Tragedy Or Scandal?

Strategies Of GT, XR and the New Climate Movement

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Content

Note: this paper is almost entirely based on public materials by or about the Extinction Rebellion movement and its founders, and Greta Thunberg's movement, in 2018-19. It is heavily focused on the UK, where Extinction Rebellion as 'XR UK', has been most active. So where it refers to 'XR' it generally means XR in the UK in 2018-19. This is a self-funded project intended for readers of the free Campaign Strategy Newsletter

PART 1 - Introduction

Greta Thunberg and Extinction Rebellion, or 'GT' and 'XR' have made a huge impression on the public debate about climate change. Greta Thunberg and the 'school strikes' because of the emotional power children and the young over adults and parents, Extinction Rebellion because of their energy and disruptive 'rebellions'. The celebrity status which massive attention has conferred on Thunberg should not distract attention from the fact that as well as unsettling parental assumptions about climate, she is is an inspiration to young people, and in particular to women and girls, all over the world. Even if she stops now, her legacy will roll on.

That prominence has also brought vicious attacks on Thunberg, particularly from a fringe of older white male commentators (such as in Australia), perhaps because she threatens their adherence to the 'strict father' framing of parenthood and its patriarchy, as well as lunatic chatter such as the idea that she is a time traveller.

Screenshot from Huffington Post

GT and XR are rightly being taken seriously and their meteoric rise to become leading actors in climate politics has taken everyone, including themselves, by surprise.

This blog is my attempt to take stock of that and I'm writing it in the hope that although some of it is critical, it will help them, and in particular help their efforts align with those of others trying to tackle to climate crisis, as they approach their next phase. This includes the campaigning NGOs who were sometimes left bewildered in their wake in 2019, and the vast numbers of people in business, academia, research, and in politics and government, who are now working hard to tackle the climate emergency.

Extinction Rebellion and Greta Thunberg's movement have significant differences but so far neither is treating inadequate official responses to the climate emergency as a scandal. Extinction Rebellion in particular communicates the climate emergency as the mother of all tragedies. My suggestion is that this is a pivotal strategy issue for GT, XR and other parts of the 'new climate movement'.

Having created valuable new social capital, it's time for these players in the new climate movement to move on from just sounding the alarm about the threat, to driving real change by focusing on what can be done, and yet is not being done: the elements of a scandal, not a tragedy.

The house is on fire, and simply ringing the alarm bell louder, will not extinguish it. 'XR' and 'GT' have done the world a massive favour but would be doing a far greater one if they were now to align their

efforts with those trying to displace the problem with solutions, through targeted pressure on governments and corporates, in communities, and from within government and businesses at all levels. For XR, this need not, indeed should not mean abandoning 'rebellion' but changing what it's a rebellion against.

In my view, XR's 'theory of change' is unlikely to work in its current form, for reasons I explore later in this paper. This may not seem of great interest outside the UK where XR began just a year or two ago, and in a few other mostly English-language developed countries where it's been most active but it now has a presence in many more countries, and as a model and campaign phenomenon, it's already influential beyond the UK.

Real Achievements

Although riding on as much as causing a wave of public concern about climate (the wave started growing pre-GT and pre-XR around 2014), the movement has achieved a huge amount in terms of new and additional public engagement and mobilisation, and it has given new energy, sharpness and clarity to the wider climate effort. As journalist Polly Toynbee has said, 'thanks to Extinction Rebellion' [in the UK] we're experiencing a climate culture change'.

Both GT and XR have provided new opportunities for mass participation, GT has reframed climate change from being about the planet or energy choices to children and parents, and XR has provided disruption, periodically making it a more acute issue. Together with external events and the efforts of others from Friends of the Earth to 350 and David Attenborough, they have 'shifted to Overton Window'. These are real achievements.

At least in the UK, 'GT and XR' may merge in the public mind but from a change point of view, the contribution of 'Greta Thunberg' (for which read the 'school strikes', 'youth strikes' and networks such as #fridaysforfuture) is a lot more important than it may appear, while Extinction Rebellion (also referred to in this piece as XR), is a lot stranger than it appears. In the UK at least, in many ways, XR has a valid claim to be the first populist climate movement in the political sense.

I apologise to any readers who've got this far and are outside the UK. A friend pointed out to me that it XR is far less significant than GT internationally, at least in so far as a google Trends comparison can evidence:
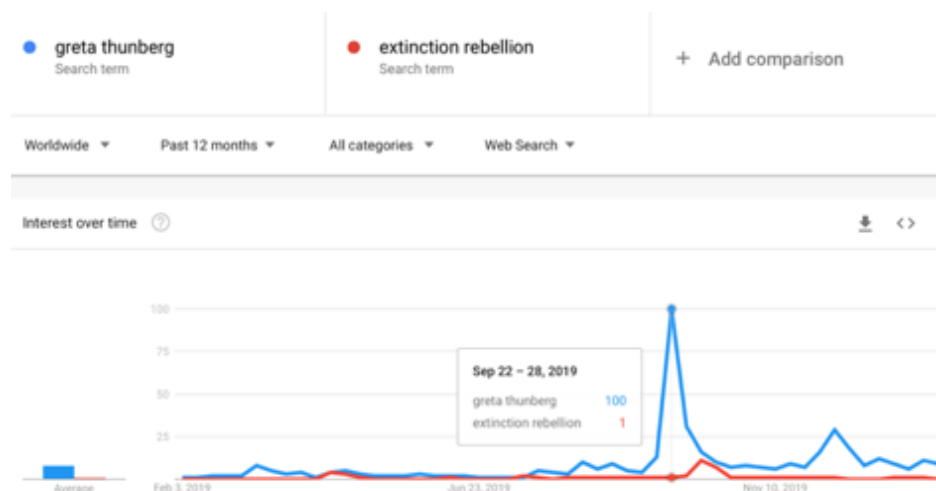
Even in the UK where XR has had a huge impact, GT is still the larger influence:
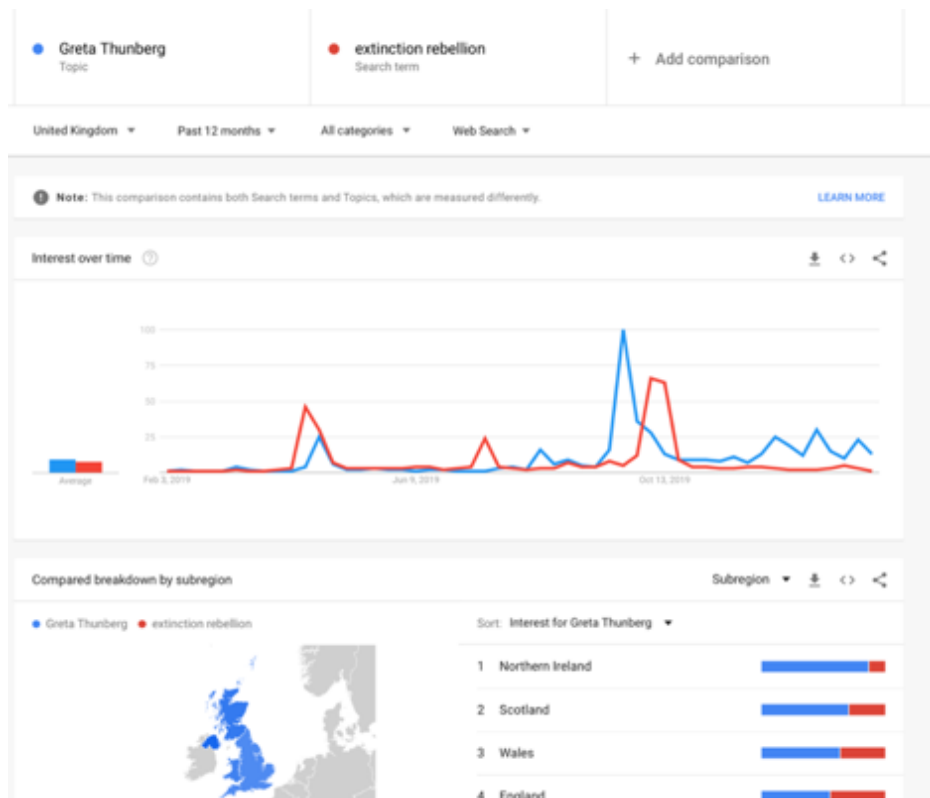
Other parts of the 'movement' include, depending on where you are in the world, initiatives such as the Green New Deal, fronted by Representative Alexandria Ocasio-Cortez in the US and promoted by organisations such as Sunrise Movement, and the Green New Deal Group in the UK. If they succeed, these will be significant as their agenda converts straight into change policy for energy and economy and conventional government action. I apologise for not doing them justice in this paper. So far, neither GT nor XR are really working in this space.

Different Narratives

Although they are often associated around public events, GT and XR have different game plans and once you get 'into the weeds' with XR, different narratives. Greta Thunberg and the associated 'strikers' are mainly calling on the UN governments, politicians and the adult population in general, to 'listen to the science' and act on the 'climate emergency' by adopting policies in line with the 2.C limit of the Paris agreement. XR makes the same topline call to heed the science but in the UK at least, its game-plan is very different.

XR intends overthrow of the government through a system of mass participation non-violent civil resistance, and then its replacement with (and this part becomes increasingly vague) a series of 'Citizens Assemblies' to agree on national climate emergency action, and beyond that, a more 'truly democratic' form of governance.

If extended globally, which it would need to be to really resolve the climate crisis, XR's approach would require the overthrow of every 'neoliberal' government worldwide, possibly along with all dictatorships, totalitarian regimes and undemocratic forms of capitalism such as in China and arguably, North Korea.

Until I started looking into it, this aspect of Extinction Rebellion was not at all clear to me, and I suspect, to many others. I have blogged a bit about the new climate movement before, noting that the 'school strikes' seemed to have much more potential than XR but I admit that I had regarded Extinction Rebellion as a parallel protest movement intent on pressing for effective action on the climate emergency, and with anti-capitalist tendencies. As someone put it to me, "XR gives a bit of bite to Greta Thunberg's bark".

An eminent scientist involved in lots of climate work read a draft of this paper commented to me "despite having bought the pink book and having been drawn in to several XR related events, I had no idea that their underlying objective is to overthrow the government!"   To be fair to XR their revolutionary theory of change is out in the open but it's missing from their headline public narrative of demands that government declares an emergency, speaks and listens to the truth, acts like there's an emergency, and sets up citizen's assemblies. That's the generous interpretation. Another view might be that as with the 1960s radical Committee of 100 (see S 8 and Conclusions), the climate demands are a front for the revolutionary objective. Of course both could be true for different XR actors.

The Cavalry View

Perhaps like many people who have worked for decades on climate change, my general attitude to the emergence of GT and XR was: "this is great – at last the young are rising up" and in the 'war on climate change' frame, a bit of "thank goodness the cavalry have arrived". Although various people I know had got involved with enthusiasm, it didn't seem to me that I had much to offer, certainly not to XR, as they obviously knew how to do tactical NVDA such as rolling road-blocks, and were attracting a lot of support and no doubt had a strategy worked out.

Moreover, in my experience, groups styling themselves as a 'movement' often come attached to a lot of pre-formed sociological theories, and are highly resistant to any advice from 'conventional campaigners', especially when the movements are new and the campaigners are a lot older. Plus I am always hopeful that my own preconceptions about what can't be done by initiatives aiming to achieve the right things, will be proved wrong.   I saw GT and XR as ringing the alarm bell more effectively. What seemed to be missing in the UK was the implementation process beyond declaring 'emergencies'. On May 2 I tweeted this

So it was not until August when I heard a [radio programme](#) about 'eco-anxiety', 'climate grief' and despair, and how this seemed to be facilitated and actively encouraged by people (eg [Jem Bendell](#)) associated with Extinction Rebellion, that I started to wonder. It seemed to me that this focus on encouraging people to take a journey into despair about climate change based on a conviction that the game was up and 'it's all over – so we can only adjust to the inevitable', was not a recipe for winning the war on climate change but simple surrender. It also defined and created a social problem (very upset people) that would be a lot more attractive to some, than trying to solve the climate pollution problem: in other words, a diversion.

Shortly afterwards I read an internal climate strategy discussion paper written for a major climate NGO and found it advocating a change of strategy to give space to 'deep adaptation' and 'grieving', partly it seemed, as this was the 'zeitgeist'. The implication was – as I have heard many people say hopefully – "well nothing else has worked enough, so maybe this mass movement will make the difference. Let's give it a go".

But to me this introspective journey into gloom seemed to be dangerous, so at that point I embarked on trying to understand what was going on, and this paper is (many months later) the result.

