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Int. J. Middle East Stud. **47** (2015), 555–558

ROUNDTABLE

Historicizing Science and the Modern State

Introduction

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doi:10.1017/S0020743815000549

This roundtable brings together a diverse group of scholars to ask how a critical engagement with science studies, writ large, might allow us to rethink the modern history of the Middle East. They speak in the name of a number of disciplines, including: archaeology, agriculture, engineering, geography, medicine, natural philosophy, public health, psychology, sociology, and urban planning. And they cover a wide array of local, regional, and even international networks of expertise and experts. These included (to name a few) a British engineer who worked in colonial Egypt and India calculating the future demography of water supplies and sewage systems; American, Palestinian, and Zionist agricultural researchers and proponents of dry-land cultivation and colonization in Ottoman Palestine; Ottoman Arab and Turkish nationalists in Istanbul who debated the metaphysical and political implications of positivism; and, finally, the various experts and political actors who fought over the preservation (and destruction) of antique material artifacts and objects in Iraq and Egypt from the 19th century to the present. What we might claim they have in common, however, is a concern with the rise of the "modern state"—another broad category here encompassing a range of imperial, colonial, and national states in the region, and the multiple claims for legal and political sovereignty that they spawned. Of course, interlacing these questions of sovereignty, particularly in this context, as the essays show, is a further set of questions organized around the various forms of power that both these new states and these new sciences exercised. We could say, therefore, that collectively these essays reflect upon the coterminous rise of epistemic, material, and political orders in the region, and that, in the process, they contribute to our understanding of the ideas and practices claimed on behalf of both "science" and the "state."

Science and the state, like knowledge and power, are tied together in these essays in more ways than one. As Khaled Fahmy shows, charting the history of forensics in Egypt from the 19th century to the present allows us to see how new medical disciplines and practices led to the exercise of novel fora and forms of authority (and of disavowal and dissent too). In this case, as he points out, appeals to dissection can be said to have been made both by and for, as well as against, state officials in modern Egypt: such as when legal and political claims on the bodies and rights of citizens are taken up by the state;

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https://doi.org/10.1017/S0020743815000549 Published online by Cambridge University Press

or, conversely, when legal allegations are made by ordinary Egyptians against official forms of brutality, violence, or even murder made in the name of the state. These are timely questions and they help us to reconsider the epistemic and political histories of forensics in Egypt. Omar Tesdell also considers questions of sovereignty while reflecting on Palestine in the early 20th century. He examines the work of Najib Nassar, an early Palestinian advocate of modern dryland farming techniques, and looks at the capital, technical, and political networks that this new field of agricultural research engaged with along the way. Nassar's work to develop a national "treasury" of dryland farms as the basis for a future Palestinian agroeconomy shows us how and why modern methods and techniques of scientific research and practice were instituted there. In this sense, he traces the contours of an "environmental history of sovereignty" in Palestine to highlight how local, regional, and international networks of dryland research and development served multiple, and often competing political interests.

Ellen Amster also reflects upon the ways in which we might consider competing claims to sovereignty in the Middle East and North Africa while looking at concepts and practices of health, healing, and medicine as instances of debates over the "body politic," or historical claims made over both bodies and polities in the region. As she shows, these debates were organized around new conceptions and claims of citizenship and rights. But they also held multiple epistemological and ontological implications for the bodies or people that comprised these body politics. Just as new disciplines and new states sometimes tussled over the same places, so too did old remedies and new medicines sometimes rest in singular bodies.

Adrien Zakar, meanwhile, focuses on a single debate: a 1916 forum on "National Education" in Istanbul held on the eve of the Ottoman Empire's demise. Following Satiʿ al-Husari and Ziya Gökalp's heated dispute over the nature of positivism, he shows how they each appealed to it for their own visions of nationalism and of science: on one side, the Ottoman (and Arab) patriot al-Husari could appeal to modern psychology to cultivate, through pedagogic techniques and practices of suggestion, an individual ethic that bound together science, patriotism, and passion; and, on the other Gökalp, a Turkish nationalist, could advocate for an institutionalization of disciplines and practices of positive science—particularly through sociology, which he deemed the "Queen of the sciences"—and a transcendent view of both "nature" and "society"—the latter viewed by Gökalp as a kind of "social organism" with particular, psychic centers of authority. Al-Husari thought this view could only be used to promote metaphysics and mystics: in essence, he rejected what he thought of as Gökalp's "pantheistic" emphasis on society as an organismic or a holistic entity, and what he saw therefore as Gökalp's own antipositive and metaphysical approach to (social) science. Behind this, too, lay his aversion to the brute collectivism he thought lay behind Gökalp's view of (Turkish) national heroes and social scientists of "unity and progress."

