

German-speaking economists in British exile 1933-1945 *

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1. Introduction

This paper deals with the contributions by German-speaking economists in the United Kingdom during the Nazi period. Shortly after their rise to power the Nazis launched a new law, the 'Restoration of Civil Service Act' (April 7, 1933), which enabled them to dismiss scientists from their academic positions for racial or political reasons. This caused a group of British academics, on the initiative of the President of the London School of Economics William Beveridge, to found the Academic Assistance Council (AAC) to help "University teachers and investigators of whatever country who, on grounds of religion, political opinion or race, are unable to carry their work in their own country" (Cooper 1992, p. 7). The support of the AAC was one of the reasons why the UK, after the US, became the most important host country for exiled scholars.¹

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* A first draft of the paper has been presented to the Eighth Annual European Conference on the History of Economics ECHE "Exile in Economics" at the Technical University of Lisbon. The paper was also presented at the British History of Economic Thought Conference in Leeds, in a faculty seminar at the Manchester Metropolitan University, at the Workshop 'The Migration of Ideas II' at the University of Bologna, and at the 4th 'History of Economics as History of Science' Workshop at the École normale supérieure de Cachan, Paris. The author thanks José Luís Cardoso, Geoff Harcourt, Gary Mongiovi, Roberto Scazzieri and John Vint for helpful comments and suggestions.

¹ See also Beveridge (1959) and Cooper (1992).

The Academic Assistance Council, from 1936 the Society for the Protection of Science and Learning, mainly supported émigré economists with 'international reputation', i.e. members of the middle-age group, whereas a more restrictive policy was followed with regard to the younger generation of exiled scholars. The reason was that the poor prospects of the younger British scholars should not be worsened further in the world depression with high unemployment. The Rockefeller Foundation followed a similar policy. During the second half of the Weimar Republic, the Foundation had supported some of the most innovative research centres in Germany, particularly in the area of business-cycle theory. Whereas it stopped financing shortly after the Nazis' rise to power, the Foundation now played a major role in the continued support of many important émigré economists. This holds for the United States as well as for Great Britain, where the creation of additional jobs, the strict selection criteria of the Foundation and the high academic reputation of the émigré scholars, from which the development of economics in the host countries benefited, helped that no greater animosities against the refugee scholars arose, but on the contrary an integration process was nurtured so that after the end of the Second World War only a few exiled scholars remigrated from the UK and the US to Germany and Austria.

The outbreak of the Second World War, and particularly the discrimination émigrés had to suffer after the defeat of France, had the impact that British exile for many refugees became only temporary. The loss of many great scholars, who in the years 1939-40 moved to the United States, enforced the long-run shift of scientific power towards the US. A greater part of those émigrés who stayed since May 1940 were put into internment prison as 'enemy aliens' by the British government on the Isle of Man, from which many were sent further into the Dominions like Canada and Australia. The group included even prominent economists like Piero Sraffa, who had been in Cambridge since 1926. Many younger economists from Germany and Austria were among these enemy aliens who were internment prisoners, mainly on the Isle of Man: Frank (Fritz) Burchardt (1902-1958) who held a position at the University of Oxford since January 1936 where he later became the director of the Institute of Statistics in 1948, or Heinz Wolfgang Arndt (1915-2002), Sir Hans Singer (1910-2006) and Paul Streeten (born as Paul Hornig 1917 in Vienna), who all should later gain international reputation as development econo-

mists. Furthermore, the group comprised Erwin Rothbarth (1913-1944), an outstanding young economist who was hired by Keynes as a research assistant of statistics in 1938 after he graduated from the LSE (Rothbarth later died as a volunteer in the British army in the Netherlands), and Eduard Rosenbaum (1887-1979), the former Director of the Library of the Hamburg Chamber of Commerce who became Librarian at the LSE from 1932 to 1952. In summer 1940 Keynes, who actively fought for the liberation of many interned economists, in particular Sraffa, Rothbarth, Singer and Rosenbaum, intervened at the Home Secretary. He regarded the whole affair as "the most disgraceful and humiliating thing which has happened for a long time" and finished his letter to F.C. Scott of 23 July 1940 with the statement: "If there are any Nazis sympathisers at large in this country, look for them in the War Office and our Secret Service, not in the internment camps".² The hope, which was expressed by Keynes, namely that the protest in the British public would lead to a correction of the policy against the ca. 65,000 'enemy aliens', was fulfilled in late 1940/early 1941, when also many young economists were liberated from internment prison as, for example, Burchardt who returned to the University of Oxford in November 1940.

Among the outstanding economists who in spring 1933 were dismissed by the Nazis and emigrated to England were Adolph Lowe (1893-1995) and Jacob Marschak (1898-1977). Both of them were consulted by the Academic Assistance Council/Society for the Protection of Science and Learning as well as by the Rockefeller Foundation on a regular basis to report on the qualification of persecuted social scientists who were looking for help. Like his friend Marschak, who had been a member of Lowe's research group at the Kiel Institute from 1928 to 1930, Lowe was highly regarded by the Rockefeller Foundation as "A-1, both scientifically and from the point of view of character".³

The paper is structured in six parts. In the second section an overview is given on the emigration of economists from Germany and Austria and the subgroup who came to Great Britain. In the third section the case of Adolph Lowe and his reflections on contemporary

² Keynes (1978, p. 191).

³ John van Sickel, Paris, to the headquarter in New York, 10 May 1933; Rockefeller Archive Center, Record Group 1.1, 200/109/539.

Britain and the balance of freedom and order in *The Price of Liberty* (1937) is dealt with to analyse the impact of emigration and acculturation on the topics discussed by the refugee scholars. The fourth section deals with the Oxford Institute of Statistics where Jacob Marschak became the founding director in fall 1935. In the late 1930s and early 1940s émigré economists from Central Europe played a decisive role. This is illustrated by the fact that with Frank (Fritz) Burchardt, Kurt Mandelbaum (Martin), Ernst F. Schumacher, Thomas Balogh and Michal Kalecki not less than 5 of the 6 contributors to the famous 1944 study *The Economics of Full Employment* came from the European continent. In the fifth section development economics is discussed as that new sub-discipline of economics where the percentage of the most innovative contributions made by émigré economists was significantly high. Important contributions were made by Mandelbaum, Singer, Paul N. Rosenstein-Rodan and, among the younger economists, Paul Streeten and H.W. Arndt. The reasons for this high concentration of émigré economists who came to Britain in the area of development economics are examined. Finally, the role of émigré economists as observers of the German war economy are reflected. Hans Singer, for example, contributed a series of articles to *The Economic Journal* between 1940 and 1944, and Hal C. (Hermann Christian) Hillmann during the war years was one of the most important analysts of the economic development of the German economy in the Royal Institute of International Affairs at Balliol College in Oxford, which was directed by the historic philosopher Arnold Toynbee. E(rnst) F(ritz) Schumacher, who had worked together with Kalecki, Kaldor and Joan Robinson and was instrumental in convincing Beveridge of Keynesian ideas, and who later became famous because of his *Small is Beautiful* (1973), played an important role in the reconstruction of the German coal-mine industry after the war.

2. Dismissal, expulsion and countries of refuge

The dismissal of academicians from German universities under the Restoration of Civil Service Act (*Gesetz zur Wiederherstellung des Berufsbeamtentums*) and the expulsion of academicians from Germany, Austria and other European countries interrupted or destroyed

promising developments in economics as well as in physics and other areas. This caused a negative turning-point for the long-run development of sciences at German-speaking universities. German and Austrian economics fell behind internationally; after 1945 it had to undergo a laborious catching-up process without being able to compensate the loss of qualified personnel in the following decades. In contrast, the economists who had been driven out of Germany, Austria and other countries not only enriched the development of their specialized areas in their host countries, but also made decisive contributions to the international standard of research. This holds in particular for the United States, which was the direct or indirect destination for some two-thirds of German-speaking émigré economists, but also for Britain.⁴

The group of dislocated economists comprises 328 scholars.⁵ Whereas 253 had acquired academic degrees, there is a so-called 'second generation', i.e. another group of 75 economists who were young students or pupils who emigrated with their parents and later made an academic career as economists, like, for example, Walter Eltis, Frank Hahn or Sir Claus Moser. They did not contribute to the transfer of scientific methods or approaches and were socialized in the hosting countries, particularly at Anglo-Saxon universities, but can be regarded as part of the long-term brain drain. One hundred and forty-eight members of the first generation were dismissed from the universities, whereas 57 came from other research institutions, 28 from the public administration and 20 had just finished their studies, like Richard A. Musgrave (1910-2007) who emigrated to the United States shortly after receiving the diploma degree from the University of Heidelberg in May 1933. With about 20% the share of the Austrian economists is considerably higher than the relative size of the population. Whereas the second generation comprises exclusively émigrés, only 221 out of the 253 dismissed economists emigrated. This is a share of 87%. Of those 32 scholars who did not emigrate almost one half died in the Holocaust, concentration camps or Gestapo prison, like Carl Grünberg, Käthe Leichter, Robert Liefmann or Cläre Tisch. The same fate befell the émigrés Rudolf Hilferding, who was

⁴ See, more recently, Ambrose (2001), Snowman (2002) and the earlier contributions in Hirschfeld (1984) for an overall perspective.

