



Logical empiricism in Turkish exile: Hans Reichenbach's research and teaching activities at Istanbul University (1933–1938)

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Abstract

In this article, I seek to shed new light on a lesser-known stage of the development of Hans Reichenbach's thought, namely his research, output and teaching activities at Istanbul University (1933–1938). I argue that the experience of Turkish exile was decisive in the elaboration of Reichenbach's probability theory of meaning and knowledge. His work *Experience and Prediction*, produced while in Istanbul, should therefore be put in its Turkish context of elaboration and reception. To this end, I will take into consideration not only Reichenbach's efforts to popularize and extend the Berlin Group's program of scientific philosophy in Turkey and throughout Europe in the 1930s, but also the forgotten work of Reichenbach's students—most of them women—at Istanbul University.

Keywords Hans Reichenbach · Berlin Group · Istanbul University · Logical empiricism · Problem of induction · Gestalt psychology · Turkish women philosophers

1 Introduction

The crucial role of exile in the establishment and self-description of logical empiricism as a philosophical paradigm, and furthermore in the development of the philosophy of science (Dahms, 1988a), has mostly focused on migration to the United States, neglecting resettlement and network development elsewhere in the 1930s. This may partially explain why the history of the Berlin Group, led by Hans Reichenbach (1891–1953),

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long formed a research gap in the history of logical empiricism, especially in comparison with the Vienna Circle. Unlike other core members of the Berlin Group,¹ Reichenbach was able to continue his academic career, emigrating first to Turkey in 1933 and then to the United States in 1938. Reichenbach's research and teaching activities at Istanbul University, where other scholars and scientists close to the Berlin Group or in contact with Reichenbach were also appointed after the 1933 Turkish university reform, has not received much attention.² Reichenbach's stay in Istanbul has sometimes even been dismissed as a failure and a time of intellectual isolation.

The aim of this paper is to show that Reichenbach's Turkish exile was not an insignificant step on his journey to North America. During his five-year exile in Istanbul, Reichenbach succeeded to some extent in recreating the working atmosphere he had encountered in Berlin by organizing an interdisciplinary colloquium, several seminars, and public conferences. Moreover, his time in Istanbul was not one of solitude as during this time Reichenbach developed academic relations with institutions and scholars from other countries, especially in France. It was indeed during these years that Reichenbach earned his truly international reputation by contributing to international congresses and academic journals. Reichenbach was able not only to diffuse and popularize logical empiricism in a very active manner but also to develop his own probability theory of meaning and knowledge based on the rejection of the verifiability conception of meaning. This theory, associated with a vivid critique of positivism, is revealed in *Experience and Prediction* (Reichenbach, 1938a), a book he wrote in Istanbul, which reflects his collective experience working and teaching there.³ My

¹ Sandner & Pape (2017, p. 219): "In the end, Reichenbach was the only member of the logical empiricist core group who survived World War II and National Socialism." This is especially true of the members of the Berlin Group, who Reichenbach expressly named in his article "Logistic Empiricism in Germany and the Present State of its Problems" (Reichenbach, 1936a, p. 143): Walter Dubislav, Alexander Herzberg and Kurt Grelling, the latter being murdered in Auschwitz. Other participants of the meetings of the Berlin Group went into exile, some in Istanbul (Dahms, 1988b).

² An exception to this approach is to find in the special issue of *Synthese* edited by Gürol Irzik and Elliott Sober, entitled "Hans Reichenbach, Istanbul and Experience and Prediction" (vol. 181, Nr. 1, July 2011), which contains an article by Gürol Irzik on the conditions of Reichenbach's stay in Turkey. Irzik also wrote on the Turkish presence of mathematician Richard von Mises, who also emigrated from Berlin to Istanbul in 1933, see Eden & Irzik (2012). For a more comprehensive presentation of German mathematicians, including von Mises, who emigrated during the Nazi period, see the standard work by Reinhard Siegmund-Schultze, *Mathematicians Fleeing from Nazi Germany: Individual Fates and Global Impact*, in which Reichenbach is incidentally mentioned because of his links with mathematics (Siegmund-Schultze, 2009, pp. 14, 16) or as a "philosopher of mathematics" (Siegmund-Schultze, 2009, p. 274).

³ Presenting this hypothesis simply amounts to taking seriously a statement made by Reichenbach himself in the preface of *Experience and Prediction*: "The ideas of this book have been discussed in lectures and seminars at the University of Istanbul" and "the active interest" of friends and students in Istanbul "formed a valuable stimulus in the clarification of my ideas [...]" (Reichenbach, 1938a, p. viii). But beyond this case, it is a matter of questioning a tenacious prejudice in the historiography of exile studies, which consists of focusing exclusively on the disadvantages of the exile in Istanbul or in reducing it as a "Turkish detour" towards America (for a critical approach to this historiographical trend in the field of Romance philology, see Konuk, 2015, p. 191 and Roure, 2020b, pp. 171f.). Sometimes the emigrants themselves put forward in their private correspondence the difficulties they encounter in Turkey, mostly expressed in the frustration of having to leave the German university or in connection with concerns about the status of statelessness and the imminence of war in Europe. In the field of Romance philology for example, Erich Auerbach contributed to this historiographical bias with his very often quoted complaint about the lack of library resources in Istanbul—a complaint that was largely exaggerated, as pointed out by his former assistant Süheyla Bayrav

main claim is that it was precisely during this stay in Istanbul that Reichenbach sought to continue the realization of the Berlin Group's program of scientific philosophy or analysis of science and adopted his unique conception of "logistic empiricism" that he emphatically opposed to the "logical positivism" of the Vienna Circle (Reichenbach, 1936a).⁴

I start by giving some details about Reichenbach's background and activities in Berlin (1) and by presenting the specificity of his philosophical views as well as the interdisciplinary program of the Berlin Group (2). Then, I present the circumstances of Reichenbach's arrival in Istanbul, including major transformations underway at the Istanbul University Department of Philosophy (hereafter IUDP) following the 1933 Turkish university reform (3). I then provide an overview of Reichenbach's efforts to popularize the sciences and disseminate ideas about logical empiricism during his stay there, continuing the activities of the Berlin Group. This includes the organization of interdisciplinary meetings (4) but also publishing and active participation in international congresses (5). Finally, I consider another kind of reception linked to Reichenbach's sojourn in Istanbul, which is his teaching activities and the work of his, mainly female, students at Istanbul University (6) and its impact in Turkey after Reichenbach's departure (7).

2 Reichenbach and the Berlin Group

A fact seldom emphasized is that Reichenbach's departure for Istanbul was not only the result of an initially envisaged temporary exile, but also a strategic choice that allowed him to secure his academic career in the field of philosophy. His stay in Istanbul marks a decisive moment in the institutionalization of logical empiricism, a paradigm that was then still encountering a great deal of resistance in the academic philosophy field in Germany. Reichenbach found in Istanbul a milieu through which the difficulties he encountered, in Berlin, in obtaining recognition for his work disappeared. Not only was he received as an eminent philosopher from Berlin with an international reputation when he arrived in Istanbul in 1933, he was also appointed as a full professor with a five-year contract⁵ and was given the task of reorganizing and heading the IUDP.

Footnote 3 continued

(Bayrav & Keskin, 2000, p. 150). It is worth noting that in contrast, his predecessor Leo Spitzer valued the Turkish experience over the working conditions offered by the United States. On the former's experience in Turkey, see below, n. 39.

⁴ In *Experience and Prediction*, Reichenbach presents "logistic empiricism" as a philosophical movement spread across many countries, including Turkey, that brings together various small groups: "American pragmatists and behaviorists, English logistic epistemologists, Austrian positivists, German representatives of the analysis of science, and Polish logisticians are the main groups to which we now call 'logistic empiricism'." (Reichenbach, 1938a, p. v). Among these different groups, the one represented by Reichenbach in Berlin and then in Istanbul distinguished itself by the primacy given to the probability problem, insofar as "A logistic empiricism would be untenable if we do not succeed in finding a formalistic solution of the probability problem" (Reichenbach, 1938a, p. 337).

⁵ In contrast to the shorter contracts of 1 or 2 years, the contracts issued to emigrant professors in 1933, established for a renewable period of 5 years provided that the professor teaches in Turkish after the third year and publishes a textbook for the study of the discipline in Turkish (Widmann, 1973, pp. 74f. and Dölen, 2010/3, pp. 465f.).

Reichenbach studied physics, mathematics and philosophy in Munich, Göttingen, and Berlin, where he met Albert Einstein and attended his lectures on the theory of relativity. During his philosophy studies, he was particularly impressed by Ernst von Aster in Munich and Ernst Cassirer in Berlin, because of their “understanding of the problems of natural philosophy” (Cohen & Reichenbach, 1978, 1f.). His original approach, combining physics and philosophy, was not developed without difficulties, to the point that Reichenbach wrote his doctoral dissertation *Der Begriff der Wahrscheinlichkeit für die mathematische Darstellung der Wirklichkeit* [The Concept of Probability in the Mathematical Representation of Reality] largely without academic supervision (Salmon, 1977, p. 9, Eberhardt, 2009, p. 125).⁶ He obtained his habilitation and authorization to teach physics (*venia legendi*) at the *Technische Hochschule* in Stuttgart in 1922, where he worked as a physics and philosophy lecturer.

After researching causality and probability with a fellowship of the Emergency Association of German Science (*Notgemeinschaft der deutschen Wissenschaft*), Reichenbach applied for a re-habilitation in the University of Berlin Faculty of Arts (*philosophische Fakultät*) in 1926. With the support of Max Planck and Max von Laue, Reichenbach was finally appointed as a non-permanent Associate Professor at the Faculty of Sciences with a “teaching assignment on [the] Epistemological Foundations of Physics” (Hoffmann, 1994, p. 28), without, however, obtaining authorization to teach in the Department of Philosophy.⁷ He expressed the difficulties he encountered in a letter addressed to his former teacher in Munich, Ernst von Aster:

My re-habilitation to Berlin, which I told you about at the time, has unfortunately still not been completed; there are terrible obstacles to overcome, and the matter, which is very much supported by Planck and Laue, is still pending. It is not even a chair, but only a teaching assignment.⁸

In the 1920s, Berlin was one of the most important centres of modern physics, marked by the work of Albert Einstein, Max Planck and Max von Laue, and could therefore be seen as the ideal place to develop a new philosophy taking into account the latest developments in modern physics. Reichenbach was in this context the main popularizer of the theory of relativity and its central defender against attacks by both

⁶ Cassirer tried to help Reichenbach find a supervisor, recommending him in 1914 to Paul Natorp, who nevertheless refused to supervise his thesis, which was accepted in 1915 by Paul Hensel and Max Noether at the University of Erlangen. He afterwards unsuccessfully attempted to have it published in the *Kant-Studien*. Cassirer’s efforts to help Reichenbach find a professorship in a philosophy department in Germany were as well unsuccessful (Heis, 2013, p. 71).

⁷ According to Tilitzki (2002, p. 233), Reichenbach could not teach at the Department of Philosophy because his *venia* was limited to physics. This is the reason why Reichenbach’s seminars in philosophy of science and theory of probability were offered under the aegis of the Department of Physics (see the memories of Sidney Hook in Cohen & Reichenbach, 1978, p. 32). This point will be used in Turkey to defame Reichenbach and to question his competence in philosophy, notably under the pen of the sociologist Ziyaeddin Fahri Findikoğlu (Fahri [Findikoğlu], 1936, p. 447, see also Roure, 2022a, pp. 125f.).

⁸ Letter from Reichenbach to Ernst von Aster, 15.04.1926: “*Meine Umhabilitation nach Berlin, von der ich Ihnen damals erzählte, ist leider immer noch nicht vollzogen; es sind da schlimme Widerstände zu überwinden, und die Angelegenheit, die von Planck und Laue sehr unterstützt wird, schwebt immer noch. Dabei handelt es sich nicht einmal um einen Lehrstuhl, sondern nur um einen Lehrauftrag.*” Hans Reichenbach Papers 1884–1972, ASP.1973.01, Box 16, Folder 1, University of Pittsburgh (hereafter RP). Unless otherwise stated, all translations are by me.

scholars and popular press. However, Reichenbach was aware that his commitment to the theory of relativity represented an obstacle to his career in the field of philosophy, where he was mistrusted for his popularization activities and in particular his axiomatic work on the theory of relativity (Tilitzki, 2002, p. 234). In a letter (27.01.1929), Reichenbach complained to Einstein about the latter's lack of support in his struggles with his career, even though Einstein had published a very favorable review of his 1928 book *Philosophie der Raum-Zeit-Lehre* (Röseberg, 1998, p. 30).

Despite the difficulties Reichenbach encountered in obtaining the recognition of academic philosophers at Friedrich Wilhelm University, he experienced in Berlin a particularly productive period with the formation of what he called the "Berlin Group." Initially formed as a continuation of his seminars, the Berlin Group included Kurt Grelling,⁹ Walter Dubislav,¹⁰ Alexander Herzberg,¹¹ and occasional representatives of the Berlin School of *Gestalt* Psychology such as Wolfgang Köhler (1887–1967) and Kurt Lewin (1890–1947). Reichenbach's doctorate students Carl Gustav Hempel (1905–1997) and Olaf Helmer (1910–2011) also participated in discussions.

