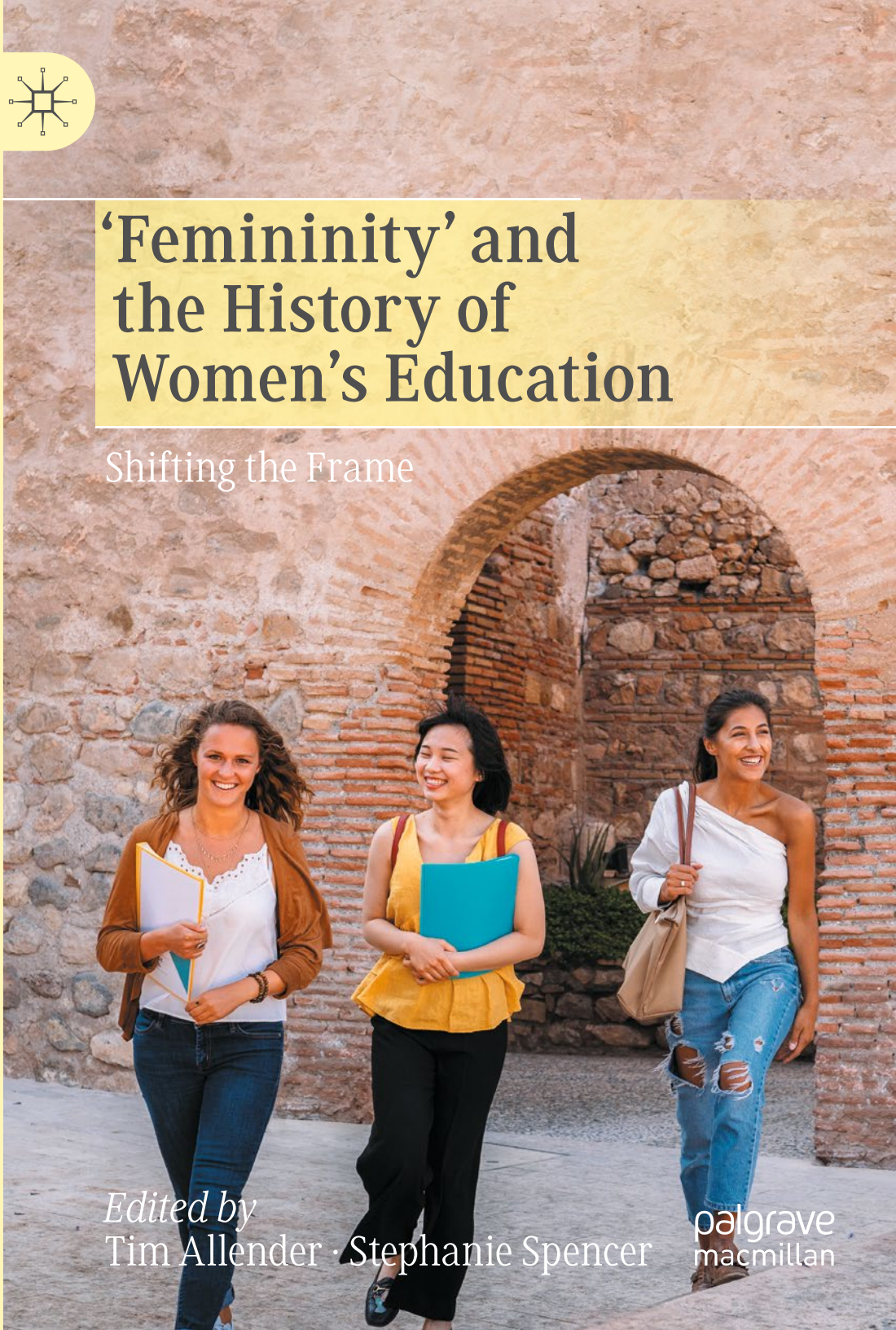
‘Femininity’ and the History of Women’s Education

Shifting the Frame



Edited by
Tim Allender · Stephanie Spencer

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Cover illustration: Westend61 / GettyImages Cover Caption: The image on the cover of the book is used as a visual metaphor. It shows three young scholarly women of different cultural backgrounds. They have walked through a non-Western historical gateway. We hope our book will be read in this way, where the respective contributions, drawing on various cultural histories and other analytical frames, help build a deeper understanding of women's education today.

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About This Book

This book explores the different theoretical and epistemological constituencies that are engaged in the field of women's history as these relate to aspects of education within broader social settings. As our theme, shifting conceptions of femininity are interrogated in a range of historical sites in the nineteenth and twentieth centuries.