⁵ See Hagemann and Krohn (1999) and Hagemann (2005).

arrested in Marseille and died in a Gestapo prison in Paris in February 1941, and Robert Remak (1888-1942), who had emigrated to the Netherlands but was caught there after the Nazi occupation and sent to Auschwitz.

It is not surprising that the decision to emigrate depended on age. The largest group of emigrated economists was between 24 and 33 years old, whereas only about 60% of the economists older than 50 years who were dismissed from their jobs left their country. The importance of the age variable is also reflected in the group of 22 women economists, of whom only two had received their Ph.D. degree until 1918 in Imperial Germany. Only the new republics which were constituted in Germany and Austria after the end of the First World War opened up academic career prospects for women like they enlarged those of Jews and Socialists.

Less than seven weeks after the passing of the Restoration of Civil Service Act by the Nazis on May 24, 1933 the Academic Assistance Council was founded in the United Kingdom. The AAC, since 1936 the Society for the Protection of Science and Learning, was financed by solidary self-taxation of the academicians. In the US the Emergency Committee in Aid of Displaced German/ Foreign Scholars, the Rockefeller Foundation and the 'University in Exile', the later Graduate Faculty of Political and Social Science, which was founded at the New School for Social Research in New York on the initiative of Alvin Johnson,⁶ were the major supporters of the emigrated economists. No wonder that the United States⁷ and Great Britain were the main countries where the emigrated scholars finally took refuge, as is shown in the following synopsis.

France, which played a considerable role for the overall intellectual emigration from Germany, strikingly was only of minor significance for the emigration of economists. In fact it was less important than Turkey, where a group of emigrated professors of law and economics (including Wilhelm Röpke, Alexander Rüstow and, most influential, Fritz Neumark in public finance) were eminent in the

⁶ See the detailed study by Krohn (1993), Mongiovi (1997 and 2005) and Coser (1984).

⁷ On the impact of émigré economists in the US see Craver and Leijonhufvud (1987), Scherer (2000) and the Mini-Symposium on "Émigré economists in America: their impact and their experiences", *Journal of the History of Economic Thought* 27/4, December 2005.

modernization process of Turkish universities, which started with the reopening of Istanbul University in summer 1933 and, as experts and consultants to the government in Ankara, in the modernization process of the Turkish economy and society. However, despite the hospitality of the Turks, cultural differences and language problems – Neumark was one of the very few able to teach without an interpreter and the last who came back to Germany in 1951 (see also his informative recollection of the Turkish period, Neumark 1980) – were responsible for the fact that all émigré scholars returned to Germany after the Second World War, whereas only very few returned from either the US or the UK.

TABLE 1
FINAL COUNTRIES OF REFUGE OF THE EMIGRATED ECONOMISTS

United States	131
Great Britain	35
Switzerland, France, Netherlands	12
Palestine	8
Latin America	7
Turkey	6
Australia, New Zealand	3
Other countries	19
Total	221

That about 60% of the émigré economists ended up in the United States, in a greater distance from the turbulences in Europe and with a more open and flexible labour market, is neither surprising nor does it differ significantly from the findings in other disciplines.

However, one point is worth mentioning. About one half each emigrated directly into the United States or came on a more or less roundabout route from other countries where they first took refuge, not seldom from Great Britain, which was, at least temporarily, a host country for more than a hundred emigrated economists of whom only one third finally stayed.⁸

⁸ See the Appendix for a full list of names and the details of emigration.

3. Balancing freedom and order: Adolph Lowe on contemporary Britain

Adolph Lowe played a major role in the debate on business cycles to which German economists had turned in the later 1920s and early 1930s. In 1925 he had already published an article on the present state of research on business cycles in Germany, in which he gave a critical survey of the existing body of theoretical and empirical research work. But it was particularly his seminal Kiel habilitation thesis with the Kantian-inspired question, 'How is business cycle theory possible at all?' (Lowe 1926) with which he became the *spiritus rector* of the debates on business cycle theory in the Weimar Republic.

According to Lowe a satisfactory explanation of cyclical fluctuations cannot result from outlining the consequences of a disturbing factor exogenously imposed upon an otherwise static economy. Rather, economic theory must seek for some causal factor endogenous to the system itself which can distort the rigid interrelations implied in the system of static equilibrium. Stimulated by the works of Marx, Sombart and Schumpeter, Lowe identified *technical progress* as the decisive endogenous factor. Indeed, technical progress was seen by him as the central determinant of both the cycle and the long-run growth-trend, i.e. he denied the possibility of fully separating growth and fluctuations from each other.

In early 1926 Lowe accepted an offer by Bernhard Harms and became a Director of Research at the Kiel Institute of World Economics, where he established a new department of statistical international economics and research on international trade cycles which soon obtained international reputation. Lowe had managed to bring together a group of extremely talented young economists, including Gerhard Colm, Hans Neisser, Fritz Burchardt and, for a period of time, also Wassily Leontief (1927-28, 1930-31) and Jacob Marschak (1928-30). From Kiel, where in February 1930 he was appointed Professor of Economic Theory and Sociology at the University, he moved to Frankfurt/Main in October 1931, where he was among the first professors of the Goethe University who were dismissed by the Hitler regime in April 1933.

The rise of fascism not only forced Lowe to emigrate but also caused a major shift in his research programme. Between 1933 and

1940 he was Special Honorary Lecturer in economics and political philosophy at the University of Manchester. In England he also became a naturalized citizen on the day after the outbreak of the Second World War: Löwe became Lowe.⁹ In his British exile he published *Economics and Sociology* (1935), an ambitious plea for interdisciplinary work in the social sciences which was based on a series of lectures he had presented at the London School of Economics at the invitation of Karl Mannheim.¹⁰ In contrast to current debates about the relationship between economics and sociology which are characterized by controversies on 'economic imperialism', Lowe aims for a fruitful synthesis of both disciplines. He is deeply convinced by the limited application of pure economic analysis and the necessity to embed it in the broader context of the social sciences to increase its content of realism, thereby revealing stronger influences of the tradition of the German Historical School to which he did not belong. On the other hand, clear traces of acculturation in the Anglo-Saxon world can be detected in his arguing for an 'economic sociology', which is concerned with the social influences on economic behaviour as, for example, the formation of consumers' preferences. With its combination of "middle principles" from both disciplines, economic sociology shows reminiscences of John Stuart Mill with whom Lowe shares the open-mindedness toward sociology as a synthetic social science but also the emphasis on the necessity of an independent theoretical economic analysis. This assessment is shared by the then leading British sociologist Morris Ginsberg, who writes in his Foreword:

"The business of sociology in relation to economics is not to minimize, or to seek to displace, economic analysis, but rather to throw light on the conditions under which the laws propounded as a result of economic analysis work, and, in this respect, modern sociology surely deserves more consideration than was shown it by its early critics".¹¹

⁹ This saved him internment prison on the Isle of Man. However, when in the climate of summer 1940 the University of Manchester indicated to him that his contract might not be prolonged, Lowe accepted the offer from the New School in New York which wanted him already in 1933.

¹⁰ For a modern reexamination of the proposals for the division of labour and cooperation between economics and sociology which were made by Lowe and Mannheim in the mid-1930s see Ganßmann (1998).

¹¹ Ginsberg in Lowe (1935, p. 16).

The complexities of evolutionary processes call for interdisciplinary research in which the individual disciplines enter into a fruitful combination. As the reactions to Lowe's engaged plea for cooperation in the social sciences in the mid- and late 1930s showed, the impulses were more fruitful on the side of sociologists than economists.¹² By no means accidentally, attention was paid to Lowe's *Economics and Sociology* by the young American sociologist Talcott Parsons, whose research work by the time was essentially inspired by Max Weber's studies on *Wirtschaft und Gesellschaft* (Economy and society), and who wrote an extensive review (1937).

