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Martin Kohlrausch, Helmut Trischler, *Building Europe on Expertise: Innovators, Organizers, Networkers*, (Making Europe 2) Basingstoke: Palgrave Macmillan 2014. 416 S., £ 60,00. ISBN 978-0-230-30805-3.

Images of the past that form a nation's or a group's self-perception often assume the character of myth. A powerful image is that of the European Union

and its predecessors as primary, if not sole, forces of European integration. That the union has acted as a powerful force of Europeanization since the 1990s has rendered this image almost mythical dimensions. For historians — with myth-breaking as one of their most important tasks — the challenge has been to identify other forces of European integration and to place the process of integration in a long-term perspective. The ambitious book series "Making Europe", consisting of six volumes in total, meets the challenge by investigating technology's role in the 'hidden integration' of Europe between 1850 and 2000.

Building Europe on Expertise is the second volume in this series. Its authors, Martin Kohlrausch and Helmut Trischler, examine how technoscientific experts shaped Europe, and vice versa. They claim that "the building of Europe's individual nation-states and the creation of cross-national networks, organizations, and institutions – also referred to as Europeanization and European integration – are interconnected processes, both featuring technoscientific experts as the main actors" (p. 6). By technoscientific experts, they mean all kinds of scientists as well as trained professionals whose work drew on scientific principles. It was professionals who often could convert their technoscientific knowledge into political and social influence.

The book is chronologically structured in three parts, each consisting of three chapters. The chapters are organized around case studies that, the authors argue, demonstrate the dynamics of expertise of the time. The first part deals with the period from the mid-nineteenth century to the late 1920s. Its first two chapters explore the institutionalization of engineering education and how engineers gained a position as a new national elite all over Europe. The authors emphasize the mutual dependence - even alliance - between the state and the emerging technical elite. The basic form of this expert nationalism was largely international, however. The third chapter, in turn, analyzes three visionary blueprints for a science-based universalism: Paul Otlet's Mundaneum, Otto Neurath's picture-based international language, Isotype, and Wilhelm Ostwald's attempt to standardize scientific communication. Although only partially realized, these projects reflected a new understanding of science and technology as a means of building a better society.

The second part of the book concentrates on the changing fortunes of expertise in the interwar period as well as the Second World War and its aftermath. Against the backdrop of the dramatic scientific and technological progress of the era, experts increasingly sought to apply their technoscientific knowledge to social problems such as housing and health. Particularly in the case of health, the ambition to improve the human condition with scientific schemes paved the way for eugenics and racial politics. In the total-itarian European states, which emerged during the

interwar period, many of the technical and scientific elite entered into a Faustian pact with the new regimes. Others were forced into exile on political or racial grounds. To frame this forced migration purely in terms of loss and gain is too simplistic, however. In the long run, Kohlrausch and Trischler point out, the resulting transnational circulation of knowledge accelerated the denationalization of expertise and equalized interregional disparities of knowledge.

The third and final part of Building Europe on Expertise takes the reader rather abruptly to the big transnational science projects of postwar Europe. Its chapters include case studies of European collaboration in the nuclear sector (most notably CERN), the European space programs, and the shaping of European research programs. These final chapters move the analysis to the institutional level, with the inner workings of technoscientific expert groups taking backstage. Although Kohlrausch and Trischler maintain that experts were crucial actors, they do not provide any deeper analysis of how their ideas and actions promoted and shaped these pan-European projects. Particularly when discussing the recent vision of the European knowledge society, the authors take the policymakers' accounts - for instance, Helga Nowotny's - at face value rather than critically examine them. Admittedly, the closeness of the recent past makes it difficult to render a clear picture of it. In any case, this lack of distance brings the authors dangerously close to reiterating the policymakers'

The biggest problem with Building Europe on Expertise is that the authors' examples only partially substantiate their very strong claim that experts became a "huge force" (p. 5) in building Europe. Part of the problem is the format of the series "Making Europe". Two of the other books in the series deal de facto with experts: Europe's Infrastructure Transition: Economy, War, Nature (2015) written by Per Högselius, Arne Kaijser, and Erik van der Vleuten, and Writing the Rules for Europe: Experts, Cartels, and International Organizations (2014) written by Wolfram Kaiser and Johan Schot. As a consequence, Kohlrausch and Trischler's account excludes system-builders and experts in technology, law, and business - both key in building Europe. Moreover, they are too quick to dismiss professionals in industry - rationalization experts, for example as rank-and-file experts and hence not a subject of their study. The result is an almost exclusive focus on a specific group of technoscientific experts - perhaps technoscientific visionaries would be a fitting term - driven largely by idealistic motives. Obviously, Building Europe on Expertise would have benefited from a more moderate introductory claim.

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Notwithstanding these critical remarks, Kohlrausch and Trischler have presented a fascinating and highly readable account of technology's role in the hidden integration of Europe. While historical studies of Europe often are mere compilations of national stories, particularly those of the large industrialized nations, their book, especially its first two parts, is exemplary in incorporating stories from the 'Other Europe' into a single coherent narrative.

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