The XR Model in Brief

The XR model of 2018 and 2019 (it's now under review), was based on a design worked out by it's highest profile founder, former spinach farmer and radical activist turned sociology researcher, [Roger Hallam](#). Despite a vast amount of videos, papers and blogs online, XR's origins are a little hazy but it derives from a fusion of work by Hallam, Gail Bradbrook and others, under the aegis of Compassionate Revolution, Radical Think Tank, and Rising Up!

It seems Hallam was responsible for persuading 14 others (see Daily Mail on some of the founders [here](#)) to set up Extinction Rebellion as a RisingUp! campaign, picking climate change because it was the most significant issue facing governments and meriting their overthrow. The previous campaign experiments of RisingUp! included topics such as tax and economic justice, similar to Occupy, and attracted few followers. At the launch of 'Compassionate Revolution' in 2015 Gail Bradbrook [said](#) it was "basically" about "rapid redistribution of wealth and power to tackle the urgent issues of our age', while Michael Dinesh said its concerns included 'inequality, austerity, climate change, the power of big multi-nationals, billionaire owned media and tax avoidance'. Read Gail Bradbrook's own account of how her activism led to her Extinction Rebellion [here](#).

Based on work by US academic Erica Chenoweth on the relative effectiveness of violent and non violent revolutions, everything in XRUK's strategy has been designed to enlist 3.5% of the population in disruptive but non-violent civil resistance, at which point they claim any government will fall 'automatically'. (Varying figures are given for how many days or weeks this would have to last, ranging from a week or so to indefinitely).

The primacy of 'The 3.5% Revolution' then created a path dependency of the sort Hallam has rightly criticised in others. Everything else gets fitted around it, and sometimes bent out of shape to make that work.

The strategy is supported by an unshakeable assertion that 'neoliberal' governments are irreparably corrupted, including by their tolerance of fossil fuels, and this damnation by association with vaguely defined 'neoliberalism' is extended to cover any campaigning NGO or politician not actively committed to revolution.

Solutions Denial

To reach the magical 3.5%, prospective participants are told that nothing effective has been done about climate change, and nothing is being achieved, closing off conventional campaigns ("failed") and government action ("tinkering") as routes to change. Many participants have no previous engagement with campaigns or activism (including a significant number of academics) and along with many of 'the young', probably rely heavily on XR for their information.

After a short-lived liaison with business, XR also excludes the possibility that the private sector could deliver effective change. This 'solutions denial' leaves only rebellion as a viable option.

Emotionality

To motivate participation, XR uses what Hallam calls 'emotionality': at the small scale, such as designing its public meetings to channel people into conditional-commitment and 'embodiment' (speaking feelings and commitments aloud) in small groups; in its calculated interpretation of science (selectively focusing on worst case possibilities and shearing away any reference to solutions or progress – "gloom-picking"); in its design of rebellion events so as to engender empathy amongst onlookers for protestors 'sacrificing' themselves (comforts, getting arrested etc); in its attempts to bully campaign groups into supplying participants; and in its encouragement of expressions of grief, anxiety, despair and rage, designed to encourage the feeling that there is 'nothing to lose' as we (probably or definitely) have no future, thereby lowering the threshold to taking illegal actions during 'rebellions'.

This is why XR has been out delivering talks aimed at children, young people and their parents, telling them that today's young may not live to have a future, and why it has rewritten history to airbrush away examples of progress in changing policy and in reducing emissions, sometimes dramatically, both by governments and NGOs (Section 5). Despite it's clarion call to 'tell the truth', XR has been misleading about aspects of climate science, systematically misleading about solutions and campaigns

(see Sections 5 – 7), and some say, about the social science its rebellion model rests on (see Section 8).

Rethink ?

The Roger Hallam design for XR involved application of a lot of psychological theory, from the micro to the macro level but XR has applied almost none in its relationship with society as a whole, whether 51% or 96.5%, because it did not need to, as the support of 'only 3.5%' would ensure victory. As that hasn't transpired, a number of voices have started to question the theory – even the 'scared object'/'magical gift' of the '3.5% rule' – and Extinction Rebellion is having a strategy rethink (see Postcript). Some insiders, such as Rupert Read, have started talking openly about the need to have the wider population onside.

Risk

An obvious risk in the existing XR strategy of creating disruption in order to cause economic cost to the 'regime', is that if the 3.5% is not reached and/or the regime does not concede, then nothing may have been achieved in terms of reducing climate emissions, as the 'rebellions' mainly do things like blocking traffic outside Parliament (or electric tube trains).   This means that for all XR's considerable efforts, such as its elaborately organised October Rebellion in London in 2019, it will have generated almost no direct pressure on government policies bearing directly on emissions. XR poses a law and order conundrum but putting pressure on policies (and corporate policies) with a direct bearing on climate emissions, is mainly left to the 'conventional' activist and campaign groups pre-dating XR.

XRUK has also conducted actions against fossil fuel targets such as Shell Oil's offices but these are still mostly disruption protests rather than strategic actions: symbolic rather than instrumental. (In a departure from the '3.5%' strategy, on January 6 2020, XR Scotland climbed onto a jack-up oil/ gas rig in Dundee in a bid to stop it leaving port. Seven people were arrested.)

The organisation faces difficult choices in whether or not to adapt or stick with its original plan, which many see as unsustainable or unachievable. It seems to me that so far, Extinction Rebellion has been largely sheltered from scrutiny by association with Greta Thunberg and her emotional 'nuclear umbrella'. Without that, it's strategy might have been subject to far more questioning. Nevertheless XR now has an opportunity to apply a 'mid-course correction'.

One person, who has had long experience in 'green politics', in running the Sustainable Development and with NGOs commented to me:

"the more I dig down into Roger Hallam's 'Theory of Change', the more uneasy I become! Indeed, I'm not sure it really is a Theory of Change at all – it's just an expression of deep, principled anger, but with no real understanding of how political systems work whatsoever. And that is really worrying – we need Extinction Rebellion to continue to succeed, and I fear it's already being undermined by this wilful naivety".

I agree with that: we need Extinction Rebellion to continue to succeed.   Yet as XRUK now rethinks its approach, it faces the difficult task of taking its small army of followers with it, while changing some of its strategy so as to bear more directly on politics and policy machinery to shift it into real climate emergency response mode.

Engaged supporters and the media will still want XR to rebel, and it's right about being disruptive. But if it's not to be marginalised as 'just revolutionary', it needs to be seen by the wider public as trying to

do what needs to be done to tackle the climate problem. If disengaged from that, it will have no political traction. If it's not covered by an umbrella of supportive public opinion, it will be susceptible to being demonized as extremist.

Attacking the efforts of NGOs, trying to coerce them into supporting the revolutionary pathway, dismissing all governments as incapable of making a significant difference, denying the existence of solutions, claiming that nothing has been done and nothing has worked, gloom-picking the science and promoting grief and despair, are all hostages to fortune which in my view, will not survive the scrutiny that will come through more 'contact with the enemy'. Picking fights with the IPCC and talking up the problem of climate anxiety are diversions not winning strategies. It also needs to tone down its exceptionalism which gets in the way of working with or at least alongside others, and deludes its followers.

I don't claim this paper is in any way comprehensive or authoritative – it's just my impressions and some thoughts based on public materials and reports.   Most of it concerns Extinction Rebellion, and in particular XR UK but I'll start with something on the 'Greta Thunberg phenomenon'.

PART 2

Greta Thunberg's 'Nuclear Umbrella'*

[*During the Cold War, politicians used to refer to Europe as sheltering under the protective 'nuclear umbrella' of the United States. In my view other parts of the 'new climate movement' have been sheltered by the emotional power of Greta Thunberg]

"What If Children Did That For The Climate?"

On St Valentine's Day, February 14 2018 a school student at Marjory Stoneman Douglas High School in Parkland Florida killed 17 people with a semi-automatic weapon. It triggered a new wave of protest against US gun laws. With others, the Women's March youth branch, called for "students, teachers, school administrators, parents and allies" to take part in a national school walkout. Four survivors of the Parkland massacre organised 'March for Our Lives', a student-led protest in Washington. "We will be the last mass shooting" declared survivor Emma Gonzalez. USA Today reported that the youth campaign could be a 'tipping point'.

The student-led movement has changed the American conversation over guns but it also had an impact far away in Sweden, where 15 year-old Greta Thunberg was worried about climate tipping points. For some years Thunberg had been trying to persuade her parents – her opera-singer mother and film director father – to change their lifestyles in response to climate change. In May 2018 she won a climate essay competition in the newspaper *Svenska Dagbladet* and was contacted by Bo Thorén from the group Fossil Free Dalsland.

In an interview with Democracy Now at the December 2018 UN climate summit in Katowice, Poland, Thunberg credited him with giving her the idea for the strikes. She said: "it started with a couple of youths in the United States [who] refused to go to school because of the school shootings. And then someone I knew said, "What if children did that for the climate?""

[An alternative explanation is that Thunberg's initiative derived from a 2015 one day school strike timed to coincide with the COP21 UN Paris climate conference, which attracted 50,000 students in 100 countries, although it got less publicity].

"Parliament should stop acting like children"

After trying unsuccessfully to get others to join her, on 20 August 2018, Thunberg started a solo strike outside the Swedish Parliament. She urged parliament to take action in line with the Paris agreement. Next day others joined her and by November 2018 strikes had spread to Australia where thousands took part in "Strike 4 Climate Action", bringing traffic to a halt in Melbourne. They were criticised by pro-coal Prime Minister Scott Morrison. Manjot Kaur, 17 rejoined: "If Scott Morrison wants children to stop acting like a parliament, then maybe the parliament should stop acting like children".

Kaur's remark and thousands of others inspired by Thunberg echoed the narrative of the American student gun-control campaigners. "We are children; you guys are the adults," 17-year-old Parkland survivor David Hogg had told CNN. "You need to take some action and play a role. Work together. Come over your politics and get something done." The older generation had created this mess and by doing nothing effective to sort it out, were ruining their children's future.   It tweaked the deepest emotional reflex of human adults: to pay attention to cries for help from their children.

'Being A Parent'

In Communications terms, the 'new climate movement' has reframed the challenge of climate change as being 'about' the planet to being 'about' children and families.

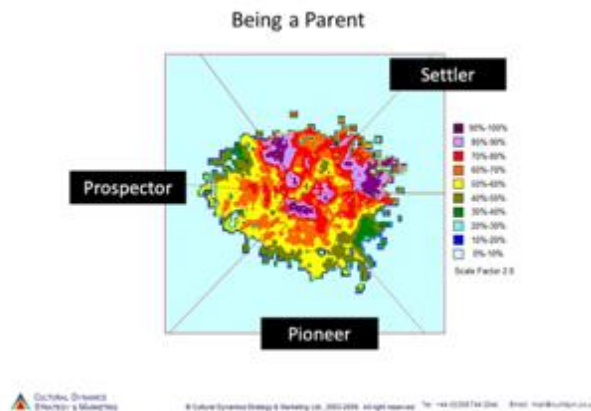*(TIME magazine covers 1989 and 2019 - reframing)*

In the world of news media cliché 'the power of youth' means energy and innovation but the power of the child lies in the bond between parent and child started at birth.

In the UK 'being a parent' comes in the top three of dozens of possible identity choices, and is one of the few factors which resonates with almost equal power across all the main values groups.

Researchers left 240 wallets on the streets of Edinburgh 42 per cent of the wallets were posted back in total. (No money but clear id/address)
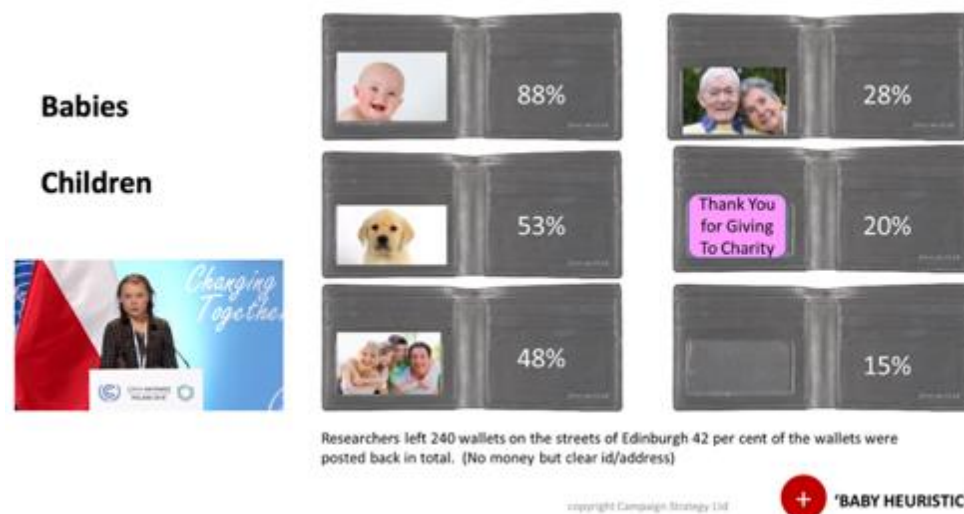
The underlying emotional driver of responding to cries of children is the same 'baby heuristic' which leads advertisers to use babies (or puppies that look baby-ish) in promotions and branding, and

politicians to kiss babies. The child-like looks of Greta Thunberg is much remarked on by detractors and sympathisers, and she started her protest as 'a lone 15 year old'. Even Extinction Rebellion adopts a parental tone towards Greta Thunberg: " … we will work to engage every person in the truth of the crisis we face … This is not a task that should fall on the shoulders of a 16-year-old Swedish schoolgirl".