This informal working group found an institutional anchor in moving closer to the Berlin Society for Empirical Philosophy (*Gesellschaft für empirische Philosophie*)¹² of which Reichenbach became a member in 1928. After Joseph Petzoldt's death in 1929,¹³ Reichenbach, along with Herzberg and Dubislav,¹⁴ took over the direction of

⁹ Kurt Grelling (1895–1937), whom Reichenbach met in Munich, was an active member of the Berlin Group and continued to organize its activities after the departure of Reichenbach, Dubislav and Herzberg. After a visit to Paul Oppenheim in Belgium in 1937, he was deported to Vichy France, where he was interned in a camp in Les Milles near Marseille. Before managing to escape to the United States, he was deported with his wife Greta to Drancy and then Auschwitz (16 September 1942), where they both were murdered in the gas chambers (Peckhaus, 1994, pp. 65–67).

¹⁰ After having attained his habilitation with Petzoldt in 1928, Walter Dubislav (1895–1937) was nominated in 1931 as extraordinary professor at the Technical University of Berlin. He was victim of smear campaigns against him (Dahms, 1990, p. 20) and lost his authorization to teach following his incarceration for violently assaulting a woman in 1935; he emigrated to Prague in 1936, where he murdered his girlfriend and killed himself (Peckhaus, 2013, p. 237, Milkov, 2015b).

¹¹ The physician and psychiatrist Alexander Herzberg (1887–1944) was dismissed in 1933 from the Berlin Medical Faculty and did not manage to leave Nazi Germany until 1937. He went to London, where he died in 1944, probably as a result of poorly treated angina pectoris (Schernus, 1994, p. 45).

¹² Founded in 1927 as the local branch of the International Society for Empirical Philosophy, the Berlin Society for Empirical Philosophy aimed at the development of an empirical philosophy that would evaluate "the results of the individual sciences" such as "theory of relativity, the science of heredity, brain research, *Gestalt* and developmental psychology, psychoanalysis and psychopathology" (Hoffmann, 2008, p. 43).

¹³ Joseph Petzoldt (1862–1929), who was one of the founders of the Berlin Society, was a follower of Ernst Mach and presented his own philosophical views such as empiricism and rejection of metaphysics in an essay entitled "Positivistische Philosophie" (1913). Before the First World War, Petzoldt had founded the Society for Positivist Philosophy (*Gesellschaft für positivistische Philosophie*) (1912–1921), which can be considered as the predecessor of the *Gesellschaft für empirische Philosophie* (Hoffmann, 2008, p. 45).

¹⁴ After Reichenbach's departure in 1933, Dubislav and Herzberg continued to organize the *Gesellschaft's* meetings for a few years before themselves leaving Germany. As Milkov points out, Reichenbach and Dubislav gave several lectures at the Society, as did Herzberg to a lesser extent; other core members of the Berlin Group such as Kurt Grelling and Carl Hempel never intervened in this context (Milkov, 2015a, pp. xif.). Grelling was, however, an active member of the *Gesellschaft*, involved in the preparation of the congresses of logical empiricism and in the journal *Erkenntnis* (Peckhaus, 1994, p. 61). He also tried to keep the activities of the Berlin Group running after Reichenbach and Dubislav had left the city (Peckhaus, 2013, p. 231).

the society (Hoffmann, 2008, 48f.). Its reorientation was reflected by the change of its name to the Society for Scientific Philosophy (*Gesellschaft für wissenschaftliche Philosophie*) in 1931 (Nehls, 1932, Milkov, 2013b, p. 12). The activities of the Berlin Society consisted essentially in the organization of public lectures on philosophically significant problems in the empirical sciences, including physics, biology, medicine and psychology. Public lectures took place at the auditorium of the Charité medical clinic. They were intended for broader public and were discussed in newspapers such as the *Vossische Zeitung* and the *Berliner Tageblatt* (Danneberg & Schernus, 1994, 405ff.). Another important activity of the *Gesellschaft* consisted in the publication of articles related to its activities, first in the *Annalen der Philosophie* edited by Hans Vaihinger and Raymund Schmidt, then in the journal *Erkenntnis* co-founded in 1930 by Hans Reichenbach and Rudolf Carnap (Hegselmann & Siegart, 1991), which Reichenbach directed from Istanbul after 1933. Another activity was the organization of colloquia and congresses, allowing for exchange with other representatives of logical empiricism, with the explicit intent of internationalizing the movement.

3 Turkish exile as a matrix of an anti-positivist theory of meaning and knowledge

Having anchored itself to the Society for Scientific Philosophy, the Berlin Group positioned itself in opposition to the Vienna Circle, particularly after the publication of its 1929 manifesto “The Scientific Conception of the World. The Vienna Circle” (*Wissenschaftliche Weltanschauung. Der Wiener Kreis*), published by the Ernst Mach Society and co-authored by Rudolf Carnap, Hans Hahn, and Otto Neurath (Stadler & Uebel, 2012). The Berlin Group promoted a descriptive approach to problems specific to individual disciplines (*Einzelwissenschaften*) such as physics (theory of relativity and quantum mechanics) and psychology (*Gestalt* theory, psychoanalysis); the Viennese in contrast, were more oriented towards mathematical logic and had a more programmatic, even prescriptive, conception of philosophy (Dahms, 1988a, p. 162).

At the same time, relations between Reichenbach and the leading figure of the Vienna Circle, Moritz Schlick (1882–1936), deteriorated¹⁵ to the point that in 1931 Schlick wrote a negative recommendation when Reichenbach sought a professorship in Germany (Milkov, 2015a, p. xx). Schlick openly rejected the realism advocated by Reichenbach and was concerned about the tendencies of the Berlin Group and Reichenbach’s “far-fetched ideas on probability” (*verdrehte Wahrscheinlichkeitsideen*), as he wrote in a letter to Carnap dated September 19, 1931 (Stadler, 2011, p. 143). Because of his disagreements with Reichenbach, Schlick refused to join the editorial board of *Erkenntnis*. This was for Reichenbach additional evidence that the journal was the press organ of the Berlin Group and not of the Vienna Circle, as seen in his letter

¹⁵ Despite some disagreements on Kantian philosophy and conventionalism (Parrini, 2003, 12f), a common interest in the theory of relativity brought Reichenbach and Schlick together in the early 1920s. According to Milkov, while his previous criticism did not name him personally, Schlick started to criticize Reichenbach explicitly in the early 1930s (Milkov, 2015a, p. xx).

to Max Black (18.04.1938), with whom he shared the same critical attitude towards positivism:

I was much interested to read your hard criticism of positivism. You know that my attitude toward positivism is as critical as yours. [...] the movement of scientific philosophy should not be identified with positivism, and not with the Vienna circle. Unfortunately, our German branch of this movement, as it was centered around *Erkenntnis*, has been identified in the English literature with the Vienna circle [...] I may add here the remark that *Erkenntnis* was not a foundation of the Vienna group, but of the Berlin group, and that when I invited the Vienna group to collaborate in the edition of this journal, Schlick refused to accept because of the differences in his view and mine. (cited from Schernus, 1994, p. 35).

After leaving Germany in 1933, Reichenbach's criticism of the Vienna Circle became increasingly open and virulent: he found the group too dogmatic and under the influence of Ludwig Wittgenstein, "the most radical mind among modern positivists" (Reichenbach, 1938a, p. 74); something for which he held Moritz Schlick particularly responsible.¹⁶ It was especially during his stay in Istanbul, a time when he obtained relative institutional security compared to the precariousness of his situation in Germany, that Reichenbach developed his probability theory of meaning and knowledge, recurrently and polemically presented as a critique of positivism. Criticism of the Vienna Circle's neopositivist program is indeed a leitmotiv of Reichenbach's work from that time.¹⁷ Such a critical approach reached its climax in *Experience and Prediction*, written in Istanbul and published in 1938 by University of Chicago Press. In this key epistemological work, Reichenbach speaks of positivism as a "dangerous fanatic doctrine" and compares it to a "religious sect"¹⁸ with "its dogmas and its preachers."

¹⁶ The murder of Schlick in 1936 by one of his former students, who had been deprived of his support, deeply shook Reichenbach, who published a homage in *Erkenntnis* (Reichenbach, 1936b). This tragic event certainly helped to blur the memory of the sharp theoretical disagreements between Schlick and Reichenbach.

¹⁷ Afterwards, this seems to have faded and even disappeared during his stay in the United States. For example, there is no trace of it in his book *The Rise of Scientific Philosophy*, published in 1951. In this book, presented as an introduction to "scientific philosophy," Reichenbach develops his criticism of philosophy as being based on an unequivocal rejection of metaphysics and ontology (Reichenbach, 1951, pp. 3f.).

¹⁸ These formulations echo a criticism that the publicist and editor Heinrich Mühsam had made in the early 1930s against the "naïve positivism" of the Berlin Society in the *Vossische Zeitung* newspaper in which the meetings were announced and discussed on a regular and in-depth basis. See Heinrich Mühsam, "Philosophische Sonntagspredigt" (*Vossische Zeitung*, 07.11.1932) and "Erbauung und Wissenschaft" (*Vossische Zeitung*, 22.11.1932). Mühsam described there the "Tuesday evenings" at the Berlin Society, in which he acknowledges that he himself took part often and with pleasure, as the "scientific edification evenings of a philosophical sect" (Danneberg & Schernus, 1994, pp. 407f.). He also emphasized that the repeated object of his criticism is not the strictly scientific attitude of the society, but its claim to have the only correct method of philosophy in its hands, and its refusal to take seriously other conceptions of philosophy and in particular metaphysics (Danneberg, 1998, p. 125).

These are the fundamental ideas of positivism as they are generally developed by their adherents. There is something very suggestive in these conceptions, something comparable to the convincing clarity of a religious conversion; and the ardor with which this interpretation of the existence problem has been emphasized by the preachers of positivism reminds one indeed of the fanaticism of a religious sect. [...] it is the danger of fanatic doctrines that they forget the necessary criticism of their basic conceptions; we must take care that admiration of the lucidity of the theory¹⁹ does not restrain us from a sober examination of its logical bases [sic]. (Reichenbach, 1938a, p. 103).

Reichenbach's attempt to position himself and the Berlin Group within logical empiricism in the 1930s was accompanied by the development of distinct terminology to prevent the group being labelled as positivist.²⁰ He indeed never associated himself with "logical positivism", a term that emerged in the early 1930s (Blumberg & Feigl, 1931). In his essay "Logistic Empiricism in Germany and the Present State of its Problems" (Reichenbach, 1936a), which can be read as a counterpoint to the Vienna Circle's manifesto (Sinaceur, 2018, p. 48)²¹ or even better as a "Berlin manifesto in exile" (Stadler, 2011, p. 146), Reichenbach uses the expression "logistic empiricism" to describe the Berlin Group in order to distinguish it from the "logical positivism" of the "Viennese Circle" and in particular the position of Carnap and Schlick. Even though Reichenbach considers in this essay that the two movements were linked and originated from the same "epistemological turn" due to the development of natural sciences in the nineteenth century (Reichenbach, 1936a, p. 141), he clearly affirms his rejection of "positivism" and particularly of Wittgenstein's philosophy, in a very similar way to that in *Experience and Prediction* (Reichenbach, 1938a, p. 49, 74f.)—the name of Schlick, however, does not appear in this book.

According to Reichenbach, Schlick "had held a realistic conception of physics, but impressed by the ideas of Wittgenstein, was converted to positivism" (Reichenbach, 1936a, p. 143). He further adds that the members of the Berlin Group—specifically mentioning Dubislav, Herzberg and Grelling—share the same method of scientific analysis (*wissenschaftsanalytische Methode*), i.e., "the method of examining details" (Reichenbach, 1936a, p. 150), without any adhesion to a doctrinal system. The members of the Vienna Circle, conversely, are presented in this essay as adherents of

¹⁹ In the same passage, Reichenbach recognizes the critical potential of positivism and specifies that his criticism is limited to its doctrinal character.

²⁰ Paradoxically, Reichenbach did not succeed in getting rid of this label, particularly in the countries where he was most active at the time, Turkey and France. Reichenbach is still often presented in both countries as a positivist thinker close to the Vienna Circle—if not as "one of its most important representatives"—as can be read in the preface of a recent reissue of his Turkish conferences, collected under the title *Bilime Yeni Pozitivist Bakış* (Neopositivist View on Knowledge) (Reichenbach, 2013; see also Akdoğan, 1986). As expressed by Gürol Irzik and Elliott Sober in their Introduction to *Synthese's* special issue on "Reichenbach, Istanbul, and Experience and Prediction", "Reichenbach is now often lumped together with the logical positivists of the Vienna Circle, but his ideas, especially those in *Experience and Prediction*, were often developed in opposition to positivism" (Irizik & Sober, 2011, p. 2).

²¹ Among the "quasi-manifestos" of the Berlin Group is Herzberg's article "Empirische Philosophie" published in 1928 in the *Vossische Zeitung* and Reichenbach's *Ziele und Wege der heutigen Naturphilosophie*, Leipzig: Felix Meiner 1931 (Reichenbach, 2011, pp. 47–94). Reichenbach himself described this text as programmatic (Cohen & Reichenbach, 1978, p. 7).

a “refurbished logistic materialism.” In this perhaps caricatural presentation of the Vienna Circle,²² Reichenbach opposes his own conception of empiricism in relation to his probabilistic solution to the problem of induction, which he elaborated precisely in the years spent in Istanbul (see Padovani, 2011, p. 41). The reason why the Berlin Group could not accept positivism, according to him, is its lack of a theory of propositions about the future “in which the two truth-values, true and false, are replaced by a continuous scale of probability” (Reichenbach, 1936a, p. 154).