Chapter 1, written by Tim Allender and Stephanie Spencer, is divided into three parts. Firstly, it briefly sets out the conceptual and theoretical framework regarding femininity and women's history as we see it, especially as these relate to education and the chapters in the book. It then considers the necessary engagement any study of femininity needs to have with the usually more dominant and distinctive boundaries created by different academic traditions of historical investigation, including transnational approaches. And lastly there is a discussion of how shifting frames of femininity take the researcher into more intimate domains of personal experience, where studies about feminine bodies, their educative surroundings, their ageing, their aesthetic and their religiosity provide fascinating sites of study for scholars of women's history.

Then follows eight chapters, each analysing shifting frames of femininity in some of the sub-fields, it might be argued, of histories of women's history.

Chapter 2, by Ruth Watts, examines the positionality of women who engaged with the emerging discipline of science in the nineteenth century. She argues that by their very participation, these women were subversive in pressing against broader assumptions about their feminine psychology and even rationality. Critically, though usually excluded from being

scientists, this feminine agency led these women (including illustrator and painter Marianne North, whose work this chapter focuses upon) to use permitted feminine skills and occupations in new and shifting intellectual fields of imaginative endeavour that had connection especially with botany. It was permissible for them to be teachers, but in creating these rich connections with other fields, they also established new ways to think about science: including later scholarship that has revealed the limiting gendered associations and language embedded in the discipline itself.

In Chap. 3, Linda M. Perkins takes the reader to the United States of America and explores the shifting juxtapositions of race and femininity in women's physical education and sport in the early to mid-twentieth century. The chapter sees strong precursors that relate to the emancipation of slaves in the previous century where former female slaves were forced to conform to White notions of morality and beauty. Sexual assaults by slave owners against female slaves fed into widely held narratives that Black women were promiscuous. Some are enduring constraints for many Black sportswomen to this day. However, in the 1920s, when college-level physical education and sport began to see Black female participants participating with White women, some of these constraints were reconfigured, revealing differing White attitudes on the issue of race, femininity and sport. Key institutions in this period such as the YWCA, though encouraging Black participation, reinforced racial segregation in sport. Yet, sport also led to new marginalities around their putative femininity. Drawing on the life stories of several key athletes and administrators, this chapter explores an emerging distinction within sports, where basketball, in particular, was identified in US colleges as a masculine pursuit or one only for the working-class and Black women. This stereotype was then replaced by a stronger sporting relegation for them which was track and field. This sport eroticised Black women athletes and conveyed new anxieties about their possible homosexuality.

Chapter 4, by Joyce Goodman, focuses predominantly on the year 1931 in the life and career of feminist Suzanne Karpelès. From a wealthy Hungarian Jewish family, and educated in Paris, Karpelès was an outstanding linguist of Eastern languages. She was appointed the founding director of the Royal Library and later also of the Buddhist Institute in Phnom Penh, Cambodia, which was part of Indochina, then under French colonial rule. Drawing on a rich variety of sources, including photographs, personal letters, journal and newspaper articles, this chapter uses Karpelès' fascinating travels to illustrate the fluidity of femininities within spaces of

circulation: embracing the intimacies of empire and shifting international mentalities of the era, including fascism. There are four levels of inquiry that engage femininities as they related to Karpelès in her colonial locale and in spaces of circulation in Europe: religion and colonialism; internationalism and emerging feminine expertise within international organisations; Karpelès' countervailing configurations of the "native woman" which were in tension with her views on indigenous schooling in empire; and, finally, where Karpelès encountered new educational cinematography in the context of fascism that re-shaped ascriptions of femininity in respect of women. This chapter's approach to the dynamic frames of femininity in which both Karpelès and her world are engaged is brought together by articulating processes of encounter and negotiation, underpinned by Judith Butler's performative account of gender and Karen Barad's posthumanist extension of Butler's performativity.

In Chap. 5, Kay Whitehead traces gender relations around the appointment of women in authority, most notably as female school inspectors in post-suffrage South Australia in the 1890s. She analyses the career trajectories of seven white-settler women teachers where their professional identity, authorised by men, entangled their femininity and relegated their authority by gender-specific assignations around their 'modest' and 'kind' natures. Broader and rapid shifts in educational policy and offerings moved women teachers into secular classrooms as the state tookover responsibility for educating many school children in the 1870s. The appointment of Blanche McNamara as the first Lady Inspector two decades later in 1897 resulted in a new level of male anxiety about "petticoat government", prompting satirical cartoons that stereotyped women as inadequate disciplinarians, mannish and not worthy to hold authority over the teachers of boys. However, upon McNamara's premature death, her portrait in the local press conveyed conventional white-settler femininity, yet also a woman of intensity and intellect.