In the small booklet *The Price of Liberty* Lowe (1937a) inquired into the conditions of political freedom. Here we find him as a perceptive historical, political and sociological observer praising 'spontaneous conformity' of liberal England as "the only mode of life through which a large-scale society can reconcile the conflict between freedom and order" (Lowe 1937a, p. 6). The price of liberty is individuals' readiness to conform to particular constraints and controls that are manifested as structures, institutions and rules. The functioning of the latter depends on subjective factors such as the understanding and approval of their purpose by those who are to be controlled.¹³ In his reflections of *A German on Contemporary Britain*, the subtitle of *The Price of Liberty*, Lowe contrasts two possibilities of social conformity: the British one of political freedom and self-constraint of the individual with the opposite German one of a fully developed self-realization of the individual but political autocracy. The German solution, with its contradiction between a life of introversion and of extroversion, had completely failed because it did not create a stable social regime.

¹² See the reviews of Lowe's *Economics and Sociology* in the leading British journals: P.S. Florence in *The Sociological Review*, vol. 28, 1936, pp. 318-19, T.S. Marshall in *The Economic Journal*, vol. 46, 1936, pp. 294-97, and A.E.T. in *The Manchester School*, vol. 7, 1936, pp. 91-92.

¹³ The emphasis on behavioural and motivational patterns also characterizes Lowe's later elaboration of 'political economics' as the science of controlled economic systems in *On Economic Knowledge* (1965), in which Lowe developed 'instrumental analysis' as a generalization of his concern with the requirements for the attainment of full employment in Germany and elsewhere. Lowe's plea for interventionism is designed to serve the purpose to provide economic and social stability which he regarded as a necessary condition for the freedom of individual agents.

"Thus the England and the Germany of the liberal age represent two extremes of social formation. [...] The social investigator is driven to the resigned conclusion that in a large-scale society the extroverted freedom of political action and the introverted freedom of individualization are irreconcilable opposites. Just as every step towards self-government must be paid for by limiting the free expansion of the ego, unconditional individualization must bow the head to external autocracy" (Lowe 1937a, p. 26).

The Price of Liberty is dedicated to Lowe's friend Paul Tillich, a brilliant Protestant theologian and philosopher, on the occasion of the latter's fiftieth birthday. It originally had the working title "Spontaneous Collectivism – England's contribution to the socialist decision", thereby referring to Tillich's *Die sozialistische Entscheidung* which had been confiscated and burned by the Nazis immediately after it was published in early 1933. Tillich, the Protestant theologian, and Lowe, the agnostic Jew, also strongly cooperated when in July 1937 an ecumenical conference of Christian churches took place at the University of Oxford. Tillich and Lowe drafted the final report for the section on the Church, Community and State in relation to Economic Order which probably, with regard to society, was one of the most open-minded documents ever being published by a Christian organisation, a statement which was opposed by the American delegation as an unjustified attack on business.¹⁴

Many of the topics of *The Price of Liberty* (1937) reappear more than half-a-century later in Lowe's last book *Has Freedom a Future?* (1988), which deals with the conditions under which freedom can be established and maintained *vis-à-vis* the radical transformation to which contemporary Western society is exposed. This concern with a viable order, both stable and free, permeated Lowe's entire work. At the end he became more and more sceptical that the Western societies in their present condition are able to master the fundamental problems they are confronted with, ranging from structural unemployment via the intra- and international maldistribution of income and wealth to ecological crises. He stresses the danger that the fail-

¹⁴ For greater details see Clary (1998). At the wake of the Oxford meeting the *Moot* circle was founded at the initiative of Joseph Oldham, convener of the conference. Among the members were Lowe and Tillich, T.S. Eliot, Karl Mannheim and the London lawyer Geoffrey Vickers, with whom Lowe developed a life-long friendship (see Vickers 1991).

ures of the market system will be aggravated by failures of the political system. This threat can only be avoided by revitalizing the Western tradition of individualism properly understood, i.e. individualism rooted in social responsibility. What is at stake here is the problem of balancing the private and the public domains, where the latter is conceived as the guardian of the viability of the former. Hence his plea for a new communal ethic in *Has Freedom a Future?*, which can be regarded as the culmination of a lifetime of thought and teaching of this "economic philosopher".¹⁵

In the Weimar Republic, Lowe had witnessed the destructive tendencies of mass unemployment which culminated in the seizure of power by Hitler and the Nazis. This experience left a lasting impression on Lowe and makes understandable his deep concern with high levels of employment as perhaps the most important precondition of socio-political stability.

The question of whether the capitalist system can provide sufficient employment opportunities for those who have nothing to sell but their labour power has occupied a prominent place in economics since the time of the classical economists. This was closely related to the need felt by many authors to assess modern society, with wage labour as its basic institution, from a moral perspective. Adam Smith in *The Wealth of Nations* poignantly expressed this view.¹⁶ If the "system of natural liberty" was to be considered ethically superior to other socio-economic systems, then it must not, *inter alia*, violate this property. Smith was convinced that, despite the rapid growth of labour productivity entailed by the process of the division of labour (the only form of organizational and technological change he contemplated), no problem of technological unemployment could arise. For, he argued, any increase in the division of labour presupposed additional capital accumulation, which in turn was tied to an expansion of markets. Thus the growth of labour productivity was inextricably intertwined with the growth of "effectual demand", which rap-

¹⁵ Boulding (1965, p. 139).

¹⁶ "The property which every man has in his own labour, as it is the original foundation of all other property, so it is the most sacred and inviolable. The patrimony of a poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in what manner he thinks proper without injury to his neighbour, is a plain violation of this most sacred property" (Smith 1776/1976 I, p. 138).

idly compensated or even overcompensated any labour displacement that might occur.¹⁷

Unfortunately, modern capitalist economy, according to Lowe, is not endowed with a self-regulating mechanism that guarantees harmonious economic dynamics along a full-employment path. In order to prevent or at least mitigate the effects of large, uncompensated unemployment on the stability of the system, effects which tend to weaken the role of the free Western societies, public controls are necessary. Put briefly, while in Smith high levels of employment are taken to be an effect of the "system of natural liberty", in Lowe they are considered an indispensable condition of it. Lowe's attention in more than sixty years of research was focused upon technological change as the mainspring of destabilizing tendencies in industrial economies. He kept this theme from his early work on business-cycle theory via the Manchester period (see Lowe 1937b) up to his last work (Lowe 1988), where the spectre of technological unemployment is on the stage again and the prospects and risks of the present form of technological change in the wake of the microelectronic revolution are discussed thoroughly. The conditions for compensation of technological unemployment are also at the very centre of the traverse analysis in his *The Path of Economic Growth* (1976), where Lowe starts his investigation of the macroeconomic consequences of technological change from Ricardo's analysis of the machinery problem.

4. Jacob Marschak and the Oxford Institute of Statistics

Jacob Marschak had been a close friend of Lowe ever since he started to work at the Kiel Institute in 1928. Marschak had one of the most eminent biographies of an economist in the 20th century.¹⁸ Born in Kiew in 1898 he started to study there in summer 1915 at the Technical University, where his teacher in statistics was Eugen Slutsky who in the same year published his famous article in Italian (Slutsky 1915) which anticipated the theory of consumer behaviour as it was

¹⁷ For a critical assessment of Smith's vision of the long-term development of the capitalist economy, see Lowe (1954 and 1975, pp. 415-25).