Similarly, Harun Küçük asks us to consider the multiple meanings of science and the visions and practices of the state they implied while looking at examples of early modern Ottoman scientific texts. He asks how we might better understand these texts as part of specific material, social, and technical networks rather than simply read them for their philological or literary place in Ottoman history. And he points to the ways in which we might read both these texts and their contexts differently—both in a more specific and in a more general sense: on the one hand, as the product of historical, social, and

https://doi.org/10.1017/S0020743815000549 Published online by Cambridge University Press

technological networks that ranged locales and spanned vast geographies, and, on the other hand, as embedded in very particular and often quite local networks of material and knowledge production. After all, *Thamrat al-Funun* (Fruit of the Tree) connected Çelebi to a variety of methods and machines along these networks—from imperial presses and Ottoman mint techniques of standardization that linked to craft knowledge and practices in Europe and beyond to methodological appraisals of the "practical sciences," in which a 13th-century illuminationist treatise on the value of medicine, alchemy, and astrology is also cited. How might we better chart the complex geographies of knowledge production behind these texts, he asks, rather than resort to simple philological assessments of them or to simple claims of the patrimony of the sciences that they might be said to represent ("Islamic" or "European" or "Western")? Indeed, as he argues, the appeal to "European sciences" or technologies at this time seemed to have nothing to do with the view that they were "European." Rather, what made them appealing was that they were in some sense "global," or rather, that they contained, emerged, and circulated in a world-wide network of data, materials, and practices organized around new forms of statecraft and knowledge production.

Reflecting further on science and statecraft, Shehab Ismail returns us to Egypt to investigate the work of large-scale technological projects there: in particular, Cairo's first sewage system. He follows briefly the work of Charles Carkeet James, a British engineer who spent time in both Egypt and India and who undertook the plans for its construction. Ismail shows how, through the very demographic calculations James made for the sewage system, this was as much a vast project of technological engineering as one of social engineering. The system transformed more than just the city's underground piping; it also worked unevenly across the neighborhoods and publics that its Public Health plans claimed to represent (such as when tying together material and social calculations of water use in terms that favored upper-class Egyptian and European neighborhoods). The example is interesting, as Ismail shows, not just because it helps us to understand why and how the city suddenly became the object of colonial governance in Egypt (prior to this, the countryside had occupied the majority of British interests there), but also because it sheds light on how, and where, these colonial urban "heterotopias" were engineered, and why they ultimately failed.

Mirjam Brusius asks us to consider the place of antique sciences within both science studies and the history of science in the Middle East. This means, as she points out, confronting the question of what lay behind their double marginalization (because of both the periodization and the geography). It also invites us to reflect upon the problem of how to rethink the methodological, historical, political, and even ethical ideas and practices organized around antique artifacts and objects in the Middle East (and not just the disciplinary or even institutional histories and networks in which they were embedded). Thinking through the questions of how, why, and for whom do we preserve these objects, and how we might tell their histories, she leads us to consider how scholars might take into account claims for, as well as alternatives to and critiques of, preservation (and its sometimes unwitting double, destruction).

The roundtable concludes with Cyrus Schayegh's three, apt questions: in the context of the modern Middle East, or in his case specifically of 19th- and 20th-century Iran, what is science, who was involved, and where was it practiced? As he shows, many in Iran thought it applied to modern, positive methods and practices, but they might just as

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easily have classed it as "Islamic" or even universal. Social scientists in Iran, as he points out, wrote as enthusiastically in the name of positivism as they did in favor of a view of the civilizational legacy of the Muslim sciences. These claims, he goes on to argue, need to be understood sociologically: they often came from an aspiring middle class of professional scientists, who used its authority and prestige to bolster their own national ends (particularly around education rather than merely industry). These professions were themselves embedded in numerous local, regional, and international networks and hierarchies, taking us back to themes raised earlier. These questions—what was science, who studied it, where, and why—could be said to shape all of the essays here. We hope that by collectively framing them, and by gesturing toward answers, we might ask yet other questions in order to expand both our sense and scope of science studies and of Middle Eastern studies in future.

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