Upstream of the concept of positivism used by Reichenbach in the 1930s is an ambivalent reference to Ernst Mach, the emblematic figure of both the Berlin Society of Petzoldt’s time and the *Verein Ernst Mach* (Association Ernst Mach) led by Schlick. Reichenbach explains Mach’s epistemological ideas and more generally the “systems of positivism, created by Mach and others,” together with “the pragmatism of Peirce, James and Dewey,” as both a constitutive step in the formation of scientific philosophy and a rather dogmatic²³ moment of this “new phase of philosophical analysis” (Reichenbach, 1936a, p. 141). This offensive against positivism as a dogmatic materialism—which can be read both as a criticism of the initially positivistic or empirio-criticist orientation of Society for Empirical Philosophy led by Petzoldt and as a willingness to distance himself from certain features he attributed to the Vienna Circle—²⁴ finds its most complete expression in the first two chapters of *Experience and Prediction* (1938). This critique of positivism is in line with those developed at the same time by other thinkers close to the logical empiricism of the Berlin Group, notably *Gestalt* theoreticians.²⁵

Reichenbach’s determination to distance himself from positivism and to have the Berlin Group recognized is also clearly found in his correspondence during this period, notably in his letters to his former philosophy professors²⁶ Ernst Cassirer²⁷ and Ernst

²² Reichenbach has been criticized for basing his argument on a caricatured image of the Vienna Circle and for attacking “a strawman version of Vienna Circle philosophy” (Uebel, 2013, p. 76).

²³ Reichenbach alludes in *Experience and Prediction* to Boltzmann’s criticism of Mach’s “dogmatism” (term that he places in quotation marks), which Reichenbach interprets in favor of a probabilistic conception of the “existence of atoms” (Reichenbach, 1938a, p. 213).

²⁴ Reichenbach has often been reproached for the outdated or exaggerated nature of his critique of the Vienna Circle. The point here is not to discuss the relevance of this criticism, but rather to question the function it took in Reichenbach’s thought and its impact on the reception of logical empiricism as a more or less heterogeneous movement.

²⁵ See, for example, the criticism developed by Wolfgang Köhler in his book *The Place of Value in a World of Facts* (1938), according to which positivism was then designated as dogmatic, and which neglects some of the most essential characteristics of experience (Ash, 1994, pp. 87f.). It should be noted in this regard that in his critique of positivism, Reichenbach takes up arguments from the *Gestalt* theory (see Reichenbach, 1938a, pp. 105–114, §13 “Reduction and projection”).

²⁶ Reichenbach had indeed followed the courses of Cassirer in Berlin in 1913 (Heis, 2013, pp. 68f.) and those of Ernst von Aster in 1912–1913 in Munich, playing a decisive role in Reichenbach’s interest in philosophy, particularly in relation to the question of probability (Milkov, 2013b, p. 15).

²⁷ In a letter to Ernst Cassirer, who had declined the offer of the position finally given to Ernst von Aster in Istanbul, Reichenbach wrote in a letter (19.01.1936) that it is important to make a clear distinction between his own work and the “positivism” of his colleagues in Vienna: “Because *Die Erkenntnis* was jointly edited, many people have assumed that I am a part of the Vienna Circle. This is neither historically nor factually correct” (quoted and translated by Hoffmann, 2008, p. 42).

von Aster.²⁸ Deprived of his chair at the University of Giessen in 1933, Ernst von Aster went into exile in Sweden, where he published a monograph devoted to contemporary philosophy in 1935, including a chapter “Logistical Neopositivism,” where he mentions Reichenbach but fails to reference the Berlin Group (v. Aster, 1935, pp. 177–211). Reichenbach wrote to Ernst von Aster that he was very disappointed by this omission, which leads one to believe that this philosophical orientation arose exclusively in Vienna and Prague, though the Berlin Group was just as active as the Circle of Vienna:

First of all, I must say that I very much regret that you almost always write only about the Vienna Circle, so that it seems as if this whole philosophical direction originated in Vienna and Prague alone. Our Berlin group was just as active a center as the Vienna Circle, and there has never been any doubt about this within our movement.²⁹

Reichenbach mentions in this letter the extensive organizational work carried out in Berlin within the framework of “our Society for Scientific Philosophy,” with the organization of conferences and discussions “every two or three weeks,” bringing together between 100 and 300 people. In the letter, he also mentions his own seminars and colloquia for further discussion, and the fact that it was in Berlin that the journal *Erkenntnis* was founded.

But it was also for political reasons that Reichenbach sought recognition for the Berlin Group, as the rest of the letter suggests:

This Berlin circle has now been driven apart by the Hitler government, but it still lives on as a virtual unity; and especially since our work has been so severely affected by political developments, it is important to me that this work at least be called our movement in history. How important I myself considered this Berlin center of our movement, you can also see from the fact that at that time I refused the appointment to the chair in Prague, which Carnap received later. Of course, at that time I had no idea that one day I would be forced to leave Berlin for political reasons.³⁰

²⁸ Ernst von Aster was finally appointed at Istanbul University in 1936 with the active support of Reichenbach, whom he succeeded as head of the Department of Philosophy until his death in 1948.

²⁹ Letter to Ernst von Aster, 03.06.1935: “*Da muss ich nun zuerst sagen, dass ich es sehr bedauere, dass Sie fast immer nur von dem Wiener Kreis schreiben, sodass es so aussieht, als ob diese ganze philosophische Richtung allein in Wien und Prag entstanden wäre. Ein ebenso aktives Zentrum wie der Wiener Kreis war unsere Berliner Gruppe, und darüber hat es ja in Innern unserer Richtung auch niemals einen Zweifel gegeben.*” RP, Box 13, Folder 39.

³⁰ Letter to Ernst von Aster, 03.06.1935: “*Dieser Berliner Kreis ist ja nun durch die Hitlerregierung auseinandergetrieben worden, aber er lebt noch jetzt als virtuelle Einheit fort; und gerade nachdem unsere Arbeit durch die politische Entwicklung so schwer betroffen worden ist, liegt mir daran, dass diese Arbeit wenigstens in der Geschichte unsere Bewegung genannt wird. Wie wichtig ich selbst dieses Berliner Zentrum unserer Bewegung aufgefasst habe, können Sie auch daran ersehen, dass ich seinerzeit die Berufung auf den Prager Lehrstuhl abgelehnt habe, den ja dann nachher Carnap erhielt. Dass ich einmal aus politischen Gründen gezwungen sein werde, Berlin zu verlassen, habe ich damals freilich nicht geahnt.*” RP, Box 13, Folder 39.

As can be seen here, fighting for the widespread acceptance of logical empiricism in Germany and its implementation in university curriculums was not the only important point for Reichenbach. Bringing to life the memory of the activities and work of the Berlin Group, taking into account its very “virtual” unity, was for him an act of resistance in the face of Nazi attempts to annihilate it.

4 Reichenbach in the context of the Turkish university reform

On April 7th, 1933, the Nazi regime passed the “Law for the Restoration of the Professional Civil Service” (*Gesetz zur Wiederherstellung des Berufsbeamtentums* or *Berufsbeamtengesetz*, shortened hereafter to BBG), which led to several waves of dismissals at German universities between 1933 and 1935. Reichenbach’s right to teach at the University of Berlin was revoked on 5 September 1933 on the basis of the “Aryan clause,”³¹ (§ 3 BBG; Tilitzki, 2002, p. 602). He had started to organize his departure from Germany on the very day of the proclamation of the law however.³² Reichenbach went first to Switzerland before moving to Istanbul with the help of the Emergency Association of German Scientists Abroad (*Notgemeinschaft deutscher Wissenschaftler im Ausland*).

This Emergency Association was established in 1933 in Zurich by the physician Philipp Schwartz (1894–1977) to assist scholars being persecuted in Nazi Germany find new positions abroad. Having himself been deprived of his position at the University of Frankfurt from 1927 to 1933, Schwartz, with the Swiss pedagogue Albert Malche (1876–1956), organized the academic emigration of scholars to Istanbul University,³³ negotiating directly with his colleague doctor Reşit Galip, who was at that time the Turkish Minister of National Education and the main architect of the 1933 Turkish university reform (Widmann, 1973, pp. 49, 53–59). The protocol initially signed by Galip on the 06.07.1933 (see the *procès verbal* reproduced in Widmann, 1973, pp. 236–239) nominated two professors to the Department of Philosophy, Hans Reichenbach and Fritz Heinemann,³⁴ and expresses the wish to welcome among others Ernst Cassirer.

Reichenbach was given the title Professor Ordinarius at the Faculty of Letters (*Edebiyat Fakültesi*) at Istanbul University and was made the head of the Department of Philosophy, which was completely reorganized after the Turkish university reform. Reichenbach’s Chair of Systematic Philosophy and Logic (*Umumî Felsefe ve Mantık*)

³¹ Reichenbach, like other representatives of logical empiricism, was presented as a Jew in the propaganda of the time. This corresponds to what Stadler described as “anti-Semitism without Judaism (*Antisemitismus ohne Judentum*)” (see Dahms, 1985, p. 311). Being Jewish does not reflect in this context a religious allegiance but is rather related to the National Socialist definition of the “Aryan race”. Reichenbach’s father, who was baptized in 1887, was born Jewish (Cohen & Reichenbach, 1978, p. xvi).

³² In a letter dated 7 April 1933, Reichenbach asked Louis Rougier for help in obtaining the position he had left vacant at the University of Cairo. As Flavia Padovani pointed it out, Reichenbach’s concern with finding a position abroad is particularly present in his correspondence at that time (Padovani, 2006, pp. 234f.).

³³ Schwartz himself led the new Istanbul University Department of Pathology between 1933 and 1953.

³⁴ Fritz Heinemann (1889–1970) was dismissed on 8.9.1933 from the University of Frankfurt am Main according § 3 BBG (Tilitzki, 2002, p. 603). After a stay in Amersfoort and at the Sorbonne in Paris, he emigrated to Oxford in 1937.

can be seen as the merger of the Chair of Logic held by Halil Nimetullah (1880–1957)³⁵ and the Chair of Metaphysics held by Ahmet Naim Babanzâde (1872–1934), positions which were closed in 1933 (Kafadar, 2000a, p. 52). The university reform that year and the dismissal of much of the teaching staff took place before Reichenbach's arrival; however, the latter played an important role in the reorganization of the Department of Philosophy in the years that followed.

The initial working conditions he received were apparently good enough for him to refuse a proposal from Oxford University (Irzik, 2011, 160f.) and the University of Uppsala.³⁶ Reichenbach was very enthusiastic about his position in the first years, including the task of reorganizing the teaching of philosophy but also by the warm welcome in Istanbul and the interest of the students. He expressed this in a letter to Ernst von Aster, where he mentioned students' interest and goodwill, which eased the linguistic difficulties he faced having, for example, to teach through the use of an interpreter.³⁷ In spite of administrative difficulties,³⁸ Reichenbach managed to provide two additional chairs for exiled professors: Ernst von Aster was appointed to a Chair of History of Philosophy in 1936, Wilhelm Peters to the new Chair of Experimental Psychology created in 1937.

However, both the situation and Reichenbach's appreciation of it changed over the years and the new difficulties. Due to the arrival of a large number of scholars who had been dismissed in Germany and the sudden renewal of the teaching staff, including several dismissals that was felt as arbitrary, the Turkish university reform gave rise to tensions and sometimes hostile reactions among some Turkish colleagues, tainted with xenophobia and anti-Semitism. In Reichenbach's correspondence, there are several allusions to this general atmosphere³⁹ and resentment (Irzik, 2011, p. 173). A

³⁵ Halil Nimetullah [Öztürk] took part in the 1934 Prague International Congress of Philosophy as a professor at Istanbul University, although he had already been dismissed. At the same Congress, Reichenbach presented himself as a representative of Istanbul University (Roure, 2022a, p. 112).

³⁶ Reichenbach's letter to Ernst von Aster (07.01.1934), RP, Box 13, Folder 39.

³⁷ Reichenbach's letter to Ernst von Aster (07.01.1934): "You may have already heard that fate has seduced me to Istanbul. I have taken over the chair of general philosophy here, and I am quite happy about this solution after having been dismissed from my position in Berlin. The task of reorganizing the teaching of philosophy from scratch has fallen to me here, and that is quite an interesting task; admittedly not easy, especially since I still have to do everything with translators. It will take me a few years to learn the language of the country. The interest of the students is quite great, there is very goodwill here everywhere, and with that one will perhaps get over the difficulties that still exist here at the beginning" ("*Sie haben vielleicht schon gehört, dass mich das Schicksal nach Istanbul verführt hat. Ich habe hier das Ordinariat für allgemeine Philosophie übernommen, und ich bin recht froh über diese Lösung, nachdem ich aus meiner Stellung in Berlin entlassen worden bin. Mir ist hier die Aufgabe zugefallen, den philosophischen Unterricht von vorn an neu zu organisieren, und das ist eine recht interessante Aufgabe; freilich nicht leicht, besonders da ich noch alles mit Übersetzer machen muß. Es wird einige Jahren dauern, bis ich die Sprache des Landes gelernt habe. Das Interesse der Studenten ist recht groß, man hat hier überall einen sehr guten Willen, und damit wird man vielleicht über die Schwierigkeiten hinwegkommen, die hier zu Anfang noch bestehen*").

³⁸ Reichenbach complains about the slowness of bureaucratic procedures, especially with regard to the recruitment of new colleagues. He was also very affected by the refusal by the Turkish government of his request for a leave of absence which would have allowed him to accept an invitation for one year as a guest professor at New York University. See Reichenbach's letter to Ernst von Aster (03.06.1935), RP, Box 13, Folder 39.

