

## **Die Medizinische Orient. Wien und die Begegnung der europäischen Medizin mit dem Osmanischen Reich (1800–1860)**

**By Marcel Chahrour. Stuttgart: Franz Steiner, 2022. Pp. 402. Paperback €70.00. ISBN: 978-3515131933.**

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Marcel Chahrour's work on the scientific and institutional engagement of Austrian and, more broadly, European medicine with the Ottoman Empire argues that there was, beside the literary, philosophical, or despotic Orient, an even more consequential "medical Orient" through which the modern West constituted itself. More consequential, because it was the medical Orient of the doctors and institutions that spoke for European academic medicine in the nineteenth century that allowed them to stand at the center of the most potent universalist claims of European modernity against the Islamic East. These claims included the unique capacity of modern science for epistemic innovation and progress; the hygienic capacity to police populations and maximize health and prosperity; and, in an increasingly connected context of interdependent health, in which European doctors began equating a population's level of health with its level of civilization, the mission to spread medico-political progress and prosperity across the globe. Accordingly, to put this medical Orient of modern European medicine under the historical microscope, Chahrour provocatively brings together the two most sustained challenges to such universalist claims in contemporary historiography, namely the post-positivist critique of triumphalist accounts of modern natural and social science and the post-colonial critique of European Orientalism and imperialism. He thereby shows, on the one hand, how European doctors conjured up the universal status of modern Western medicine—its alleged exclusive capacity for epistemic and social progress—by, for instance, portraying medicine in the Ottoman East (and beyond) as, at best, non-cognitive, practical; by panning Islam (e.g., in its religious ideals proscribing dissection) as making medical research and innovation impossible; or by the idea of Muslim fatalism. On the other hand, he demonstrates that the history of how modern Western medicine actually universalized itself ran in virtual reverse to such invidious distinctions.

The first two chapters—on the use of plaster casts for healing broken bones and on the development and propagation of vaccination on the basis of the earlier practice of variolation—illuminate the historical reality behind the idea of modern Western medicine as universal by showcasing how some of the great innovations of nineteenth-century European medicine were due to direct borrowing from the Ottoman East. This debt to the medical Orient, though, was soon forgotten under the principle that nothing is "discovered" until it enters the epistemically adequate veins of European medicine. The next three chapters, which comprise the heart of the book, deal with the so-called Egyptian eye-inflammation (trachoma), the plague, and cholera. They focus on the heated debate between European doctors in the first half of the nineteenth century about whether these diseases were contagious or not, and, at a time before bacteriology and virology, about the meaning of "contagion," which included prominently the ideas of direct as well as miasmatic transmission. Chahrour argues that precisely doctors who tended to anti-contagionist or "epidemic" etiologies of these diseases relied on medical ideas drawn from the classical Greek and Arab (Islamic) medical traditions shared with the Ottoman East to identify secondary causes emanating from climactic and, increasingly, socio-cultural "hygienic" factors comprising an "epidemic constitution" as capable of causing disease. These ideas then served to fashion the

Orient as a diseased, unhygienic, abnormal space that required European medical observation, experimentation, and intervention.

The story of how Western medicine universalized itself via the medical Orient is thus, in a clearly Foucauldian trajectory, encompassed by Chahrour's account of the shift in the European approach to the Ottoman Empire from the eighteenth to the nineteenth centuries. The Ottomans, first viewed as a military threat—the plague was seen as invasive—were trenchantly separated from the Habsburg realm and Europe by a military border and quarantine. During the nineteenth century, increasingly conceived instead as a medical threat, the Ottoman East and Egypt were incorporated as diseased, unhygienic spaces requiring European medico-political intervention and induction into a world order defined by Western economic and cultural hegemony. The fascinating final chapter describes the full dynamics of this European medico-political intervention: the shifting of the quarantine into the Ottoman East and Egypt; the role of European doctors, particularly Austrians, in the establishment of quarantine institutions and health councils (often dominated by foreigners) that would become the kernel of burgeoning medical bureaucracies; and, as part of military modernization programs, the construction and administration of new medical schools on European models. Chahrour's honest, fair presentation of a wealth of evidence makes this book a true historical achievement, and his capacity to make this material speak to large historiographic questions means it deserves to be read by all those interested in the history of science and cultural encounters.