It is this which has given the 'new climate movement' an emotional 'nuclear umbrella', one that has grown as the student strikes and Fridays for Future have expanded, involving more and more school children. According to the Wikipedia page School strike for the climate it involved 'at least 270 cities' including in Australia, Austria, Belgium, Canada, the Netherlands, Germany, Finland, Denmark, Japan, Switzerland, the United Kingdom, and the United States. In January 2019 strikes returned to those countries along with Colombia, New Zealand, and Uganda and 'at least 45,000 students protested in Switzerland and Germany alone'. In Germany and the UK students called for a reduction in the voting age to 16 to allow them a more effective voice.

Raised Eyebrows

In February 2019 many politicians struggled to judge their response to the growing student strikes. A Belgian Minister had to resign after wrongly claiming his security service had evidence that they were a 'set-up'. In Britain, Prime Minister Theresa May attacked them as wasting school time and her Cabinet Minister Andrea Leadsom took issue with the BBC for tweeting it as a 'strike', demanding they call it 'truancy' but they were on the wrong side of public sentiment.   May's Business Minister Claire Perry even sided with supportive opposition politicians, saying: "I'm incredibly proud of the young people in the UK who are highly educated about this issue and feel very strongly – quite rightly – that we do need to take action because it's their generation that will bear the consequences."   The conservative *Daily Telegraph* reported that what really 'raised eyebrows' was the support for the protest from Carolyn Fairbairn, director general of the CBI [Confederation of British Industry].

Largest Ever

So it became the largest ever climate protest, or 'movement'. 1.4 million students took part in strikes on 15 March 2019, 4 million on 20 September 2019, and 2 million on 27 September 2019. Hundreds of thousands also struck in over 1600 towns in at least 125 countries timed to affect the European Elections in May 2019. The 20-27 September strike was promoted through Earth Strike backed by a coalition of NGOs including Greenpeace and 350, Extinction Rebellion, trade unions and politicians, and timed around the UN Climate Action Summit on 23 September, involving 4500 locations in 150 countries. 1.4 million took part in in Germany alone, 300,000 in Australia and a million people in Italy. The September 2019 Climate Strikes Wikipedia page details actions in 98 countries and notes that '350.org—a group that organised many of the protests—claim that 7.6 million people participated'. Forbes reported that it was 'the largest climate protest in history' (worldwide) and The Guardian that it was the largest in the UK.

A cascade of political initiatives have accompanied Thunberg's numerous speeches and appearances at rallies and protests, as politicians scrambled to align themselves with her in a public mea culpa. For example in the UK, PM Theresa May who resigned over Brexit issues, made it one of her last acts to pledge on 11 June that Britain would achieve 'net zero' carbon by 2050. This passed into law by 'order' on 27 June 2019.   The UK's own Climate Change Committee and Greenpeace pointed out that the commitment contains 'loopholes' such as the possibility of relying on 'carbon offsets' bought from other countries rather than real UK emission reductions but May's move not only side-stepped opposition from her own Chancellor but marginalised political climate sceptics inside her own party. As a previous blog detailed, these people had successfully stifled onshore wind in the UK and a side-

effect of May's move will be to make it easier to reverse that. So the 'Thunberg effect' has been to shift the window of climate ambition.

I have no idea if anyone apart from Greta Thunberg herself writes her speeches but part of their power lies in the way they fold science-based reason into her personification of blameless and betrayed youth.

Every parent remembers times when they themselves did not want to study and go to school. Most were prevailed on by their parents who told them it was vital 'for your future'. Now they do the same for their children, sustained by the belief that it is for the best if they go to school (even presumably, 'home schoolers'). The logic of Thunberg's call to action has forced millions of parents to recognize that unless climate change is tackled, that promise is betrayed. It's not just the breaking of a political or social contract but a very domestic one.

The school strike proposition creates a psychological pincer movement in which Track 1 (the intuitively, emotionally driven world of the everyday such as child-parent relationships) has combined with tests set from Track 2 (the expert, analytical evidence-based world). It has succeeded in trapping politicians in a way that many previous campaigns have tried hard to do but rarely succeeded at, and none on such a scale. It has given new traction to climate science. In 'campaign' design – although many of those involved eschew the idea that it is a 'campaign' – this is the greatest contribution of the Thunberg phenomenon.

"Listen to the science"

It's encapsulated in Thunberg's repeated calls to politicians, echoed by school students around the world, to "listen to the science".

"We know most politicians don't want to talk to us. Good, we don't want to talk to them either. We want them to talk to the scientists instead. Listen to them because we are just repeating what they are saying and have been saying for decades". – Greta Thunberg, European Economic and Social Committee, Brussels, 21 February 2019

"I keep telling you to unite behind the science" – European Parliament, 16 April 2019

"Many of you appear concerned that we are wasting valuable lesson time, but I assure you that we will go back to school the moment you start listening to the science and give us a future. Is that too much to ask?". – Houses of Parliament, London, 23 April 2019

Where the students in question reference their commitment to learning and in particular to science, it re-folds the proposition in on itself.

The genius of particularly studious students forgoing their lessons intended to enhance their life-chances because they believe an unattended climate crisis may make learning futile, is that it tightens the emotional vice. Securing a good education for their children is an almost universal priority for families, and emotionally, that is being called into question by Thunberg's challenge. Responding to the climate crisis now means responding to her and her followers, not just familiar environmental NGO outriders. Thunberg and her followers have personified climate impacts in a way that transcends academic scientific 'limits' or political concepts like 'climate justice'.

The parents and grandparents caught most painfully in this grip are those who may have acknowledged climate change as the greatest existential threat 'to humanity' but still put the

immediate short-term needs of their families – their own and those of their children – before disrupting their lives in the way that would be demanded if 'the world' actually treated climate change as an emergency, like war or a deathly plague.

It converts climate change from a Track 2 global governance game for grown up experts, to a domestic intrusion. Thunberg's own back-story - her struggle to convince her parents and their response, including her mother foregoing air travel and thus a part of her career – has been both an insulation against the many attacks mounted against her, and at least an indication to all parents, that they too should act.

The politicians and governments most trapped by Thunberg's pincer movement are those most committed to responding to the climate crisis but whose commitment involves a lot of can-kicking, pilot projects and rhetoric rather than wholesale action to rapidly transition out of fossil fuels and other causes of climate change. This includes those in countries like Germany and the UK and potentially maybe even China.

What ties a knot around them is the fact that 'science' agrees with Greta Thunberg. Which has perhaps been an added incentive to Donald Trump to double down on his climate denial and quit Paris, the UN, and all that.

PART 3

The New Climate Movement and the Green Wave

The mobilisation successes of the 'new climate movement' are undoubted, and many political responses to it are also unarguable, if so far, often indicative rather than very substantial.

Many commentators, particularly journalists, have also pointed to increased levels of public concern about the environment as evidence of the movements impact. So has XR itself. Many in XR have been in little doubt that changes in public opinion can be attributed to their activities. In spring 2019 Roger Hallam stated:

"Before the April civic disruptions [XR's 'spring rebellion'], the general public did not have an opinion about climate change. After XR's public disruptions, 67% of the UK population acknowledged the 'climate emergency'"

And claimed:

"we've obviously had a major success … concern for environment has gone from 12 to 25% as one of the top three issues".

This is more open to question. Can it be attributed to XR ?

In my opinion, the present 'green wave' is similar to the previous one in the late 1980s, in that it is primarily driven by real-world events, not just activism. (There was an earlier wave around 1969-1971). The current wave is mainly driven by climate-related impacts whereas the late eighties one was a response to a more mixed bag of environmental disasters, threats and discoveries.

As an activist movement can create a positive feedback, the new climate movement is of course both riding and elevating the green wave. Salient protest brings an 'issue' to the front of mind and the

effect of organising a movement or campaign makes the 'issue' more disruptive and intrusive which itself draws attention, as XR says.

Greta Thunberg's speeches, #fridaysforfuture strikes and XR 'rebellions' will have pushed up 'environment' scores in tracker polls in the same way as a prominent political climate-related events have (eg Mrs Thatcher's speech in 1988, the IPCC 1.5C and Tipping Points reports), and as prominent media coverage does (eg David Attenborough's Blue Planet on plastic and Climate Change: The Facts), and as weather-related disasters attributed to climate change do, such as the 2007 UK floods, 2018 Northern Hemisphere 'heatwave', or the more recent fires in California, the Amazon and Australia. In 'issue tracker' polls, any event which pushes a topic to the front of the public mind, produces a result. It makes floods, disasters and political crises interchangeable factors within the same category, irrespective of whether they may be cause, effect or consequence.

Mobilisation of children and youth will also have unsettled the assumptions of millions of parents with psychological, and sometimes social results. This is a qualitatively new magnifier and in my opinion, the most significant contribution so far of the 'new climate movement'. It has not only moved 'the issue' from a technical and political space into a personal one but a domestic one in which generations interact within families. This has often been tried for before by myself and others but it's never succeeded on the scale Greta Thunberg has achieved.

The 'true' test of the awareness driving capacity of the 'new climate movement' will be not what it can do to elevate or sustain a wave of public concern but what assets and resources it can deploy to create impact if and when that wave subsides. Right now that may feel like an impossibility but it's not. This first wave subsided once there seemed to be a big political response, and this one could too.

For instance, imagine what will happen if, and I fervently hope it does happen, the graphs of global CO2 emissions and concentrations start to fall, year on year. Given the news media's stock-in-trade of "first simplify then exaggerate" it's very possible that, say around year 3 of the decline (or whenever there is any political popping of champagne corks), some will start saying "the problem's being solved" which gets reduced to "the problem's solved".

While those who stop to think about it analytically (the Track 2 discussion) will realise that's not the case, most people will just 'get the signal' at an intuitive level (System 1, Track 1). [This is why using the 'Doomsday Clock' as a visual is a good idea. Since 2007 it has included the climate threat as well as nuclear conflict but that can send a mixed message – even so, it or something like it should be centre stage if and when the tide is turned on global emissions].

It would be a great loss if GT and XR were not players in a post-wave world because the effective fight against climate change will be in its most urgent period. The new climate movement and the rest of the emergency responders need to get together and work out what the political legacy of this wave is to be, for there will only be one shot at it.

What People Have Said About XR, GT And The New Green Wave

In October 2019, activist blogger @ecohustler Matt Mellen raised several concerns about XR's strategy but acknowledged:

'April's Extinction Rebellion protest in London was phenomenal. I was inspired to be a part of something so bold and ground-breaking. Holding the centre of London captured the world's attention and boosted ecological concerns up everyone's agenda'.

Also in October, Adam Vaughan declared in *New Scientist* that he was writing 'in defence of the protests', because: 'along with student climate strikes, the Extinction Rebellion movement has helped propel environmental issues to be one of the top public concerns'.

Following the London April 2019 'rebellion', in May blogger Leo Barasi posted that 'Polls reveal surge in concern in UK about climate change'.   In June The Guardian reported 'Public concern over environment reaches record high in UK', citing a YouGov poll.   Damien Carrington wrote:

'Public concern about the environment has soared to record levels in the UK since the visit of Greta Thunberg to parliament and the Extinction Rebellion protests in April. The environment is now cited by people as the third most pressing issue facing the nation in tracking data from the polling company YouGov that began in 2010. Environment was ranked after Brexit and health, but is ahead of the economy, crime and immigration'.