³⁹ The romance philologist Leo Spitzer (1887–1960), who had left Istanbul University for Baltimore in 1936 and repeatedly expressed his disappointment with the American university system, wrote to Reichenbach

particular point of contention was the fact that the working conditions and remuneration of foreign professors were particularly attractive, whereas most Turkish professors working in the department before the reform were suddenly dismissed. Only two assistant professors were allowed to continue: Mustafa Şekip Tunç (1886–1958) became Professor of Psychology and Education at the new Department of Philosophy⁴⁰; Orhan Sâdeddin (1899–1964), previously a doctoral student of Ernst von Aster's at the University of Giessen in Germany in the 1920s,⁴¹ was kept on in 1933 as professor of the History of Philosophy but he was not able to assume his position for medical reasons (Gültekin & Kaya, 2016, p. 15). Sâdeddin's career interruption contributed to Reichenbach's obligation to teach this subject⁴² before Ernst von Aster's appointment in 1936.

One of the main changes related to philosophical disciplines that occurred after Reichenbach's arrival is the separation of psychology and sociology from the Department of Philosophy in order to become institutionalized as autonomous scientific disciplines. The Chair of Sociology, originally assigned in 1933 to another German émigré professor, Gerhard Kessler (1883–1963), was transferred to the Faculty of Economics (*İktisat Fakültesi*) in 1937. That same year, the institutional split between philosophical and experimental psychology was initiated, as a result of the appointment of the psychologist Wilhelm Peters (1880–1963) to the new Chair of Experimental Psychology. This creation of a new chair to meet the needs of training in experimental psychology was largely due to Reichenbach's efforts,⁴³ reflecting his then-strong interest in scientific psychology, especially *Gestalt* theory, which had a central place in the work of the Berlin Group (Ash, 1994), but which had also enjoyed some popularity

Footnote 39 continued

that as far as xenophobia is concerned, the situation was no better in the USA. He added that students were no better prepared for higher education in the United States than they were in Turkey; he also points out the difficulties created by the private system of research funding, particularly with regard to the precariousness of assistants. See: RP, Box 13, Folder 55. From the scientific point of view, Spitzer was fighting the positivist orientation of linguistics in the United States, a positivism that he believed had long been overcome in German science (Jurt, 1991, p. 127).

⁴⁰ According to an unpublished conference paper by Kaynaradağ, "Filozof Hans Reichenbach'ın Türkiye'deki yılları ve etkileri" (1991), Reichenbach had written an unfavorable report about M. Ş. Tunç, the translator and a disciple of Henri Bergson (On Mustafa Şekip Tunç as the leading figure of Turkish Bergsonism, see Özerverli, 2022, pp. 124–128). However, the assertion of the existence of a conflict between the two men is based on little more than a famous anecdote, according to which Reichenbach is said to have excluded Bergson's books from the philosophy library, having them classified in the literature section. This has prevented certain cooperation from being considered, such as Tunç's contributions to scientific psychology as a translator. He translated for example Wolfgang Köhler's paper on Human Perception (see Köhler, 1931) and two papers by Richard Müller-Freienfels in the second issue of the journal *Felsefe Yılığ*, which was largely devoted to the logical empiricism. On this, see below, Sect. 6.1.

⁴¹ Sâdeddin's thesis on *Erlebnis, Erlebniswahrnehmung und Erlebnisbeschreibung* (Giessen, Diss. 1925) dealt with a topic at the intersection of theory of knowledge, experimental psychology and phenomenology.

⁴² In spite of the work overload this may have presented, in his private correspondence, Reichenbach expressed his great interest in this task (see Irzik 2011, pp. 171f.).

⁴³ After Peters' departure, the Chair of Experimental Psychology was dissociated from the Institute of Pedagogy, to which it was initially attached, and became autonomous (Widmann, 1973, p. 113).

at Istanbul University (*İstanbul Dârülfünûnu*) starting in the late 1920s.⁴⁴ Reichenbach first tried to hire Wolfgang Köhler⁴⁵ and then Adhémar Gelb,⁴⁶ both well-known *Gestalt* psychology researchers, before supporting Wilhelm Peters' candidacy.⁴⁷

5 The Berlin Group in Istanbul

Reichenbach was not the only German scholar linked with the Berlin Group to have taken refuge in Istanbul starting in 1933. Another academic, mathematician Richard von Mises (1883–1953), professor and director of the Institute of Applied Mathematics at the University of Berlin (Stadler, 2015, pp. 1, 6), came to Istanbul in 1933 and stayed there for as long as Reichenbach.⁴⁸ Richard von Mises was in contact with both Viennese and Berlin representatives of logical empiricism and participated before the First World War in a discussion group at a Viennese café considered to be the first iteration of what was to become the Vienna Circle. Although von Mises kept his distance (Bernhardt, 1994) or at least seems not to have been an official member of the Berlin Society (Danneberg & Schernus, 1994, p. 396), he was part of Reichenbach's intellectual environment in Berlin and after 1933 in Istanbul. Reichenbach and von Mises seemed to have several theoretical disagreements during their stay in Istanbul, particularly on the theory of probability. Reichenbach had an expanded conception of probability that Mises rejected as "metaphysical" (Irzik, 2011, pp. 174f.).⁴⁹ Reichenbach's correspondence also reveals more personal conflicts with von Mises regarding the recruitment policy at the Istanbul University. A subject of dissension was, for

⁴⁴ In 1927, Orhan Sâdeddin published two papers on *Gestalt* theory and *Gestalt* psychology in the journal *Felsefe ve İçtimaiyât Mecmuası* (Roure, 2020a, p. 332). Sâdeddin, who had been Ernst von Aster's doctorate student, had followed the lectures of Kurt Koffka (1886–1941) during his stay at the University of Giessen.

⁴⁵ One of the founders of *Gestalt* psychology, Wolfgang Köhler (1887–1967) led the Institute of Psychology in Berlin and participated in interdisciplinary meetings organized by the *Gesellschaft für empirische Philosophie* (see Danneberg & Schernus, 1994, pp. 441f.). Reichenbach had tried to recruit him as a professor at Istanbul University before he took on a position in the United States in 1935.

⁴⁶ Adhémar Gelb (1887–1936) died before coming to Istanbul, where he had been appointed Professor of Psychology (Widmann, 1973, p. 111). Until 1933, he directed the Institute for Psychology in Frankfurt with Max Wertheimer.

⁴⁷ In a letter to Albert Malche (14.11.1936), Reichenbach argues in favor of recruiting Peters rather than the candidate Louis Rougier recommended, RP, Box 13 Folder 50. The very same day, Reichenbach also discouraged Helmuth Plessner, who had expressed interest in the position, from applying. Reichenbach replied by pointing out, by way of consolation, the scholarly nature of education in Turkey. Rather than expressing Reichenbach's opinion, this may be seen as a strategy to discourage candidates he did not wish to have in the department from applying. On this subject, see Reichenbach's letter to A. Malche (14 November 1936) and the exchange of letters between Reichenbach and Plessner, RP, Box 13 Folder 53.

⁴⁸ Von Mises' former assistant, Hilda Geiringer (1893–1973) was also appointed at the new Institute of Mathematics in Istanbul. Before that, she was extraordinary professor at the University of Berlin, where her teaching authorization was revoked in 1933 due to anti-Semitism. The non-renewal of Geiringer's contract at Istanbul University may have been one of the reasons why Richard von Mises decided to leave Istanbul. He went to Harvard in 1939, while Geiringer obtained a position at Bryn Mawr College, also in the USA. See Eden & Irzik (2012, p. 444): "The Turkish government did not extend Geiringer's contract. A disappointed von Mises left his job in protest."

⁴⁹ Criticizing Reichenbach's *Experience and Prediction* for not being critical enough of metaphysics, von Mises published an essay on Ernst Mach's empiricist conception of science in 1938 and the book *Kleines Lehrbuch des Positivismus* [Little Textbook of Positivism] in 1939.

example, the attitude towards a colleague close to the Berlin group who also migrated to Istanbul, the astrophysicist Erwin Finlay-Freundlich (1885–1964).

Finlay-Freundlich was in contact with Reichenbach from the early 1920s and linked to the Berlin Society, where he once gave a lecture. He was one of the first astronomers willing to test Einstein's theory of relativity (Hentschel, 1994). From 1933 to 1937, Finlay-Freundlich headed the new Astronomical Institute of Istanbul University, where he had a solar observatory constructed (Dölen, 2010/4, p. 238). He ended his contract in Istanbul in 1937 having accepted a chair at the German University in Prague. He remained in contact with Reichenbach, who continued to express his support while von Mises judged Finlay-Freundlich's departure before the end of his contract with the Istanbul University more harshly.⁵⁰

Other individuals close to Reichenbach were also invited to Istanbul University but did not come: Ernst Cassirer, who, together with Richard von Mises and Max Born, was a member of the board of the *Notgemeinschaft* (Widmann, 1973, p. 54), as well as Albert Einstein, who negotiated unsuccessfully with Hikmet Bayur, the then Turkish Minister of National Education, to allow a group of professors, doctors and pharmacists at risk in Germany to work in Turkey (Dölen, 2010/3, pp. 455–465 and 581–604).

During his stay in Istanbul, Reichenbach's efforts to develop the program of scientific philosophy were not limited to statements about the existence of the Berlin Group and its autonomy from the Vienna Circle. In Istanbul, Reichenbach continued the interdisciplinary activities characteristic of the Berlin Group and of the Berlin Society for Scientific Philosophy, with however a greater concern for internationalization due to the perilous situation many scholars faced in Germany.⁵¹ In addition to seminars held at Istanbul University and a colloquium under the aegis of the Turkish Philosophical Society, Reichenbach organized events for the general public in order to reach a wider audience. This interest in popularization is also manifest in his publishing activities, both in scientific journals and in mainstream cultural media. Some of his lectures were published in Turkish literary and cultural periodicals, such as *Vartlık* (Being)⁵² and *Edebiyat* (Literature) (Reichenbach, 1934a, b). Another example of these efforts to popularize scientific culture is the 1938 publication of one of his public lectures, "*Tabiat Kanunu Meselesi*" [The Problem of Natural Law], by CHP Press (Reichenbach, 1938b).

Reichenbach's engagement with Istanbul's philosophical circles through his lectures and publication activities is reminiscent of the activities of the Berlin Group, which had initially formed around Reichenbach's seminars given at Friedrich Wilhelm University, and from 1928 onwards through a colloquium organized with Walter

⁵⁰ See Reichenbach's letter to Freundlich (27.03.1938), RP, Box 13, Folder 44.

⁵¹ Before leaving Germany, Reichenbach had expressed his intention to spread logical empiricism beyond the borders of German-speaking countries. See, for example, the letter to Louis Rougier of the 3.11.1931, quoted by Flavia Padovani (2006, p. 229): "[...] *da ich selbst bemüht bin, unsere Bewegung über die Grenzen der Länder hinauszutragen*" [as I myself am endeavoring to carry our movements beyond the borders of the countries]. Padovani also refers to Reichenbach's plan to create a European research institution to support the efforts of logical empiricism, with a potential seat in Paris (Padovani, 2006, pp. 230f.).

⁵² Other emigrant professors in contact with Reichenbach, such as Erwin Finlay-Freundlich and Hans Winterstein, published in the same journal in 1934.

Dubislav (Milkov, 2015a, p. ix). According to Matilt Kamber, a graduate of the IUDP, in addition to seminars given in German with the help of an interpreter⁵³ and warmly received lectures in French, Reichenbach organized an interdisciplinary colloquium at Istanbul University that brought together professors from different departments, particularly from the Faculty of Science: “There were physicists, biologists, mathematicians, physicians, and dentists, and each philosophical problem was discussed from different points of view” (Kamber, 1978, p. 38).

In one of his letters, Carl Hempel mentions that Reichenbach told him about a colloquium held in Istanbul “by a small circle of scholars speaking German,” which he described as “a weak substitute for the circle in Berlin” (Hempel, 1991, p. 10). However, the few extant testimonies of those who attended Reichenbach’s colloquia in Istanbul all emphasize the high level of the discussions and the participants’ great pedagogical and scientific interest in the meetings, which were open to the public. In an interview, Reichenbach’s student and assistant Neyire Adil Arda noted that the colloquia, which brought together teachers from various disciplines and faculties, were the place for important discussions on philosophical and scientific subjects. She added that the practice of holding colloquia was entirely new at that time in Turkey and even still rare in the United States (Kaynaradağ, 1999, pp. 22f.).

An important witness of Reichenbach’s activity is the Turkish historian of philosophy and thought Hilmi Ziya Ülken (1901–1974).⁵⁴ Ülken mentions in his *Türkiye’de Çağdaş Düşünce Tarihi* [History of Contemporary Thought in Turkey] that Reichenbach, together with professors from the Faculty of Letters and the Faculty of Science, founded an Association of Natural Sciences (*Tabiat İlimleri Derneği*), where he presented his theory of knowledge entitled “*empirisme logistique*” (logistical empiricism) as well as the principles of probabilistic logic at courses, seminars and lectures given between 1933 and 1936 (Ülken, 1966, p. 692).

