
Editorial

Editorial: decolonising film education

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What follows is a conversation between our guest editors for this special issue, Jyoti Mistry and Lizelle Bisschoff, about the processes involved in decolonising work in film education, which is intertwined with an introduction to the work of the contributors to this special issue on decolonising film education.

Jyoti: In a poignant moment in Claire Denis's 1988 film *Chocolat*, the houseman Protée is asked by the French woman Aimée Dalens to assist with fastening the zipper in the back of her dress (Figure 1). Her husband is stationed as a colonial administrator in French Cameroon in 1957, and she is hosting a dinner party for his friends at their outpost home during his absence. The brilliance and beauty of the scene lies in the subtle shift in the gaze between the two characters. Initially, their clearly defined power relations of coloniser–colonised, mistress–servant, White–Black are reflected in Protée's inability to look directly at Aimée. In the moment of a shared reflection in the mirror, not only is he able to meet her gaze, but his look disarms her, challenges the power dynamics of their relationship created by colonialism, and introduces a powerful ambiguity and sexual awareness between the two characters. They are confronted, even if only for a moment, with the possibility to transgress the regulation and oppression of colonialism and its prohibition of cross-racial desire.

I have taught this film alongside *Black Girl* by Ousmane Sembene (1966), not in the context of the canon of African cinema, but as a way to explore colonial histories in relation to subjectivity and to focus on the entanglements of power, desire, ambitions and disappointments in everyday lived experiences.

Figure 1. Still from *Chocolat* (Claire Denis, 1988)



My focus is principally on research and pedagogy in film practice, so increasingly I work less with prescribed canons or genres as have been defined in film studies, and more by organising courses with an approach to themes or issues. This allows for content to be organised around how film-makers have approached film practices with similar historical and political content but from different perspectives, and often with divergent points of view based on characters and the sociocultural positions they occupy. The narrative focus in *Chocolat* is on the memories of a young White girl called France Dalens growing up in a French colony with the domestic proximity to Protée as the Black houseman and also the caretaker. This is in stark contrast to the experiences depicted in *Black Girl* in terms of point of view and subjectivity, since Claire Denis is working as a White French woman who observes and critiques French colonial history from this position. Her films rely on an attuned sense of intimacy, and at times ambiguous tensions and shifting power relations between characters. Offering these films in a thematic constellation alongside films such as *The Battle of Algiers* (Gillo Pontecorvo, 1966) and *Chronicle of a Summer* (Jean Rouch and Edgar Morin, 1961) allows space for significant comparisons with cinematic techniques and storytelling devices around similar themes and issues.

Lizelle: The young Senegalese protagonist Diouana in Ousmane Sembene's film gazes up in expectation, in anticipation of her arrival from Dakar, Senegal, to Antibes in France to work as a nanny for a French couple (Figure 2). Her hope for a life of adventure, beauty and style is crushed, as the couple effectively entrap her into servitude. Set just after the end of French colonisation, Sembene's scathing critique of the West's exploitation of Africa is couched through the use of parody, allegory and myth. A particular symbol is the mask that Diouana gives as a gift to her employers when she arrives in France. At the end of the film, when her employer takes the mask back to her village in Senegal, it becomes a menacing symbol of her objectification and fetishisation, but also of her eventual, symbolic, return and freedom. I add a content warning when I teach the film because of the shocking ending of Diouana's suicide – her final act of defiance. I have introduced *Black Girl* in a first-year film history course that replaced the five weeks of Hollywood with various examples of world cinema, which included postcolonial cinema. For most first-year students at the University of Glasgow, this would be their first introduction to African cinema, and it is an excellent example of the fiercely political, anti-colonial impetus that forms a thread through all Sembene's work. Many of the themes that he would revisit in subsequent films, such as the role of women in African societies, the feminisation of labour, forced and voluntary migration to the West, neo-colonialism, cultural exchange and oppression were introduced in *Black Girl*. Stylistically, the film is

Figure 2. Still from *Black Girl* (Ousmane Sembene, 1966)



reminiscent of French New Wave and social realism, and students recognise the style as a product of its time, not least because of the sound design and asynchronous sound.

