

Decolonising Computing (?)

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[TITLE SLIDE]

Intentionally ambiguous, I suggest the title of my talk provokes a cluster of questions. If the question mark is ignored, 'decolonising computing' arguably points to an *activity* – that is, subjecting computing to a *process* of decolonisation.

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Beyond the question concerning what is meant by 'computing', various other questions present themselves including the following:

- *What* does it mean to *decolonise* computing?
- *Who* is carrying out this activity?
- *Where* is this activity being carried out?
- *How* is this activity being carried out?
- *Why* is this activity being carried out?

And we need to appreciate that these questions prompt a set of further questions once we reframe them in normative terms, viz.

- *What* should it mean to *decolonise* computing?
- *Who* should be carrying out this activity?
- *Where* should this activity be carried out?
- *How* should this activity be carried out?
- *Why* should this activity be carried out?

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Beyond these questions, there are questions about *whether* this activity is already underway, and if not, *whether* it *should* be underway. Of course, this presumes that such an activity *can* be carried out – that is, that computing *can* be decolonised – which in turn presumes something else, something prior, viz. that computing *is* in some sense *colonial*. However, isn't it somewhat of a stretch to describe computing as colonial, especially since colonialism, as a phenomenon tied up with imperial structures of domination and settlement, is largely a thing of the past? How *can* computing be colonial if the 'age of empires' is over and we live in a postcolonial world?

[SLIDE 4]

In an article published in the *Communications of the ACM* entitled 'Why Computing Belongs Within the Social Sciences' (2020), Randy Connolly, Professor in Maths and

Computing at Mount Royal University in Calgary, Canada argues that: “We **normalized** the belief that ***the world is irrelevant next to computing*** precisely ***through the structure of our curriculum.***” In his view, “we need to do better, and be willing to inform both our work and our thinking, with the more nuanced, ***historically grounded***, empirically supported thinking of the ***social*** sciences.” (p.58)

[SLIDE 5]

Insofar as computing contributes to ‘world-making’ through the building of infrastructure, and insofar as our students will go on to work as practitioners, shaping and deploying computing technologies within a range of contexts, it is imperative that we, as educators, equip them with the ability to understand the need to make worlds *otherwise*. I argue that this requires us to first understand and then explain to our students what is meant by ‘computing’, what is meant by ‘the world’, and the relationship between the two.

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By ‘the world’, I refer to what some have described as the racial capitalist world system forged through colonialism and imperialism commencing with the Columbian voyages of conquest in 1492 CE and expanded throughout the *long durée* of the 16th century.

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Colonialism as a project of European political domination involving labour exploitation, resource extraction, and settlement *formally* ended with the national liberation and independence – or *decolonisation* – movements of the 1960s. Yet the modernity which colonialism engendered persists, albeit transformed under the condition of postmodernity, which has meant the persistence of certain ‘sedimented’ colonial ways of knowing and being – that is, colonial epistemology and ontology – based on systems of categorisation, classification and taxonomisation, and the embedding of these in practices, artefacts, and technologies. It is these legacy systemic structuring logics (ontological, epistemological, cultural, political, economic etc.) – what is referred to as *coloniality* – which persist in the contemporary, post-colonial era notwithstanding the formal end of colonialism, shaping what computing is and how it is done – at least in relation to its dominant (or hegemonic) form.

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While recognizing that the history of computing, like other histories, is a contested terrain, and duly acknowledging the entanglement of history with geography, and both with power, it is a fact that computers, programming, artificial intelligence, the internet and ICTs all emerged in the West (primarily Britain and the US) against the backdrop of inter-European military conflict (WW2) and post-war ideological conflict (The Cold War), both of which were relationally-entangled with colonised populations along “the colour line”.

I argue that the histories (and geographies) of computing and colonialism are ‘entangled’ insofar as the origins of computing are tied to European *cum* Western imperial projects and militarized-industrialized contexts whose legacy afterlives

persist in the contemporary era. Going further, I maintain that computing has become a – if not *the* – primary means by which the racialised-colonial project has perpetuated itself in the postcolonial age.

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Philosophically-speaking, if computing stands in a *historically contingent* relationship to colonialism, then it is, at least in principle, *possible* to ‘de-link’ computing from its entanglement with coloniality. However, even if the relationship between computing and coloniality *is* historically contingent, in its dominant (or hegemonic) contemporary form, computing does not merely carry the legacy traces of colonialism but is arguably driven by a relentless colonising logic – what human-computer interaction (HCI) theorists and practitioners Paul Dourish and Scott Mainwaring (2012) have referred to as a pervasive and expansionist ‘colonial impulse’ in connection with ubiquitous computing. While endorsing this view, I suggest that the colonial impulse is far more deeply-embedded in the broader, expansionist thrust of computing associated with the transformation of the modern world through incessant computerisation (latterly ‘digitalisation’ and more recently, ‘datafication’), and the rise of a purportedly global ‘information society’ following the “cybernetic turn” of the 1950s.