Chapter 6, by Stella Meng Wang, explores the dynamic that the Girl Guide Movement created within both colonial and public spaces in interwar Hong Kong. The shifting frame of feminine identity, particularly in urban English medium schools for middle-class girls (most of whom were at least part-Chinese descent), revolved around the transformative agency of Girl Guiding that directed these girls into sporting and philanthropic spaces as they moved into higher education. Guiding promoted work in prisons, teaching female inmates needlework and raffia work as well as gardening and basic literacy. Guiding also engaged the feminine physique,

encouraging drills, marching and sport while simultaneously emphasising a cultured and theatre-going school girl. On both levels, Guiding provided an entrée into the upper echelons of Hong Kong colonial society. Yet, the sponsors of this movement, to keep it strong, also provided bridges into rural and working-class domains that embraced social service but cut across the colonial class agendas of the British.

In Chap. 7, Stephanie Spencer reflects upon shifting frames of femininity created by the ageing process in mid-twentieth-century Britain, specifically in the 1960s, typically considered to be a decade when the old social order relaxed. An analysis of fiction in three publications aimed at a teenage audience is informed by a symbolic interactionist approach that explores the role that leisure reading played in the informal education of girls into an age-appropriate performance of femininity. The closer the reader came to adulthood, the more clearly the advantages of youth and the problems of old age were articulated. In *Honey,* marriage, presented as the ultimate goal in the numerous romance narratives, also heralded a seismic shift of femininity towards the invisibility of middle and old ages. Early teen readers of *Diana*, however, encountered a greater variety of older role models, and the emphasis in the fiction for a younger audience was not on the older girls' teleological search for Mr Right but on a performance of prepubescent femininity that was fearless, independent, and girl centred.

Chapter 8, by Deirdre Raftery and Deirdre Bennett, frames femininity within the habitus of religious life. Though dressed in habit and veil, there was an underlying and distinctive professional feminine characteristic of women religious (nuns), where they negotiated the traditional male spaces of architecture and engineering. The chapter concerns the nineteenth century, where Church femininity, as enshrined by nuns, could also be shifted by them in practical and professional pursuits that encompassed both male and female agency. Focusing mostly on one such sister, Honora (Nano) Nagle, Foundress of the Presentation Sisters, the chapter analyses her building of two convent houses with ambitions for further expansion. This work reflected the expansion ambitions of several other orders, also based in Ireland at this time. Though there is little evidence that any nuns were trained in engineering and design, foundresses of nineteenth-century convents were deeply concerned with the actual building of them. Sometimes as wealthy women with the power of the purse, their views influenced leading architects such as Augustus Welby Pugin and George Ashlin. This chapter considers the shifts in the femininity of these women religious as

they embraced these male domains to achieve their religious-building programs. And it reveals the critical place such women have in the fields of women's history and history of education.

In Chap. 9, Tim Allender examines shifting frames of femininity in colonial India between 1785 and 1922. While making brief contrasts with traditional Indian constructions of femininity and their intersection with household and nationalist politics, the chapter's main concern is the colonial side of the ledger and those Indian females who interacted with it. Passing through several key periods of variable interaction with colonial state constructions of preferred feminine outcomes, the chapter looks at the European female body in India. In the early British colonial era, femininity was connected to sex, emotional realms of domesticity and masculine decrepitude. As the nineteenth century progressed and Western demographers took hold, it was the femininity of mix-race females (Eurasians) who became more formally the focus of emerging state agendas. In the 1870s feminine professional codas emerged for this same racial grouping (and for some expatriate European females) in teaching and nursing that, in turn, connected with transnational currents regarding pedagogical innovation and tropical medicine protocols. In the early twentieth century new geographies of female medical missionary interaction with some Indian females (with publicly accountable statistical reportage around treatment and cure) began contributing to the breakdown of the rigid racial barriers of colonial India. This was well before the fierce Nationalist struggles for Independence from the British of the later 1920s and the1930s.

Chapter 10 explores the theoretical implications of the preceding chapters in the book and interprets these implications through an established academic approach of frame analysis. The chapter sees two dimensions that are apparent across the book's chapters: an analytical frame and a metaphorical frame. Shifting femininities reveal new conceptual interactions as well as newly identified, yet often unconscious, metaphorical identity formation.