In the first half of the nineteenth century, European medicine embarked on a more disciplinary approach to disease but had as yet no more convincing explanations of what it called Oriental diseases than its Ottoman Islamic counterpart, and certainly no better therapies. A key question of Chahrour's research is thus, how was it precisely that European medicine came to claim epistemic and moral superiority over the medical Orient? Chahrour draws here on Edward Said's critique of Orientalism as imperialist discourse to argue that European medicine's claims about the medical Orient must be understood not on an epistemic but on a political basis. Europe was more powerful, which allowed European medicine to say it was exclusively committed to knowledge, instituted health and hygiene, and was civilized, whereas Islam vitiated knowledge, Muslims were fatalistic and needed Europeans to civilize them. As for why Ottomans and Egyptians would embrace a European medicine that was little more than a denigration of themselves, this seems to be explained through the idea of self-Orientalization, the defensive internalization by Orientals of Orientalist tropes. Certainly, when Chahrour says that European doctors turned the Orient into a "experimental laboratory," (196) this damningly suggests Westerners experimented on Easterners, in the diseased Orient, to save Western lives. His evidence shows, however, that much of this experimentation was so-called "medical heroism" (199) (self-experimentation by European doctors), that Europeans and non-Europeans were equally experimented on in this context, and that the same experiments were proposed to be undertaken in Europe. That is, European doctors' claims to superiority were staked not on devaluing Muslim lives but the opposite: they claimed to care more for human life (even more for Muslim lives) than Muslims did. This was their brief against so-called Muslim fatalism.

This is also the theoretical tension between Said's critique of Orientalist objectification/dehumanization of Orientals versus Chahrour's Foucauldian critique of medical subjectification eliciting hygienic self-discipline. Said condemns Orientalist discourse. Chahrour, far from dismissing modern European medicine, wants to give the Orient due credit for it. There is, beside this great theoretical tension, also a great historiographic tension and weakness in the book: it reads like an internal debate between the author and his cast of European doctors, akin to the social historians of a generation ago who sought to recover the agency of subaltern groups by reading the hegemonic discourses in which these groups appeared against the grain. Chahrour eloquently defends the Orientals, but the "Oriental" voices and perspectives of the time have not been lost; they can be historically reconstructed. Is it not ironic first to condemn Europeans for representing "Orientals" because supposedly

they could not represent themselves and then, with that treacherous concept, “self-Orientalization,” to do essentially the same thing because the Orientals did not say what you apparently think they should have said?

doi:10.1017/S0008938923001395

## Technology in Modern German History: 1800 to the Present

**By Karsten Uhl. London and New York: Bloomsbury, 2022. Pp. v + 280. Hardcover £85.00. ISBN: 978-1350053205.**

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A friendly couple in Stuttgart once proudly proclaimed to me that “das Schwabenland” was a “Land der Tüftler [a region of tinkers].” Indeed, tinkering and engineering have played a prominent role not just in the Swabian popular historical imagination, but in the larger German one as well. Karsten Uhl provides a timely primer on the history of German technology, examining how technology shaped modern German society and culture and how German society and culture shaped technology. He highlights the continuities connecting modern German technology’s history since 1800 as he chronicles how technology became an essential aspect of German identity. He ambitiously states at the outset that he will examine “how technology permeated all facets of life in modern Germany” (1). While he may not accomplish this lofty goal, he delivers a series of thought-provoking essays to stimulate further discussion and investigation by English-reading audiences.

Uhl begins his overview with an interesting vignette on the history of KUKA AG that serves as a metaphor for the narrative he constructs about modern German technology. Before the late nineteenth century, imitation characterized German technological development, borrowing heavily from other national models like Great Britain to achieve a global reputation in heavy industry. Here he relies on the prototypical example of Krupp AG. However, by the late nineteenth century, German technology moved beyond the status of imitator to become a global innovator in science-based technology. It was during this period that KUKA AG was founded, producing electrical lighting and appliances to address the demands of rapid urbanization. As Uhl explores in subsequent chapters, German firms like KUKA built on this initial success by diversifying their line of innovative products to include automated welding processes. By the 1930s, the firm moved into waste removal vehicles, as industrialization created new demands for environmental waste disposal, and started manufacturing its now iconic, orange-painted garbage trucks. KUKA remained innovative into the twenty-first century as a robotics manufacturer, still painted “KUKA orange,” and was acquired in 2016 by the Chinese company Midea Group as it sought to automate its production processes. The fate of KUKA symbolizes the arc of German technological development, from early imitators to later innovators, and then as a model for further technological development.

The text is best understood as a series of separate essays covering the relevant historiography and various case studies. The first part summarizes the well-told story of German industrialization within the context of rapid urbanization. Using the advantages of late-comers to industrialization, German engineers and scientists steadily overcame the