In your description, Jyoti, of teaching *Black Girl* alongside *Chocolat*, you mention studying similarities and divergences in how certain themes and techniques are represented across a range of films from different perspectives, of resisting the perpetuation of canonisation – these are all pedagogical techniques that are crucial to consider within a decolonial imperative.

In the process of selecting images to discuss, both of us inevitably focused on the gaze, the colonial and anti-colonial gaze, and, not without coincidence, the cinematic gaze. The gaze is so implicated in subject/object power relations, and so ensnared in colonialism and cinema as a colonial tool. As such, our respective indelible film moments seem an apt way to introduce the theme of decolonising film education. This issue relies on multiple strategies to unravel the question of what it means to decolonise film education. It considers the necessary counterpoints to established canons in film studies, and interrogates the relationship between film practices and the ossifying of film conventions that for the most part have remained unchallenged in film education. In seeking to unfold these entangled relations of knowledge in film education (its practices, histories and theories), we have emphasised the geopolitical positions and the subjective experiences drawn from practitioners, scholars and educators.

In their article 'De-marginalising and de-centring film studies in bodies, places and on screens', Berenike Jung and Derilene Marco pose one of the defining questions of this special issue on decolonising film education: 'How do you enable a decolonial practice ... and do you really think it's possible to do this in our global climate in higher education?' (p.20).

Consequently, the issue takes on a textured and layered form – sustaining interlocutory encounters that reflect on the (in)visibility of power relations that constitute the infrastructure of education from the meta-framework of the institution to the micro-dynamics of encounters in the classroom. We have drawn on case studies and examples of film practices that move from the conceptual proposition of decolonisation to recounting tangible experiences (its challenges) of intrepid unlearning and relearning – a core demand of undertaking any forms of decolonial work and decolonisation.

What many of the contributions in this special issue lay bare are the necessary institutional structures required to support and sustain the unlearning of prescribed canons and conventions that allow for reflexive engagement with power-knowledge relationships as they pertain to everything from institutional histories, to curriculum frameworks and encounters in the class: the relationship-responsibility between teacher–students engagement. This special issue is neither exhaustive nor sufficiently extensive to address the plethora of questions or propositions to undertake the scope of decolonialisation, but this issue is an invitation to initiate a moment, to facilitate an intervention to transform curriculum and institutional practices, and it serves as a vital incision into assumed certainties of knowledge and practice. It is, we hope, an initiative towards further dialogues in issues to come that aim to tackle the myriad complexities that inform decolonial processes and their iterative explorations.

Jyoti: I taught in South Africa at Wits School of Arts in Johannesburg for over 17 years. In that time, I was involved in developing the curriculum with the aim of meeting the transformational agenda for curriculum content and the student demographic, and the institutional structures that needed radical restructuring in order to support those changes. In that time, I saw the student demographic change from being predominantly White students, with an increase in Black students – to reflect the racial demographics in the South African population, but there were also still numerous class privileges and issues of access inherent in the acceptance rates. In that experience, I observed that there was a shift in my position in the classroom, not just in terms of the content I was teaching, but also in the conversations in the classroom. I was recognised as a Black teacher working with more Black students, compared with my earlier experience of encountering resistance for being a Black teacher in a classroom with predominantly White students. I can imagine that teaching African content in Glasgow to students not always immediately connected to the material about African cinema (or are they?) must create some compelling revelations, challenges and dialogue.

Lizelle: This is so interesting because I know that Wits was very progressive and at the forefront of the anti-apartheid movement within academia, and it continues to be a progressive beacon in the landscape of South African universities. I feel I missed out, studying at what was then the Rand Afrikaans University, a historically White and Afrikaans university. It was in many ways the opposite of Wits – conservative, parochial and, in fact, connected to the Broederbond (a secret Afrikaner male organisation in South Africa dedicated to the advancement of Afrikaner interests, which existed between 1918 and 1994)! I feel that my re-education only properly happened when I started studying in the UK. I missed out on so much – so much of African culture, films, literature, theories, thought ... which weren't accessible to me growing up as a White woman in apartheid South Africa. Starting with my undergraduate degree at Rand Afrikaans University in the mid-1990s, but then leaving South Africa for postgraduate studies in the early 2000s, allowed me to reflect back on the country (and continent). And having this distance has been crucial in formulating my own positionality, as well as my engagement with the continent.