The book is the product of a rich collaboration between chapter authors. The project began its life as an all-day workshop where all chapter authors and other scholar specialists participated. It was hosted by Humboldt University, Berlin, and the International Standing Committee of History of Education (ISCHE) in September 2018.

Contents

Notes on Contributors

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Deirdre Bennett is a PhD scholar at University College Dublin and a second-level school teacher. Her doctoral work examines the economics of convents in nineteenth-century Ireland, and she has carried out research at convent archives all over the country. Her work has been published in *History of Education*, and she has been awarded bursaries from the International Standing Conference for the History of Education and the History of Education Society (UK). Bennett has presented her work in Germany, Portugal and the UK, and she has twice been the recipient of a graduate research award from University College Dublin.

Joyce Goodman is Professor of History of Education at the University of Winchester and chercheure associée at CERLIS.eu. Her research explores women's work in and for education during the interwar period in relation to internationalism, empire and comparative methodologies. Goodman is an honorary member of ISCHE and of Network 17 of EERA. Her books include *Girls' Secondary Education in the Western World* (Palgrave, 2014 pbk), with James Albisetti and Rebecca Rogers, and *Women and Education: Major Themes in Education* (2011, 4 volumes), with Jane Martin.

Linda M. Perkins is Associate University Professor and Director of Applied Gender Studies at Claremont Graduate University, California (USA). She holds an interdisciplinary university appointment in the departments of Applied Gender Studies and Educational Studies. Her primary areas of research are on the history of African-American women's higher education, the education of African Americans in elite institutions, and the history of talent identification programs for African-American students. She has served as vice president of Division F (History and Historiography) of the American Educational Research Association (AERA) and has served as a member of the Executive Council of AERA.

Deirdre Raftery is a historian of education at University College Dublin. She has thirteen book publications and most recently co-authored three books on aspects of the history of nuns and education, published by Routledge and Irish Academic Press. She is completing a book entitled *Irish Nuns and Transnational Education, 1800–1900* (Palgrave Macmillan), and her new book of *Teresa Ball and Loreto Education* (Four Courts Press) is to be published in 2021.

Stephanie Spencer is a professor of History of Women's Education and convenor of the Centre for the History of Women's Education at the University of Winchester. Her research focuses on the development of both formal and informal education for girls in the twentieth century. She has a particular interest in adolescent leisure reading, and her most recent publication is co-authored with Nancy G. Rosoff, *British and American School Stories, 1910–1960: Fiction, Femininity, and Friendship* (Basingstoke: Palgrave Macmillan, 2019).

Stella Meng Wang is a PhD candidate at Sydney School of Education and Social Work, University of Sydney. Her research explores the everyday life of children in colonial Hong Kong. Meng's research interests include the architecture of childhood, gender and youth movements, and women's education.

Ruth Watts is Emeritus Professor of History of Education at the University of Birmingham. She has published much on the history of education and gender, her books including *Gender, Power and the Unitarians in England, 1760–1860* (1997), and *Women in Science: A Social and Cultural History* (2007) for which she won the History of Education Society Book Prize in 2010. She is ex-president of the British History of Education Society and an honorary life member of both the latter and the International Standing Conference for the History of Education. Recent publications include historical work on women and environmental sciences.

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CHAPTER 1

Shifting 'Femininities': Multifaceted Realms of Historical Educational Inquiry

Tim Allender and Stephanie Spencer

(1)

Recently, deconstructions around the notion of femininity have been revealing in determining the diversity of educational spaces. These spaces range from institutional contexts to family, to professional outlooks, to racial identity, to defining community and religious groupings. For the historian, each of these avenues opens up considerable scope for new academic research. This new research could explore some of the associated historical contexts to examine the deeper question of the variable and shifting interplay of feminine identity and its challenges within different socio-cultural settings: particularly those occupied by educators and their students. Driven by systematic archival research, this approach can give rich and vivid insights about femininity. The approach can also provide

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the reader with interesting accounts of how these historical contexts shaped the agency of females and their identity. In doing this, new directions in feminist and gender history emerge that interrogate the dynamic nature of femininity. This is 'femininity' as both a conceptual tool and as part of the personal projects of actors immersed in their respective historical contexts.

New research suggests 'femininity' should not be seen as an analytical category by itself, but rather being mostly determined within the academic spaces created by the paradigms of race, feminism, gender and class. Much academic travel about femininity is authorised by this phenomenon. And, tantalisingly, the entanglement of feminine identity formation within these broader paradigmatic categories creates a fluidity that reveals different educational outcomes for those females who shared their respective learning spaces. Furthermore, there is also some perversity to notice as authors seek to engage with this shifting frame to better understand how the ideal of femininity was referenced by the practicalities of female agency. One such circumstance was when women negotiated rather than disregarded the constraints of their historical context by paradoxically continuing to enshrine a time-specific ideal of femininity, even when their later circumstances demanded that they move away from it.