¹⁸ See Hagemann (1997b and 2006).

developed by Hicks and Allen two decades later. As an active member of the anti-war group of the Mensheviks and the chairman of the socialist students group, he was put into prison by the Tsarist regime in December 1916 and released only three months later due to the amnesty by Kerensky. For health reasons his parents sent him to the Northern Caucasus where Marschak soon found himself being promoted to the Minister of Labour in the coalition government of Mensheviks, Bolsheviks and Social Revolutionaries in the Terek Republic in winter 1917-18. When he died in Los Angeles in 1977 Marschak was President Elect of the American Economic Association. Emigrating from the civil war in Russia and the Ukraine, Marschak came to Germany in January 1919 as the first of an outstanding group of young Russian economists and Mensheviks who were all trained well in mathematics and statistics. Among those who followed were Wassily Leontief, Vladimir Woytinsky, Paul Baran, Georges Garvy (Georg Bronstein), Naum Jasny, Nathan Leites and Mark Mitnitzky (Millard). They all emigrated for a second time from Nazi Germany in 1933 (with the exception of Leontief who had gone to the US already in the year before). There were two centres of gravitation of these young Russian economists in the Weimar Republic: Ladislaus von Bortkiewicz (himself born in St. Petersburg in 1868) at the University of Berlin and Emil Lederer (who moved to Berlin in 1931 as the successor of Heinrich Herkner on the former chair of Gustav Schmoller) at the University of Heidelberg where Marschak got his Ph.D. in November 1922 with a dissertation on the quantity equation and his habilitation in 1930 with a work on the *Elasticity of Demand* (Marschak 1931).¹⁹ In the winter semester 1931-32 the young Richard A. Musgrave attended Marschak's seminar on Keynes's *Treatise* and on integrating fiscal flows into the national income accounts at the University of Heidelberg.²⁰ In spring 1933 the *Privatdozent* Jacob Marschak was among the 7 of 11 faculty members who were dismissed after the Nazis' rise to power, the highest percentage of any German faculty of economics followed by the Goethe Universität in Frankfurt.²¹

¹⁹ He also published one of the earliest thorough analyses of Italian Fascism (Marschak 1924-25).

²⁰ See Musgrave (1997, p. 64).

²¹ Until the winter semester 1934/35 about 14% of the faculty at German universities had been dismissed for either racial or political reasons. With 24% the share in economics was far above the average, but the dispersion was great. Whereas at

Marschak had already left Germany in March 1933 and, in the fall of the same year, he accepted the Chichele Lectureship in Economics at All Souls College of Oxford University where he was promoted Reader in Statistics in 1935.

In the same year Marschak became the founding director of the Oxford Institute of Statistics (OIS), an institution that had been created with the assistance of funds from the Rockefeller Foundation, which had already financed some of Marschak's research projects in Germany. The Institute soon got a high reputation in theory-guided empirical research. Marschak himself continued his studies on theoretical and statistical aspects of demand analysis, an area in which the former student of Slutsky did pioneering research as well as Ragnar Frisch, Henry Schultz and Leontief. Furthermore, he published a series of articles with Helen Makower and H.W. Robinson (1938-40) on the causes of regional mobility of labour which show for the United Kingdom differences in the unemployment rates as the decisive determinant. These studies were part of a more comprehensive research programme which can be considered as a "multi-faceted attack on the problem of the business-cycle".²² They were published in the first volumes of the *Oxford Economic Papers*, a journal which also had been founded as an outlet for the research results of the Institute. From November 1939 onwards the OIS also published a *Diary* with actual information on economics statistics which was soon afterwards expanded to another regular economic journal, published as *Bulletin* since October 1940. It still exists today as the *Oxford Bulletin of Economics and Statistics*.

Marschak's 1938 article on the demand for money as an element of holding wealth is the first of a series of outstanding theoretical contributions on money demand as a reaction to uncertainty followed by others written in the US (where he was located as a Rockefeller Foundation Fellow at the outbreak of the Second World War and where he stayed as Professor at the New School for Social Re-

many universities which hardly had changed their recruitment policies during the years of the Weimar Republic nobody (e.g. in Munich or Tübingen) or only one member (like in Göttingen or Marburg) was dismissed from the economic faculties, the universities of Heidelberg and Frankfurt as well as the Institute of World Economics in Kiel can clearly be identified as the centres which had to suffer the greatest losses in economics and the social sciences.

²² Young and Lee (1993, p. 125).

search in New York from 1939 to 1942 before, at the beginning of 1943, he moved to the University of Chicago as the new Director of the Cowles Commission for Research in Economics) in the late 1940s.²³ Characteristic for Marschak is the basic idea that money demand can be understood better if it is embedded in a general portfolio theory.

Together with Roy Harrod, James Meade, E.H. Phelps Brown and others Marschak, too, was responsible that economics at Oxford, where Edgeworth originally had created an open-minded international atmosphere, made great achievements in the "Years of High Theory".²⁴ He also played an instrumental role in the genesis of Harrod's path-breaking 1939 article which laid the foundations of post-Keynesian growth theory.²⁵ On July 6, 1938 Harrod wrote to Keynes: "We have a sort of minor Tinbergen here in the form of Marschak".²⁶ The OIS had already hosted the sixth European meeting of the Econometric Society which was opened on 26 September 1936 with the famous symposium on Keynes's *General Theory* where Harrod, Meade and Hicks presented their interpretations.

In the late 1930s and early 1940s émigré economists from Central Europe dominated the research work at the OIS. This is shown in an exemplary way by the famous study *The Economics of Full Employment* which was published in October 1944. The main aim of this cooperative effort is to give "an outline of the strategic factors on a policy of permanent full employment in industrial countries".²⁷ With this concern the study transcends the *White Paper on Employment Policy* of the British government (1944) which was published shortly before and which wanted to avoid mass unemployment by the application of anti-cyclical policy measures in the case of a beginning depression. The editor of *The Economics of Full Employment* was Frank Burchardt, who also had built up the Institute's *Bulletin* since his release from internment prison on the Isle of Man in Fall 1940. With Burchardt, Kurt Mandelbaum (since 1947 Martin; 1904-1995), Ernst F. Schumacher (1911-1977), the Hungarian born Thomas Balogh and the Pole Michal Kalecki, who was the towering intellectual figure at

²³ See, for example, Marschak (1949).

²⁴ See Young and Lee (1993, particularly chapters 4 and 5).

²⁵ See Young (1989, chapter 5) and Besomi (1999).

²⁶ Keynes (1973, p. 298) and Besomi (2003, vol. II, p. 802).

²⁷ Burchardt *et al.* (1944, p. IV).

the OIS between 1940 and 1944, five of the six contributors came from Continental Europe (the exception was G.D.N. Worswick). Schumacher, who had come to know Burchardt in internment prison as an 'enemy alien' in summer 1940, was delegated by the OIS to support Sir William Beveridge, whose report *Social Insurance and Allied Services* (1942) to the British government had laid the basis for post-war social policy in the welfare state, in the writing of the further report *Full Employment in a Free Society* (1944). In close cooperation with Nicholas Kaldor, Joan Robinson *et al.* Schumacher drafted greater parts of the report and was instrumental in the transformation of Beveridge to Keynesian economics.

Josef Steindl (1912-1993), who had to emigrate from Austria after the *Anschluss* in 1938 and first got a research fellowship at Balliol College in Oxford, also moved to the OIS in 1941, where he became a member of Bowley's research team and got under the intellectual influence of Kalecki. In his autobiographical reflections Steindl (1984) names Kalecki his "Guru". Steindl had already returned from Oxford to Austria (1950) when his *opus magnum* *Maturity and Stagnation in American Capitalism* (1952) was published, which, however, must be seen as the fruit of his Oxford years, revealing a deep influence of Kalecki's analytical methods.

Other emigrated economists from the German language area who worked at the OIS during the war years were Moritz Julius Elsas, Karl Forchheimer, Detlev Bruno Halpern and Siegfried Moos. Due to a great demand for economists in the war administration in 1941 besides G.D.N. Worswick only two other British economists were left at the OIS. When Marschak decided to stay in the US after the outbreak of the war, H.E. Caustin succeeded him as the director for an interim period of a few months before A.L. Bowley, who had already retired, became the director from 1940 until the end of 1944. During that period a lot of the daily coordinating work was done by Burchardt, who was an able organiser of research and due to his personality a great team-player. His most important own contribution to economic analysis was his first attempt to combine the schemes of the stationary circular flow of Böhm-Bawerk and Marx (Burchardt 1931-32), i.e. the vertical (Austrian) and horizontal (sectoral) approach to the disaggregation of production structures, which came out of his close co-operation with Adolph Lowe during their Kiel years. Burchardt's habilitation thesis had already been submitted to the Goethe University

in Frankfurt in the winter semester 1932-33, but the process was not finalised due to the Nazis' rise to power. After Champernowne's term came to an end, Burchardt succeeded him as the Director of the Oxford Institute of Statistics at the end of 1948.²⁸

5. The contributions of émigrés to development economics in its formative period

Development economics, which evolved predominantly in Great Britain and in the United States at the United Nations and its ancillary organisations after the war, is among those areas where the contributions made by German-speaking émigré economists are most significant. This can be seen easily by a simple comparison based on standard reference volumes. Whereas only ten out of the hundred economists listed in Mark Blaug's *Great Economists since Keynes* were in Germany and Austria before 1933/38,²⁹ the share of economists coming from the German language area among the pioneers in development economics, listed in Meier and Seers (1984) and Martin (1991), is about 30%. Besides Alexander Gerschenkron and Albert O. Hirschman, Paul N. Rosenstein-Rodan, Kurt Martin and (since 1994 Sir) Hans Singer have to be mentioned. During the formative period of the early and mid-1940s in particular the universities of London and Oxford became institutional centres for the development of development economics. This had a strong impact also on several of the brightest younger émigrés who studied at these universities and later got a name in this field, among them Heinz W. Arndt, Warner Max Corden, Gerard O. Gutmann, Alexandre Kafka, John H. Mars and Paul Streeten.