In a report on the activities of the Turkish Philosophical Society, “*Yeni Felsefe Cemiyeti ve Türkiye’de Felsefe Cemiyetinin Tarihçesi*” [The New Philosophical Society and the History of the Turkish Philosophical Society] published in 1943 in the sociology journal of Istanbul University, Ülken devotes several pages to a colloquium regularly organized by Reichenbach (Ülken, 1943, pp. 395–400). In it he gives a description of several sessions and emphasizes the importance of the discussions that took place, bringing together professors, advanced students or simply those curious and interested. Held over three years, with one session every two weeks, this colloquium brought together a relatively small but highly qualified and specialized audience, allowing for in-depth discussions spread over several sessions, depending on the subject (Ülken, 1943, 395f.). According to Ülken, Reichenbach initially wanted every faculty member to give a lecture within the framework of the colloquium, which was

⁵³ In an article giving insight into the attitude and difficulties of German professors in Istanbul regarding the languages of instruction, Leo Spitzer mentions in particular the case of “the philosopher”—presumably Hans Reichenbach—who “divided his ‘seminar’ into three sections according to the three world languages understood by his listeners” (Spitzer, 1936, p. 231). On this, see Roure (2022b, p. 153).

⁵⁴ Ülken was the Philosophy and Sociology Teacher at the Galatasaray High School. After a research stay in Berlin in 1933 (Ülken, 1943, p. 395), he became Assistant Professor of Turkish Cultural History at the Department of Philosophy. He took part in the foundation of the new Turkish Philosophical Society in 1931 (Kaynaradağ, 1994, p. 7).

however impossible to put into practice. The first lecture, given by Ülken himself, was a presentation of “Cassirer’s book on the concept of substance and the concept of function” (see Cassirer, 1910), which gave rise to discussions on the links “between the school of neo-Kantism and the new school of logistic realism” (“*yeni Kantçılık ile yeni realist logistik mektepler arasında*”) (Ülken, 1943, p. 396).⁵⁵ The second lecture was a presentation by Reichenbach on his study of the question of space and time, with a discussion of the principles of Einstein’s physics and the consequences for “the new scientist philosophy” (*yeni ilimci felsefe*). This discussion was prolonged in following sessions with a conference on “the principles of the philosophy of logistical empiricism” (*empirisme logistike felsefesinin esasları*), in which philosophers and also scientists in the disciplines of natural sciences participated⁵⁶ (Ülken, 1943, p. 396). Ülken mentions another lecture by Reichenbach on probability logic (*ihtimaliyet mantığı*) and on the application of the probabilistic conception to the natural sciences, followed by a lively discussion in which the physiologist Hans Winterstein⁵⁷ and the physicist Harry Dember⁵⁸ took part by raising critical objections. Other sessions mentioned by Ülken include a lecture on “American philosophy” by the Robert College philosophy teacher Eleanor Bisbee⁵⁹ (Ülken, 1943, p. 397); another lecture, given by Ülken on determinism in the social sciences, based in part on Neurath’s “positive sociology,” gave rise to a debate between Kessler and Reichenbach, the latter advocating a probabilistic approach and the use of statistics in the social sciences (Ülken, 1943, pp. 397f.).

The report given by Ülken bears witness to the fact that the colloquium organized by Reichenbach had a reach far beyond the Department of Philosophy, and that Reichenbach transposed the interdisciplinary practices of the Berlin Group to Istanbul. These activities were also accompanied by an important development in publications related to logical empiricism. In addition to his active participation in the colloquium organized by Reichenbach, Ülken contributed greatly to this reception of logical empiricism in the 1930s, as will be shown in the following section.

⁵⁵ On the importance of this work by Cassirer and the central role of the probability function in Reichenbach’s early epistemological views, see Padovani (2011, pp. 47ff).

⁵⁶ Ülken unfortunately gives little information on the identity of participants from disciplines other than philosophy. This deserves to be explored further.

⁵⁷ In 1933, Hans Winterstein (1879–1963) was dismissed from his position as university professor and director of the institute of physiology in Breslau (Wrocław) due to anti-Semitism.

⁵⁸ Harry Dember (1882–1943) was professor at the Institute of Physics at the Technical University of Dresden before being dismissed in 1933 due to anti-Semitism.

⁵⁹ Eleanor Bisbee is listed among the people Reichenbach thanks in the preface of his book *Experience and Prediction* for “help in linguistic matters and reading of proofs” (Reichenbach, 1938a, p. viii). About Eleanor Bisbee, see Irzik, 2011, p. 174 and Eleanor Bisbee Papers, Hoover Institution Archives (Stanford University).

6 The reception of Logical Empiricism in Turkey in the 1930s.

Two vectors of internationalization and science communication, academic journals and international congresses,⁶⁰ show Reichenbach's production and networking practices during his stay in Istanbul. These activities made important discussions within the field of logical empiricism possible. They also contributed to the international diffusion of this paradigm, especially in Turkey and France. Reichenbach's publishing activities highlight his fruitful collaboration with his colleague Hilmi Ziya Ülken, who was one of the first to disseminate logical empiricism in Turkey. On the other hand, in international congresses, one sees dissension with contemporaries such as Ziyaeddin Fahri Fındıkoğlu, who worked to discredit Reichenbach and "neo-positivism" more generally. Thus, in Istanbul, the reception of Reichenbach's philosophical views was polarized from the outset through these two sociologists, who were initially his colleagues at the Department of Philosophy.⁶¹

6.1 Hilmi Ziya Ülken's contribution to the introduction of Logical Empiricism in Turkey

Reichenbach helped arrange for the publication of texts related to logical empiricism in Turkish, based mostly on then-contemporary French publications. Ülken translated a short book of Moritz Schlick under the title *İlim ve Felsefe* [*Science and Philosophy*] that rejects the opposition between logical positivism and realism—an opposition that would become central in Reichenbach's theory of knowledge. In his short preface, Ülken presents Schlick as a major figure of the "new logical and scientific philosophy represented in Vienna and Berlin and distinct from the English school" (Schlick, 1934b, 3f.). Published in the same book collection of the newspaper "Vakit" [Time] as Schlick's, a short book of Reichenbach was translated by Ziya Somar⁶² under the title *İlmî Felsefe* [*Scientific Philosophy*] (Reichenbach, 1935c; see also Reichenbach, 1932).

These translations accompanied the preparation of the second and final issue of the journal *Felsefe Yıllığı* [*Annals of Philosophy*], the press organ of the Turkish Society for Philosophy, edited by Ülken in 1935. Years later, Ülken described how this issue was the most important publication on logical empiricism in Turkey (Ülken, 1966, pp. 692–694). This issue was indeed largely devoted to works on logical empiricism,

⁶⁰ For an in-depth study of Reichenbach's participation in journals and congresses, I refer the reader to two articles (Roure, 2020a, 2022a) from papers I presented in the framework of a project of the DFG Research Group led by Andrea Albrecht (Heidelberg), Lutz Danneberg and Ralf Klausnitzer (Berlin) on "Germany's International Academic Relations between 1933 and 1945": „Wir sagen ab der internationalen Gelehrtenrepublik“? Internationale akademische Beziehungen Deutschlands von 1933 bis 1945.

⁶¹ Strictly contemporaries, Ülken and Fındıkoğlu shared similar trajectories. Both were sociologists, French speakers, and high school teachers before the reform (see note 54). In the 1930s, they both had an intense editorial activity, and worked in close collaboration with the exiled philosophy professors at Istanbul University. In spite of this, their only cooperation consists in the publication of a book on Ibn Khaldun (Fahri [Fındıkoğlu] & Ziya [Ülken] 1940).

⁶² Ziya Somar (1906–1978), who had studied in the Department of Philosophy before the reform, made a career as a high school teacher in Izmir and in Istanbul.

but it also discussed developments in the field of scientific psychology with contributions on *Gestalt* theory, one of the main interests of the Berlin Group. In this issue, works by *Gestalt* psychologists such as Kurt Koffka, Wolfgang Köhler, David Katz and Max Wertheimer were reviewed by Mümtaz Turhan (Turhan, 1935), who had studied in Germany between 1928 and 1935, writing his doctorate thesis under the direction of Max Wertheimer (Turhan, 1937). In 1936, Turhan was appointed as Wilhelm Peters' assistant, interpreter, and translator at the Istanbul University Faculty of Letters.

A defining aspect of the reception of logical empiricism in this issue of *Felsefe Yıllığı* is that it essentially relayed the French reception, which developed rapidly in parallel with the preparation of the Parisian congresses of 1935 and 1937, in which Reichenbach also actively participated. In addition to book reviews by Reichenbach, Philipp Frank and Moritz Schlick, published in French by the Hermann publishing house, this issue also contained Turkish translations of articles originally published in *Erkenntnis* (Carnap 1935, Reichenbach, 1935b). It is Reichenbach's translated article on "the logical foundations of the concept of probability" in which he expounds upon his solution to the problem of induction, published in German in 1933 and in French in 1935 (Reichenbach, 1933, 1935a). Nusret Şükrü [Hızır], who had translated this article, also translated a report on the 8th International Philosophy Congress—published in the same issue—which took place in Prague in 1934 (Ülken, 1935, pp. 347–353).

Other contributions in this issue can be linked to the Berlin Group's activities related to physics and psychology. For example, the translation of two articles by the French physicist and Nobel Laureate Louis de Broglie (1892–1987)⁶³ reflects Reichenbach's willingness to strengthen ties with French academics in a common effort to promote the philosophy of science. Indeed, Louis de Broglie had previously agreed to head the French Society of the Philosophy of Science, which Louis Rougier hoped to establish as a French equivalent to the groups of Vienna and Berlin, although this project was never realized (Padovani, 2006, p. 230). Also noteworthy are the contributions of the philosopher and psychologist Richard Müller-Freienfels (1882–1949), originally published in the journal *Recherches philosophiques* and translated into Turkish by Mustafa Şekip Tunç. One of these articles was initially presented as a lecture: "*Die Hauptrichtungen der gegenwärtigen Psychologie*" [Major Trends in Contemporary Psychology] given in 1928 by the *Gesellschaft für empirische Philosophie*, where Müller-Freienfels gave a second lecture in 1934 (Danneberg & Schernus, 1994, pp. 457f.).

The only original and untranslated contribution in this issue was that of the Friedrich Wilhelm University philosophy professor David Baumgardt (1890–1963), who was dismissed from his position in 1935 due to anti-Semitism (Tilitzki, 2002, p. 603). For this issue, Baumgardt prepared a short essay, "*Die Gesamtlage der Philosophie in Deutschland*" [The Situation of Philosophy in Germany], where the scientific philosophy of modern empiricists such as Hans Reichenbach and Walter Dubislav is portrayed as a safeguard against the irrational tendencies of certain trends in German metaphysics, particularly those popular at the time in Nazi Germany, such as Ludwig

⁶³ The articles on "*Déterminisme et causalité dans la physique contemporaine*" [Determinism and Causality in modern Physics] and on "*Ondes et corpuscules dans la physique contemporaine*" [Waves and corpuscles in contemporary physics] were initially published in the *Revue de Métaphysique et Morale* before being translated into Turkish by Ülken (Roure, 2020a, p. 339).

Klages' *Lebensphilosophie*, Othmar Spann's political theory and above all Martin Heidegger's ontology (Baumgardt, 1935, pp. 309f.; Roure, 2020a, pp. 343–345).

In *Felsefe Yılığ*, Ülken presented the philosophy of the Vienna Circle and that of the Berlin Group in an indiscriminate manner, stressing that which unified these movements over on their internal disagreements, using expressions such as “Scientific Philosophy” (*ilmi felsefe*) and “New Positivism” (*yeni pozitivizm*) to speak of them (Ülken, 1935, p. 330). Moreover, in his book *Yirminci Asır Filozofları* [Philosophers of the 20th Century], published in 1936, Ülken devoted an entire chapter to the “Philosophy of Physics” (*Fizik Felsefesi*), divided into three sections: Ernst Mach, Albert Einstein and Logical Empiricism.⁶⁴ Logistic or logical empiricism (“*ampirizm logistik*” or “*mantikî ampirizm*”) is presented as a unified European movement, not only limited to Vienna and Berlin but also present in Poland, Finland, Turkey, Sweden, and which had been received sympathetically in France, especially by the physicist Marcel Boll, the logician Louis Rougier and the philosopher Gaston Bachelard (Ülken, 1936, p. 322). Ülken emphasizes the role of international congresses and of the journal *Erkenntnis* in this international diffusion of logical empiricism. After this general presentation of the movement, Ülken introduces its different representatives: Moritz Schlick, Philipp Frank, and Hans Reichenbach, who is the subject of a more detailed examination. The section ends with a long piece devoted to two Cambridge professors: Arthur Eddington (1882–1944), who introduced Einstein's theory of relativity to the English-speaking scientific community, and James Jeans (1877–1946).

Despite Reichenbach's impact on the Department of Philosophy and his importance there, the interest in logical empiricism in Turkey gradually faded after his departure for Los Angeles. This situation can partly be explained by the circumstantial character of this reception, linked to Reichenbach's efforts to make logical empiricism known in Turkey. However, and above all, the strong criticism of Reichenbach's position, which was assimilated to a new positivism, should be seen as a major reason for it. This criticism was to take hold during the Second World War and especially in the IUDP.