Additionally, there are new academic horizons to consider. Historians of gender and feminism, in particular, are seeking alternatives to linear analysis and they are resisting disciplinary boundaries around their research. For example, Kathryn Gleadle, in her influential *The Imagined Communities of Women's History,* is responsive to the seeming slowing in progress of women's history in the last 15 years or so. She disagrees with this view. Instead she sees an active field, still, but one that now cuts across many traditional binaries of inquiry and occupies, rhizome-like, imaginative intellectual alliances with other disciplinary fields. These create unexpected theoretical juxtapositions and complicated chronologies, while maintaining women's history's edge in broader feminist politics.[1] In another direction, Mia Liinason and Claire Meijer argue that the mythology of homogeneous societies obscures the marginalisation of women of colour, as well as migrants and other ethnic minorities of women, where the historicity of their femininity reveals deep roots of gender-based

[1] Kathryn Gleadle. 2013. 'The Imagined Communities of Women's History: current debates and emerging themes, a rhizomatic approach' in *Women's History Review*. 22: 4, 524–540.

oppression.[2] It is within these shifting intellectual frames, and others like them, that new research locates its analysis around femininity using a diverse range of historical contexts through which interesting individual and collective personal stories are told.

(II)

The book is also sensitive to the important relational aspects of key areas of research that distinctively associate broader academic traditions with the dominant paradigms of feminism, gender, race and class. This sensitivity is important because these traditions have a direct impact on academic constructions of femininity within educational settings and contextualise femininity in quite different ways.

For example, in the colonial world, feminism was generally internal to the colonial project, as shown by Antoinette Burton. She asserts that feminist writers, in fact, in the late nineteenth and early twentieth centuries, created images of needy women in the non-white empire mostly only to project their part in an imperial mission to their audiences 'at home' in England.[3] There is also a cross over between gender and feminism, peculiar to empire. For example, Claire Midgely argues, women involved in the anti-slavery movement not only located feminism within prevailing imperial ideologies but also gendered these ideologies.[4] While Raewyn Connell, (largely taking the discussion outside the feminist discourse) sees colonial masculinity and femininity in highly relational sociological terms.[5] Central to understanding the construction of femininity is the significance of its relation to the construction of masculinity and the consequent recognition of how power is dispersed, and gendered ideas disseminated, in formal and informal education settings within any society.[6] How then do European hegemonic mentalities around femininity in the non-white colonial world

[2] Mia Liinason and Clara Meijer. 2017. 'Challenging constructions of nationhood and nostalgia: exploring the role of gender, race and age in struggles for women's rights in Scandinavia' in *Women's History Review*. 27:5, 729–753.

[3] Antoinette Burton. 1994. *Burdens of History: British Feminists, Indian Women and Imperial Culture, 1865–1915.* Chapel Hill: North Carolina, 8, 82–3.

[4] Claire Midgely. 1998. 'Anti-slavery ang the Roots of "Imperial Feminism"' in Claire Midgely, (ed.), *Gender and Imperialism*. Manchester: Manchester University Press, 161–9.

[5] Raewyn Connell. 2009. *Gender in World Perspective*, Cambridge: Polity.

[6] Joan Scott. 1986. 'Gender a Useful Category of Historical Analysis' *American Historical Review,* 91: 5, 1053–1075.

play out, notwithstanding the more visible clash of cultures that is usually the dominant topic of postcolonial scrutiny?

On the other hand, in mostly white European contexts, the overarching category of feminism is dominant in the analysis in another way, where other national and cultural determinants are in play. For example, Rebecca Rodgers, drawing on the work of Jo Burr Margadant as well as that of Isabelle Ernot, makes the case for strongly contrasting academic traditions in the English-speaking world compared to those to be found in France. In the former domain, feminist biographies have flourished and been given new robustness by postmodern scholarship, while in France there has been less of a commitment to creating a 'pantheon of foremothers'.[7] These variable legacies in feminist scholarship, then, naturally create a different set of academic lenses, within which 'femininity' can be scrutinised.