The biographies of the emigrated development economists show that the young economists who had not got their academic training in the tradition of the Historical School and, as younger intellectuals normally do, specialised in the paradigmatically younger sub-disci-

²⁸ On Burchardt's work in Germany see Lowe (1959), on his activities during his Oxford period see Worswick (1959).

²⁹ The list comprises Gerschenkron, Haberler, Hahn, Hayek, Hirschman, Machlup, Marschak, Mises, Morgenstern and Musgrave.

plines, personifies the innovation potential. A comparison of the 'age pyramid' of the 36 development economists with that of all emigrated economists does show this. Whereas those economists born before 1900 have a share of 36% among all émigrés, their share among the group of development economists is only 3%. On the other side, 42% of all development economists among the émigrés belong to the age group born between 1910 and 1919, which has only an overall share of 17%. However, this demographic picture does neither give an answer to the question why the share of later development economists among the émigrés was so high nor does it explain the high quality and enormous weight of their contributions to the sub-discipline of development economics in international comparison. The same holds for the fact that it were two émigrés from the German language area, Rosenstein-Rodan and Mandelbaum, who became the founders of development economics.

These questions were not in the centre of the research interest when the history of modern development economics was analysed in the 1980s and early 1990s. Emphasis was focused on the systematisation and aggregation of the numerous models of development theory to different types and groups and the paradigmatic shift from the idea of a dual-economics, i.e. the denial of a universal economics which holds for industrial and developing economies alike, in the first two decades of development economics to neoclassical mono-economics. Although an understanding of the main causes and contents of the counterrevolution in development theory is important,³⁰ it is also illuminating to show the interplay between the institutional and personal factors in the genesis of development economics, the role of émigrés from Continental Europe in laying the roots of this sub-discipline and the basic ideas governing the early paradigm.³¹

The presence of several exile-governments of Central, Eastern and Southeastern Europe in Great Britain during the war years as well as the high concentration of émigré economists coming from these regions and working in the three institutions of the Institute of Statistics and Nuffield College in Oxford and The Royal Institute of

³⁰ See, e.g., Ascher (1997) and Krugman (1993) for the need of a counter-counterrevolution in development theory.

³¹ For a more detailed analysis see the studies by Esslinger (1998 and 1999).

International Affairs (RIIA)³² in London before and during the war provided a great stimulus to the analysis of the economic problems and conditions for a successful reconstruction and industrialisation of backward areas, and explains why 'backward areas' were especially identified with Eastern and Southeastern Europe, as in Rosenstein-Rodan's (1943) path-breaking article or in Mandelbaum's (1945) follow-up study. Rosenstein-Rodan was born in Cracow and grew up in Vienna where he made his Ph.D. in economics in 1925. In the following years he wrote important contributions on marginal utility and the role of time in economic theory, and edited the new journal *Zeitschrift für Nationalökonomie*, the most important and internationally-oriented scholarly journal in the German language area in the 1930s, together with his close friend Oskar Morgenstern from 1930 to 1934. Without any hope to make a university career in Austria, in 1931 Rosenstein-Rodan became Special Lecturer at the University College in London where he was promoted to Reader in 1936 and Professor shortly afterwards. From 1939 he was Chairman of the Department of Political Economy until 1947 when he left Britain for the US, where he made a career at the World Bank and at various universities, including the MIT (1953-59), the University of Texas at Austin (1968-72) and thereafter Boston University, where he founded the Center for Latin American Development Studies. In 1941 Rosenstein-Rodan accepted the offer from the RIIA to become Secretary of the new Committee on Reconstruction-Economic Group which marked the beginning of systematic research on development questions at the Institute. At the first meeting the committee decided to compose a report on the economic lessons of the 1930s. However, the members could not agree on the report, with the peculiar consequence that they delegated the final draft of *The Economic Lessons of the Nineteen-Thirties* to a young research assistant Heinz Wolfgang Arndt (born in Breslau – today's Wroclaw –, Silesia in 1915 as the son of a professor of chemistry who was dismissed by the Nazis in April 1933), who had just made his M.A. at the London School of Economics in 1941, a few months after he came back to England from

³² The RIIA had been founded at the peace conference in Paris in July 1920 and was also named 'Chatham House' according to the building where it was located at St. James's Square in London.

internment in Canada.³³ According to Arndt the First World War had led to a radical break in the world economy causing strong protectionist tendencies and external disequilibria. For that situation he diagnosed a threefold market failure: a misallocation of resources due to monopolistically biased prices, an insufficient, partly perverse reaction of production factors to price signals and a strong immobility of factors. To eliminate the disturbances resulting from these market failures Arndt advocated measures of economic planning. Arndt, who later distanced himself from his early favouring of interventionism, in retrospect assessed his study as an early formulation of the theory of structuralism of the 1950s which favoured economic planning and intervention into production structures in developing countries.³⁴

Arndt was also the author of the 1942 study *Agricultural Surplus Population in Eastern and Southeastern Europe* for the RIIA research team chaired by Rosenstein-Rodan, which wanted to employ the 'excess population' in the agricultural sector as a key factor in their programme of industrialisation of backward areas. This required an exact quantification of 'hidden unemployment' which, in the Arndt report, was defined as "the number of people engaged in agriculture (active and dependants) who, in any given conditions of agricultural production, could be removed from the land without reducing agricultural output" (Arndt 1944/1993, p. 4). On the basis of Arndt's estimations Rosenstein-Rodan calculated the excess population in the agricultural sector in the range between 20 and 25% in his pioneering article "Problems of industrialisation of Eastern and Southeastern Europe" (1943) which marked the beginning of modern development economics. From here onwards the concept of hidden unemployment in the agricultural sector played a key role in the explanation of economic backwardness, and the overcoming of this obstacle, i.e. the increase of productivity in agriculture, an essential condition of development.³⁵ In other words agrarian ex-

³³ *The Economic Lessons of the Nineteen-Thirties* (1944) were republished in 1963 and 1993 and translated into Italian (1949) and Japanese (1978). From 1943 to 1946 Arndt became Assistant Lecturer of John Hicks at the University of Manchester before he accepted an offer from the University of Sydney. In 1951 he moved to Canberra, where he later became long-time Head of the Department of Economics at the Research School of Pacific Studies at Australian National University.

³⁴ See Arndt (1985).

³⁵ See, for example, the famous two-sectoral model of economic growth by Lewis (1954).

cess population at the same time was an indicator and a source of weakness but also implied a potential for future economic development.³⁶ Other obstacles to economic development diagnosed by Rosenstein-Rodan in his path-breaking article are discrepancies between the private and the social marginal net product, i.e. externalities in the sense of Pigou – Rosenstein-Rodan distinguished here between pecuniary and technological externalities –, and further market failures in the provision of public goods, i.e. the lack of a public infrastructure. Rosenstein-Rodan thus identified those elements which played a key role in his theory of the 'big push', i.e. as conditions of a successful start of a 'balanced growth' path. The government had to launch development programmes which should comprise investment in education and research, i.e. human capital,³⁷ as well as in the building up of a functioning infrastructure. In order to achieve that "external economies will become internal profits" (Rosenstein-Rodan 1943, p. 207), he considered it necessary that these programmes must comprise the whole economy to exploit complementarities in production and consumption for the development process. Although the analysis of disproportionate growth processes had been at the very basis of his understanding of problems of economic (under-)development, Rosenstein-Rodan, and later the born Estonian Ragnar Nurkse (1953), had laid the foundation for the 'balanced growth'-strategy which dominated the first decade of development economics. Interestingly, with Albert O. Hirschman (1958) and Paul P. Streeten (1959) it were two younger émigrés who became the architects of the opposite 'unbalanced growth'-strategy,³⁸ which favoured the concentration of investment

³⁶ See Rosenstein-Rodan (1943, p. 202 and 1984, p. 208).

³⁷ "The first task of industrialisation is to provide for training and 'skilling' of labour" (1943, p. 206). For a modern formalisation of Rosenstein-Rodan's big push-theory see Murphy, Shleifer and Vishny (1989).