6.2 Ziyaeddin Fahri Fındıkoğlu and his critique of Logical Empiricism as Neopositivism

Regardless of the efforts undertaken by Ülken to make logical empiricism known and to develop the philosophy of science in Turkey, logical empiricism was attacked and condemned as a “neo-positivism.” This can be seen in the activities of a lesser-known figure in the dissemination of logical empiricism in the 1930s in Turkey, that of the sociologist Ziyaeddin Fahri Fındıkoğlu (1901–1974). The example of Fındıkoğlu is interesting insofar as it attests also to the changing attitude towards Reichenbach and a shift in the reception of logical empiricism in Turkish Academia. Fındıkoğlu adopted

⁶⁴ As Ülken mentions it in a note (Ülken, 1936, p. 302), this chapter consists mainly of a Turkish translation of texts by Schlick, Bachelard and Reichenbach. Ülken's presentation of contemporary philosophy, based on a division between “phenomenology” and “neopositivism,” is essentially based on French-language sources. The chapter devoted to phenomenology, for example, is in fact a translation of a work by Georges Gurvitch published in 1930, *Les tendances actuelles de la philosophie allemande* [Current Trends in German Philosophy].

increasingly critical, even hostile positions towards Reichenbach and his “doctrine.” After a stay in Berlin in 1936, Fındıkoğlu published, in a Turkish journal, a study on the University of Berlin Department of Philosophy, where he publicly attacked Reichenbach, calling him an impostor and presenting him as a stranger to philosophy before his departure from Germany. He claimed that Reichenbach was not a real philosopher and that his appointment in Istanbul was fraudulent, and only made possible due to prevailing ignorance in Turkey and with the support of “foreign specialists” who organized the reform and who also had “no clue” (Fındıkoğlu, 1936, pp. 368f., 447).

From 1934 Fındıkoğlu worked as an assistant of the sociologist Gerhard Kessler who was hired as Ordinarius Professor in the Department of Philosophy at the same time as Reichenbach. Fındıkoğlu did not work directly with Reichenbach, but showed at first a certain interest for Reichenbach’s ideas, translating for example a text on “neopositivism” from the already mentioned monography by Ernst von Aster (v. Aster, 1937). Moreover, Reichenbach and Fındıkoğlu both participated in international philosophy congresses, in Prague (1934) and in a following one in Paris—the Descartes Congress (1937). Between these congresses, Fındıkoğlu published a brochure entitled *Felsefe Kongrelerinde Türkiye* [Turkey at the Philosophy Congresses] to promote the creation of an official national delegation to represent Turkey at such congresses. He also actively campaigned for this in his own monthly journal of ethics and sociology *İş* (Action), calling for a more genuine Turkish participation.

This brochure brings together texts that show the evolution of his relationship with Reichenbach. At the beginning of this brochure, in a text written immediately after the Congress in Prague, Reichenbach was still praised as a brilliant representative of Istanbul University (Fındıkoğlu, 1937a, pp. 2, 6). But the Parisian Congress of Scientific Philosophy in 1935, where Reichenbach gave the opening speech on behalf of the Berlin Group, however, gave Fındıkoğlu the opportunity to express his disagreement with Reichenbach and his movement, through the translation of a pamphlet against logical positivism by the French metaphysician Louis Lavelle (Fındıkoğlu, 1937a, pp. 12–17). In this text, originally published in the newspaper *Le Temps* on 27 December 1936, Lavelle describes “the school of neo-positivism” as “nominalist scholasticism” and “intellectual asceticism.” He presents it as an attitude of distrust of thought and a limitation of the mind that, in his opinion, should renounce calling itself philosophy. On the basis of a similar caricatured understanding of the “neopositivism,” Fındıkoğlu continued to accuse Reichenbach, throughout the early 1940s, of having had a negative influence on the development of social sciences in Turkey (Fındıkoğlu, 1941, p. 156).

The 1937 Descartes Congress highlighted even deeper divergences between Reichenbach and Fındıkoğlu. In a proposal to the Descartes Congress, which was not accepted but published in the journal *İş*, Fındıkoğlu presents the Turkish reception of Descartes as proof that Turkey belongs in Europe, highlighting the prominent role of the “New Turkey” in the project of “Cartesianising the Muslim Oriental World” (Fındıkoğlu, 1937b, p. 86). In his journal, Fındıkoğlu also published a discourse by Mustafa Şekip Tunç as the representative of the IUDP, in which the later presents, in Bergsonian terms, the new Turkey as the inheritor of Descartes and his fight against the obscurantism of “centuries of mystical fatalism” (Şekip [Tunç], 1938, p. 7). In

contrast to these nationalistic reappropriations of the figure of Descartes, Reichenbach's contribution to the Descartes Congress with his paper "Scientific Philosophy" dealt with the fundamental difference between Cartesian epistemology and the empiricist views of the Berlin Group (Reichenbach, 1937a, p. 87), defending a probabilistic conception of knowledge. The model of scientific philosophy no longer implied the certainty of mathematical knowledge, as it was for Descartes, but rather the empirical knowledge of physics, which is necessarily uncertain because it is predictive.⁶⁵ It is on the same basis that in this paper Reichenbach opposed all *a priori* philosophies—such as ontology, phenomenology and any philosophical system based on immediate intuition (Reichenbach, 1937a, p. 91).

Although it sheds light on the dissonance between Reichenbach and some of his colleagues at Istanbul University, his active participation in philosophy congresses introduces nuance to the idea of scientific isolation during his stay in Istanbul.⁶⁶ The reception of logical empiricism by Ülken and briefly by Findıkoğlu may have had internal, institution-related causes resulting from Reichenbach's position of authority at Istanbul University. In what follows, I show a more discrete but active reception of Reichenbach's philosophy in the context of his teaching activities, which had an impact in the training of secondary school teachers and after the Second World War in the development of philosophy of science in Turkey.

7 Reichenbach's teaching style and the work of his assistants and students at the IUDP

As an Ordinarius Professor of Logic and Systematic Philosophy between 1933 and 1938, Reichenbach played an important role in the reorganization of the Department of Philosophy. He lectured on the philosophy of science, symbolic logic and the history of philosophy, the latter at least for one year before Ernst von Aster's appointment in 1936. Reichenbach also introduced a new method of teaching philosophy and undertook interdisciplinary research, seeking to build bridges between the Department of Philosophy and the various disciplines of the Faculty of Science. He not only sought to attract natural science students to philosophy (Irzik, 2011, p. 172), but in order for philosophy students to be provided with an overview of the natural sciences, he redesigned the philosophy curriculum. In a text recounting memories of her studies at the Department of Philosophy, Matilt Kamber wrote the following about the interdisciplinary teaching methods Reichenbach introduced at Istanbul University:

⁶⁵ In Reichenbach's words: "*Il n'y a pas de connaissance synthétique a priori; toutes nos connaissances sont, ou empiriques et incertaines, ou analytiques et certaines. Il n'y a pas de certitude hors des tautologies*" [There is no a priori synthetic knowledge; all of our knowledge is either empirical and uncertain, or analytical and certain. There is no certainty outside of tautologies] (Reichenbach, 1937a, p. 88).

⁶⁶ It is moreover the networking related to these activities that enabled Reichenbach to prepare his departure from Turkey, particularly via his contacts with Charles W. Morris, who first met Reichenbach at the Prague Preparatory Conference in 1934 and helped him with the publication of his book *Experience and Prediction* as well as with his appointment as a Professor of Philosophy at the University of California, Los Angeles (Cohen & Reichenbach, 1978, pp. 39f.).

Philosophy belonged to the Faculty of Letters, yet Professor Reichenbach put philosophy into a unique position. Like regular science students, philosophy students had to attend classes in the Faculty of Science. To be more specific, they had to study two theoretical sciences and one experimental [science] each semester for four years. So they studied mathematics, biology, physics, medicine, chemistry, physiology, and genetics in addition to the different humanity courses such as literature, sociology, psychology, history, etc. (Kamber, 1978, pp. 37f.)

A quick overview of the graduation theses of Reichenbach's students—most of whom were women—shows their ability to deal with philosophical issues of modern logic and empirical sciences. Among them, Feride Noyan⁶⁷ wrote her graduation thesis on *The Problem of the Reality of Atoms (Atomların Şeniyeti Meselesi, 1937)*. In the text, she uses various course notes of the exiled professors—those of Reichenbach but also of von Aster and Alexander Rüstow⁶⁸—and refers to popular science books such as Reichenbach's *Atom and Cosmos* (1930 for the first German edition), as well as to important works of physicists such as Niels Bohr, Charles Fabry and Jean Perrin.⁶⁹ Another student, Zehra Raif Akaç, based her graduation thesis “Logistic Objections against Logic” (*Lojistiğin Lojiğe İtirazları, 1939*) on the notes of Reichenbach's logic courses and on Susan Stebbing's book *A Modern Introduction to Logic* (Stebbing, 1930). Zehra Raif's name appears in the list of assistants in the Department of Philosophy for the year 1937/1938 (*Edebiyat Fakültesi 1937–1938 Ders Yılı Talebe Kılavuzu*, p. 70), but her work was completed after Reichenbach's departure and was therefore evaluated by Ernst von Aster and Mazhar Şevket İpşir[oğlu].

Following their graduation, two of Reichenbach's students spent their careers split between the United States and the Robert College for Girls in Istanbul: Neyire Adil Arda (Baysal) and the aforementioned Matilt Kamber.

Neyire Adil Arda (1914–1999) received her education at the American College for Girls in 1931⁷⁰ and studied philosophy and psychology at Istanbul University. She began her studies before the reform, continuing afterwards with great interest in the courses delivered by Mustafa Şekip Tunç and İsmayıl Hakkı Baltacıoğlu (1886–1978);

⁶⁷ According to an announcement in the newspaper *Cumhuriyet* (8.10.1938), she became a high school teacher at the Istanbul High School (*Istanbul Lisesi*).

⁶⁸ In 1933, Alexander Rüstow (1885–1963) was appointed at Istanbul University as a professor for economic geography and economic history. He participated in discussion circles organized by Reichenbach (Irzik, 2011, p. 174). Like Reichenbach and von Aster, he lived in the Kadıköy district on the Asiatic side. In his monumental critique of civilization entitled *Ortsbestimmung der Gegenwart, Eine universalgeschichtliche Kulturkritik*, Rüstow mentions, in connection with his own reflections on Mauthner's *Sprachkritik*, the long discussions he had there with Reichenbach, on the merits of the new logic and the methodological value of behaviorism (Rüstow, 1957/3, pp. 48, 544).

⁶⁹ Feride Noyan, *Atomların Şeniyeti Meselesi, 1937*, Istanbul University, Library of the Faculty of Letters, TBa 1139.

⁷⁰ In an interview with Kaynaradağ (Kaynaradağ, 1999 pp. 19–26), Neyire Baysal recounts that when she graduated from high school (*Erenköy Kız Lisesi*) as top of her class in 1927, her father Hacı Adil was opposed to letting her study abroad. Since she wanted to study at the Mathematics Department but needed to master a foreign language to do so, she first studied at the Robert College for Girls, where she was accepted as a scholarship student. She learned English there and developed an interest in philosophy and psychology. She obtained a scholarship to study psychology in London, but her father again refused to let her go, arguing that she could do the same at Istanbul University and that she could go abroad to do her doctoral studies (Kaynaradağ, 1999, pp. 20f.).

she also spoke of Orhan Sâdeddin as “a good professor” (Kaynaradağ, 1999, p. 21). The reform of 1933 permitted her to study, in addition to one’s main discipline, two other disciplines in another faculty. Following the advice of Tunç,⁷¹ Neyire Adil Arda oriented her studies towards Reichenbach’s philosophical courses. As a secondary subject, she chose mathematics, as taught by Richard von Mises and Kerim Erim. She also attended psychiatry courses given by Mazhar Osman and Hans Winterstein (Kaynaradağ, 1999, p. 22). She also mentioned that she was close to the chemist Fritz Arndt, who lived like her in Bebek and with whom she took the boat to go to the university (Kaynaradağ, 1999, p. 26).

These choices reflect the interests of Reichenbach and his circle; the intellectual profile of Neyire Adil Arda, of all of Reichenbach’s students, best corresponded to the work undertaken in the program of scientific philosophy. Her graduation thesis was “The Problem of Induction” (*İstikra Problemi*, 1935), for which she received a result equivalent to an A (“pek iyi,” very good) from Reichenbach himself. This nearly 40-page study discusses the works of English scholars such as the Oxonian sinologist Homer H. Dubs, *Rational Induction: An Analysis of the Method of Science and Philosophy* (Oxford 1930) and the economist John Maynard Keynes, American philosophers of sciences such as Ernest Nagel and Charles Sanders Peirce, Alfred Whitehead’s book *Process and Reality* (1929) and the views of Hans Reichenbach on his probability theory as discussed in his paper “The logical foundations of the concept of probability” (Reichenbach, 1933). The latter paper, as mentioned, had been translated into Turkish by Nusret Hızır and published in *Felsefe Yıllığı* (Reichenbach, 1935b). Neyire Arda officially became Reichenbach’s assistant and worked as his interpreter during his classes. In the preface of his book *Experience and Prediction*, Reichenbach thanked her in person: “I welcome the opportunity to express my warmest thanks to friends and students here in Istanbul and [...] especially to my assistant, Miss Neyire Adil-Arda, without whose constant support I should have found it very much harder to formulate my views.” (Reichenbach, 1938a, p. v). It is therefore highly plausible that some of her activities were related to the preparation of this book, although more research is needed to better clarify the nature and extent of Arda’s activity.

After her graduation, Neyire Adil Arda attended Harvard University with the aim of writing a doctoral thesis on the notion of “problem”⁷² under the supervision of Clarence Irving Lewis (Kaynaradağ, 1999, pp. 24f.). She spent two years at Radcliffe College (1936–1937) and one year at the University of California, Los Angeles (UCLA), preparing her doctoral thesis.⁷³ According to Paul Wienpahl’s notes on Reichenbach,

⁷¹ Neyire Adil Arda initially wanted to study psychology. She ended her interview with Kaynaradağ by expressing her regrets for having followed Tunç’s advice: “If only Şekip Tunç had not sent me to Reichenbach, if only I had stayed with him to study psychology. I would have gone to Switzerland to do a thesis on child psychology. In this field, I would have been more useful in my country. I am not saying this to make Reichenbach guilty. But that’s what I think when I see the flow of events that followed.”