In the USA the interplay of race and gender has a different historicity. Angel David Nieves' work examines African American women educators in the nineteenth century who helped to memorialise the struggle of Black Americans. Using biography, Nieves examines how these educators contributed by combining social and political ideology as these related to racial uplift and gendered agency.[8] Yet, mostly male-constructed paradigms of racial separateness and female respectability could also intervene to create newly marginalised and shifting spaces of feminine educational interaction.

Transnational enquiry is also significant in the pursuit of new research on this theme. This is where the likes of Joan Scott's well-established framework of gender as a useful category of historical analysis is extended to embrace new theorisations that encapsulate the global transferral of some feminine mentalities.[9] More deeply, opportunities arise where transnational perspectives bring to history of education, research that

[7] Jo Burr Margadant. 2000. 'The New Biography: Performing Femininity in Nineteenth-Century France'. Berkeley: University of California Press; Isabelle Ernot. 2007. 'L'histoire des femmes et ses premières historiennes (XIXe-debut XXe siècle)', *Revue D'Histoire de Sciences Humanities* 16: 1: 165–94 cited in Rebecca Rodgers. 2013. *A Frenchwoman's Imperial Story: Madame Luce in Nineteenth-Century Algeria*, 11–12.

[8] Angel David Nieves. 2018. *An Architecture of Education: African American Women Design the New South,* New York: University of Rochester Press.

[9] Joan Scott. 1986. 'Gender a Useful Category of Historical Analysis' *American Historical Review… op cit.*, 1053–1075.

highlights analysis of connecting spatial and temporal educational frameworks.[10] And as interest in transnational frameworks has also grown to include cultural and social histories, so the history of women's education has enriched the discussion and extended it to include changing conceptions of femininity. In this way Kay Whitehead has tracked the flow of ideas and individuals as women educators crossed and re-crossed borders between what was once seen as merely one-way travel between a putative centre and its peripheries.[11] Furthermore, women, and their performance of femininity, becomes central to what Chris Bayly has identified as the production of nation as a result of transnational flows.[12] At this macro history level, women's experience has frequently been seen as a marginal enterprise, and to counter this predilection, work such as that of Pierre Yves Saunier has identified the need to "recover individuals, groups, concepts … that have often been invisible or at best peripheral to historians because [these historians] have thrived in between, across and through polities and societies".[13] More sophisticated research into the changing nature of femininity within transnational flows of both formal and informal educational ideas is now possible.

(III)

There are more intimate spaces of inquiry that take the discussion into the personal domain of historical actors where their femininity is discernible by objects, visual representations and their surroundings: research that invites a different kind of abstraction and theorisation. For example, there are studies to consider around sensory perceptions in the classroom that define feminine sensibilities and form. Additionally, visual representations of school settings that assume feminine identity, engage scholarship that

[10] Barnita Bagchi. 2014. Eckhardt Fuchs & Kate Rousmaiere, (eds.) *Connecting Histories' of Education: transnational and cross-cultural exchanges in (post) colonial education*. New York, Oxford: Berghan.

[11] Kay Whitehead. 2014. 'Mary Gutteridge (1887–1962): Transnational careering in the field of early childhood education' in Tanya Fitzgerald and Elizabeth Smyth, eds. *Women Educators, Leaders and Activists 1900–1960*, New York: Palgrave Macmillan; Kay Whitehead. 2017. British teachers' transnational work within and beyond the British Empire after the Second World War, *History of Education*, 46:3, 324–342.

[12] C.A.Bayly, Sven Beckert, Matthew Connelly, Isabel Hofmeyr, Wendy Kozol, and Patricia Seed. 2006. 'AHR Conversation: On Transnational History', *American Historical Review* 111: 1441.

[13] Pierre Yves Saunier. 2013. *Transnational History,* Basingstoke: Palgrave Macmillan, 3.

focusses upon who controls forums of image making and why such studies need to relate strongly to cultural history.[14] Again, gendered spaces are in play here and the work of Ian Grosvenor and Catherine Burke feature prominently.[15] This field has yielded rich and revelationary perspectives in the past 15 years about child learning in non-verbal and non-textual ways despite Karl Catteeuw *et al.'s* claim that the pictorial turn, given its limited scope, can only really complement textual sources.[16] Furthermore, there is the much less studied, but equally defining, sensory dimensions of the classroom concerning olfaction and noise. Here Gary McCulloch, drawing on the work of Alain Corbin, as well as that of Jill Steward and Alexander Cowan, imaginatively uses contemporary literary texts, which stills the hand of the historian and takes it into other disciplinary fields. Such historical analysis remains largely ungendered and is worthy of further research.[17]

