The climate emergency and the transformed school

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"I've always preferred to live more frugally than less frugally. This may have been influenced by my wartime childhood in East London when food as well as clothes rationing were part of everyday life; when 'raspberry' jam had tiny fragments of wood in place of pips; and holidays, meals out, shopping expeditions for non-basics, and bananas were all unknown."

My plan for this cameo piece was to write about education for frugality in the light of the climate crisis, and I saw this as an arresting way in. But it now seems to me that education for frugality plays a minor – and, more importantly, a possibly counterproductive – role in a larger set of issues about how schools should react to the crisis.

By 'frugality' I mean in broad outline a simpler life-style than many of us lead today – one not dependent on the excessive purchase of consumer goods like clothes, home comforts, pricey meals out and foreign holidays. Pursuing a simpler life has been a recurrent personal ideal since at least Epicurus and there are many today who find fulfilment in uncostly pleasures of an intellectual or artistic sort as well as intimate relationships, friendship and a love of nature (Westacott 2016). In our climate crisis days, a form of frugality which at points touches this personal ideal is increasingly mooted and practised – but as a moral obligation rather than an individual preference. It involves helping to decrease emissions of CO_2 and methane by reducing the use of plastic, not eating red meat, giving up petrol driven cars, buying less, etc. Various educational agencies can and do play a part in promoting this kind of frugality – families (see Zwarthoed 2018), schools, news and social media. On philosophical aspects of education for frugality in its several aspects, including climate change, see White (forthcoming).

I said earlier that this kind of education for frugality might be counterproductive. What I mean is that if young people believe it is through this kind of self-restraint that they can best help to meet the challenge of climate change, they may well be wrong. This is not at all to deny the contribution of these life-style changes, but the more that people feel that they are 'doing their bit' if they adopt them and nothing further is required of them, the harder it will be to meet the challenge. Only immediate, large-scale, government and international action can do so, reducing CO_2 emissions both via legislation and via coordinated global projects.

If individual young people have a role to play, it is not only through personal restraint but, more importantly, through the pressure they can bring to bear on institutions like their own governments. Schools can help them in two ways.

First, they can pass on the *understanding* students need so as to bring maximum pressure on the authorities. This understanding is many-sided and is in many ways interdisciplinary. It draws on chemistry and physics, given the role of CO_2 and other substances in the greenhouse effect; on biology, seeing the dangers to biodiversity; and on geography, in connection with such things as uncontrollable wildfires and the social effects of sea level rises in different areas. It also includes global social, economic, and historical understanding of related factors like the following: population increases, movements into cities, growth in

sales of consumer goods, the rise of free market capitalism and social inequalities. Ethical and political enquiries raise issues about, for instance, the role of wealth in human flourishing, and about international cooperation. These different disciplinary perspectives interconnect at innumerable points.

The second contribution of the school is that it can encourage students to use this understanding to take the necessary *action* both to mobilise public opinion and to force governments to respond. Extra-school agencies – school strikes, mass meetings, web-based organisations and social media – are already effective in this mobilization effort. Greta Thunberg's recent initiatives have galvanised young people of secondary age across the world to act on climate change. In the UK as elsewhere, there have been frequent Friday strikes since early 2019. New web-based organisations have been created. *Teach the Future*, for example, describes itself as "a youth-led campaign to urgently repurpose the entire education system around the climate emergency and ecological crisis" [1].

Working to government guidelines, secondary schools at least in England have so far not been impressive in their reaction to the crisis. On the first point about kinds of understanding, in the English educational system climate change is mentioned briefly in the science National Curriculum framework, and climate more generally in that of geography. The treatment of the topic is sparse and uncoordinated. School students, journalists and politicians have all been pressing recently for a more adequate, joined-up approach. On the second point, English schools and education authorities have tended to be critical of pupils taking direct action like striking [2]. There is every reason for them to be more positive.

A central fact about the kinds of understanding learners need is, as shown above, that many central issues to do with climate change are *interdisciplinary*, with scientific aspects interweaving political, social, economic and ethical ones. One problem is that English schools have traditionally had little space for anything apart from separate subjects. Those subjects that made up the National Curriculum of 1988 are, indeed, almost identical to those chosen for the first state secondary schools in 1904 (Aldrich 1988). In recent years, owing to government policy on the curriculum and its assessment, the subject-based régime especially in secondary schools has become even more entrenched. This has meant less space for covering 'extras' like environment.