³⁸ *Albert Otto Hirschman(n)*, who was born in Berlin in 1915, first emigrated to France in 1933. He only spent a short period in the UK in 1935, from where he went to Italy where he got his Ph.D. at the University of Trieste in 1938. In 1940-41 he was the main helper of the American author Varian Fry in Marseille to bring out German refugees from Vichy France into a safer haven. Thereafter he was involved in a research project on national power and foreign trade at the University of California at Berkeley, in which Alexander Gerschenkron was another participant. The historical background and the empirical data used in that project had a great similarity with the parallel work of Rosenstein-Rodan and his team because they focused on Nazi Germany's attempts to expand its hegemonic trade relations and influence

funds in a few carefully selected growth poles to set a development process in motion by a chain of disequilibria, thus launching a major controversy which lasted for years.

It became clear very quickly that the analysis of the problems of industrialisation and the development of economically backward areas was not limited to countries of Eastern and Southeastern Europe (where the analysis got new topicality after 1989). In a lecture on "The international development of economically depressed areas" given at Chatham House in January 1944, Rosenstein-Rodan (1944) explicitly discussed the exemplary character of his earlier analysis, which also applies for countries such as China or India, colonial countries in Africa, the Caribbean or in the Middle East. Despite political differences or differences in the supply of raw materials, all these countries or regions share a dominance of the agricultural sector, hidden unemployment and an insufficient qualification level of human capital. Emphasis on the mass phenomenon of hidden unemployment was also put in Kurt Mandelbaum's study *Industrialisation of Backward Areas* (1945), which grew out of a research project on postwar reconstruction carried out by the Joint Committee of Nuffield College and the Institute of Statistics in Oxford. Mandelbaum clearly saw the double character of hidden unemployment, which on the one hand is the key problem and on the other hand a great potential for a successful development process. Thus he stressed (*ibid.*, p. 2) that

"if these surplus workers were withdrawn from agriculture and absorbed into other occupations, farm output would not suffer, while the whole new output would be a net addition to the community's income. The economic case for the industrialisation of

spheres in Eastern and Southeastern Europe, thus containing an early example of 'dependence theory'.

Paul Streeten was born in 1917 as Paul Hornig in Vienna, where he had been an active young socialist before the *Anschluss* forced him to emigrate. After internment in England and Canada he did military service and participated in the allied landing on Sicily in 1943. Having been seriously wounded he continued his studies after recovery and made his M.A. at the University of Aberdeen in 1944. From 1947 to 1966 he was Fellow at Balliol College in Oxford (the second economist beside the Hungarian Thomas Balogh). In 1966 he became Professor of Economics and Director of the Institute of Development Studies at the University of Sussex in Brighton, where he had already got his first job as an economist from 1944 to 1947. In 1968 Streeten moved back to Oxford as the Warden of Queen Elizabeth House and Director of the Institute of Commonwealth Studies before he finally left for the US in 1978.

densely populated countries rests upon this mass phenomenon of disguised rural unemployment".³⁹

Mandelbaum also proposed to work out Five-Year Plans to industrialise backward agrarian economies. This proposal reflected his early interest in economic planning and problems of long-term growth as they were heavily discussed by Feldman, Preobrazhenski and others on the basis of modified versions of the Marxian schemes of expanded reproduction in the Soviet Union in the 1920s. Mandelbaum, who was born in Schweinfurt, Germany, in 1904, got an early interest in Marxian economics since he became a student of Bortkiewicz at the University of Berlin in fall 1923. In 1926 he made his Ph.D. with a dissertation on the discussion of the problem of economic imperialism within the German social democracy at the Goethe University in Frankfurt. His dissertation supervisor was the Austro-Marxist Carl Grünberg who became the founding director of the Institute for Social Research, where Mandelbaum held a research position from 1926 to 1939, i.e. keeping it after his 1933 emigration. Whereas the Institute, which had been moved to Paris after the Nazis' rise to power, resettled in New York, he moved to London in 1934. From 1940 to 1950 Mandelbaum was researcher at the OIS before he accepted a lecturing position at the University of Manchester, where he co-operated with W. Arthur Lewis and stayed until 1967. In 1964 he co-founded the *Journal of Development Studies* at the School of Oriental and African Studies in London. From 1969 to 1985 he held a position at the Institute of Social Studies in The Hague, where he co-edited the journal *Development and Change*, before he finally returned to London. Mandelbaum, who was married to a Czek, kept his strong interest for Eastern and Southeastern Europe. Thus, during his Manchester years, he often travelled to Hungary, Poland and the Soviet Union, sometimes accompanied by Joan Robinson and Maurice Dobb. Interestingly, he had written an early review article of Keynes's *General Theory* under the pen name of Erich Baumann, which was published in the journal edited by the Institute for Social Research. Mandelbaum (Baumann 1936), who was well informed on contemporary British economics, criticised Keynes from an enlightened perspective of Marxian accumulation theory. He emphasised the role of

³⁹ For an assessment of the importance of Mandelbaum's study for development economics in its formative period see Singer (1979).

technical progress and its influence on profit expectations and criticised Keynes's liquidity preference theory, the neglect of structural disproportionalities and "Keynes's occasional relapses into a rather primitive underconsumptionist argumentation" (*ibid.*, p. 402).

Despite Mandelbaum's critique it has to be stated that Keynes had a certain indirect influence on development economics in its formative period,⁴⁰ via the overcoming of neoclassical monoeconomics and in providing, for example, the basis for Joan Robinson's (1936) concept of disguised unemployment. The influence of Keynes on the development of a development economist is most clearly detectable in the work of Hans Wolfgang Singer, who had started his Ph.D. with Joseph A. Schumpeter after getting his diploma degree at the University of Bonn in 1931 and finished it at the University of Cambridge in November 1936, where he was only the third candidate to be awarded a Ph.D. in economics.⁴¹ Singer worked as an investigator for Pilgrim Trust in the major inquiry into high and sustained unemployment that existed in the depressed areas of Britain in the years 1936-38 before he became Assistant Lecturer of Economics at the University of Manchester, where his role was that of an intermediary between the lectures of John Hicks and the students.⁴² After short periods as an economic research officer in the UK Ministry of Town and Country Planning in 1945/46 and as Lecturer in Political Economy at the University of Glasgow in 1946/47, Singer in 1947 was among the first of numerous émigrés who started a career as a development economist at the United Nations, where he worked from 1947 to 1969 (teaching also as a Guest Professor at the New School for Social Research), before he returned to England as a Professorial Fellow to the Institute of Development Studies at the University of Sussex in Brighton. During his early period at the UN he also published his best known article (Singer 1950), which originally was given as a lecture to the American Economic Association under the slightly different title "Gains and losses from trade and investment in under-developed countries" in 1949. This led to the famous Prebisch-Singer thesis on the long-run structural deterioration of the terms of trade for primary products compared to industrial products which

⁴⁰ See also Esslinger (1998, pp. 318 ff.).

⁴¹ See Singer (1997) and Shaw (2002) for greater details.

⁴² See Singer's interview with Keith Tribe (1997, p. 69).

discriminates against developing countries. The Prebisch-Singer hypothesis caused lively debates and major controversies ever since.

Singer's 'two heroes', Schumpeter (Bonn) and Keynes (Cambridge), point out in an illuminating way the advantages of a double education which made several of the émigrés, particularly in the age group between 1910 and 1918 (Austria), to *Emigrationsgewinner*, i.e. having benefited from emigration, despite all the hardships caused by expulsion. This aspect of emigration recently has been highlighted by Richard Musgrave (1996 and 1997), who was instrumental in the development of modern public finance in which the best elements of the German or Continental European tradition of *Finanzwissenschaft*, having a broader perspective including institutional, historical, socio-logical and legal aspects, were merged with the Anglo-Saxon tradition of public finance, which had developed as part of pure economics and shared the rigour of its analysis. Singer had the main ideas of Schumpeter's *Theory of Economic Development* in his emigration baggage, including the emphasis on technological innovation, the role of the entrepreneur and the importance of credit for financing innovational activities, i.e. a deeper understanding for the necessity of breaking up the traditional circular flow. The high concentration of development economists born between 1910 and 1917 (Arndt, Baran, Hirschman, Hoselitz, Kafka, Singer, Streeten *et al.*) does not only show that they were benefiting from a double education in economics and a mutual insemination at a time when different national traditions were still important, they themselves were for a greater part instrumental in the internationalisation process of the discipline. In the discussion of the 'Americanisation' of economics in the post-1945 period, it is often overlooked that a great part of 'the' American economists were colleagues who came from Hitlerian or Stalinist Europe. In interviews with emigrated economists the author of the present paper was often told (by members of the age group born between 1890 and 1910) how deeply they had been influenced by national traditions before, and that emigration had made them feel to become 'citizens of the world' or, in the words of Paul Streeten (1986), to adopt "aerial roots". It is no accident that a greater number of the younger émigré economists, particularly of those who went to the UK, developed a deep concern for the problems of the developing world and engaged themselves professionally in the improvement of living standards in 'backward areas'.

