

Mathematics and citizenship: disordering the taken-for-granted

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Mathematics and citizenship: Disordering the taken-for-granted

Hilary Povey and Gill Adams explore ways in which mathematics education can be 'rewilded'.

In recent years, there has been increasing interest in possible links between citizenship and mathematics. In our earlier article (MT269), we wrote about the materials produced from a European (ERASMUS+) funded project (2017-1-UK01-KA201-036675) – the *Project in Citizenship and Mathematics (PiCaM)* (<http://www.citizenship-and-mathematics.eu/>). Here, we draw on our experience of some of the problematic issues we encountered.

As soon as an idea becomes established, no matter if the original intention is radical, it quickly becomes colonised and incorporated into the *status quo*. In trying to understand and think about this, we came across the idea of 'disordering' as an attempt to unsettle and disrupt. (We have written about this elsewhere (Povey and Adams, 2021, open access) and draw on that text and its images in much of this article.) 'Disorderliness' represents a way to fight against this colonisation of radical ideas by a refusal of the taken-for-granted 'orderings' of both mathematics and mathematics teaching, the 'common sense' of contemporary schooling. In rejecting those 'orderings', we have to remain uncertain, open and incomplete, challenging "the learned modern/colonial desires for consensus, coherence, neutrality and quick resolutions" (Andreotti *et al.*, 2018, p. 12). We try to keep a rebellious state of mind (in the sense used by Extinction Rebellion), one that demands a fairer, more just, ecologically sustainable and more loving world.

Our project brought us face to face with two problematic and contested ideas: mathematics and (global) citizenship. *Mathematics Teaching* readers will be familiar with the difficulties around mathematics. Suffice it here to say, it currently acts as a powerful political tool supporting governing elites, formatting how we understand the social world. Mathematical models are presented in the context of political decision making without reference to relevant preconditions and with the mathematics providing a neutral and apparently value-free tone. Yet mathematics does significant harm in the world. For example, as John Berger (2016) notes, through the use of computer software, highly sophisticated

weaponry is deployed by the rich against the poor, unmanned combat aerial vehicles against slingshots. Similarly, algorithms within predictive policing create self-reinforcing feed-back loops likely to support anti-Black violence and oppression. Mathematics is an engine for continued economic growth despite the life-threatening damage to the planet this is causing. For teachers, it is used to rank young people, legitimizing allocations of advantage and disadvantage. It used to judge and discipline children, teachers and schools with learners becoming "a cell on a spreadsheet coloured red, amber or green or a labelled co-ordinate on a two-way grid" (Povey and Angier, 2021).

So why mathematics? We believe that we need to unlearn – to rewild if you will – the subject and, as often experienced, our destructive relationship with it. We need mathematics as part of a critique of contemporary political arrangements (precisely because of its formatting power) as we try to function as radical citizens, caring for each other and for the planet; the young need mathematics in shaping policies that bring greater fairness to the world and that help to re-green the planet. And we need a mathematics that can contribute to our understanding of the world as a mysterious and beautiful place and an awareness that it can delight us and allow our creativity to flourish within its realm.

Perhaps less familiar are the contested ideas around citizenship, an elusive and inherently political concept. We see illustrated here that it is something that can be acquired at birth (or not); or be prohibitively expensive and dependent on 'good character'; or bestowed in gratitude for selfless bravery; or taken from you as a punishment or because you are the 'wrong' religion; or act as a defining characteristic in a rallying cry to arms; or withheld because of the colour of your skin or your sex or your economic status; or bought by the wealthy; or as a reward for athletic prowess or ...

Most often, in contemporary society, we see citizenship used to support an inherently conservative agenda: the good citizen as individual, conforming, law abiding and accepting of the *status quo*. 'Rights' are entirely individual: the freedom to exercise choice



Meanwhile ... hundreds of vulnerable children as young as 10, who have spent most of their lives in the UK, are having their applications for British citizenship denied for failing to pass the government's 'good character' test.

And ... while enforcement has become tougher, gaining citizenship has become more complicated and more expensive. In fact, it costs thousands of pounds for someone to maintain their 'leave to remain' status.

Kirkaldy, Liam (2018). No recourse to public funds: How the UK's hostile environment policy is driving people into destitution. Holyrood, 17 January 2018. (https://www.holyrood.com/inside-politics/view,no-recourse-to-public-funds-how-the-uks-hostile-environment-policy-is-drivi_13757.htm)



Natives: Race and Class in the Ruins of Empire

[The] assumption is that anyone who is not racialised as white is not really a citizen, echoing the old white-supremacist adage 'Race and Nation are one' and the 'blood and soil' logic of the Nazis ... [It is implied] that those of us who critique Britain's historic and current injustices are not real citizens of this country ... the idea of race has been one of the most important ideas in the modern world, it has underpinned centuries of enslavement, justified genocide and been used to decide the demarcation line between who lives and who dies, who gets to access rights of citizenship ...