Subject-mindedness is found not only in schools. The British political philosopher Jonathan Wolff has recently identified several ways in which universities should be reformed. One way is to encourage interdisciplinary research. He writes

> "Problems such as climate change or global inequality cannot be solved from within a single discipline. Making a valuable contribution requires painstaking acquisition of a variety of complex skills and knowledge.
>
> For a junior scholar this can be career suicide. Most universities are based on single-discipline departments and few jobs are advertised in interdisciplinary areas. We need to align university propaganda, favouring interdisciplinary work, with career incentives. Might we, perhaps, reform the undergraduate curriculum, or, heresy of heresies, rethink academic structures?" [3]

The attachment of both secondary schools and universities to separate subjects shows how, buttressed since 1988 by government demands on it, the education profession has been

steeped in traditional ways of behaving. So have some of its other taken-for-granted *modi operandi*. Teachers have seen themselves and continue to see themselves as unique experts in the transmission of subject-based knowledge and skills. They have restricted themselves to passing on what they know in a face-to-face way, teaching groups at set times in school classrooms and university lecture rooms, or individual students in tutorial offices.

In *The Future of the Professions*, Richard and Daniel Susskind (2015) argue convincingly that the traditional model of professional activity that we see here (and also found among lawyers, doctors and others) has already begun to become obsolete in the tech-based society we now have in countries like the UK and the USA, and will erode further in future. For not all the work carried out in the professions is as arcane as is claimed. Many tasks are routinisable, implying that they can be and almost certainly will be taken over by machines. Some are already delegated – from doctors to nurses, for instance. The internet allows ordinary people to freely access much of the knowledge these professionals have claimed as their own preserve.

This last point is true, not least, in education, where factual knowledge is now easily googled and videos can be used, in connection with online exercises and tests, to teach academic subject-matter. A notable example is Khan Academy, a free online teaching resource funded by Bill Gates and others, that provides courses for school students in STEM subjects, computer science, health and medicine, economics and finance as well as some areas of the humanities [4]. It is still only a few years old, so we can expect more refinements and extensions of coverage. The same is true of MOOCs and other on-line platforms for university level courses [5].

Both Khan Academy and various MOOCs have courses specifically on climate change, as well as on academic subjects like the sciences which include climate change as part of their curriculum. For a highly accessible Khan Academy video on how climate change affects biodiversity, see [6]. TED talks are another resource. See David Saddington's talk 'Why I Don't Care about Climate Change' with its focus on the social, financial and security impact on young people's lives rather than just the science [7]. Such platforms are in a good position to develop this work in interdisciplinary directions. There are also now a growing number of other educational agencies with websites on what schools can do in the area of climate change. As well as those mentioned elsewhere in this cameo, see [8].

Another way in which the internet can facilitate awareness about this is through students' use of social media. This has already been shown in the coordinated activity that led to recent school strikes. Andersson and Öhman (2017) show via an empirical study how these on-line conversations can generate sophisticated discussion in which empirical facts and moral/political arguments are confronted and explored.

I mentioned the Susskinds' view that traditional professions will become transformed thanks largely to the tech revolution. Because of the urgency of the climate crisis, it may well be in the teaching profession that significant change will first occur. There is not the same pressure on legal services, for instance, to respond to the imminent threat of global disaster. School strikers and countless other young people are agitating for action *now*. This may stimulate the attrition of some of the traditional features of the teaching profession, especially in secondary schools: its claim to unique expertise in the transmission of knowledge and other educational goods; its attachment to a curriculum of separate subjects; its dependency on the classroom and other communal spaces as its workplace; its emphasis on top-down communication from

teacher to learner and lack of emphasis on sideways communication between learners themselves; its unaccustomedness, given the constraints of class teaching, to respond to the felt interests of individual students and so to personalise what it offers them (Sardoč and White 2018). At the same time, the difficulties in preventing the profession from defaulting back to its older model should not be underestimated, especially given the challenges to top-down control presented by alternative modes of education.

What action can and should schools now take in relation to the climate crisis? I outlined above the different kinds of *understanding* that secondary students need and how they can use that understanding to take the necessary *action* to influence public opinion and pressure their governments and other authorities to take steps to cope with the emergency. Seeing that much of this understanding is interdisciplinary and is to issue in informed action, how can things move forward – with some haste – in an educational system like England's, unaccustomed to interdisciplinary teaching and unsympathetic to direct action like taking part in school strikes?

