. Even after all systems of morality, codes of norms and value judgments have been expelled from the cognitive domain and relegated to the realms of feelings or wishes [...] [w]hat indeed remains is the *group of adherents to the*

⁴⁴ Menger's general epistemological attitude is well summarized in *Moral, Wille und*

Weltgestaltung: "[f]or as much as I value systematic theories in mathematics and in mathematical sciences and eagerly have tried to develop such theories myself, I take exception to systematism in epistemology" (Menger 1974, 3). Menger's philosophy of science and opposition to Neurath's monism is also well described: "[i]n my opinion, the name of a science (and, more generally, of a *Wissenschaft*) is a word that is useful and at times indispensable, as a brief description of a certain group of propositions – but of a group changing with time and of propositions somewhat loosely connected by the terms in which they are formulated as well as by all sorts of mere historical accidents" (Menger 1974, 23). Menger offers geometry as an example of the fruitlessness of the demarcation project and attacks Neurath's unity-of-science movement on these grounds (Menger 1974, 23-24).

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systems, to the codes and to the value judgments as well as the relations between such groups. [...] A general theory of relations between individuals and individuals, between groups and individuals, and between groups and groups resulting from diverse characteristics and attitudes of human beings and from their diverse demands on others – such a theory seemed to be nonexistent in the literature. I fully realized that ethics thus externalized would be regarded by most philosophers as quite superficial. On the other hand, it would lend itself to sound applications of the logic and mathematics of classes and relations and thus might bring about what I fervently hoped for: a positive contribution, however modest, by exact thinking to questions of ethics” (K. Menger, 1994, pp. 183-184).

In other words, Menger sought a theory of social cooperation *given the moral beliefs of various groups and individuals*—that is, how might we ensure the peaceful social coexistence of people with mutually inconsistent moral beliefs?

Perhaps unfortunately, Menger’s book made little impact upon its initial publication. However, among the few people who read it at the time and admired its approach were Menger’s friends, Oskar Morgenstern and John von Neumann, soon to be recognized worldwide as the fathers of modern game theory (Leonard, 2010).⁴⁵

⁴⁵ In the introductory passages of the present paper, we described this project as “proto-Hayekian.” In a footnote to the original version of his well-known “Economics and Knowledge” (1937, 38n), Hayek wrote:

It has long been a subject of wonder to me why there should, to my knowledge, have been no systematic attempts in sociology to analyse social relations in terms of correspondence and non-correspondence, or compatibility and non-compatibility, of individual aims and desires. It seems that the mathematical technique of *analysis situs* (topology) and particularly such concepts developed by it as that of *homeomorphism* might prove very useful in this connection, although it may appear doubtful whether even this technique, at any rate in the present state of its development, is adequate to the complexity of the structures with which we have to deal. A first attempt made recently in this direction by an eminent mathematician (Karl Menger, *Moral, Wille und Welgestaltung*, [Vienna 1934]) has so far not yet led to very illuminating results. But we may look forward with interest to the treatise on exact sociological theory which Professor Menger has promised for the near future. (Cf., "Einige neuere Fortschritte in der exakten Behandlung sozialwissenschaftlicher Probleme," in *Neuere Fortschritte in den exakten Wissenschaften*, Vienna, 1936, p. 132.)

This footnote was removed when Hayek reprinted "Economics and Knowledge" in the *Individualism and Economic Order* (1948) anthology. Our suspicion is that, contra what is implied by Leonard (2010, 138), this excision is explained less by any antipathy toward mathematics that had been aroused in Hayek over the intervening decade, than by the simple fact that Menger had not in fact advanced the project much beyond *Moral, Wille und Welgestaltung*; and that such further development as Morgenstern and von Neumann had made Hayek thought of little value.

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On June 22, 1936, Mortiz Schlick was tragically assassinated on the steps of the University. Schlick's murderer was a deranged former student named Johann Nelböck who was tried and sentenced to ten years in prison. However, though Schlick was not Jewish, Nelböck, who deeply resented the positivist philosophy of the Schlick-Kreis, became something of a celebrity among the city's large (and growing) community of German nationalists and anti-Semites. Indeed, Nelböck's sentence was commuted after two years when the Nazis annexed Austria in 1938.⁴⁶

⁴⁶ According to Golland and Sigmund (2000, p. 43), Nelböck "managed to persuade the jury that he had killed the free-thinker Schlick for ideological reasons." Upon his release after the *Anschluss*, Nelböck "pointed out that his deed, the elimination of a teacher spreading Jewish maxims alien and pernicious to the people, had rendered a service to National Socialism." However, apart from misplaced anti-semitism, it is worth noting that Nelböck was a diagnosed schizoid psychopath with a deep hatred for Schlick that had festered for years. Schlick had received numerous death threats from Nelböck and, at one point, even had a personal government-appointed bodyguard (K. Menger 1994, pp. 197). Nelböck was twice admitted to a psychiatric ward after Schlick brought charges against him. By 1936, it seemed as if the threat had receded, but when Nelböck failed to receive a teaching position, he blamed Schlick (mistakenly) for having intervened against him, and this seems to have been the final straw that led to murder. Only later did Nelböck portray this as an act of political expression (see Sigmund 2015, 258-261, 284-290, 301-302).

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Schilck's assassination and the virtual celebrity treatment his murderer received in Vienna were the last straws for Karl Menger. He could see the storm clouds on the horizon.⁴⁷ In January 1937, Karl and his young family – wife Hilda (née Axamit), whom he had married in December 1934, and son Karl Jr. (born July 1936) – emigrated from Vienna to the United States. Karl joined the mathematics faculty at the University of Notre Dame in South Bend, Indiana, and the Menger family soon grew to include fraternal twins Rosemary and Fred (born December 1937), and daughter Eva (born December 1942). The Mengers remained in South Bend until

⁴⁷ See Menger (2009, 119):

Rechspost [sic: "Reichspost"], the official daily paper of the Christian Social party and at the time of the government, devoted a leading editorial to the Schlick tragedy. As everyone else, the paper said in effect, we deeply regret what has happened. None is in favour of murder. But [...] and then came the buts alluding to the fact that the demented murderer was a former student of Schlick's. Is it surprising, the paper asked, that a corrosive philosophy such as Schlick's had an unsettling effect on a student? And so on.

For me, this was the end of the Austria of my youth.

It is also worth remembering that, as the son of a liberal professor and a mother of Jewish birth – and as someone who maintained intimate relations with a number of Jewish friends and colleagues – Karl Menger's own prospects, both personal and professional, were threatened by the Nazi menace.

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1946, when Karl accepted a position at the Illinois Institute of Technology in Chicago, where he remained until his retirement in 1971.

Karl Menger died “peacefully and painlessly, in his sleep” at the home of his daughter, Rosemary, in suburban Chicago, on October 5, 1985 (Menger-Gilmore 1985).

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