A quarter of Britons say the environment is one of the three most important issues facing the country

Guardian graphic. Source: YouGov
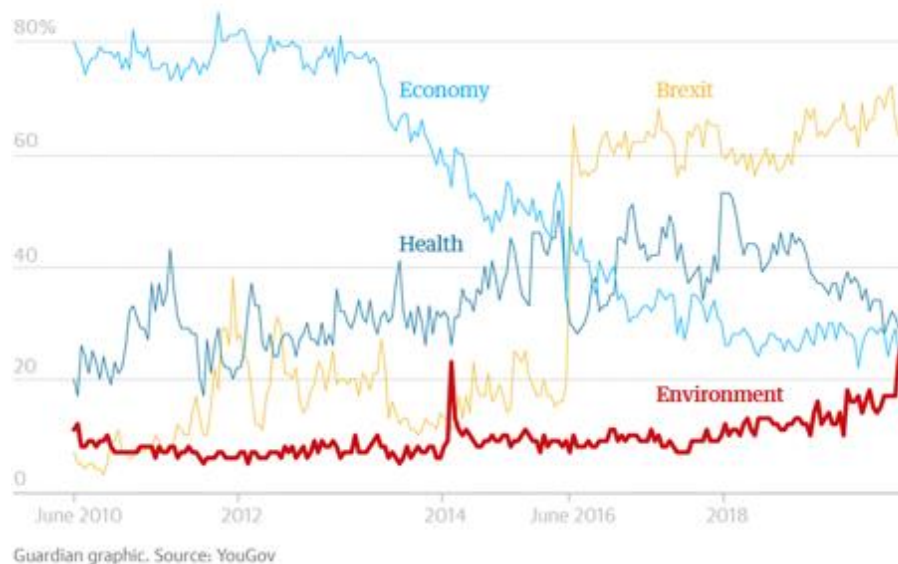
In October, IPSOS-MORI found that 'Brexit remains Britons' top concern whilst worry over the environment hits its highest level since 1990', and that (from a different poll) 85% of voters were concerned about climate change. But what do such polls really tell us?

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Box: 'Facing the Country'

Both the IPSOS MORI poll and the YouGov poll are framed as about 'issues facing the country'. Although this is often treated as measuring 'concern' or 'worry', the frame effectively asks people to respond on behalf of the country. As very few people actually do 'run the country' they intuitively respond by referencing proxies for 'the country'.

Such surveys snapshot what is most salient, noticeable or front-of-mind. This can be through direct experience but is likely to be mostly influenced by media or social media. The frame element 'issue',

denotes something that is unresolved or in dispute, and the elements 'facing' and 'country' make it about public conversations involving decisions and leaders, rather than 'about me' or 'my family'. So if leaders talk about it and if it's dominating 'the news', that must be an-issue-facing-the-country.

Consequently a limitation of such surveys in understanding "what people really care about" is that they tend to reflect what's 'been in the media' and you could get a similar result by asking people "what's been in the [national] news ?" That however could contradict the convention that 'news' is an independent insight into reality so polls are unlikely to be commissioned that way.

For example if you had asked British people at any time since 1988 whether the NHS was really important to them, you'd find almost all would have agreed. But 'NHS' goes up and down the MORI issue tracker in relation to debate about the NHS, which is often associated with political argument about problems with the NHS, such as funding or performance. The same applies to 'environment' and 'pollution', meaning that an absence of controversy or notable events such as disasters tends to lower the score but if at any time you had asked people how important a good environment is for their family (as other surveys have), most would have said it was vital. In that sense the tracker is not necessarily measuring how much or why people 'really care' but whether they've noticed there's an unresolved issue or problem to be fixed and needing attention. This is probably why the environment tracker scores fell sharply in the early 1990s when an 'Earth Summit' was to be held in Rio (1992 – see below) because it gave the impression that the 'issues' raised in the late 1980s were being recognized and getting attention.

The IPSOS-MORI survey question is 'open' and unprompted. People respond and the surveyors then code the responses into categories, of which pollution/ environment is one, amongst 43 others including topics such as housing, the economy, unemployment, don't know and 'other'. So any topic that gets coded as about pollution of environment 'ticks that box', not just climate-related ones. The YouGov version presents a fixed list of options visible to respondents but is otherwise similar.

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Unprecedented ?

'Record levels' implies that something unprecedented has happened as a result of the 'protests' and we are in uncharted territory. In terms of mobilisation that is true. In May 2019 Roger Hallam wrote in The Guardian:

"In less than a year Extinction Rebellion has gone from 15 people in a room to creating the biggest organised civil disobedience campaign in British history. In the past two weeks more than a thousand

[people have been arrested](#) *and as a result the climate and ecological crisis is finally on the political agenda. Everyone from the Labour party to the Sun newspaper is accepting we are right".*

But if it's due to the new climate movement at least half is probably down to Greta Thunberg even in the UK, and more elsewhere. In terms of UK public concern we have also in fact seen higher levels in the past, namely during the 'green wave' of 1988-1990. That also had political consequences and it is at least worth asking whether we can learn from and improve on what happened last time around. Let's look first at the polling.

As Carrington noted, the YouGov poll shown above only goes back to 2010, and the transient spike in 2014 was caused not by campaigning or an uprising but by winter storms and floods

Gales and floods also produced the previous spikes shown in the longer-running IPSOS MORI poll shown below, with the January 2007 storms rating at 19%, just 2% less than the recent October 2019 record.
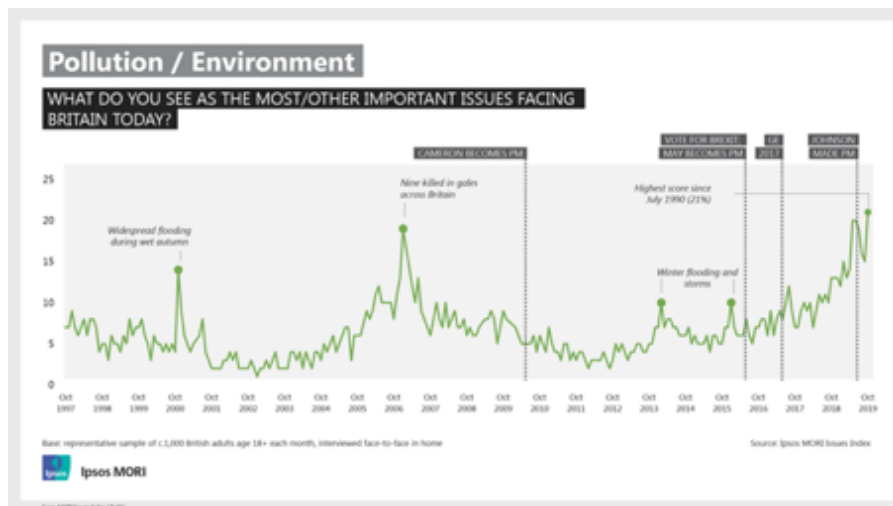
Floods in 2007

A look at the detail of the October 2019 IPSOS MORI tracker (below) also shows that the number of people placing 'pollution or environment' as the top issue was actually just 5%, with another 17% made up by those mentioning it as one of their 'other important issues' (see below). 5% is still a lot – it's about the number of people who are members of environmental groups in the UK – and more, for instance, than Extinction Rebellion's target 3.5% (about 2.3 million people) needed to 'overthrow any regime through non violent civil disobedience'.
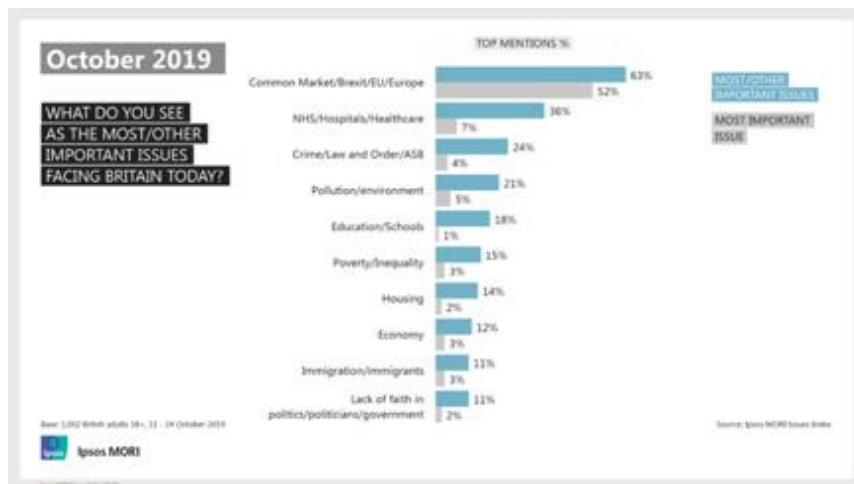
'Environment/ pollution' then fell from 21% in October 2019 to 15% in November, because of an 18% increase in people mentioning the NHS (National Health Service), and 3% increases in mentions of 'education/ schools' and 1% each for poverty/inequality, and housing (see below).
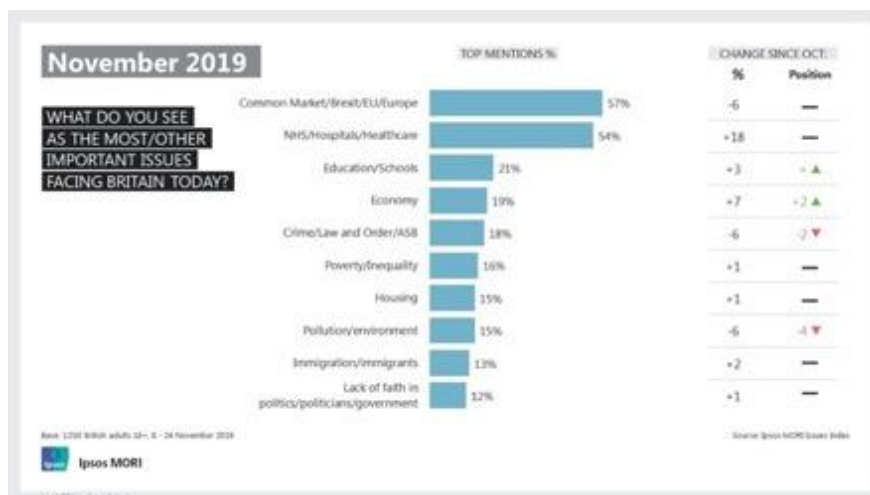
The dip was probably due to the General Election campaign which began in early November. Although environment/ climate change played a greater part in the campaign than in most if not all previous ones, the dominant focus of the two major parties was on Brexit and the NHS. If there is now no singular crisis, for instance in the NHS, and/or once Brexit appears to be resolved, this suppressing effect may disappear.

We've Been Here Before

History does not repeat itself. Not exactly but it's possible to go back further in the IPSOS MORI online archives to when 'pollution/ environment' was first recorded (1988) as a category in this long running issues tracker. If we do that, it reveals an even higher importance for environment as an 'issue facing the country'.
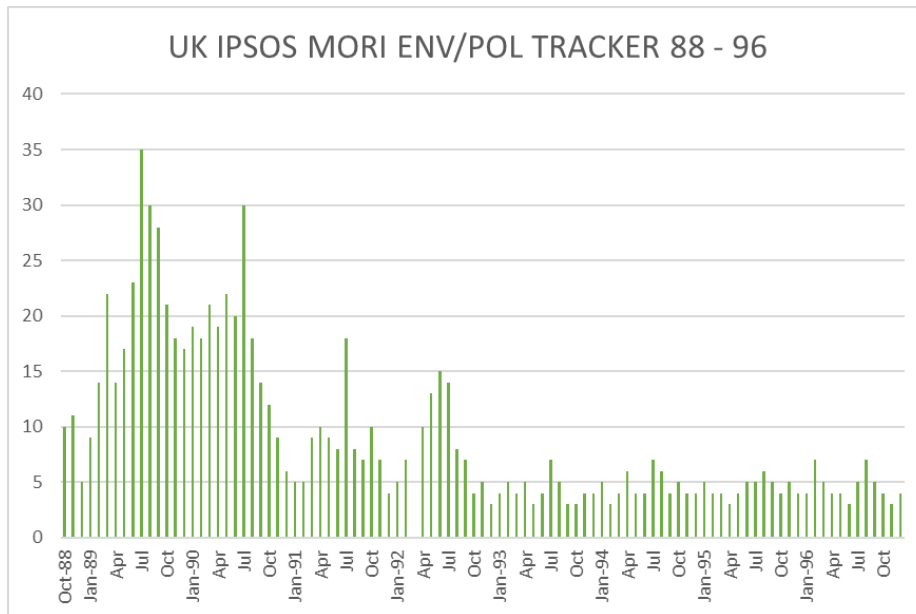
(My extraction of data from IPSOS MORI tracker - https://www.ipsos.com/ipsos-mori/en-uk/issues-index-trends-1988-1997)

This (above) is the 'green wave' which hit Britain in the late '80s and early '90s.   Here's the month by month data for 'environment/ pollution'.