The ideal – if time allowed – would be to rethink the control of the curriculum. Since 1988, it has been under political rather than professional control. In one way this is welcome. In a democracy there is no good reason why a section of the population – teachers in schools – should dictate the content of education, given its bearing on students' well-being and that of the wider society. Teachers may well have adequate credentials as transmitters of knowledge and skills, but they have none as ethical experts. Neither they nor any other section of society can lay down how we should live, individually or collectively. It is for the democratic community as a whole to make political decisions relevant to these ends.

But the 1988 move was misconceived. It put curricular power into the hands of the Secretary of State for Education. But this was, after all, *only a different kind of sectional voice*. Since 1988 we have seen ministers impose their own subjective notions of what school education should be about. For the most part, as today, they have based it on traditional subjects.

The ideal move would be to entrust the curriculum to a National Curriculum Commission (NCC). See my piece on this at [9]. It would be drawn from and keep closely in touch with people from all parts of the community, reflecting its remit to construct a curriculum appropriate to a democracy. Its focus would be on *aims*. This is a welcome departure from the more usual way of setting out a curriculum that focuses on its components like maths or history without acknowledging the need to show how they help to realise more general purposes and the fact that that school subjects are no more than one kind of *means*, or *vehicle*, by which aims are to be realised. (Other such vehicles might be interdisciplinary enquiries or extra-school activities). True, these curriculum statements are usually accompanied by brief references to aims, but these tend to be very general and unable to provide the backing needed to justify the inclusion of specific components. An example is the aims-statement accompanying the current National Curriculum in England:

> The national curriculum provides pupils with an introduction to the essential knowledge they need to be educated citizens. It introduces pupils to the best that has been thought and said, and helps engender an appreciation of human creativity and achievement. DfE (2014: 3.1)

The NCC aims would begin from general ones to do with furthering individual and communal well-being and then move on to aims derivable from these like, for example,

understanding the social and economic make-up of the community. As for the *vehicles* by which aims are realised, e.g., school subjects, interdisciplinary topics, out-of-school activities, it would guide schools as to which kinds of vehicle best suited different aims, but leave them to make final decisions.

An urgent NCC aim for the 2020s would be equipping students to deal with the climate emergency. Here we might expect it to point schools in the direction of a mix of disciplinary and interdisciplinary work, using internet facilities where appropriate; to urge them to look kindly on student action in favour of climate change, including the use of the web and social media in school time and in out-of-school activity in place of some lessons; to favour more discussion of the issues, collaborative planning of courses of action, and personalised learning by building time for these, including internet explorations, into the school day. An NCC would have to see that teacher training reflected these changes, not least by preparing teachers for interdisciplinary work. As things are now, the great majority of them believe they haven't received adequate training in the area of climate change [10].

An NCC cannot be set up overnight. But there has to be climate change action *now*. Young people are increasingly eager for it. As well as [a] mustering public support for a more democratic form of curriculum control at the national level, [b] they can move things on by pressurising individual schools to change their ways of operating in line with suggestions in the last paragraph. Given that in the same poll two thirds of teachers believe that there should be more teaching about climate change (ibid.), student activists should now find a receptive audience. For a wealth of more specific suggestions about action on both levels, see [11] as well as websites already cited.

In these ways the education profession could loosen its still existing ties with the nineteenth century and become fit for the twenty first. Responding to the climate emergency would be its overriding priority.

Notes

[1] https://www.teachthefuture.uk

[2] https://www.theguardian.com/commentisfree/2019/mar/14/children-climate-strike-schools-activism-pupils

[3] https://www.theguardian.com/education/2020/jan/07/2020s-universities-need-to-step-up-central-pillar-civil-society

[4] https://www.khanacademy.org

[5] https://en.wikipedia.org/wiki/Massive_open_online_course

[6] https://www.khanacademy.org/science/high-school-biology/hs-ecology/hs-human-impact-on-ecosystems/v/how-does-climate-change-affect-biodiversity

[7] https://www.youtube.com/watch?v=7vnzKPq390Q

[8] https://www.wwf.org.uk/get-involved/schools/resources/climate-change-resources
https://www.metlink.org/climate/climate-change-schools-project/
https://unesdoc.unesco.org/ark:/48223/pf0000190101
https://www.theclimatecoalition.org/schools

[9]
https://www.researchgate.net/publication/333386298_A_National_Curriculum_Commission

[10] https://www.theguardian.com/environment/2019/jun/21/teachers-want-climate-crisis-training-poll-shows

[11] https://www.campaigncc.org/schoolresources#references

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