⁷² Referring to an unpublished paper by Kaynaradağ, Yaman Örs specifies that the title of Neyire Arda’s doctoral thesis was “The Concept of Problem in Different Sciences” and that this work was based on her notes from a seminar given by Reichenbach in Istanbul (Örs, 2006, p. 197).

⁷³ An interesting coincidence is that the philosopher Susanne K. Langer (1895–1985) from Radcliffe College participated in the Fifth International Congress for the Unity of Science at Harvard University (1939) with a talk on “The Scope of Problems as Limit of Intellectual Fields” (Stadler, 2015, p. 190).

the arrival of Neyire Adil Arda at the Department of Philosophy at UCLA coincided with that of Reichenbach.⁷⁴ After spending one year in Los Angeles, Neyire Adil Arda was called back to Istanbul University (ACG *Alumni Bulletin*, 1960, p. 55) in 1939. University records indicate that upon her return to Turkey, she taught sociology and statistics applied to the social sciences as Ülken's assistant. In her own words, she decided to return to Turkey because of the war and left her books, notes and photos related to Reichenbach in the United States (Kaynaradağ, 1999, p. 25). She continued to work as an assistant in the Department of Philosophy and Ernst von Aster accepted supervising her doctoral thesis, which she had begun in the United States, and which remained unfinished. Unhappy that Adil Arda spent much more time on her doctoral research than her teaching duties, Ülken reported her to the administration, calling her work irregular (*devamsız*). This greatly upset her and led to her to resign after von Aster's death in 1948 (Kaynaradağ, 1999, p. 25). After serving as an assistant of philosophy from 1939 to 1949 at Istanbul University, she married the architect Halûk Baysal (1918–2002) and in 1960 it was reported that “since 1949 she has done social work and been a housewife” (ACG *Alumni Bulletin*, p. 58). That same year, she was appointed as the Turkish Vice-President of the Robert College for Girls in Istanbul, Arnavutköy, where she also worked as an instructor of logic until 1972.⁷⁵

Matilt Kamber completed her graduation thesis on “The Mathematical Concepts in Locke and Hume” (*Hume ve Locke’ta Riyazî Mefhumlar*) in 1936. Her work was approved by Reichenbach as well as by Tunç and Halil Vehbi Eralp (1907–1994), who was the assistant at the Chair of History of Philosophy from 1933. In addition to the use of Reichenbach's courses notes in her study, all the literature cited was related to an American school of psychology initiated by William James (1842–1910).⁷⁶ Kamber worked as a philosophy teacher at the American College for Girls in Istanbul (*The Record*, 1966) and went to California where she had relatives.⁷⁷ In the 1970s, she worked as a philosophy and logic instructor at Columbia College (Lopeman & Ogle, 1982).

Only two of Reichenbach's students were able to continue their academic career in Turkey, although outside IUDP. Nusret Şükrü Hızıroğlu, better known as Nusret

⁷⁴ “The arrival of Miss Neyire Adil Arda from Turkey gave me another view of Reichenbach. Here was a student who had followed him almost half way around the world to pursue her studies with him” (Cohen & Reichenbach, 1978, p. 47).

⁷⁵ “Neyire Baysal, ACG 31 The Turkish Director of ACG between 1960 and 1971 passed away in April 1999. After graduation from ACG, Neyire Baysal studied in the Department of Philosophy of Istanbul University and graduated in 1935. After her retirement from the office as the Turkish Director she continued to be an instructor of Logic until 1972.” RCQ, SPRING 1999, p. 34 (Alumni News).

⁷⁶ The bibliography of her work refers to works by American psychologists such as *The Persistent Problems of Philosophy* (1907) by the Mary Whiton Calkins (1863–1930), *An historical introduction to Modern Psychology* (1929) by Gardner Murphy (1895–1979) and *Locke's Theory of Knowledge and its Historical Relations* (1931) by James J. Gibson (1904–1979).

⁷⁷ Seyla Benhabib (2006) refers to Kamber as her philosophy teacher at the American College for Girls: “During the last month before my graduation from the American College of Girls in Istanbul in June 1970, I visited the apartment of my philosophy teacher—Mrs. Mathilde Kamber—a Turkish-Armenian citizen, who had studied with Hans Reichenbach at Istanbul University in the 1930's, and from whom I had learned not only about the Greeks but about Bertrand Russell, A. J. Ayer and Ludwig Wittgenstein. I was honoured to be invited to pick up my seminar paper at my teacher's house. She had just returned from six months visiting relatives in California and was so happy about it!”. See also Benhabib (2015).

Hızır (1899–1980), began work as Reichenbach’s assistant and translator due to his knowledge of German. He had previously studied physics in Germany and afterwards wrote a graduation thesis approved in 1939 by Ernst von Aster on *The Classification of Sciences (İlimleri Tasnifi Hakkında)* that contained a section about Reichenbach’s views on this topic. Among his sources, Hızır used the *Systematische Wörterbuch der Philosophie* [Systematic Dictionary of Philosophy] by Karl Wilhelm Clauberg and Walter Dubislav (Clauberg & Dubislav, 1923), as well as Paul Oppenheim’s works on the classification of sciences and on the formation of scientific concepts (Oppenheim, 1926, 1928). It was only after the Second World War that Hızır was able to become a philosophy professor at Ankara University.

The other student, Nezahat Nazmi Tanç, better known by her married name, Nezaht Arkun, was able to pursue an academic career at Istanbul University, but in the Department of Psychology. Her graduation thesis “Logical Behaviorism according to Carnap and Reichenbach” (*Mantıkî Behaviorism’in Carnap ve Reichenbach’a Göre Tefsiri*) was published in the only issued volume of the journal of the Istanbul philosophy seminar (Arkun [Tanç], 1939). The issue had been prepared by Reichenbach but was published only after his departure and edited by Eralp (Roure, 2020a, pp. 350f.). In 1948, Arkun completed her doctoral thesis, “Statistical Study on Suicide in Istanbul” (*İstanbul’daki İntiharlar Üzerine İstatistikî bir Araştırma*), under the supervision of Wilhelm Peters (Toğrol, 1972, pp. 61f.). In 1968, she became a professor of psychology at Istanbul University, where she mainly pursued studies in social psychology, using statistical methods (Arkun, 1963, 1965).

8 The IUDP after Reichenbach’s departure and the development of philosophy of science in Turkey

Despite the importance of Reichenbach’s influence on his students, we can only note that none of his students, not even the most outstanding among them, pursued an academic carrier within the IUDP. The difficulties faced by Reichenbach’s students may partially be explained by the fact that they did not hold a PhD, a qualification that did not yet exist in the Faculty of Letters during Reichenbach’s stay. The requirement that those pursuing an academic career at the Department of Philosophy held a PhD was introduced at the Faculty of Letters in 1937. This administrative change favored the recruitment of Turkish students trained in Germany, where it was possible for them to obtain a PhD (Roure, 2018, p. 44, Roure 2022b, pp. 152, 163f.), to the detriment of the students trained by Reichenbach, who were only holders of a bachelor’s degree. Moreover, students who had studied abroad in the 1930s were again favored over those who had only studied in Turkey by the condition that doctoral students needed to have mastered a foreign language (French, German or English).

This might however not be the only explanation. Reichenbach’s departure for the United States had many consequences, one of which being that he was no longer in a position to support his own students. More importantly, the situation in the IUDP changed profoundly despite von Aster’s expressed willingness to continue the interdisciplinary work undertaken by Reichenbach (v. Aster, 1939, p. 6). This change was obvious for his contemporaries, as shown by Kamber’s complaint about the end of a

“Golden Age of the university”: “Unfortunately, this ideal situation did not last for long, for as soon as Professor Reichenbach moved to the United States, the Department of Philosophy reverted to the old system without any interdisciplinary activity” (Kamber, 1978, pp. 38f.).

Reichenbach’s departure was indeed followed by a wider change of perspective within IUDP. His role there was strongly downplayed, especially among a new generation of PhD graduates trained in Nazi Germany, appointed as professors in the Department of Philosophy from 1939 onwards. After Reichenbach’s departure in 1938 and exacerbated after Ernst von Aster’s death in 1948, the Department of Philosophy, under the leadership of Takiyettin Mengüşoğlu (1905–1984), saw the development of philosophical currents that were openly hostile to logical empiricism and in particular to Hans Reichenbach. Reichenbach had been the target of personal attacks, for example in the doctoral thesis of Mengüşoğlu (Roure, 2021, p. 167). This work, supervised by Nicolai Hartmann⁷⁸ and published in Berlin in 1937, begins with a personal attack against Reichenbach caricatured as “the positivist” (Temuralp [Mengüşoğlu], 1937, pp. 2, 4f.).

Mengüşoğlu was only successfully accepted into the Department of Philosophy after Reichenbach’s departure. There, he worked actively to widely disseminate contemporary strains of German ontology and philosophical anthropology. His efforts to have his former professor Nicolai Hartmann appointed to the chair left vacant by Reichenbach are documented in his correspondence. In the end, Mengüşoğlu was able to arrange for the appointment of Heinz Heimsoeth (1886–1975)—a philosopher and metaphysician close to Hartmann—who occupied this chair from 1950.⁷⁹ In the 1950s, ontology and philosophical anthropology became dominant in this department and almost hegemonic in defining its particular conception of philosophy and modernity.

The hostility towards logical empiricism contributed to the development of a historiographical legend, according to which Reichenbach’s philosophy was largely inaccessible to his audience because of its highly technical nature. Such remarks are actually linked to a willingness to discredit Reichenbach in the field of philosophy, by assimilating him to a physicist or a mathematician. Statements expressing such difficulty or over-technicality of Reichenbach’s thinking essentially came from philosophers who were openly hostile to logical empiricism and who didn’t work with Reichenbach, with the exception of Reichenbach’s assistant Macit Gökberk (1908–1993).

Gökberk, who worked as an assistant at the Philosophical Seminar at the time of the Turkish university reform, disliked being assigned as Reichenbach’s assistant from the very beginning (Berkes, 2014, p. 103). He expressed the difficulties he faced

⁷⁸ It should be noted here that Hartmann agreed, together with Köhler, to supervise the work of Reichenbach’s doctoral student, Carl Hempel. However, Hempel remained in contact with Reichenbach, who was keenly interested in his research on problems of the frequentist conception of probability (Hempel, 1991, 8f.) and put him in contact with Paul Oppenheim, who helped him emigrate to the United States, see Roure, (2022a, p. 117).

⁷⁹ Reichenbach seems to have suggested Philipp Frank as a possible successor to his chair of general philosophy. The so-called “Scuria Report” mentions “Frank from Prague” as well as “Jaspers from Heidelberg” as candidates considered on the Turkish side, while the German authorities considered Otto Friedrich Bollnow (Halm & Şen, 2007, p. 82). The chair remained unoccupied until 1950.

in understanding Reichenbach's philosophy,⁸⁰ which he was supposed to translate. In 1935 Gökberk decided to continue his studies abroad and went to Berlin, which he later explained was based on a desire to improve his German and to prepare a doctoral thesis while taking advantage of lectures by Nicolai Hartmann and Eduard Spranger there (Kaynaradağ, 1986a, pp. 24f.).⁸¹ But Gökberk's is an isolated case however, and the significant collaborative work between Reichenbach and his students, assistants and translators suggest we should contextualize statements on the difficulty and inadequacy of Reichenbach's teaching.

In contrast, several students and assistants who attended Reichenbach's lessons praised the innovative character of his teaching style compared to the memorization-based and top-down, frontal and passive teaching traditions common at the time. Kamber described students' enthusiasm for Reichenbach's classes: "I cannot find [the] words to describe how much we enjoyed these classes and how much of his philosophy was imparted to us in a very simple and lucid manner." Halil Vebhi Eralp, who was from 1933 onwards an assistant at the Chair of History of Philosophy and translated several writings of Reichenbach,⁸² also mentions the vivacity of the seminars and lectures given by Reichenbach and the originality of his concepts. Many students from Istanbul, as well as from Berlin and later the United States, spoke to the fact that Reichenbach was a "virtuoso pedagogue" (in Nusret Hızır's words), respectful of his students and accessible, always seeking to develop dialogue on an equal footing (see Hempel, 1991, pp. 5f.). Neyire Adil Arda noted that

Prof. Reichenbach was a teacher like we had never seen before. His classes were both lively and simple. I sometimes translated his logic lessons. His English was very good and he also had a fairly good knowledge of French. He held the students in high esteem, never put them down, he always wanted to engage in dialogue. He considered the students as colleagues and addressed them saying: "*Kollege*, what do you think about this?" [...] Reichenbach wanted the students to always be "active," he asked them questions and expected them to do the same. However, I remember that many students were taking notes. I couldn't do that because I was translating most of the time. I only managed to take a few small notes. (Kaynaradağ, 1999, pp. 22f.)

⁸⁰ Reichenbach's lectures contrasted with the way of teaching of his predecessors, notably the professor of logic Halil Nimetullah who, according to Gökberk, used to dictate to the students his translation of a book by Lucien Lévy-Bruhl on the "primitive mentality" (Kaynaradağ, 1986a, p. 16), see Roure (2022a, pp. 114f).