Akala (2018) Natives: Race and Class in the Ruins of Empire. London: Two Roads. p. 26, 29, 34-35.



Citizens of nowhere

Prime ministers line up to offer super-rich passports - at a price

Three prime ministers took to the stage at a five-star London hotel ... to offer the world's wealthiest people "golden passports" and citizenship in return for hundreds of thousands of pounds ... [the prime minister of St Lucia] promised ... visa-free travel to 145 countries including the UK, members of Europe's Schengen area, Hong Kong and Singapore.

The Guardian, 16 Nov 2019, p. 45



Aux armes, citoyens,
Formez vos bataillons,
Marchons, marchons!

To arms, citizens,
Form your battalions,
Let's march, let's march.

From the French national anthem.



Mohammed El-Hamisi saved 48 people on his fishing boat. “That night the winds were up to 10 on the Beaufort scale, so it was very choppy. And there was smoke everywhere; visibility was nil ... I decided to leave instantly.” He had lived in Greece since he was 17; he has since been granted Greek citizenship but has received no compensation for the damage to his boat. He is still paying off the debt. “Lots of people ask me what they can give because I saved their families. But how can I accept anything from people who’ve lost everything?”

The Guardian, 20 July 2019.



Clashes across India over new citizenship bill ‘that excludes Muslims’

There were violent clashes in Dehli ...over a new citizenship bill that critics say discriminates against Muslims and undermines the secular foundations of India ... the United Nations human rights office also voiced concern that the new citizenship law was ‘fundamentally discriminatory in nature’ ...

The Guardian, 14 December, 2019



Dual national terror suspect ‘Jihadi Jack’ is stripped of UK citizenship

Jack Letts, who left his home in Oxfordshire to join Islamic State five years ago, has been stripped of British citizenship ... prompting a row with Canada, from where he also holds a passport.

The Guardian, 19 August, 2019



Migrant runs for a new life

It took teenager Kone Yossodjo more than a year to run from poverty in west Africa ... If he can meet the 1,500m Olympic qualifying time, his coach says, Spain will grant him citizenship to compete.

The Guardian, 15 November, 2019



The Windrush scandal

British citizens were wrongly deported to countries they had left as children fifty years ago, held in immigration detention centres, dismissed from their jobs and deprived of services such as NHS care. The official inquiry said the Home Office demonstrated “institutional ignorance and thoughtlessness towards the issue of race” and operated a “culture of disbelief and carelessness.”



Joe, 13, Dominican Republic

Despite a clear entitlement to nationality under the law, children of Haitian descent have frequently been denied Dominican nationality by the civil registry. Joe should be considered a Dominican national as he was born in the country, but he has never been able to obtain his ID. He spends his school vacations scavenging in San Pedro de Macoris rubbish dump in order to earn 50 pesos (just over one USD).

UNHCR - The kids foraging for a future

in the market, without regard to the welfare of others, and the freedom to consume. There is no place for knowledge of the 'other'. We believe that this idea of citizenship cannot simply be extended or expanded or added to. The world of which it is a part is based on "violence of exploitation, ecocide, and genocide" (Andreotti *et al.*, 2018, p. 28), within each of which mathematics is implicated. Citizenship needs to be completely reimagined, rejecting existing social and political power relations.

We suggest that such radical citizenship requires the person-centredness, empathy and human values currently advocated by many of those engaged in anti-globalisation movements who are striving for a deep ecological democracy that stresses interconnectedness, not just between people but with mathematics and the planet too. It is a citizenship (and a mathematics) that recognises personhood and strives to create and maintain "ethical, equitable relations premised on respect, reciprocity, solidarity to uphold the well-being of present and future generations" (Andreotti *et al.*, 2018, p. 31). We believe that such citizenship still has the potential to evoke more human and more humane connectedness with others.

We argue for a hopefulness that citizenship can become about care and interconnection, with mathematics helping us to enable this and to experience delight and mystery in the world, practising a radical, active hope-in-the-present (Povey and Angier, 2021). In a context of uncertainty, openness and indeterminacy, we can use mathematics to critique and change the world and to take joy in it; and to engage in a citizenship understood as solidarity and as enabling just practices and transformational action by young people to build a better world.

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