Research into teaching spaces, as well as the shifting feminine aesthetic, is productive in understanding historical constructions of femininity. This is partly because history, as the study of the artefact, offers a more tangible source base. For example, Kellee Frith and Denise Whitehouse see the classroom as a spatial environment with social, cultural and psychological dynamics which can be explored through the selection of colour, texture, furnishings and lighting. Here there is room for exploring material feminine spaces. This is where at least some female school classrooms and

[14] Antónia Nóvoa. 2000. Ways of Knowing, Ways of Seeing Public Images of Teachers (19th – 20th Centuries), *Paedagogica Historica*, 36:1, 20–52; Mark Depaepe & Brett Henkens. 2000. 'The History of Education and the Challenge of the Visual' in *Paedagogica Historica*, 36:1, 11–17.

[15] See, for example, Catherine Burke and Ian Grosvenor. 2007. 'The progressive image in the history of education: stories of two schools' in *Visual Studies*, 22:2, 155–168, on the typology of photographic images of school and schooling and the visual methodologies of historical research into the classroom.

[16] Karl Catteeuw, Kristof Dams, Marc Depaepe & Frank Simon. 2005. 'Filming the Black Box: Primary Schools on Film in Belgium, 1880–1960: A First Assessment of Unused Sources' in Ulrich Mietzner, Kevin Myers & Nick Peim (eds.), *Visual History. Images of Education*, Bern, Peter Lang, 203–232; I. Grosvenor, M. Lawn, K. Rousmaniere (eds). 1999. *Silences and Images: The Social History of the Classroom*, New York: Peter Lang.

[17] Gary McCulloch. 2011. 'Sensing the realities of English middle-class education: James Bryce and the Schools Inquiry Commission, 1865–1868' in *History of Education*, 40:5, 601–2, citing Alain Corbin, 'A History and Anthropology of the Senses' in Alain Corbin. 1995. *Time, Desire and Horror: Towards a History of the Senses,* Cambridge: Polity Press, 191; and Jill Steward and Alexander Cowan, 'Introduction', in A. Cowan and J. Steward (eds.) 2007. *The City and the Senses: Urban Culture since 1800*, Aldershot: Ashgate, 1–2.

other educational spaces deployed "the language of home, [with] comfort and security [and] … through the choice of paint colours and the use of fashionable wallpaper and floor rugs".[18]

While on the question of feminine aesthetics, like those scrutinised in Marjorie Theobald's *Knowing Women*, gender and class-based readings of the documentary records are brought into play to produce other internal tensions regarding femininity. With a good dose of imaginative positioning, Theobald sets up femininity as the middle-class female learning aesthetic "at the piano, in the parlour rather than the classroom … unequivocally belonging to the realm of culture". This 'accomplishments' learning (poetry, needlework, deportment and the like) is threatened only by the unfeminine blue stocking teacher in the classroom, urging the study of masculine academic subjects instead.[19] Additionally, the work of Ruth Watts, as well as that of Claire Jones, posits in different ways other normalised and shifting feminine constituencies. Were the 'unnatural' acts of women pursuing careers in the masculine domains of science and mathematics (in the early to mid-twentieth century) encouraging other females to move away from the Arts, a domain more aligned to feminine learning in the past?[20]

And what then were the domestic and/or professional futures of those women educators of a generation earlier (who had imbibed an education of 'accomplishments'), as their bodies, in middle age, lost their capacity to conform to nineteenth-century feminine physical sensibilities and aesthetics, so attached to this earlier form of learning? The response here concerns the gendered nature of the life cycle where women's changing feminine experience is categorised according to their role as 'virgin, wife or widow'. Research in this dimension concerns the effect that the ageing body has on women's perceptions of self and their shifting femininity.[21] Associated with this sub-topic of age-framing is the role that both formal and informal education has played for girls on the cusp of adulthood and

[18] Kellee Frith and Denise Whitehouse. 2009. 'Designing Learning Spaces That Work; A Case for the Importance of History' in *History of Education Review*, 38:2, 106.

[19] Marjorie Theobald. 1996. *Knowing Women: Origins of Women's Education in Nineteenth-Century Australia,* Melbourne: CUP, 27.

[20] Ruth Watts. 2007. *Women in Science: a Social and Cultural History,* Abingdon: Routledge; Claire Jones. 2017. *"All your dreadful scientific things":* women, science and education in the years around 1900', History of Education, 46:2, 162–175.

[21] Katie Barclay, Rosalind Carr, Rose Elliot and Annmarie Hughes. 2001. Introduction: Gender and Generations: women and life cycles. *Women's History Review* 20:2, 175–188.

this forms part of a fruitful discussion on gendered secondary education.[22] Girls' and women's individual frames of femininity shift, or are shifted, by their society as they enter adulthood, middle and old ages, yet this phenomenon requires far greater study.