⁸¹ Gökberk noted himself his incompatibility with Reichenbach's approach to philosophy, due to his lack of mathematical culture. He expresses his gratitude for the fact that Reichenbach welcomed with "great tolerance" his choice to continue his education with philosophers like Nicolai Hartmann and Eduard Spranger, who were both openly opposed to his own philosophical views.

⁸² Eralp translated Reichenbach's courses on the history of philosophy (reprint in Reichenbach, 2013) and his handbook of symbolic logic from French (Reichenbach, 1939a, 1939b). He also translated from French into Turkish Reichenbach's article on "Causality and Induction" (Reichenbach, 1937b, 1939c), which he considered an enlightening text for anyone interested in philosophy (Kaynaradağ, 1986a, p. 68). This publication followed Reichenbach's participation in a session of the French Philosophical Society on June 5, 1937, where Reichenbach was welcomed by Léon Brunschvicg as the best interpreter of the theory of relativity, recommended by Einstein himself.

Encouraging interdisciplinary and scientific work,⁸³ he also developed multilingual and participatory teaching methods in which translation had a central role (Roure, 2022b, pp. 153f.). Reichenbach took the work of his assistants very seriously and made himself available as needed to prepare the interpretation with them in advance⁸⁴ to facilitate better communication with the students, even more so as he used to speak freely without notes. Based on his knowledge of Turkish and because of the attention he paid to his audience, he was also able to check the accuracy of the translations.⁸⁵ Kamber gives some indications on Reichenbach's pragmatic approach to the different languages known to his students and on his own method of learning foreign languages.⁸⁶

What can be seen as a defeat for Reichenbach's work within the Department of Philosophy was counterbalanced by the activity of his students, mainly in connection with the development of the social sciences but also modern logic and philosophy of sciences. The teaching activities of Reichenbach's students in high schools as well as in universities should be considered not as a doctrinal allegiance to Reichenbach but much rather as different contributions to develop his conception of scientific philosophy.

In the field of experimental psychology, the work of Nezahat Arkun and of Mümtaz Turhan, who had contributed to *Felsefe Yıllığı* II, participated in the dissemination of behaviorism, psychoanalysis and *Gestalt* psychology in Turkey. They were able to pursue an academic career at the Department of Psychology at Istanbul University, which was established in the continuation of the efforts of Reichenbach and Peters. Also, the flourishing development of modern logic and philosophy of sciences in Ankara from the 1960s relates to Reichenbach's legacy. His student and assistant Nusret Hızır, who is considered to be Reichenbach's principal disciple in Turkey (Örs, 2006, pp. 198–201), was able to continue his academic career in philosophy after the Second World War at Ankara University and become an active member of the Philosophy Society of Turkey. Hilmi Ziya Ülken, who had been the main mediator of logical empiricism in the 1930s Turkey and published in 1942 his book *Mantık Tarihi*

⁸³ Reichenbach occasionally complained, in his private correspondence, about the difficulty of teaching students with no scientific background. See for example the correspondence with Rougier, presented by Padovani, 2006. It should be noted here that unlike Rougier, whose remarks about his own students at Cairo University are openly racist, Reichenbach expressed respect and sometimes even enthusiasm about his students at Istanbul University. When Reichenbach mentioned the unpreparedness of the students and the low quality of secondary education in Turkey, it was rather the administrative constraints that discouraged him.

⁸⁴ Reichenbach proposed together dedicating two hours per week to rehearse the course Gökberk would interpret. Paradoxically, this attempt to overcome the difficulties of translation seems to have increased Gökberk's frustration, as he wrote in a letter to his wife (15.04.1934), see Roure 2022b, p. 162.

⁸⁵ "On several occasions I remember his catching a mistake of translation, knowing that the interpreter had not translated what he had said, and this he would detect not only by examining the facial expressions of the students but also by recognizing a Turkish word with which he was familiar and which he thought might contradict what he had said in his lecture" (Kamber, 1978, pp. 38f.).

⁸⁶ "One day he was supposed to give a lecture in English and, after completing a very impressive address, he told us that he had used only 1500 different words in English. When I asked him how he could manage with so few words, he said that he had learned those English words which, according to a certain calculation which he himself had made, were the words that enabled him to lecture on that particular problem with no difficulty. Before he left for the United States, he had improved his English and French and could also make very intelligent guesses about what we were saying in Turkish" (Kamber, 1978, p. 39).

[History of logic], also left the IUDP after 1960 to join the University of Ankara, where he wrote a book on philosophy of science entitled *İlim Felsefesi I* (Ülken, 1968) in which the ideas of Reichenbach and logical empiricism in general were given an important place in a history of ideas perspective. In a chapter devoted to the pluri-valent logic (*birçok değeri mantık*) of his *Felsefeye Giriş [Introduction to Philosophy]*, also published in Ankara, Ülken mentions the work of Reichenbach, Carnap and the Polish School in developing probability logic (Ülken, 1963, pp. 122f.). It is also in Ankara, at the Middle East Technical University (*Ortaođu Teknik Üniversitesi*), that a specific program of philosophy of science and symbolic logic was set up in the 1960s by Teo Grünberg (born in 1927) and Hüseyin Batuhan (1921–2003) (Irzik & Güzeldere 2006, p. 3). The latter had been a student and an assistant of Ernst von Aster and expressed his disappointment with the philosophical orientation of the IUDP after von Aster's death (Roure, 2022b, pp. 167f.). His wife Turan Pamuk, whom he met in the 1940s, had studied philosophy with Reichenbach (Batuhan, 2002, p. 24).

After 1960 and in connection with the influence of the American academic model in Turkey, the philosophy of science and analytic philosophy, in accordance with Reichenbach's program of a "scientific philosophy," found in Ankara a favorable institutional framework for its development (Kafadar, 2000b, p. 429).⁸⁷ On the contrary, after the death of Ernst von Aster in 1948 and until the 1960s, the IUDP remained dominated by philosophical currents such as ontology and philosophical anthropology.⁸⁸

9 Conclusion

The interaction of Reichenbach with his assistants and students as well as the work the latter produced are particularly significant in order to understand the fruitful nature of his stay in Istanbul.⁸⁹ Contrary to the general perception, this stay was not a somewhat sterile period of solitude but a particularly active and productive one. It prolonged

⁸⁷ It is also possible to see in the creation of the Department of Philosophy at the University Boğaziçi a distant filiation with the teachings of Reichenbach. The historian of philosophy Zeynep Davran (1942–2014), a student of Neyire Adil Arda at the Robert College for Girls, took part in founding the Department of Philosophy within the Faculty of Arts and Sciences at Boğaziçi (Kaynarđađ, 1999, pp. 35f.), that contributed in a major way to the institutionalization of philosophy of science in Turkey. After a stay at the University of Pennsylvania, in 1969 she earned a graduate degree with her thesis on George Berkeley ("*Berkeley idealist midir, yoksa empiristmidir?*") [Was Berkeley an idealist or an empiricist?] at Istanbul University before becoming Professor of Philosophy at Boğaziçi University in Istanbul.

⁸⁸ It is significant in this respect that Bruno Baron von Freytag Löringhoff (1912–1996) was invited to IUDP at the end of the 1950s to teach logic there. Freytag Löringhoff was a disciple of Günther Jacoby and Nicolai Hartmann, and an outspoken opponent of symbolic logic or "logistic." His textbook *Mantık. Saf Mantık Sistemi [Logic. System of pure logic]*, in which he outlines his attempt to revalue Aristotelian logic by developing a diagrammatic notation, was translated by Mengüşođlu and published in 1973 by Istanbul University Press. See Roure, "Make Tradition Inventive. Freytag-Löringhoff's Concept of Pure Logic and its Reception at Istanbul University," unpublished paper presented at the workshop "History of Logic and its Modern Interpretation," Congress "Creativity 2019," December 8th–13th, 2019, Rio de Janeiro, Brazil.

⁸⁹ This task is rendered difficult by the lack of published sources. Nevertheless, the graduation thesis of Reichenbach's students at Istanbul University, and in particular the work of Neyire Adil-Arda, deserves to be examined and related to the largely unexploited archival material relating to Reichenbach's stay in Istanbul, such as course proofs and translations, notes and preparatory works.

the Berlin Group's activities, enriched through the experience of multilingualism and the challenge of translation. It was during this stay that Reichenbach developed and matured, in constant interaction with his assistants and students, his theories of meaning and knowledge which are found in *Experience and Prediction*. Considering the context of the elaboration and dissemination of Reichenbach's epistemological reflections in the 1930s is therefore necessary for a new and more complete reading of his work. Reichenbach's interest in the Turkish grammar he was studying at the time, as evidenced by several passages of *Experience and Prediction* and later works,⁹⁰ as well as his determination to distance himself from the label of positivism in the context of the French and Turkish reception of logical empiricism in the 1930s, are indeed elements that have been neglected until now but deserve further research. Reichenbach's critique of positivism disappeared completely from the later work and is not reflected in the American reception.

The relatively limited impact of Reichenbach's output in Turkey, where he stayed much less time than in the United States, can be partly explained by the administrative difficulties,⁹¹ and the hostility he encountered among some of his colleagues. Furthermore, the United States prior to the second War not only offered more favorable working conditions, but above all a greater security regarding the political situation compared to Turkey and other countries in Europe. The precarious status of emigrants in Turkey grew over the years and under the effect of the national socialist propaganda in Istanbul; it therefore led to the necessity of finding an alternative. Reichenbach's correspondence shows that he had been preparing his departure since 1936, and was hoping to emigrate to the United States, where he had many supporters.⁹² Charles W. Morris (1901–1979), who helped Reichenbach obtain a position in the United States, asserted at the Prague Congress in 1934 that American pragmatism and “logical positivism” are complementary and pleaded for a closer cooperation between these two aspects of “modern empiricism” (Morris, 1936, p. 130). The international congresses Reichenbach participated in during his stay in Istanbul allowed him to build a network

⁹⁰ In this regard, the analysis of language later developed by Reichenbach might be of interest. He may have been particularly interested in the grammaticalized caution of the Turkish verb tense system concerning knowledge based on inference. As Gürol Irzik points out (Irzik, 2011, p. 177), Reichenbach's interest in the modal richness of Turkish appears in a later book, *Elements of Symbolic Logic* (1947). Speaking of the “moods expressing absence of assertion”, Reichenbach interprets there the reported past tense as “a special mood expressing probability, i.e., a mood indicating that the truth of the sentence is none too well established” (Reichenbach, 1947, pp. 338f.). The reported past tense suffix $-m(l)\text{ş}$ (*duyulan geçmiş zaman*) is used to signify an event that has not been observed by the speaker but reported from someone else or inferred from an observable consequence. In the same book, Reichenbach also discusses the case of the Turkish aorist or “extended tense”: “Thus the Turkish language possesses a tense of this kind, called *muzari*, which indicates repetition or duration, with the emphasis on repetition, including past and future cases” (Reichenbach, 1947, p. 291). This tense (*geniş zaman*, litt. broad tense) is therefore used to express the general truths in science or a wager on an upcoming event, which the speaker admits is highly probable to occur, although with a lower degree of certitude than it would be asserted by using the future tense suffix $-(y)\text{ecek}$ (*gelecek zaman*), that allows to formulate a more definitive statement about the future (Ersen-Rasch, 2009, p. 144).

⁹¹ See above, n. 38. In a letter dated 05.08.1936 to Ernst von Aster about the possibility of his finding a position in the United States, Reichenbach concedes that the conditions in Istanbul are “far from ideal” and speaks of the struggle with “a rather unreasonable bureaucracy”: “*Die Verhältnisse hier sind keineswegs ideal; wir haben mit einer ziemlich unvernünftigen Bürokratie zu kämpfen*” (RP Box 13, Folder 39, 14).

⁹² See the letter to Ernst von Aster, 24.5.1936, RP Box 13, Folder 39.

and to organize the transatlantic emigration of himself and some of his colleagues and students. In a letter dated 27.03.1938 addressed to Freundlich (see above, n. 50), Reichenbach expressed his happiness at the prospect not only of leaving Turkey, but “the European soil.”

The war was the main reason for which Reichenbach was not able to help further his students left in Turkey. His stay in Istanbul was not long enough for him to supervise doctoral theses. It is only in 1937 that this degree was effectively introduced at the Faculty of Letters of Istanbul University and the students trained prior to this date were destined to become teachers in high schools, according to the French educational model that was still largely dominant in Turkey, even after 1933 (Roure, 2022b, p. 141). Reichenbach, who deplored in several letters the insufficient character of the school education in Turkey, actively promoted the training of high school teachers at that time, which he saw as a prerequisite for the development of a quality academic and scientific culture. From the point of view of scientific policy and institutional forms of philosophy, Reichenbach contributed also to the transformation of educational practices. He involved the students in his own research activities, inaugurating therefore a teacher-student relation which had never happened before in Turkey in the field of philosophy. He also encouraged some of his students—especially two women, Neyire Adil-Arda and Nezahat Arkun [Tanç]—to continue their studies toward a doctorate degree. From an administrative and pedagogical point of view, Reichenbach had also the opportunity, by influencing the recruitment policy, to reorganize the IUDP and orient it towards more interdisciplinary and multilingual teachings. At the same time, he contributed to the development of quantitative methods in the social sciences and to the institutionalization of experimental psychology there, and more generally to the development of the philosophy of science and modern logic in Turkey—although for mostly political reasons evoked above, this development could not be realized in a university setting until after the war and especially from the 1960s. The influence of the American university, which was developing at that time in the field of university philosophy, can thus be read as a reactivation and transformation of a forgotten heritage.

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