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Developments within computing and ICT such as networked, mobile, wearable, and cloud computing, as well as the diffuse rollout of the Internet of Things (IoT) and machine *cum* deep learning when considered together as a manifestation of ‘technological convergence’ are arguably resulting in the emergence of an increasingly sedimented computational infrastructure displaying not only technological momentum but possibly also *acceleration*, resulting in the datafication and algorithmization of the human life-world and beyond. Scholars have theorised this transformation in various ways – for example, as the rise of surveillance capitalism (Zuboff), data colonialism (Couldry and Mejias), or digital colonialism (Kwet) – drawing attention to the extraction and datafication of human ‘behavioural surplus’ generated through interaction with digital technologies for purposes of generating saleable prediction products and, perhaps more importantly, bio-political – and necropolitical – governance. One way of thinking about the entanglement of such developments with the rollout of the IoT, an embedded network of sensor-enabled devices, is in terms of what I refer to as a shift from boots on the ground to ‘bits in the ground’ (or perhaps *from* the ground) colonialism via digital proxy.

[SLIDE 11]

Developments such as these have led commentators such as Paula Chakravartty and Mara Mills (2018) during a virtual roundtable on ‘decolonial computing’ to ask the following question: “If computing technology is the embodiment of rational calculation and a driver of twenty first century capitalism, *can* it indeed be ‘decolonized’ overhauled or appropriated for other ends? [emphasis added]” (p.2)

[SLIDE 12]

Notwithstanding my increasing pessimism about the prospects for decolonising computing, building on my own work exploring what might be meant by a *decolonial* computing (Ali 2014, 2016, 2018, 2021), and drawing on insights gathered from a recent project undertaken by a team based in the School of Computing and Communications at The Open University, I want to briefly set out some propositions and principles that should be considered for adoption by computing educators in an attempt at decolonising computing:

[SLIDE 13]

1. Computing is **sociotechnical** insofar as its very subject matter is constructed (devices, infrastructure, standards, regulatory policies etc.), and this construction reflects and consolidates the social, organisational, political, economic etc. conditions under which it is designed, built, and used. This means that the more abstract and technical components of computing – which tend to be associated with computer **science** – need to be understood as a subdomain of the wider phenomenon of computing *per se*.

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2. The historical development of mainstream computing is marked by the impact of various imperial, and militaristic undertakings in the modern/colonial era, yet the **impact of this legacy** and its implications for contemporary computing tend to be insufficiently explored. Moreover, insofar as computing – especially in its pervasive, networked, and increasingly data-driven form – is marked by what some commentators have referred to as a ‘colonial impulse’, computing in the postcolonial era not only **reproduces legacy structural relationships** between historical coloniser and colonised, but also generates new forms of colonialism (digitalised, datafied, algorithmic) and hence, is **neo-colonial**. These new forms of colonialism involve extraction and exploitation of human labour (physical, cognitive, affective etc.) and natural resources (rare earth minerals, land, water) In addition, *coloniality* – that is, the facilitating logic of colonialism – may be inscribed in the immaterial (standards, algorithms etc.) and in computing practices (AI, HCI, outsourcing, enterprise systems etc.). Crucially, this is the terrain on which computing students are most likely to be able to effect change in their professional lives, and so should be a primary target for computing educators.

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3. It is only by adopting a **world-systems** perspective, wherein local-global entanglements and asymmetries of power and the flows of resources are considered that the possibility of developing a decolonised computing can arise. This necessitates thinking about computing in terms of political economy, political ecology, and – at least on my reading – political theology. It is for this reason that I suggest that an EDI (that is, equity, diversity, and inclusion) approach is necessary yet insufficient for decolonising computing.

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What might a decolonised computing look like?

Insofar as the decolonisation of computing draws upon decolonial thought and praxis, it is grounded in two basic commitments:

1. **Epistemological** embrace of the 'decolonial turn' involving 'de-linking' – that is, decentring of Eurocentrism (West-centrism, North-centrism) as the preeminent site of knowledge production.
2. **Political-ethical** embrace of the 'decolonial option' involving a **preferential** option toward those situated in and at the margins/peripheries of the modern/colonial world system with a view to seeking redress for the legacy effects of colonialism.

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These commitments inform what I have elsewhere presented as two maxims that I suggest practitioners and researchers adopting a decolonial computing perspective are required, at a minimum, to adopt (Ali 2016):

1. Consider their **geo-political** (where) and **body-political** (who) orientations when designing, building, researching, or theorizing about computing phenomena.
2. Embrace the 'decolonial option' as a compensatory politics and ethics, attempting to think through what it might mean to design and build computing systems with and for those situated in and at the margins/peripheries of the world system, informed by epistemologies located at such sites, with a view to undermining the asymmetry of local global power relationships and effecting the 'decentring' of Eurocentric/West-centric universals.

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For my part, decentring necessitates grappling with the thorny issue of reparations and considering the implications of decolonisation for neoliberal capitalism – or rather, **industrialised racial capitalism**. Put simply, can one be committed to decolonisation without being simultaneously committed to anti-capitalism given the entanglement of capitalism with colonialism and both with racism? At a minimum, given the differential human and ecological costs of computing, I suggest there is a need to think seriously about redistribution of resources – wealth, knowledge, land, technological infrastructure etc. – as well as a commitment to **degrowth**, which in the realm of computing means embracing a **qualified de-computerisation, de-digitalisation, de-datafication** etc.

Lest we fall into 'the politics of performance', it is imperative that we keep in mind Tuck & Yang's (2012) warning that "decolonisation is not a metaphor."

Thank you.

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