

Janwillem Liebrand. 2022. *Whiteness in Engineering: Tracing Technology, Masculinity, and Race in Nepal's Development*. Kathmandu: Social Science Baha and Himal Books.

Whiteness in Engineering (henceforth WiE) is an ambitious attempt to critically engage with the social world of Nepali engineers. Its central point is that technology, masculinity and race help explain Nepal's development history, including failures. The connections between technology, masculinity, and race, for the author, explains—among other things—why Nepali engineering is socially conservative and why current development projects leave so many behind.

The book consists of an introduction, five chapters and an epilogue. The chapters are presented as “dioramas,” which the author explains are a constructed “miniature representation of a scene, viewed through a peephole” (p. 35). The introduction begins with the author's initiation into studying technology, masculinity, race and development when he worked as an intern at the International Water Management Institute (IWMI) in India. The introduction then delves into a short literature review, including a discussion of authors who have previously studied masculinity and race in Nepal.

Chapter Two is a present-day ethnographic study of the role of gender and masculinity in the Department of Irrigation, especially in the construction of “engineer” and “lady engineer” identities through office and fieldwork. Chapter Three is a historical discussion of the evolution of professional institutions in engineering through a masculinity and race lens. This includes educational institutions, the Department of Irrigation, and other regulatory and professional bodies. The author also provides statistics on how the composition of these bodies has altered over the years.

Chapter Four is a detailed historical discussion of the role of professional women in Nepal's development from the 1950s to the present. This chapter relies on extensive archival research and traces the development-led construction of different types of Nepali women (e.g., "household managers" or "competent wives"). This is done in alignment with the growing role of science and technology in post-1950 projects and programs.

Chapter Five focuses on maps used for water and irrigation planning in Chitwan District. Looking at maps as expert knowledge artefacts, the author analyzes how five maps used in different projects by engineers communicated knowledge about places and reproduced masculinity and whiteness through technology. This chapter describes the often-grand aims of each project alongside what actually happened during implementation.

Chapter Six takes a completely different approach by analyzing photographs of male experts, royalty and officials to explain changing state conceptions of masculinity. This chapter mainly focuses on deconstructing photographs from the Rana regime. The epilogue summarizes the book and ends with a section aimed at Nepali engineers, aiming to provide some explanation of the seemingly harsh analysis of Nepali engineering as well as hope for the future.

Liebrand is a trained engineer and WiE draws on several years of PhD study and a huge range of other materials—much of which is quoted in the book—including primary and secondary research, observations, maps, photos, statistics, and interviews with relevant figures. Liebrand's research includes references to Nepali language documents and numerous old development reports, usually ignored even by the donors who commission them.

WiE also draws on at least three different disciplinary perspectives: science and technology studies (STS), history, and gender studies. It includes an STS focus on technology, race and masculinity through objects, such as maps and photos; a gender studies view on the role of masculinity in planned development; and a history lens on the role of engineering institutions and women in Nepal's development. As a result, for the reader, there is a tremendous amount going on inside a quite short book. Fortunately, the book has well designed chapters, ample signposting, with hardly any superfluous sections or repetition. In such a dense text with multiple references the lack of an index is a hindrance to usability.

Part of the readability occurs because *WiE* has many unusual features. First of all, it is significantly revised from the original PhD dissertation. Such a revision is not unusual but here it has been clearly done primarily (and, in my view, unusually) with a view towards crafting an accessible and succinct text. Secondly, though still quite expensive, it is published in Nepal by Himal Books and not by a foreign university press. Thirdly, the original thesis from a university in the Netherlands was examined by a Nepali—former minister, academic, and engineer Dipak Gyawali—who also contributes a foreword.

But the book is odd in other ways too—the deconstruction of Nepali engineering that it proposes is not accompanied by a text full of endless nuance and shades of grey, as is common (and, sometimes, frustrating to read) in academic books. The argument is very strident about what development is and has done to Nepal. Similarly, the author loudly calls for a dismantling of whiteness (mostly defined as the colonial legacy of race) and masculinity in Nepali engineering. However, these thoughts seem deliberately ring-fenced from any perceived association with current decolonization or “woke” talk, let alone feminist theory and wider definitions of gender studies. And another oddity: after bracing attempts at rewriting parts of Nepal’s development history, the book seems to step back from the brink by recommending relatively low-key donor report-style findings, such as the need for more inclusion of women in Nepali engineering.