In terms of Glasgow, when I started here, I became aware of how little attention or thought is being given to Scotland's (and, more widely, the UK's) role in imperialism and colonialism. Students arrive at university in their first year having been taught the history of the United Kingdom in a celebratory way! So, part of my teaching on African cinema inevitably always includes reflecting on the UK's complicity in the transatlantic slave trade and the colonial project, and critiquing the notion that the British Empire was a great feat. Now I also always include references to the entanglement of the invention of film with the colonial project, and how these two processes historically coincide and were at the service of each other.

Recently, there has been more recognition at the University of Glasgow of these historical processes, with the university publishing a report in 2018 (Mullen and Newman, 2018) on how it supported and benefited from the slave trade (including a plan of reparatory actions), and a report in 2021 entitled *Understanding Racism, Transforming University Cultures*, which highlighted the high incidence of racial

harassment and marginalisation that staff and students experience at the university, and an action plan for how to address these (Virdee et al., 2021).

Of course, the decolonising movement and Black Lives Matter movement have reverberated here. I have found that students are extremely receptive to these movements in their context. In 2021, I taught a new honours course entitled *Race on Screen* to a classroom of mostly White students, and I was continuously impressed with the students' engagement in the course, their questioning and recognition of their own positionality and privilege, and their integration of quite complex critical race, decolonial and postcolonial theories into their analyses of film and television shows. I always talk about my own positionality (a White woman who grew up during apartheid, in enormous privilege and with first-hand experience of a fascist regime) in the introductory sessions of any courses I teach. Feminism has taught us that subjectivity is paramount to be acknowledged and incorporated into our research and teaching.

'Perspectives: a round-table discussion on decolonial pedagogies' with Lindiwe Dovey, Nina Mangalanayagam and Jyoti Mistry deepens the focus on how geopolitical location, historical and racial positions and access determine approaches to decolonialisation. Their reflections are drawn from an inter-institutional workshop–conference hosted at the University of Gothenburg, Sweden, in May 2019. What is striking is how the differences in their experiences are nuanced, and these subtleties – informed further by their institutional contexts – are fundamental to decolonialisation. Dovey explains how shifting from the term 'students' to 'class members' becomes a valuable way to recognise co-curation of the curriculum, and co-creating and co-learning as fundamental to the transforming hierarchies of knowledge in the classroom, while for Mangalanayagam, her challenges are to make visible images and histories that have been elided in Sweden's homogenising ideology. For Mistry, who has moved between the southern and northern hemispheres, the challenge is one of negotiating the importance of addressing complicated questions posed in the classroom without fear, and to carve space for dialogic engagement. In this discussion, situatedness and situated knowledge are fundamental to expanding an understanding of how intersectional engagement (race, class, gender, geopolitical, historical and cultural conditions) inform and shape experiences and interpretations of knowledge (both theory and its practices).

Berenike Jung and Derilene Marco (p.12) invite us into these negotiated complexities through their epistolary exchange initiated at a conference, and further developed from a conversation about curriculum:

The decolonial turn to us, then, is an effort-filled endeavour that is ongoing and complex, not only marred by race and geography, but also complicated by who students are and what their contexts are within the evolving classroom. Diversity in and of the classroom do not always work together, because places of learning are not only impaired by race as a social construct, but also complicated by students' lived identities and the realities they bring to the classroom.

There is no one size that fits for all, nor any easy solutions, and the endeavour is about doing the work. It takes work, a necessary labour of working through the meanings and possibilities of decolonialisation as a set of iterative procedures that are attentive to the participants in a room, and its context, and the situation requires radical acts of reconstituting these relations. To not reproduce certainties of the past requires experimentation, trial with the space for error, and engaged deliberation.