|																
Oct-88	10															
Nov-88	11															
Dec	5															
Jan-89	9	Jan-90	19	Jan-91	5	Jan-92	5	Jan-93	4	Jan-94	5	Jan-95	5	Jan-96	4
Feb	14	Feb	18	Feb	5	Feb	7	Feb	5	Feb	3	Feb	4	Feb	7
Mar	22	Mar	21	Mar	9	Mar	no data	Mar	4	Mar	4	Mar	4	Mar	5
Apr	14	Apr	19	Apr	10	Apr	10	Apr	5	Apr	6	Apr	3	Apr	4
May	17	May	22	May	9	May	13	May	3	May	4	May	4	May	4
Jun	23	Jun	20	Jun	8	Jun	15	Jun	4	Jun	4	Jun	5	Jun	3
Jul	35	Jul	30	Jul	18	Jul	14	Jul	7	Jul	7	Jul	5	Jul	5
Aug	30	Aug	18	Aug	8	Aug	8	Aug	5	Aug	6	Aug	6	Aug	7
Sep	28	Sep	14	Sep	7	Sep	7	Sep	3	Sep	4	Sep	5	Sep	5
Oct	21	Oct	12	Oct	10	Oct	4	Oct	3	Oct	5	Oct	4	Oct	4
Nov	18	Nov	9	Nov	7	Nov	5	Nov	4	Nov	4	Nov	5	Nov	3
Dec	17	Dec	6	Dec	4	Dec	3	Dec	4	Dec	4	Dec	4	Dec	4

The nine months in yellow are all at or above the recent October 2019 level, and in 1989 'concern' or rather perceived importance 'for the country' was at these levels for six months, five of them consecutive. Although it should be noted that over the years, the number of categories recorded by Mori (today IPSOS MORI) has increased, so in earlier years it was 'easier' for scores to be high, in July 1989 'environment /pollution' was in first place at 35%, out-scoring even the NHS, and in July 1990 it hit 30%, level with the NHS and Local Government/ Poll Tax.   So the environment as a national issue has been higher before and may yet go higher again.
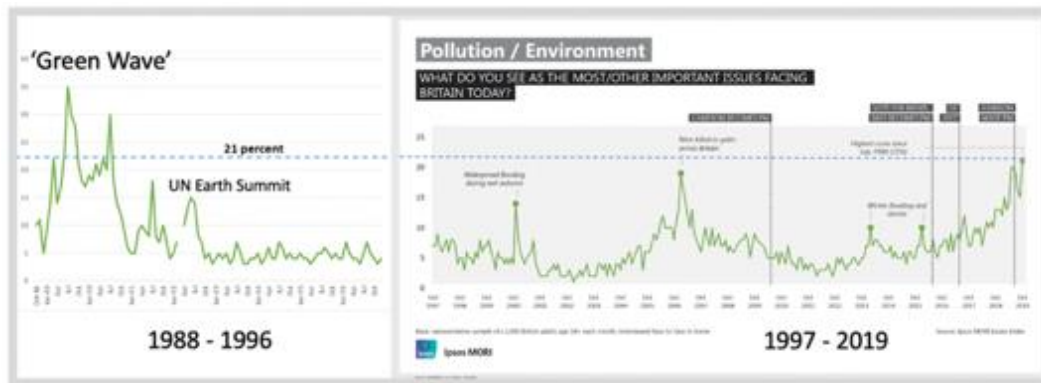
Above: approximate joining of IPSOS MORI tracker data to their 1997-2019 series, showing the 'green wave' around 1988-1989. The 21 percent line is the October 2019 peak.

By 1991 environment scores were declining and the last time they reached double figures was in 1992, the year of the (June) 'Earth Summit' (months in green in the table). So what happened and does it have any relevance to the current 'wave of environmental concern' ?

The First Green Wave

From the mid 1980s to early 1990s a succession of prominent environmental events, discoveries and scandals combined to drive public and political concern about the environment. These included the acid rain issue (from early 1980s), the discovery of the hole in the ozone layer (1985), and the greenhouse effect/ global warming/ climate change (1988). Nuclear issues were prominent in part because of the Cold War, and combined, these catalysed the rise of the Greens in Germany. The German Greens became a significant political force after gaining 8.7% of the vote in Federal elections in 1987 and helped convert Germany into an environmental leader within Europe, which in turn affected politics in the UK. All this had a ratchet-like effect in driving environmental awareness in the UK. For example:

On April 26 1986 the Chernobyl nuclear power station exploded in the Ukraine and radiation spread around the Northern Hemisphere. In 1987, 72 Beluga Whales were found dead in St Lawrence River Canada, loaded with toxic chemicals, and in July the Irish Sea was found to be the most radioactively polluted in the world, due to Sellafield, while in October, the Antarctic Ozone Hole reached a record size.

Nuclear issues and economic rethinking in the previous green wave 1988-90

In February 1988 scientists found frozen 'permafrost' under Siberia and Canada had been contracting for the last 20 years, and in April, thousands of seals started dying in the North Sea. In May 550 tonnes of a cyanide-based chemical were lost from a ship off Norfolk, and in June 48,000 pairs of puffins suffered a total breeding failure in Shetland. Then in the same month, as drought and heatwaves gripped the US, NASA scientist Jim Hansen told the US Congress that the science showed with 99% certainty that the greenhouse effect was real. Also in June, the international 'Changing Atmosphere' conference in Toronto declared "Humanity is conducting an unintended, uncontrolled, globally pervasive experiment whose ultimate consequences could be second only to a global nuclear war", and NGOs called for a 20% reduction in carbon emissions by 2020.


From the previous green wave 1988 - 1989

A fortnight later 20,000 tonnes of aluminium sulphate polluted drinking water for 20,000 people near Camelford in Cornwall. In September the Karin B a ship carrying toxic waste, returned to Italy after being refused entry to Spain and the UK, and the oil rig Piper Alpha exploded in the North Sea killing 167 and dropping four tonnes of PCBs into the water.

On 27 September 1988 UK Prime Minister Margaret Thatcher declared at the Royal Society "it is possible that with all these enormous changes (population, agricultural, use of fossil fuels) concentrated into such a short period of time, we have unwittingly begun a massive experiment with the system of this planet itself". She warned of "a global heat trap which could lead to climatic instability", saying "it is noteworthy that the five warmest years in a century of records have all been in the 1980s".

In November 1988 a UN survey found 32-57% of trees in forests across Europe were suffering damage from 'acid rain', and in March 1989 sewage pollution was found to exceed European standards on half Britain's beaches. In April, the European Commission initiated proceedings against the UK which was by now known as the 'Dirty Man of Europe'. On 24 March the oil tanker Exxon Valdez, built only a few years earlier with just a single layer hull after lobbying by Exxon, ran aground in Prince William Sound at Valdez, Alaska, leading to a 3,000 square mile oil slick and killing wildlife such as sea otters.

1989 also saw a slew of climate reports produced including from meetings in The Hague and Noordwijk, from Nobel Prize Winners and the National Academy of Sciences in the US, and the approval and publication of the IPCC's 'First Assessment Report' (August and November) which concluded "We calculate with confidence that: ...CO_2 has been responsible for over half the enhanced greenhouse effect; long-lived gases would require immediate reductions in emissions from human activities of over 60% to stabilise their concentrations at today's levels...".
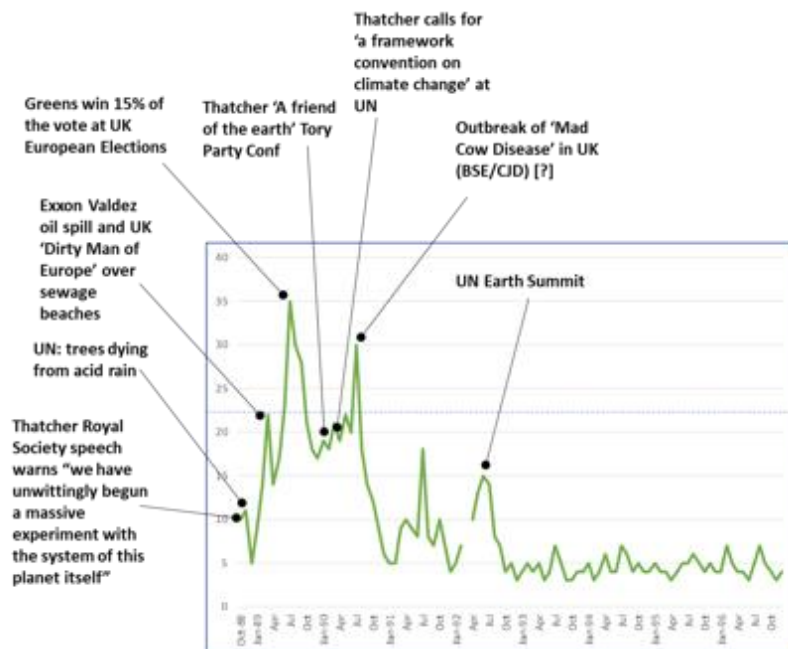
Some events from the 'Green Wave' in the UK 1988-1992. What happened in June and July 1990? The BBC 'Review of the Year' reported a peak in concern about 'BSE' or 'Mad Cow Disease' around this time, when emergency measures were introduced, not long after Agriculture Minister John Gummer had attempted to feed his daughter a beef-burger on tv.   attempted to feed his daughter a beef-burger on tv.

It also coincided with a period of extreme drought in the UK and temperatures exceeding 37.C.

1990

Ocean feedback may amplify global warming

Several climatologists tell the annual meeting of the British Association for the Advancement of Science that changes in circulation could cause "enormous and rapid" changes in global climate. Among them, Dr Peter Killworth of Oxford University's Robert Hooke Institute notes that ice core data suggest the oceans can "flip" to a completely different state within 50 years or less. During this period, "the oceans can lose heat at a dramatic rate". Enhancing the greenhouse effect, he says, could trigger such a switch, and it could release more than 100 watts per square m, or "four times the extra amount we are expecting from the greenhouse effect". This prospect Killworth describes as "terrifying" ("Scientists stress oceans' role in global warming", Financial Times, 21 August 1990; "Sea change that would harm world climate for 1,000 years", The Times, 21 August 1990).

Record-breaking heatwave in England and Wales amid the highest temperatures since 1879

In the UK, the M1 motorway melts, trains are cancelled for fear of buckled rails, and a surge of patients is admitted to hospital with heart attacks, strokes, and smog-induced asthma.

One London hospital reports admissions up 20% in early August ("The year the taps ran dry", New Scientist, 18 August 1990). The maximum temperature recorded in England and Wales is 37.1°C in Cheltenham – the highest temperature ever to be recorded there. Manchester's 33.8°C is its highest since 1871; and Heathrow's 36.5°C is its highest since records began in 1948. Previous heatwaves of this magnitude in the UK were in 1906 and 1911. Some places went without measurable rain for 39 days in England (R. Brugge, "Record-breaking heatwave of 1-4 August 1990 over England and Wales", Weather, v. 46, p. 2-10, 1991; and R.A.S. Ratcliffe, "Review of summer 1990 in the northern hemisphere", Weather, v. 45, p 414-415, 1990). A blocking anti-cyclone, sitting over western Europe for weeks and interrupting the normally changeable westerly flow of weather, is responsible ("Why the heat went on and on", The Times, 7 August 1990).

Only four or five similar droughts have occurred in the UK in the past 250 years.

(T.J. Marsh and R.A. Monkhouse, "Drought in the UK, 1988-92", Weather, v. 48, p. 15-22, 1993). 1989 had set the drought up by breaking a number of weather records in Britain. The average temperature in central England of 18.3°C in 1989 had been passed only once before, and that was in 1659 (with 1983 and 1976 being quite close). July 1989 was the sunniest July since 1911, and north of Glasgow, it was the sunniest month of any other months this century. November was also the sunniest November on record over most of eastern England (P. Eden, "1989: a plethora of records", Weather, v. 45, p. 57-58, 1990).

A table of the highest recorded temperatures in each county in Britain from 1879 to 1991 lists the following incidences of record temperatures over 35°C: (J.D.C. Webb and G.T. Meaden, "Britain's highest temperatures by county and by month", Weather, v. 48, p. 282-291, 1993).

Drought contributes to worsening famine in Ethiopia and the Sudan

The FAO suggests that the expected poor harvest will continue the current food crisis into 1991. An Ethiopian government spokesperson said: "Indicators are that we are in for another bad year and the number of affected people could not be less than 4.6 million." Namibia is also suffering from severe drought; even in the wettest part of the country, eastern Caprivi, 80% of the wells are dry and farmers are facing complete crop failure ("Earthweek: Diary of the Planet, The Toronto Star, 5 August 1990; 26 August 1990; New drought feared in northern Ethiopia as rains fail", Reuters, 29 August 1990; "Poor harvests a threat to Ethiopia and Sudan food supplies" Agra Europe, 31 August 1990).