WiE really excels in its deep historical research on the social role of engineers and engineering in Nepal’s development. The book works best when Liebrand uses masculinity, technology and race as an already given lens through which he analyzes Nepal’s development history. The core of the book in chapters three, four, and five, in particular, are excellent examples of this and how using new frames can co-exist with finding out new information. This book could have analyzed the meaning of development projects and largely left what actually happened (and the who, what, where, why) for others to document. But the author, instead, has done the historical legwork to ensure that his new perspectives exist alongside interesting evidence.

This approach is also useful when helping the author understand the changing roles that women in Nepal’s development have been categorized into since 1950. This analysis begins in Chapter Two with the creation of the “lady engineer” in the Department of Irrigation but extends into Liebrand’s analysis of development-led categorizations of all Nepali woman in Chapter Five. Here Liebrand shows how Nepali women, as one undifferentiated mass,

were created into development categories under labels such as “household manager” and “wise mother and competent wife.”

WiE is also successful in applying innovative STS approaches to the study of Nepal’s technology and development artefacts, especially when discussing maps in Chapter Five and in bringing in the role of the state via photos of men in Chapter Six.

WiE works less well when the text becomes preoccupied with justifying why masculinity and race are important frames rather than, as above, using them to uncover exciting new areas of research. It is not clear that the author has adequately justified the particular ways in which he theorizes masculinity and race in this study. A more relational and less essentialist approach to masculinity that engages deeply with feminist theory and LGBTI issues would have perhaps been more fruitful. On that front Diwas Raja Kc’s 2020 book review in this journal provides important pointers on how to study masculinity. Also, WiE talks of correcting a silence on masculinity in Nepali engineering. Nepali feminist engineers and others are likely to not have remained silent on this issue—but no evidence is shown about their activism.

Race is a less obvious and less well explained category than gender to this reader and Leibrand acknowledges that caste and ethnicity may be more salient for the Nepal context than race (p. 198). “Whiteness” is used in WiE in a wide definition. Mostly it is used to describe the colonial legacy of race. However, sometimes it also describes upper-caste male power and sometimes it is a synonym for technology and expertise.

As WiE progresses the reader understands that a dichotomy—with some important qualifications—is gradually built up whereby what is “bad” is Western, masculine, scientific and centralized and what is “good” is local, feminine, indigenous (indigenous here meaning indigenous to Nepal not really *Janajāti* knowledges) and devolved. In a book that is ostensibly progressive and which stridently calls for the whole scale deconstruction of engineering in Nepal seeing Western-imposed development as largely “bad” inevitably leads the author into unintended support for nationalist positions inside Nepal (though this is true of any foreign academic who criticizes foreign aid).

At times the range of structural explanations that the author provides for the dominance of a masculine and “white” engineering culture (the influence of British India, the Ranas, foreign aid) end up absolving rulers in Nepal who did have power and made policy choices. The huge transformation that the

author calls for in Nepali engineering is an altogether easier pill to swallow if the discussion starts by blaming someone or something else.

However, at other times, the author seems to move beyond the dichotomy and recognizes the agency and preferences of Nepalis in power, as well as the difficulties in neatly dividing up Western and Nepali influences, especially as the discussion moves on post-1990 and closer towards the present day. The epilogue for engineers—perhaps added after feedback?—is an interesting discussion of these issues, as the author belatedly seeks to soothe bruised male egos.

In a book that is absolutely packed full of material it seems picky to note gaps. However, WiE includes little discussion of the links between engineering masculinities and current day geopolitical anxieties about Nepal and Nepal's future: namely that building an independently energy-secure, technologically advanced, and well-engineered nation is a bulwark against foreign encroachment. Other gaps include: little on political parties, no mention of activist male engineers and the many Nepali politicians with an engineering background, and little mention of the wider political economy that sustains both male dominance and the gendered roles described in WiE.

WiE is highly readable and usefully provocative. The book has benefited from the author's deep level of engagement with and willingness to accept feedback from Nepali scholars working on similar topics. Readers interested in Nepal's development, engineering history, feminist activism, and 20th century history will find lots of material to argue with, respond to and debate.

Reference

Kc, Diwas Raja. 2020. Review of Mathew Maycock's *Masculinity and Modern Slavery in Nepal: Transitions into Freedom*. *Studies in Nepali History and Society* 25(2): 485–488.

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