6. The analysis of the German war economy

With the outbreak of the war the debate on the efficient organisation of the British war economy arose. Now the expertise knowledge of many émigrés, in particular in a comparative analysis of the German war economy, came into strong demand. However, the fact that until September 1939 only very few had become British citizens, or were naturalised, left the great majority still as 'enemy aliens' thereby implying barriers to achieving 'official' status or sometimes getting access to sensitive data. This did not prevent Keynes from asking Hans Singer, who was just liberated from internment prison as a 'friendly enemy alien', to contribute a series of twelve articles on "The German war economy" to each issue of *The Economic Journal* between December 1940 and September 1944. For that work Singer received a grant from the National Institute of Economic and Social Research and even got access to the material collected in the Ministry of Economic Warfare.⁴³ Singer also contributed further papers on the subject to other British scholarly journals including, for example, a paper on "The sources of war finance in the German war economy" (Singer 1942-43). Singer's account of the 'points rationing system' taken in the German war economy also had a certain impact on the reflections of Richard Kahn and Brian Reddaway, who at that time were responsible for the shaping of rationing schemes in the Board of Trade to co-ordinate the supply and demand for consumer goods and avoid inflationary pressures.

The most important contribution to a theory of rationing by an émigré economist was Erwin Rothbarth's "The measurement of changes in real income under conditions of rationing" (1941), in which the author developed the concept of a virtual price system.⁴⁴ Rothbarth's article reveals an excellent knowledge of the modern analysis of index number problems as well as of consumer and welfare theory as it had been designed by Slutsky, Hicks, Kaldor *et al.* It constitutes a "fundamental contribution to the solution of the prob-

⁴³ For greater details see Tribe (1997, p. 97) and Shaw (2002, pp. 30-32).

⁴⁴ For an overview on Rothbarth's life and work see Cuyvers (1983). Rothbarth also made the statistical calculations for Keynes's famous study "How to pay for the war" (Keynes 1940).

lem"⁴⁵ of measurement of real income changes under the conditions of rationing. The fundamental problem to determine the welfare consequences of rationing consists in the inquiry of the 'virtual price system', which makes the quantities of goods consumed under the conditions of rationing to the 'optimum' ones, i.e. those preferred by the consumers under the conditions of free market price-setting with given nominal incomes. The determination of such a virtual price system, however, proves to be extremely difficult, if not impossible, considering the interpersonal differences in preferences and incomes. Nevertheless Rothbarth's attempt to determine the required change in income with a free formation of market prices constitutes an important step in the investigation of the welfare-economic consequences of rationing. It was also recognised in the post-war literature as in Tobin's (1952) basic survey article on the theory of rationing.

Hal C. Hillmann was born in 1910 as Hermann Christian Hillmann in Kiel, where he was the chairman of the social-democratic student organisation at the university and a research assistant to Gerhard Colm at the Institute of World Economics when the Nazis arrested him in April 1933. After several months of prison he could escape and emigrate to Britain in January 1934. After making his M.A. with distinction at St. Andrews University in June 1935, he got his first job as an economic investigator at the Dundee School of Economics within the Pilgrim Trust project. In fall 1936 he moved to the University of Manchester as a research assistant of John Jewkes. Due to his marriage with Elisabeth Bacon, the daughter of the President of the Manchester Statistical Society, in December 1939 Hillmann became a British citizen. This allowed him to become Research Officer in Economics at the Foreign Research and Press Service of the RIIA, which was directed by the historic philosopher Arnold Toynbee at the Balliol College in Oxford. There Hillmann became one of the most important analysts of the German war economy and of the post-war reconstruction. In a lecture given to the Manchester Statistical Society in November 1939 Hillmann analysed the changes in the volume, direction and structural composition of Germany's foreign trade after the end of the First World War in order to answer the relevant question of the likely effects of an Allied sea blockade on the German imports and exports. He came to the result that the sensitiveness of the

⁴⁵ Kalecki (1944-45, p. 121).

German economy had been reduced in the 1930s due to the efforts in the direction of a greater 'national self-sufficiency' and the resulting reduction in the trade volume as well as due to a reorientation of trade from allied countries to neutral states. Nevertheless, with a continuation of the war serious shortages of major raw materials could be expected which would cause greater problems for the German war economy. Hillmann stayed at the RIIA until 1948 (his section was shifted from Oxford to London in 1943), when he moved as a Lecturer in Economics to the University of Leeds, where he retired in 1976. His comprehensive contribution on the relative industrial strengths of the great powers and their economic preparations for war to the famous study *The World in March 1939* (Hillmann 1952) does not only give a summary of his scientific activities during his eight years at the RIIA but is still today an important reference work concerning the different economic starting positions of the nations at war.

Further important works on the German war economy and subsequent problems of reconstruction were done at the OIS. Thus Burchardt (1945) reflected on the connection between reparations and reconstruction and wrote a further article with Kurt Martin (1947) on reconstruction in Western Germany. Of particular interest are Schumacher's ideas on international clearing arrangements which were quite similar to those which Keynes developed during the war. Ernst Friedrich ('Fritz') Schumacher (1911-1977) was the son of a Professor of Economics who never made a degree in economics but "was a man of powerful insights and deep-rooted contradictions".⁴⁶ Schumacher, who had come to know Burchardt as an internee, worked at the OIS from 1941 to 1945. Besides his engagement for a full-employment policy discussed earlier, the application of Keynesian theory to problems of international trade and capital movements became his second main area of research and publications in this period. Thus in May 1943 he published an article on "Multilateral clearing" in *Economica*, which had circulated already for more than a year as a RIIA paper, on the reform of the international monetary system in which he favoured a mechanism of pool clearing rather than currency convertibility in order to avoid the 'beggar-thy-neighbour'-policy of com-

⁴⁶ King (1988, p. 226). See King for the details of the biography and for a balanced assessment of Schumacher's personality and his controversial contributions to economics.

petitive deflation in the Great Depression and to reconcile economic growth and full-employment policies with external equilibrium. Further papers on the new currency plans in the *OIS Bulletin* followed, one co-authored with Kalecki (Kalecki and Schumacher 1943), another one with Balogh (Balogh and Schumacher 1944). Furthermore, Schumacher contributed a series of articles to *The Economist*, *Observer* and *The Times*. When Keynes abandoned his similar ideas under strong US pressure during the Bretton Woods negotiations, Schumacher became furious and heavily attacked Keynes, which led to a debate between the two men in *The Times* in August 1944. Immediately after the war Schumacher went back to Germany as an economic adviser to the British section of the Allied Control Commission from 1945 to 1950. He took main responsibility for the restoration of the German coal industry. This left a mark for his future activities after his return to Britain in 1950, where he worked for the National Coal Board until his retirement in 1970, first as an economic adviser, since 1963 as a chief statistician. Schumacher now had found questions of energy policy and (intermediate) technology as his life mission. Whereas Schumacher contributed to the post 1945-reconstruction of the German heavy industries particularly in the Ruhr area, the British military forces used parts of his co-émigré's *The Price of Liberty* (Lowe 1947) for the democratic reeducation of the Germans after the end of the Nazi period.