Place	°C	Date
Bourne, Lincolnshire	35.8	3 August 1990
Rauceby, Lincolnshire	35.6	9 August 1911
Fulbeck, Lincolnshire	35.4	9 August 1911
Lincoln, Lincolnshire	35.4	9 August 1911
Norwich, Norfolk	35.6	19 August 1932
East Dereham, Norfolk	35.4	26 June 1976
Cambridge, Cambridgeshire	36.5	3 August 1990
Cavendish, Suffolk	35.2	3 August 1991
Bungay, Suffolk	35.0	19 August 1932
Berkamsted, Hertfordshire	35.5	9 August 1911
Aldenham, Hertfordshire	35.5	3 August 1990
Halstead, Essex	36.1	19 August 1932
Clarborough, Nottinghamshire	36.1	3 August 1990
Belvoir Castle, Leicestershire	35.0	9 August 1911
Caldecott, Leicestershire	35.0	3 August 1990
Wellesbourne, Warwickshire	36.1	3 August 1990
Raunds, Northamptonshire	36.7	3 August 1990
Ross-on-Wye, Hereford	35.0	3 August 1990
Worcester, Worcestershire	37.0	3 August 1990
Cheltenham, Gloucestershire	37.1	3 August 1990
Benson, Oxfordshire	35.6	3 August 1990
Shirburn, Oxfordshire	35.6	3 August 1990
Beddington, London	36.6	9 August 1911
Heathrow Airport	36.5	3 August 1990
Wokingham, Berkshire	35.9	9 August 1911
Woking, Surrey	36.1	9 August 1911
Tunbridge Wells, Kent	35.2	9 August 1911
Eynesford, Kent	35.1	3 August 1990
South Farnborough, Hampshire	36.2	3 August 1990
North Heath, West Sussex	35.4	26 June 1976
Hawarden Bridge, Clwyd	35.2	2 August 1990
Marlborough, Wiltshire	35.6	9 August 1911
Trowbridge, Wiltshire	35.6	2 July 1976
Bristol, Avon	35.0	12 July 1923
Saunton Sands, Devon	35.4	3 August 1990
St Helier, Jersey	35.6	19 August 1932
St Helier, Jersey	35.4	3 August 1990

(J.D.C. Webb and G.T. Meaden, Britain's highest temperatures by county and by month, Weather, v.48, p. 282-291, 1993)

13

High temperatures and drought in 1990 - from The Climate Timebomb: Signs of Climate Change from the Greenpeace Database, Jeremy Leggett Ed., Greenpeace Intl, 1994 (note top of page story on climate tipping point).

A Short Lived First Greening of the Conservatives

Environmental issues became prominent in campaigning for the 1989 European Elections in the UK. NGOs united to demand action from politicians, issuing a 'Blueprint for a Green Europe' with demands on agriculture, biotech, energy, forestry, the greenhouse effect, habitats, ozone depletion, recycling, toxic chemicals, aid and tropical forests, transport, vehicle emissions and acid rain, waste management and water pollution. They warned that a temperature rise of 1.5-5.5C 'is expected by 2030'. The groups commissioned a poll by MORI which found:

43% said a party's environmental policies would be crucial or very important in deciding their vote

62% wanted the European Parliament to have more power to set environmental protections

63% were most concerned by nuclear waste, 46% by water pollution, 44% by toxic waste and 37% by destruction of the ozone layer

52% wanted farm subsidies to be based on organic or environmentally sensitive farming

On June 19, although it did not win a seat due to a first-past-the-post system, the Green Party gained a record 15% of the UK votes (2.3m). This alarmed other parties, and for a brief period, even led to a change of strategy by the Conservative Party, which started talking up the environment rather than playing it down as it had before. At the September Conservative Party Conference in 1989 Mrs Thatcher announced "It's we Conservatives who are not merely friends of the Earth—we are its guardians and trustees for generations to come".

On November 8 1989 Thatcher addressed the UN General Assembly in New York and called for "a framework convention on climate change" with "binding protocols" modelled on the Vienna Convention and the Montreal Protocol on protection of the ozone layer, to be ready "by the time the World Conference on Environment and Development meets in 1992". The task was "pressing", as we were "adding greenhouse gases to the air at an unprecedented rate" from fossil fuels and forest destruction. We needed "new technologies to clean up the environment" and "non-fossil fuel sources" of energy.

Thatcher's pronouncements on ozone and climate change signalled that environmental concern was mainstream, and right and left wing media not only echoed concern but went looking for new 'evidences' to confirm cause for concern.

Senior Tories Chris Patten and Michael Heseltine advocated more intervention and tighter environmental regulation. Heseltine pointed out that the Dutch Prime Minister had made the environment the "principal battleground for the election" and won an increased majority. A book from the Conservative Bow Group even described Thatcherism as 'a spent force … unless it can adapt itself to the electorate's priority … to improve the quality of life'.

Patten wanted the Conservatives to fight the next election on the 'Quality of Life' but he lost Cabinet battles over car emissions and greening the economy. By 1990 Thatcher had started citing claims by early climate-sceptics such as the George C Marshall Institute (GMI) casting doubt on the scientific

case for urgency, and Patten's plans were gutted. Tory Greening Mark II would have to wait until David Cameron came along in 2005.

Thatcher's cooling on climate action was perhaps the first sign of how Britain was susceptible to the influence of the US-based fossil-fuel funded lobby. (Analysis by Jon Agar of UCL [pp 244-5 ref 127], suggests Thatcher was influenced via key gatekeeper Charles Powell with material originating from the GMI in December 1989 and June 1990. Download Agar, Science Policy Under Thatcher).

In subsequent decades this hobbled progress on climate change at the UN (eg via the misleadingly named Global Climate Coalition). As Nathaniel Rich and others have since documented, it led the US to see-saw on climate, and reverse it's early plans to cut emissions, and it then polarised US politics on climate along values lines. Many have since seen this moment as a catastrophic missed opportunity. The Cold War had just ended, there was talk of a 'Peace Dividend', and politicians were determined 'not to get caught out' over climate as they had been over the ozone layer. There was a short-lived window of opportunity to head off the problem before it escalated but that was lost.

The 'Sustainability' Era

My own interpretation is that the mid-late 1980s experienced a growing sense of environmental apocalypse. Disasters and discoveries seemed to validate earlier 1970s-1980s warnings about uncontrolled industrialisation and interference with nature.

A social and political reaction followed, including rapid growth of environmental groups. It culminated in the establishment of the IPCC (Intergovernmental Panel on Climate Change, 1988), numerous new pro-environmental laws and conventions, and steps leading to the 1992 UN Rio' Earth Summit (UNCED).

Yet when the Earth Summit came, that event acted like an analgesic, It gave the impression that "something big is being done" which alleviated concern, and it popularised and institutionalised the idea of 'Sustainable Development'.

I was director of the campaigning programme for Greenpeace UK from the early 90's and something of a 'sustainable development sceptic'. At that time, a constant refrain of the UK government was that the Earth Summit would 'address' or had 'addressed' almost any subject you could think of, an idea also widely accepted by the media.

To try and prove what specialists and people on the ground knew, we went looking for a campaign which would unambiguously prove that it was, in reality, still 'Business as Usual'. We found the Brent Spar (here and here), which in May and June 1995 became a cause celebre of consumer power, and through Shell's reaction to defeat, it invigorated the field of 'Corporate Social Responsibility' as CEOs and brand managers rushed to avoid a similar disaster.

But as you can see from the chart above, it made no impression on the public 'environmental issues' Richter scale of IPSOS-MORI. It was an exception to, not a confirmation of, the prevailing mood. The 'Spar was a very big campaign but not so large that it created a paradigm shift in the general public 'mind' of the type that was going on during the 'green wave', and as is hopefully going on now, over the climate emergency. (If the first green wave was caused by a big shift in public perception it was perhaps that environmental warnings that the planet could not sustain untrammelled industrialisation, the current one is more down to a conviction that scientists and environmentalists have been proved right about the reality and threat of climate change in particular).
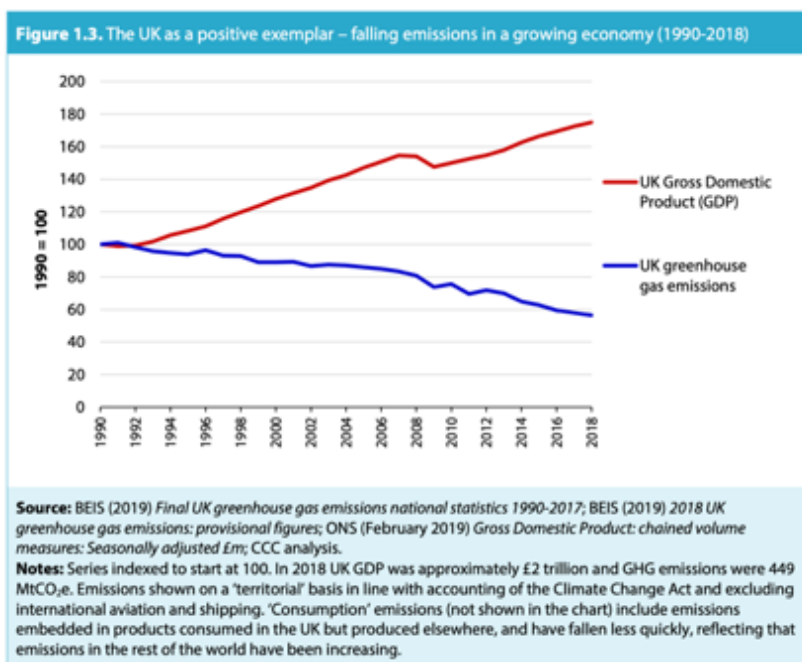
The reason Shell got punished by consumers and society in 1995 was because it broke an established social norm (take responsibility for your waste, don't dump it). Brent Spar was treated as an egregious exception, at variance with expectations (especially in Germany). The prevailing assumption, even though in in many ways this was wrong, was that the big picture environmental problem was bad but being solved. Plus of course by winning the campaign, the particular problem was 'solved'.

Post-UNCED Sustainable Development Impact

Many governments took the 'UNCED' process seriously and amongst its many top-line outputs, were the Framework Convention on Climate Change (UNFCCC), the Convention on Biodiversity, and Agenda 21, designed to stimulate local government sustainability plans. The latter were embraced fairly enthusiastically in the UK. The Conservative government introduced a 'Round Table' on Sustainable Development and in 2000, New Labour agreed to create a national Sustainable Development Commission which had access but no power in the government system. It was finally abolished in 2011.
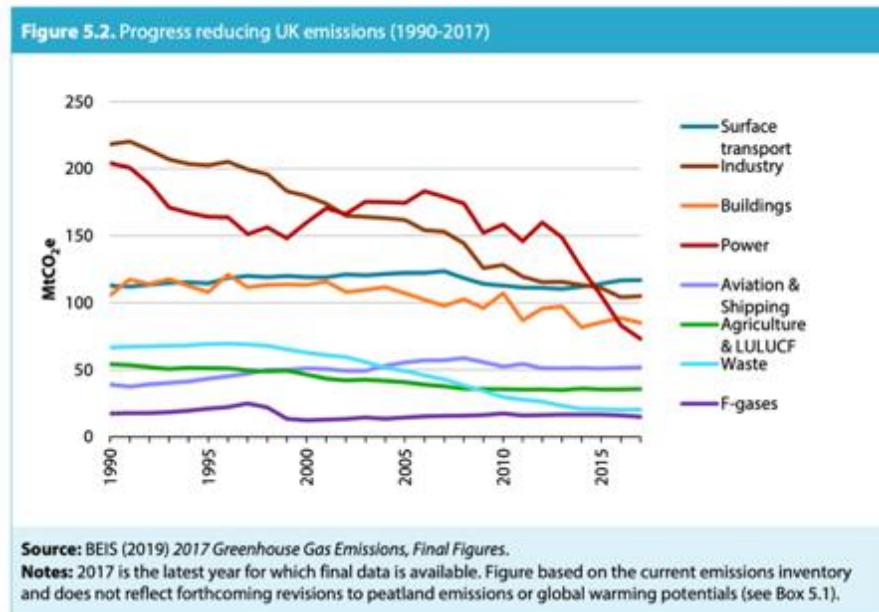
This process led to innumerable meetings and reports, launched many academic schools and research centres and created a small 'sustainability' industry which helped mainstream some serious attempts at greening business, industry, government and the economy. Tim Jackson, Professor of Sustainable development at Surrey University, points out that the UK had the first government Sustainable Development Plan in 1994 and the 2005 Sustainable Development Strategy was "the envy of people working on it [SD] in other countries". But it also absorbed a lot of people's energy, and for national government, it provided something of a relief valve against radical change, particularly in England. Agenda 21 initiatives suffered because they were made a local government responsibility in a centralised state in which power works top-down.