Experimentation with shifting power relations within the classroom, curriculum design, teaching delivery, and instructional tools and techniques lies at the heart of Armida de la Garza and Cliona Maher's paper on collaborative online international learning (COIL) as a strategy for internationalisation and decolonisation of the film studies curriculum. COIL as a pedagogical strategy holds that 'learning takes place through a distributed network of connections to other people and their resources, and formal and informal educational assets in the public domain' (Reo and Russell, 2015: 64). Coupled with the COVID-19 pandemic, COIL has provided unexpected opportunities for online learning. Armida de la Garza and

Cliona Maher's paper provides a preliminary blueprint for a truly collaborative teaching and learning approach between higher education institutions in the South and North. The impact, they claim, will not only be on curriculum content, challenging Eurocentrism; it could also potentially transform modes of teaching and learning, resulting in a mutual enrichment and understanding of different epistemologies and cultures, ultimately striving for pluriversality.

Plurality is likewise central to Sarah Shamash's paper on how teaching genre cinema could be transformed through a decolonising approach. She argues that plural knowledge systems must be part of a decolonial film pedagogy and praxis, and that genre cinema could likewise be taught through non-Western and pluriversal perspectives. Reminding us of Shohat and Stam's (2014) call to unthink Eurocentrism, Shamash argues that cinema is a '(re)worlding art form that has the power to imagine the possibility of different reals' (p.42). When expanding our genre studies beyond the Euro-American canon, turning to films from Latin America, Asia and Africa, we find films that utilise, adapt or subvert genre conventions for political purposes, activating anti-colonial, critical and feminist pedagogies that can greatly enrich and deepen learning.

Challenging genre conventions and Eurocentric canons can happen as much in the classroom as in the cinema and film exhibition space, in particular in film festivals focused on non-Western, world cinema. To widen the access to different forms that further broaden representations of Africa, Asia and Latin America, the conditions have to be created for the circulation of films that are given the necessary contextualisation. Film festivals are not simply about making films accessible – the curated framework is paramount for consciousness-raising. Dovey (2015: 177) describes how the meanings of films are contingent on the contexts in which they are shown and are – in this sense – co-authored by their film-makers and spectators. Festivals are spaces for direct dialogue.

Jyoti: The Africa in Motion festival, Lizelle, has been an important initiative in making the experiences of and from the African continent visible in the context of a broadly White European audience. No doubt it is a challenging proposition to offer audiences alternatives to the experience of African stories that are not predetermined by both film images of the last hundred years and media stereotypes that have been reproduced over several generations. I am curious about your impulse to have initiated this festival, and how it intersected with your role in the context of teaching at a university – if these are connected at all. And over the last several years of its existence, there have been strategic changes in the approach to the festival programming as well.

Lizelle: The impetus for the festival came directly out of my research, realising how difficult it was to get hold of African films to watch when I commenced a PhD on the topic in 2005. The intention from the start was to showcase the innovation, creativity and brilliance of African cinema – to situate it alongside the best of world cinema. So, we were very conscious from the start not to perpetuate the stereotypes of earlier and Western mainstream representations of Africa. My teaching, research and the festival are all closely connected, and have always informed each other. Researching African cinema has given me insights into new trends and developments that have subsequently fed into the festival programming, and the festival has given me opportunities to engage with audiences and African film practitioners in a way that I would not have had the opportunity to do if all my work was related to research and teaching. Both my research and festival experience inform my teaching. On a practical level, the festival provides opportunities for students to become involved as interns or volunteers, and to gain the kind of hands-on experience of festival curation and organisation that goes far beyond classroom teaching. The interaction that this offers to students to engage with audience members and film practitioners provides excellent opportunities to enrich their knowledge through lived experiences and what they learn about African cinema in the classroom.