Research into changing historical constructions of femininity have benefitted from other interdisciplinary and multidisciplinary approaches that draw on sociological, philosophical and theological writing. More recently interest in the 'post human' has entered the field.[23] The entanglement of people and things, and material practices with non-human life invites a new direction for shifting the current frame of femininity to include gendered objects and non-human life, both inside and outside the classroom. For example, Karen Barad's notion of agential realism brings together natural science, social science and the humanities to create new epistemologies that change how we know the world in which we find ourselves.[24] This de-centering of the human subject inevitably also changes how we learn about it, how we interact with it, destabilising our assumptions of culturally bounded gender roles, including conceptions of femininity.

Finally, religiosity and femininity take the field into realms of male-dominated institutions, particularly for the Roman Catholic church. Newly edited collections, like those of Deirdre Raftery and Elizabeth Smyth, explore the work of women religious (nuns) within these institutions where men sometimes took the kudos for the successful labour of women religious in teaching hospitals, schools and colleges.[25] Patriarchy built architectures of control within these institutions, partly justified by male readings of biblical text. Yet it was feminine agency that created ways to circumvent the often dull and delaying hand of the episcopate, to bring about productive learning outcomes for females, often preparing them for professional futures that were not culturally cognizant of their gender.

[22] Stephanie Spencer. 2005. *Gender, Work and Education in 1950s Britain,* Basingstoke: Palgrave Macmillan.

[23] Geert Thyssen. 2018. 'Boundlessly Entangled: Non-/Human Performances of Education for Health through Open-Air Schools' *Paedagogica Historica*, 54, 659–676.

[24] Karen Barad. 2007. *Meeting the Universe Halfway: quantum physics and the entanglement of matter and meaning.* Durham and London: Duke University Press.

[25] Deirdre Rafferty and Elizabeth M. Smyth, eds. 2015. 'Introduction', *Education, Identity and Women Religious, 1800–1950*, Abingdon: Routledge, 1–5.

Additionally, as Phil Kilroy argues, women religious, until the mid-twentieth century, lived their lives parallel to the historical developments of feminism which they distrusted.[26] Using another contextual narrative through autobiography, he explores if these women when entering a religious order to educate, really replaced their individual feminine identity in favour of community life and piety, and if so, did this change direct the way convent girls were taught?[27]

As has been shown by this chapter, the dimensions that are engaged by conceptions of shifting femininity are rich and diverse within the field of women's history and histories of education in and beyond the classroom. These dimensions are posited here partly for future scholars to work with as the field of women's history continues to advance. What follows are eight chapters by international scholars which illustrate a cross-section of these academic constellations, created as they are by the entanglement of femininity mentalities and identity formation within broader paradigms of academic inquiry. These chapters are rich in interesting content and have been written in a style that engages the reader with accessible narratives, and in a way that reveals the product of many of these theoretical approaches without being overwhelmed by their complexity.

[26] Phil Kilroy. 2015. 'Coming to an edge in history: writing the history of women religious and the critique of feminism' ch. 1 in Deirdre Rafferty & Elizabeth M. Smyth, eds., *Education, Identity and Women Religious, 1800–1950*, Abingdon: Routledge, 6–30.

[27] Sister Agatha with Richard Newman. 2017. *A Nun's Story – The Deeply Moving True Story of Giving Up a Life of Love and Luxury in a Single Irresistible Moment*, London: John Blake Publishing.

CHAPTER 2

‘Unnatural’ Women and Natural Science: Changing Femininity and Expanding Educational Sites Through Women’s Pursuit of Natural Science

Ruth Watts

Science in the sense of ‘the principles governing the material universe and perception of physical phenomena’[1] developed hugely in the nineteenth century but, more even than other branches of knowledge, it remained peculiarly ‘masculine’. A woman scientist was seen as ‘unnatural’ in both textual and pictorial imagery. Especially as science professionalised, its various branches became very difficult, if not impossible, for females to study in any depth. Concepts of rational man and irrational woman, promulgated by many male scientists themselves, seriously impeded deeper and higher education for females. Reinforced by the arguments of

[1] ‘[T]hose branches of study that apply objective scientific method to the phenomena of the physical universe (the natural sciences) and the knowledge so gained’ – *Shorter Oxford Dictionary (OD)*. 2007; 1st ed. 1933. 2: 2697. Oxford: Oxford University Press.

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