I'm not saying that 'SD' had no effect. It did, and particularly in business and academia but it was so diverse in definition and application that it's hard to detect. (It's much easier to track it's intellectual impact for example in shaping the Sustainable Development Goals, conceived at the UN's follow-up Rio+20, held in 2012).

Figure 1.3. The UK as a positive exemplar – falling emissions in a growing economy (1990-2018)

Source: BEIS (2019) *Final UK greenhouse gas emissions national statistics 1990-2017*; BEIS (2019) *2018 UK greenhouse gas emissions: provisional figures*; ONS (February 2019) *Gross Domestic Product: chained volume measures: Seasonally adjusted £m*; CCC analysis.
Notes: Series indexed to start at 100. In 2018 UK GDP was approximately £2 trillion and GHG emissions were 449 MtCO$_2$e. Emissions shown on a 'territorial' basis in line with accounting of the Climate Change Act and excluding international aviation and shipping. 'Consumption' emissions (not shown in the chart) include emissions embedded in products consumed in the UK but produced elsewhere, and have fallen less quickly, reflecting that emissions in the rest of the world have been increasing.

From the UK Committee on Climate Change Net Zero report 2019, p 48

For my money, the decoupling of energy from economic growth (which in the UK is spectacular) [above], and [below] the gradual reduction of impacts from waste (a lot less spectacular), are candidate parameters for an effect of SD, as they relied on multiple decisions by businesses and many different institutions.

Figure 5.2. Progress reducing UK emissions (1990-2017)

Source: BEIS (2019) *2017 Greenhouse Gas Emissions, Final Figures.*
Notes: 2017 is the latest year for which final data is available. Figure based on the current emissions inventory and does not reflect forthcoming revisions to peatland emissions or global warming potentials (see Box 5.1).

Source as above

Among the alumni of the academic sustainability industry is Jem Bendell, author of the 2018 despondent 'Deep Adaptation' paper (downloaded over 450,000 times), influential with many followers of today's Extinction Rebellion.

From my perspective, the sustainability paradigm helped mainstream fundamental rethinking of societies and economies because it is broad and very plastic, highly adaptable and taking many forms. But as a driver of change that is also its weakness. All too often its 'agenda' broadens, expands and bifurcates until its resources run out, like a rivulet of water trickling into desert sand.

Back in Thatcher's short-lived green period I asked the late Richard Sandbrook, then director of IEED, why there were so many definitions of 'sustainable development'. He pointed out that it had originally been coined to catalyse the 1980 World Conservation Strategy by helping bring developing countries onside. They feared that by agreeing to protect ecosystems they might cut off their path to economic development. But all countries could agree on development being 'ok' if it was 'sustainable'. How exactly that could be determined, was left vague.

Similarly, I was told that during her brief eco-enthusiasm, UK Prime Minister Thatcher proposed a huge research budget to show how to operationalise sustainability, and called the UK research councils together to make their pitches. All of them declared the task was impossible because it could not be defined and was therefore a useless concept. All except for the political scientists who said that its ambiguity was its principal utility. Thatcher (a chemist) got exasperated and canned the idea.

So on the one hand 'sustainable development' proved too woolly and diverse for the limited big-chunk decision making of the centralised UK state to deal with, and on the other was so managerial and

delivery orientated that it required power and resources far beyond enthusiasts near the grass-roots to implement, except perhaps in cities with mayors, and in businesses. As a concept it attracted what we would now call 'progressive' thinkers and social activists (almost all Pioneers) into local-plus-green activities, some of whom, like Bendell, later found that they had strived for years, even decades, without resolving the big picture issues which first motivated them.

Sustainable development projects certainly hoovered-up some idealistic and young people in the 1990s and 2000s but more radical activist groups also developed for example over GMOs, live animal transports and road building as well as Camps For Climate Action or 'Climate Camp' (see also Section 8).   The latter saw protests and instrumental actions from 'conventional' organisations like Greenpeace and 'grass roots' activists. John Sauven of Greenpeace says "I think Kingsnorth was very significant in 2007. First time a jury found activists not guilty on climate grounds in the crown court. It marked the beginning of the end of new coal fired power stations and hastened coal's overall decline". (Six Greenpeace activists accused of causing £30,000 of criminal damage by painting the word 'Gordon' (for Gordon Brown) on the coal power station chimney, were acquitted on grounds that they were attempting to prevent climate change causing greater damage around the world. Those acquitted included Ben Stewart and Will Rose, now better known for starting the group Led By Donkeys).

Conventional NGOs also proliferated and grew at this time, at least up until the recession of 2008. Did this dynamic prevent an earlier emergence of a youth-led climate movement such as Greta Thunberg's or a more revolutionary one such as XR? I can't say but there were certainly attempts to do such things in those decades and it may just be that by 2018 a multitude of factors had come together by chance, meaning the right people came along at the right time and ignited the new climate movement.
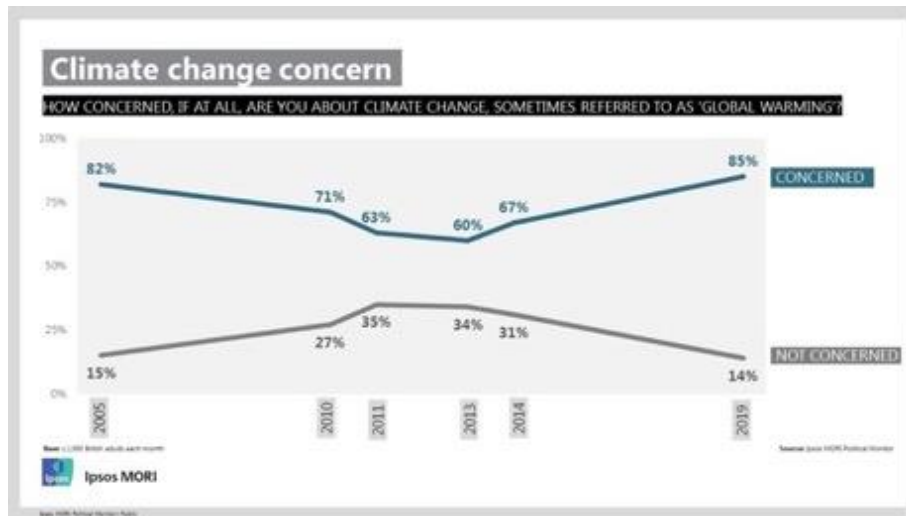
Concern About Climate Change

Other polling (than the trackers above) gives a better indicator of concern about climate change where it's the sole subject of the question and there is no inbuilt effect from other 'issues'.   A UK survey released in August 2019 by IPSOS-Mori found concern about climate change hit a record high since the company had started tracking it in 2005, with the majority (52%) 'very concerned'.
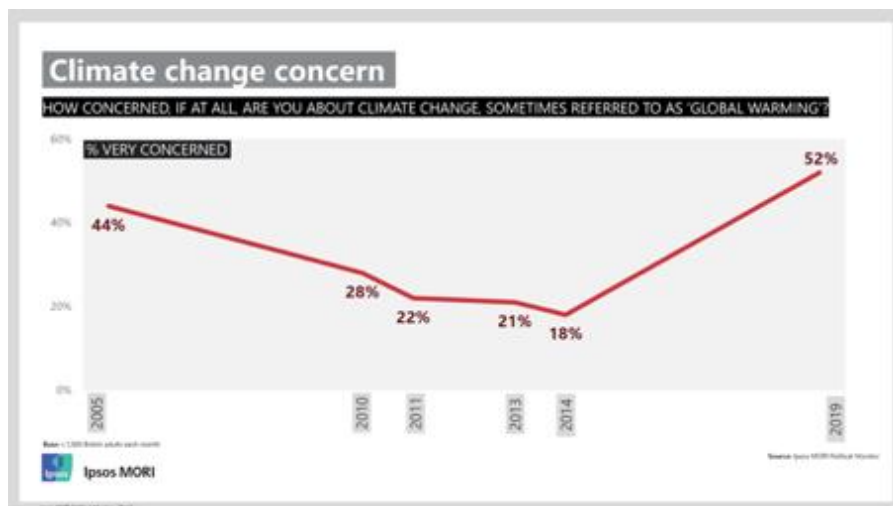

So it had nearly tripled from when the question was asked in 2014 and also surpassed the previous record of 44% but of course the 44% back in 2005 pre-dated the activities of XR and Great Thunberg, which began in 2018.   Similarly (below) the total 'concerned' rose to 85% in 2019 but that marked a

recovery to more or less the same level as 2005 (82%). So any idea that 'the new climate movement' has driven climate concern to unprecedented levels is not borne out by these results.


Another graph presented by Leo Barasi in a May 2019 blog for CarbonBrief showed a similar result: the total of those 'very' or 'fairly' concerned was 77% in May 2008, and 80% in March 2019.
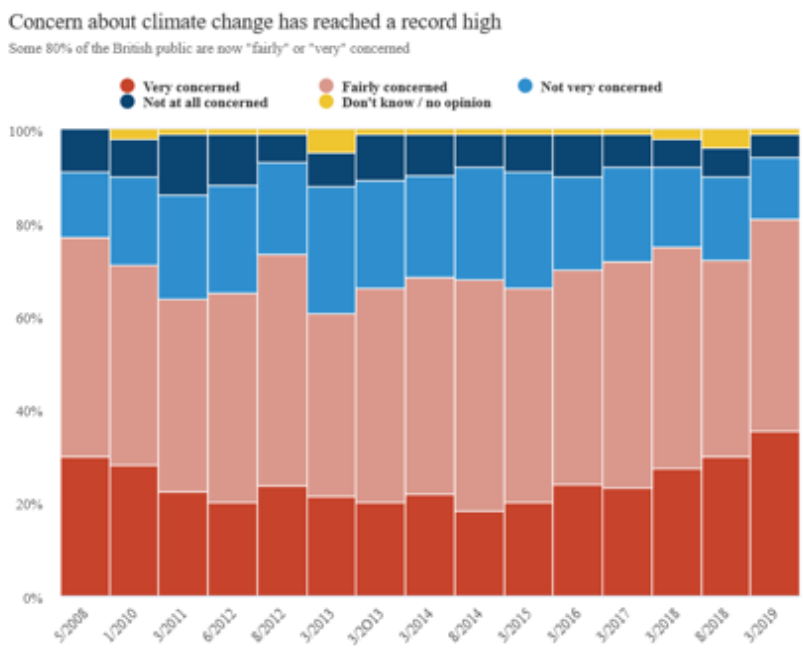
Respondents' level of concern about climate change in polls between 2008 and early 2019, ranging from "very concerned" (dark red) through to "not at all" (dark blue). Polls carried out by MORI, Opinium, BEIS and its predecessor DECC. Source: Noise of the Crowd. Chart by Carbon Brief using Highcharts

MORI also note that 'nearly three in four (73%) say that Britain is already feeling the effects of climate change, continuing a trend which has seen this rise from two in five (41%) in 2010'.
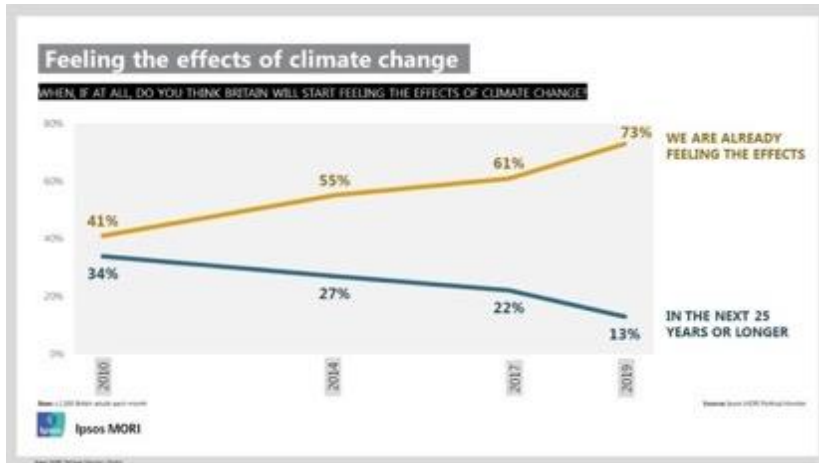
To me, this suggests that real-world signals such as weather events were driving changes in perception. The recent MORI polling brought more good news for the new climate movement in that MORI also found that most people in Britain (55%) 'think that the UK should bring all emissions to net zero more quickly than by the 2050 target announced by the Conservative government'.

