SPECIAL SECTION: INTRODUCTION

Framing Asian atmospheres: imperial weather science and the problem of the local c.1880–1950

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'It would be of the greatest importance to meteorology', noted the editor of the Singapore Chronicle in 1829, 'if a set of hourly meteorological observations could be instituted at Calcutta, Bombay, Madras, Singapore, Malacca, and some station on the elevated plains of Hindostan'. Of course, the author's comments speak from a uniquely imperial perspective, whereby such observations would benefit the colonial service of – in this case – the British Empire, enabling enhanced knowledge of imperial atmospheres and the related economic and scientific benefits that this could bring. That meteorology was closely linked to empire and imperial control has long been acknowledged, as the ability to institutionalize knowledge about an environment, and thus to define what constituted legitimate knowledge, was ultimately a question of power. In Asia, a long history of weather observation was gradually pushed into institutional scientific spaces after the 1860s, with key observatories in Tokyo, Shanghai, Manila and Hong Kong, and meteorological services in India and across the China coast. This shift is attributed to the recognition that the science was critical to state building, especially for increasing agricultural yields; for safeguarding nascent aviation services, the latter particularly critical during the Asia-Pacific War; and for enabling better prediction systems for extremes of weather.

1 Singapore Chronicle and Commercial Register, 29 January 1829, p. 2.
Linked to this was the development of better communications systems and the encroachment of imperial powers into more remote areas.

The contributors to this special section direct their attention to the practice of meteorological science across this period of institutionalization in republican China, British India and Hong Kong. Collectively, the papers speak to the themes of science, colonialism and power, drawing also from the themes explored in Secord’s ‘Knowledge in transit’. In particular, they show how local contexts shaped the production, reception and adoption of science. Meteorological practice is an excellent lens into such processes, yet the history of meteorology has been a latecomer to this field, a fact that these authors hope to address. Meteorology is acknowledged as a way in which governments could bring order to chaotic atmospheres and unite disparate regions through widespread observational networks, at the same time helping to counter anxieties about foreign climates. Nonetheless, these papers reveal tensions between imperial visions and local processes, often when imperial and scientific concerns clashed against the backdrop of complex interactions between local knowledge production, circumstances and global scientific transitions. Essentially, this boils down to an important narrative concerning how imperial and scientific visions were shaped by local agencies and environments and in the relations between imperial authorities and local staff.

Central to these newly adopted directions in the history of meteorology has been a shift away from European or American situations to highlight stories from Asia, Africa, Australasia, Canada and South America, albeit often complicated by colonial pasts. Focusing on formal scientific institutions—the department, the observatory and their staff—the authors here view imperialism as central to their arguments, exploring how incumbent regimes managed and conceptualized meteorological services, atmospheres and people in new environments. The relocation of meteorological practices from their domestic origin—in these cases China and Britain—rested on the success (or failure) of...

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5 Republican China is not considered an empire officially, but its territorial expansion and political domination regionally offer an interesting contrast and close comparison.


colonial authorities to tame or frame problematic atmospheres and meteorological roles across mixed communities of local and foreign inhabitants and scientific staff.

Sarah Carson’s study starts in 1886, the year of the first monsoon forecast of the new Indian Meteorological Department (IMD). Predicting the monsoon was an almost impossible task, however, with both public and government quickly frustrated by the service’s inability to make the unpredictable predictable. Carson’s lens into this issue is the widespread coverage of the service in the local press. With critical reporters, editors and readers stoking negativity about the IMD’s abilities, Carson finds that the general public defaulted to traditional methods of foretelling the weather, undermining meteorology’s authority as a fulcrum of the colonial state. This was not just an issue in India. As Chi Chi Huang and Fiona Williamson note, Hong Kong’s extreme weather tested the limits of British meteorological science. Here, understanding and predicting typhoons was – like the Indian monsoon – economically critical, but the predictive system was fraught with problems and traditional prognostication continued to be practised amongst the general public. In Mark Frank’s essay, the climatically misunderstood and treacherous weather of the Tibetan plateau likewise confounded the efforts of those who sought to order the atmosphere through mathematical formulae and meteorological management. Situated at the outermost reaches of the republican government’s reach, it was also hoped that the new meteorological research units and registering stations would offer an infrastructure to channel central authority into the borderlands.

Frank, Huang and Carson also explore how the notion of hazardous weathers (savage, barbarian and unhealthy) that we gain from colonial texts was specific to the imperial gaze. Building on David Arnold’s notion of tropicality,11 but within the less studied typhoon climate, Huang interrogates the British home press as a medium for knowledge about Hong Kong. Their portrayal of the storms, she argues, not only defined European views about the colony but framed the Western expatriates who lived there as somehow heroic for living with tempests (akin to the notion that colonialism could somehow ‘civilize’ the tropics). Huang also argues that the British press’s storm reportage became increasingly technical in tone after the early 1900s. A situation thus existed where the romantic and sensational became blurred with routine practice, revealing different strands of knowledge generated at multiple scales, none fully replacing or subsuming another, and buffeted by competing pressures from the public, the government and the scientific elite. This tension is also alluded to in Frank’s study as he explores what constituted meteorological fact, revealing an amalgamation of more recent instrumental meteorological methods and scientific theories alongside anecdotal and long-established means of explaining the weather as the norm.

The growing institutionalization of weather also required an extensive human investment to help generate and analyse the large quantity of data necessary for weather research in the style of the late nineteenth and early twentieth centuries. The foreign authorities relied on an army of local workers who found themselves in a difficult position. Though familiar to historians of science,12 the exploration of worker’s lives and

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their contribution to scientific knowledge has been less apparent in the history of meteorology, a situation that has led to calls for change. Frank tells the story of the people who worked at the remote outposts of the Sino-Tibetan borderlands, revealing how the extreme conditions resulted in much personal trauma and ill health. While they escaped the ravages of the ‘high cold country’ of Frank’s discussion, the staff of Williamson’s study of Hong Kong Observatory did not work under ideal conditions either. Long hours of observational work and limited leave, pay and acknowledgement defined their working lives, yet without them the service could not have functioned. In both cases, the reality of the workers’ lives undermined the framing of imperial power and authority.

As Fa-ti Fan argued in 2007, looking beyond the traditional scientific establishment and, more specifically, exploring cultural borderlands has been an important historiographical shift for understanding knowledge production and experience from within, and without, imperial contexts. Collectively, these papers reveal the importance of locally situated studies, even when working within colonial contexts.

Acknowledgements. The papers in this special section derived originally from a conference titled Asian Extremes: Climate, Meteorology and Disaster in History held at the Asia Research Institute at the National University of Singapore in early 2018. The author wishes to thank all those who supported this meeting.