While film festivals have brought film-makers closer to audiences, and discussions invite co-creation of meanings, the historical institutional divide between film studies (history and theory) and film practice (film-making) has been a strategic division of analytic work (reflection) from creating (making). The former is often placed in humanities faculties, and the latter in film schools or film programmes in art schools. This separation has had consequences: scholars (who reflect on representations) are exclusive from film-makers (those who create the representations); this concept of the film-maker auteur with a singular vision is not immediately described in relation to the world. In other words, the power of images to reinscribe ideology and the reflective moment in its development and production is an imposed separation. While these considerations of artistic accountability have recently shifted the approaches to the curriculum, often they are an addendum to film education, rather than consequential, because of education-institutional subject parameters. It has therefore become necessary to address film education in all its constitutive parts: the relationship between cinema history, film theory and film practice as a strategy of bringing together reflection and making to develop a more synergetic approach in curriculum. And increasingly, access to cameras and lens-based technologies and software makes it possible to consider the potential moments for this intersection in film education.

Emilio Reyes Bassail's contribution, 'Exploring memory through the essay film *To Remember: An exercise into the decolonisation of the filmmaker's unconscious*', brings these distinct parts – representational practices, ideological underpinnings, film-making and reflection – together into dialogic relationship. The result enables Bassail as a film-maker to question how certain modes of representation have come into being, the influence of dominant conventions that have remained unquestioned, and his own awareness from his unconscious (of the work required) in decolonising his consciousness and his practice. The necessity of work, the labour intensity of decolonising, is captured in the word 'exercise', and the iterative procedures and processes required to undertake the conceptual and political urgency to decolonise. The three-part structure of this article attests to the importance of working with the connections between context, content and film practices, where meanings are no longer inherent, but demand discussion and direct engagement. The repetition is in the form of exercise, a recognition that nothing is resolved, but remains in process towards decolonial becoming. Bassail's video essay creates yet another invitation for a revised understanding of film aesthetics – not as instrumental, but rather as a discursive medium for expressing experiences and positioning.

Again, it is useful to see how the dialogic approach is echoed throughout this issue. Questions, conversations, interlocutory encounters and epistolary exchanges require deep listening – this is formative to the decolonial strategy undertaken in various contributions. As Rolando Vázquez (2018: 147) expounds:

The task of listening is the task of bridging the colonial difference and it requires several things. It requires, first, what I call the humbling of modernity. If you assume that your view is the only view, or the universal value, or the contemporary view, or the view that is in fashion, or the latest view, then you cannot be in the disposition of listening or be capable of listening to what goes beyond your framework of understanding. So, in this sense, listening becomes an enormous challenge: how to humble your position, how to uncover your position when you have only learned to think and experience the real from inside the West? How can you receive and relate to realities and ways of thinking that do not belong to your framework of intelligibility? This is what I call decolonial listening.

Lizelle: Jyoti, as a scholar and practitioner, your work spans different forms of engagement with film. How have you grappled with the decolonising proposition in your teaching of film practice and production? Decolonising approaches in film-making of course include content as well as form, so I am wondering if you could specifically expand on how a disruption of established or canonical stylistic and generic characteristics in film form could support decolonisation, and how you convey this to students?

Jyoti: This is perhaps the challenge and the joy of teaching, and here I draw inspiration from the work of Maxine Greene. I would like to share this quotation from her seminal text *Releasing the Imagination* from 1995:

Imagination may be our primary means of forming an understanding of what goes on under the heading of 'reality'; imagination may be responsible for the very texture of our experience. Once we do away with habitual separations of the subjective from the objective, the inside from the outside, appearances from reality, we might be able to give imagination its proper importance and grasp what it means to place imagination at the core of understanding. (Greene, 1995: 140)