APPENDIX

EMIGRATED GERMAN-SPEAKING ECONOMISTS TO UK

Name		Life dates	Exile countries
Altschul	Eugen	1887-1959	1933 UK-1933 US
Apel	Hans	1895-1989	1935 NL-1935 UK-1937 US
Arndt	Heinz Wolfgang	1915-2002	1933 UK-1946 AUS
Aubrey	Henry G.	1906-1970	1938 UK-1939 US
Baran	Paul Alexander	1910-1964	1933 F-1934 SU-1935 PL-1938 UK-1939 US
Behrend	Hilde	1917-2000	1936 UK
Behrendt	Richard F.	1908-1972	1933 UK-1935 PA-1940 US-1942 PA
Berger-Voesendorf	Alfred Victor	1901-1980	1938 NL-1939 UK-1946 ET-1948 US
Bernardelli	Harro	1906-1981	1934 CH-1935 UK-1947 NZL
Bondi	Gerhard	1911-1966	1934 CS-1939 UK-1946 GDR
Bonn	Moritz Julius	1873-1965	1933 UK-1939 US-1946 UK
Braunthal	Alfred	1897-1980	1933 B-1935 UK-1936 US
Browne	Martha Stephanie	1898-1990	1938 UK-1938 US
Bruck	Werner F.	1880-1945	1933 UK-1940 US
Bry	Gerhard	1911-1996	1935 UK-1938 US
Burchardt	Frank A. (Fritz)	1902-1958	1935 UK
Corden	Warner Max	1927	1938 UK-1939 AUS
Dessauer	Marie	1901-1986	1934 UK
Doblin	Ernest Martin	1904-1951	1933 UK-1936 US
Drucker	Peter Ferdinand	1909-2005	1933 UK-1937 US
Eckstein	Otto	1927-1984	1938 UK-1939 US
Elsas	Moritz Julius	1881-1952	1933 UK
Eltis	Walter Alfred	1933	1939 UK
Firestone	Otto John	1913	1936 UK-1940 CDN
Foldes	Lucien Paul	1930	1938 UK
Forchheimer	Karl	1880-1959	1938 UK-1949 A
Goldsmith	Raymond William	1904-1988	1933 UK-1934 US

Legenda: A = Austria, AUS = Australia, B = Belgium, CH = Switzerland, CS = Czechoslovakia, ET = Egypt, F = France, NL = The Netherlands, NZL = New Zealand, PA = Panama, PL = Poland, SU = Soviet Union, UK = United Kingdom, US = United States.

EMIGRATED GERMAN-SPEAKING ECONOMISTS TO UK

Name		Life dates	Exile countries
Grossmann	Henryk	1881-1950	1933 F-1935 UK-1938 US-1949 GDR
Gruen	Fred Henry George	1921-1997	1936 UK-1940 AUS
Gutmann	Gerard	1922-1992	193x UK-1940 AUS
Hahn	Frank Horace	1925	1933 CS-1938 UK
Halpern	Detlev Bruno	1903-19xx	1936 UK
Hayek	Friedrich August	1899-1992	1931 UK-1950 US-1961 G
Helleiner	Gerald Karl	1936	1939 UK-1939 CDN
Hermens	Ferdinand Alois	1906-1998	1934 UK-1935 US
Hertz	Friedrich Otto	1878-1964	1933 A-1938 UK
Heymann	Hans	1885-1949	1934 UK-1936 US
Heymann	Hans Jr.	1920	1934 UK-1936 US
Hillmann	Hal (Hermann) C.	1910-1990	1934 UK
Hirsch	Fred	1931-1978	1934 UK
Hirschman	Albert Otto	1915	1933 F-1935 UK-1936 I-1938 F-1941 US
Hoselitz	Bert(hold) Frank	1913-1995	1938 UK-1939 US
Kafka	Alexandre	1917	1937 CH-1938 UK-1940 BR-1963 US
Kahn	Charles Harry	1921-1972	1933 UK-1940 US
Kahn	Ernst	1884-1959	1933 UK-1934 US-1935 PA
Kapp	Karl William	1910-1976	1933 CH- 1936 UK-1937 US
Kaulla	Rudolf	1872-1954	1933 UK-1934 CH
Keren	Michael	1931	1933 PA-1950 UK-1956 IS
Klatt	Werner	1904-19xx	1939 UK
Kohr	Leopold	1909-1994	1938 US-1939 CDN-1941 US-1973 UK
Kolsen	Helmut Max	1926	1939 UK-1948 AUS
Kuczynski	Jürgen Peter	1904-1997	1936 UK-1945 GDR
Kuczynski	Robert Rene	1876-1947	1933 UK
Lachmann	Ludwig Moritz	1906-1990	1933 UK-1949 SA
Leser	Conrad V.E.	1915-1998	1934 CH-1939 UK
Leubuscher	Charlotte A. P.	1888-1961	1933 UK
Levy	Hermann	1881-1949	1934 UK

Legenda: A = Austria, AUS = Australia, BR = Brazil, CDN = Canada, CH = Switzerland, CS = Czechoslovakia, F = France, G = Greece, GDR = German Democratic Republic, I = Italy, IS = Israel, PA = Panama, SA = South Africa, UK = United Kingdom, US = United States.

EMIGRATED GERMAN-SPEAKING ECONOMISTS TO UK

Name		Life dates	Exile countries
Liepmann	Heinrich	1904-1983	1934 NL-1936 UK
Liepmann	Leo	1900-19xx	1935 UK
Lovasy	Gertrud	1900-1974	1938 UK-1939 US
Lowe	Adolph	1893-1995	1933 UK-1940 US
Mars	John (Hans)	1898-1985	1934 UK-1962 A
Marschak	Jacob	1898-1977	1933 UK-1939 US
Marschak	Thomas A.	1930	1933 F-1933 UK-1939 US
Martin (Mandelbaum) Kurt		1904-1995	1933 F-1935 UK
Mayer	Thomas	1927	1938 UK-1944 US
Meusel	Alfred	1896-1960	1934 DK-1934 UK-1946 GDR
Meyer	Gerhard Emil Otto	1903-1973	1933 F-1935 UK-1937 US
Moos	Siegfried	1904-1988	1934 UK
Moser	Sir Claus	1922	1936 UK
Mottek	Hans	1910-1993	1933 PA-1936 UK-1946 GDR
Mueller	Franz Hermann	1900-1994	1935 UK-1936 US
Neurath	Otto	1882-1945	1934 NL-1940 UK
Niebyl	Karl-Heinrich	1906-1985	1933 UK-1934 US
Palyi	Melchior	1892-1970	1933 UK-1933 US
Plaut	Theodor Friedrich	1888-1948	1933 UK
Polanyi	Karl	1886-1964	1933 UK-1940 US-1947 CDN
Pollard	Sidney	1925-1998	1938 UK
Prager	Theodor	1917-1986	1935 UK-1945 A
Radomysler	Asik	1914-1952	1935 UK
Reinhardt	Hedwig	1906	1938 B-1939 UK-1939 US
Richter	Lothar	1894-1948	1933 UK-1934 CDN
Rieger	Philipp	1916	1938 UK-1957 A
Rosenbaum	Eduard	1887-1979	1934 UK
Rosenbluth	Gideon	1921	1933 UK-1940 CDN
Rosenstein-Rodan	Paul N.	1902-1985	1930 UK-1947 US
Rothbarth	Erwin	1913-1944	1933 UK
Rothschild	Kurt Wilhelm	1914	1938 UK-1947 A
Rusche	Georg	1900-1950	1933 UK
Salz	Arthur	1881-1963	1933 UK-1934 US

Legenda: A = Austria, B = Belgium, CDN = Canada, DK = Denmark, F = France, GDR = German Democratic Republic, NL = The Netherlands, PA = Panama, UK = United Kingdom, US = United States.

EMIGRATED GERMAN-SPEAKING ECONOMISTS TO UK

Name		Life dates	Exile countries
Schiff	Walter	1866-1950	1938 UK
Schüller	Richard	1870-1972	1938 I-1939 UK-1941 US
Schumacher	Ernst F(ritz)	1911-1977	1937 UK
Seton	Francis	1920-2002	1938 UK
Singer	Sir Hans	1910-2006	1933 TK-1934 UK
Sohn-Rethel	Alfred	1899-1990	1936 UK
Stark	Werner	1909-1985	1934 CS-1939 UK
Steindl	Josef	1912-1993	1938 UK-1950 A
Steiner	Ernst	1886-1971	1939 UK-1946 A
Streeten (Hornig)	Paul Patrick	1917	1938 UK-1978 US
Sturmthal	Adolf (Fox)	1903-1986	1936 B-1936 UK-1938 US
Sultan	Herbert Siegfried	1894-1954	1939 UK-1946 G
Weiss	Franz Josef	1898-1975	1938 UK-1939 US
Weiss	Franz Xaver	1885-1956	1939 UK
Westfield	Fred M.	1926	1939 UK-1940 US
Zassenhaus	Herbert Kurt	1910-1988	1934 UK-1937 US
Zweig	Konrad	1904-1980	1933 UK

Legenda: A = Austria, B = Belgium, CS = Czechoslovakia, G = Greece, I = Italy, TK = Turkey, UK = United Kingdom, US = United States.

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