When I work as a film-maker, I try to work with this consciously, and I continuously draw from the experiments with my own practice, and bring this to teaching. It has been important for me to maintain the synergies between my research, film practice and pedagogy. Film education requires the teacher to be attentive to the limits of their own imagination. In some ways, it could be argued that it is easy to teach set canons and film conventions because we are well rehearsed and schooled within the paradigms of the education which we have received. It is necessary to know the genres and conventions because they underly the ideological apparatus that facilitated the naturalisation of accepted cinematic forms. Here my own practice as a film-maker has been valuable in determining how to approach experimentation, and the classroom becomes a space for working more attentively with interrogating what it means to collapse subject-object dichotomies and how insider-outsider relations are always negotiated. Herein lies the importance of the relationship between aesthetic forms (not style), ethics and the politics of practice, and my teaching in film practice foregrounds this. My approach is one of using film to explore and to discover, rather than to tell, and to describe, rather than to prescribe. It is a way of approaching film practice as a mode of enquiry, as the starting point, rather than as a medium for representation or singularly as a form for storytelling – so that shift is important because it does not assume that there is something to be told, but instead that there is something to be discovered. To teach against the grain of our own knowledge and practice requires a radical act of imagination on the part of the teacher, with support from students, also to go to unexpected places. Often it is hard work to take students with you because they come, of course, with their own expectations of what film-making is or should be, rather than what film-making could be. Students have also been schooled about what cinema history is and the expectations of what films are, and the industrialised, commercial (capitalist) structures that dominate them. The latter aspirations are often at odds with the aims of education, and its role in social and political transformation.

Lizelle: This resonates so much with me, Jyoti, and the quotation I would like to share comes from bell hooks. It echoes with teaching film – whether theory, history or practice – as a radical strategy of discovery, imagination and experimentation, and also of unthinking, unlearning and relearning. This process is mutual, reciprocal and subjective – teacher and student work together through questioning and critiquing – to create new understandings. This results in a plurality of approaches and interpretations. In *Teaching to Transgress*, bell hooks (1994: 207) writes:

The academy is not paradise. But learning is a place where paradise can be created. The classroom, with all its limitations, remains a location of possibility. In that field of possibility, we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom.

I was drawn to teaching, researching and curating African film because, as I started to explore the little-known treasure trove of films from the continent, it became so apparent that cinema in Africa, as elsewhere, is a way of imagining and creating new worlds, that films are crucial repositories of individual and collective memories, and that film can teach us so much about societies, histories and cultures. Once

we venture outside our comfort zones and open ourselves up to the pluriversal worlds that are imagined on screens around the world, the classroom becomes exactly the 'field of possibility' that bell hooks (1994: 207) describes.

The process of decolonising education is a recognition of the multiple timelines that inform our histories, and how our different subjectivities are shaped by the geopolitical contexts of our lived experiences. It demands from us as scholars, practitioners and pedagogues to reorient our axis of knowledge: to listen attentively to images, to see vividly the polyvocality of experiences and to exercise sound-image constellations in revitalised forms.

Filmography

The Battle of Algiers (IT/DZ 1966, Gillo Pontecorvo)
Black Girl (SN/FR 1966, Ousmane Sembene)
Chocolat (FR/CM 1988, Claire Denis)
Chronicle of a Summer (FR 1961, Jean Rouch, Edgar Morin)

References

- Dovey, L. (2015) *Curating Africa in the Age of Film Festivals*. Basingstoke: Palgrave Macmillan.
- Greene, M. (1995) *Releasing the Imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass.
- hooks, b. (1994) *Teaching to Transgress: Education as the practice of freedom*. New York: Routledge.
- Mullen, S. and Newman, S. (2018) *Slavery, Abolition and the University of Glasgow: Report and recommendations of the University of Glasgow History of Slavery Steering Committee*. University of Glasgow. Accessed 31 March 2022. https://www.gla.ac.uk/media/Media_607547_smxx.pdf.
- Reo, R. and Russell, M. (2015) 'The complementary expertise of faculty and instructional designers in the design of globally networked courses'. In A. Schultheis Moore and S. Simon (eds), *Globally Networked Teaching in the Humanities: Theories and practices*. New York: Routledge, 58–69.
- Shohat, E. and Stam, R. (2014) *Unthinking Eurocentrism: Multiculturalism and the media*. London: Routledge.
- Vázquez, R. (2018) 'Decolonial listening: An interview with Rolando Vázquez'. *Sopabox*, 1 (1), 147–56. Accessed 29 March 2022. <https://www.soapboxjournal.net/print-editions/1-1-practices-of-listening>.
- Virdee, S., Taylor, M. and Masterton, C. (2021) *Understanding Racism, Transforming University Cultures*. University of Glasgow. Accessed 31 March 2022. https://www.gla.ac.uk/media/Media_772919_smxx.pdf.