A 2010 World Bank survey of 15 countries (diagram below) found an average of 58% of respondents agreed that 'people are being harmed now' by climate change.

Many other international surveys found that the UK public opinion was for a long time comparatively high on 'undecided' or sceptic' on climate change, so the 2010 – 2019 rise in 'we are already feeling the effects' may be new rather than a return to a previous level. Conviction that "we are already feeling the effects" is more likely to have been driven by perceptions of changes to real weather rather than climate change proxies such as scientific modelling or even protests.

FIGURE 5 | When will climate change harm people. Source: World Bank (2009).
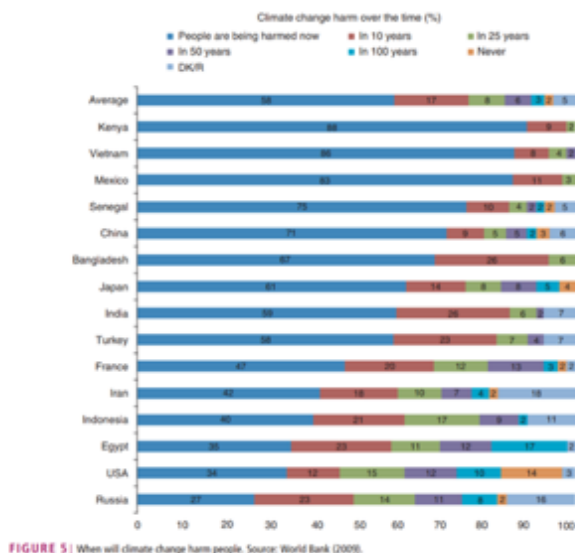
Antonia Dickman, Head of Energy and Environment Research at Ipsos MORI, said:

"In 2005/6 we saw a peak in concern about the environment, reflecting the prominence of media reporting around, for example, Al Gore's Inconvenient Truth, the Kyoto Protocol coming into effect and

the Stern Report. But climate fatigue appeared to set in, particularly in the aftermath of the economic crash when it struggled to compete for public consciousness. Recently though concern has been creeping up again, and after events such as Extinction Rebellion, the school strikes for climate, and the climate emergencies being declared by Local Authorities".

Tim Jackson identifies 2006-9 as one peak in UK 'climate awareness' consolidated in the 2006 Stern Report, the 2007 Climate Act, backing of key politicians such as Ed Milliband and establishment of new climate NGOs such as 1010 (now 'Possible') in 2009]

A long running Gallup poll shows a similar pattern from the US, with environment ranked more important than economic growth in all years except those immediately after the economic recession, which started in 2008.
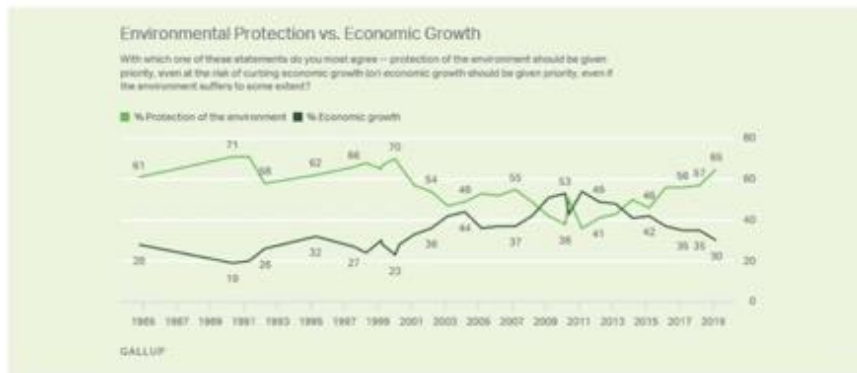
Other factors which probably depressed willingness to support climate action in the first decade of this century may have included the 2009 'climate-gate' email leaks promoted by climate sceptics as a scandal (discussed here, here and here). Confusion over whether something is 'real' is likely to suppress expressions of concern.

The same goes for political intractability: if politicians can't seem to make progress on a topic, convictions about its merit as a political issue will decrease because it will reduce the expectancy of a result. If on the other hand it appears more soluble (but not yet solved) it will get 'promoted'. Consequently when the 2009 Copenhagen Climate COP was widely reported as 'failed', it will have acted as a signal that climate change as a problem was not so 'important' to political leaders.

Long term US polls of people 'personally worried' are about climate change (below) show a remarkable stability with 50 – 70% saying 'a great deal' or 'a fair amount' throughout 1989 - 2014:
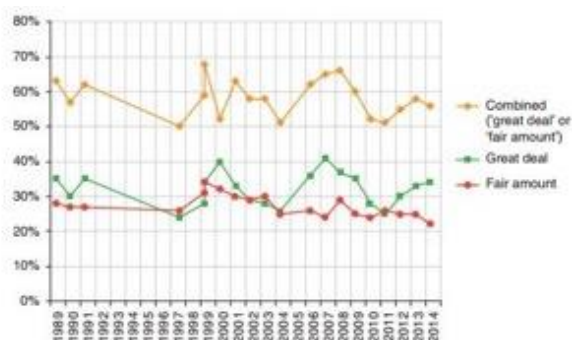

FIGURE 3 | Changing levels of 'worry' about climate change in the United States. Data points show the extent to which U.S. public survey respondents reported personally worrying about climate change over a 25-year period. Data combined from Refs 20 and 64 (n ≥ 1000 at each time-point).

From   Capstick et al [International trends in public perceptions of climate change over the past quarter century](#)

The authors point out that what this does <u>not</u> show is the severe political polarisation that took place in the US in the 2000s, peaking around 2008-2010. This pitted Republicans against Democrats along a climate-sceptic v climate-action axis as well as a values one, and as several studies have found, was at its most extreme in the Congress rather than in the public. This led to inconsistent US Federal policies and finally, extreme climate scepticism and pro-fossil policies under Trump. So population concern may be consistently high but that may not translate into action if there is a social and political stand-off: potentially relevant for Extinction Rebellion.

As partly-US-funded climate sceptic propaganda groups established in Britain, a version of this divide developed in the UK, with the right wing of the Conservative Party becoming aggressively climate-sceptic.   This led to Prime Minister David Cameron abandoning his own attempt at green modernisation begun in 2005, and to the current de facto prohibition on new onshore wind farms in England. The ERG (an extreme Conservative Party faction called the European Research Group) ran an intense campaign in 2012 which made climate and renewables policy into a wedge issue within the Conservative Party. It drove Cameron rightwards into Euroscepticism, to renounce 'green crap', and ultimately into Brexit.

Cameron's green advance 2005 – 2010   **Cameron's green retreat 2011 - 2016**

2005: December 6, Cameron elected Conservative Leader. Party Logo is changed to a green tree.

2006: April 18, Cameron says "vote blue, go green" at local elections

2006: April 20, Cameron visits Arctic with WWF

2006: September 1, Cameron supports FoE call for a Climate Bill

2007: March 21, Cameron has a wind turbine installed on his house

2007: August 8, Conservative green tree turns blue

2010: April 29, Cameron promises 'greenest government ever' in Manifesto for General Election

2010: May 14, Cameron repeats 'greenest government ever' in coalition government with Liberal Democrats

2010: October 6, Cameron changes green tree logo to Union Jack at Party Conference

2012: January 30, Cameron receives Chris Heaton Harris letter from 101 Conservative MPs against wind energy

2012: February 21, Cameron defends wind energy plans to Tory MPs saying subsidies will be cut 10%

2012: February 27, Cameron meets anti-wind MP delegation with planning and energy Ministers. In 'listening mode'.

2012: September 4, Cameron reshuffles Cabinet to the right, opening way to expand aviation.

2012: September 15, Cameron reportedly tells Energy Minister John Hayes to "deliver a win for our people" on wind farms

2013: November 21, Cameron reportedly tells aides to "get rid of all the green crap" from energy bills

2014: April 1, Cameron reportedly considers 'new attack' on wind farms in 2015 Manifesto

2015: April 4, Conservative Manifesto pledges 'We will halt the spread of onshore wind farms'.

2016: June 24, Cameron resigns as Prime Minister

From [Killing The Wind of England](#) 2018

News Media Attention: A Lagging Indicator

The mounting wave of extreme climate events in recent years has caused increasing public disquiet, probably including a feeling that climate change was being under-reported by the media. News coverage tends to act as a 'lagging indicator' of trends and public opinion and then amplify any change. This is because editors tend to be conservative, watch what each other are doing and follow 'the agenda', like a herd of sociable grazing animals, such as sheep. Once a 'new trend' is 'discovered', for a time the "first simplify, then exaggerate' reflex boosts the trend. It also means that it can take a long time for the news media as a herd, to respond to a real change, remaining 'sceptics' before flipping to enthusiastic converts.

In 2010 after NASA and NOA announced that 2009 had been 'the warmest year on this planet since annual records began in the late 19th century' Bob Ward of the Grantham Institute wrote an article 'Why have UK media ignored climate change announcements?' in
The Guardian (initially the only national 'paper to report the finding). 'Believe it or not' said Ward, 'record warming of the Earth no longer seems to be news as far as the UK media are concerned'.

In 2014 there was a high level of media coverage of controversial floods in the UK in 2014 but as Carbon Brief pointed out, the media focus was almost entirely on under-funding or under-performance of the government Environment Agency responsible for flood prevention, or disagreement between Prime Minister David Cameron (who said 'he suspected the floods were linked to climate change') and his Environment Minister Owen Paterson (well known for climate scepticism and a strong dislike of environment groups). These were both political stories. Less attention was given to a third strand that climate change would make floods worse.

It took 'a carefully-timed intervention', said Carbon Brief, by 'the Met Office's chief scientist, Dame Julia Slingo' who 'said that while there was "no definitive answer" to what caused the storms and flooding, "all the evidence suggests there is a link to climate change"' to shift the press narrative but even then the climate-framed headlines lasted just a day.

As recently as 2017, *The Guardian* lamented that:

'Even in a year when we've had string of hurricanes, heatwaves, and wildfires worthy of the Book of Revelation – just what climate scientists have told us to expect – the effect of climate change on extreme weather has been dramatically under covered. Some of Trump's tweets generate more national coverage than devastating disasters'.

The UK media herd finally started to trot if not stampede in the other direction in 2018, during a the month-long Northern Heatwave. In July Climate Home News reported several commentators who had noticed a recent change in the attitude of news editors and journalists.

On 25 July the Sun, Britain's biggest circulation newspaper, splashed the story over its front page.

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Veteran environment journalist Michael McCarthy noticed it on his local news-stand and wrote "I nearly choked on my kit-kat when I read that", because the Murdoch-press owned Sun had long leant to being climate sceptic. His article was headlined: 'Was this the heatwave that finally ended climate denial?'.

At the end of the month a breakthrough came in the fast-developing science of 'attribution' linking near-term weather events to the underlying driver of climate change when a team at World Weather Attribution led by German scientist Friederike Otto managed to show in real time, that the 'Great Northern Heatwave' had been made twice as likely by climate change. An article by Quirin Schiermeier followed the leading science journal *Nature*, revealing that 'Germany's national weather agency is preparing to be the first in the world to offer rapid assessments of global warming's connection to particular meteorological events'. [See more including on campaign opportunities, here].

Then in September 2018, BBC Head of News Fran Unsworth issued a four page internal note announcing a significant change of editorial policy on reporting climate change, from a stance of studied neutrality to one of treating it as established fact. This meant dropping any requirement to have a climate sceptic in any climate story to 'balance' a climate scientist or campaigner. In an email to staff, Unsworth explained: 'To achieve impartiality, you do not need to include outright deniers of climate change in BBC coverage, in the same way you would not have someone denying that Manchester United won 2-0 last Saturday. The referee has spoken'.

It clearly changed the Corporation's position on climate change, and given that both the British general public and many journalists and politicians treated the BBC as the de facto voice of authority on the topic, this was bound to exert a subtle but pervasive effect on the media and public opinion. As programmers responded, it also unleashed a torrent of BBC 'climate output', with sceptic voices marginalised by proportion in a way that seemed similar to that within scientific community itself (97% to 3%). It will also have influenced the rest of the UK media. (In October 2019 *The Guardian* announced its' 'Climate Pledge' to 'give the climate crisis the attention it deserves' and started to refer to 'climate crisis' instead of 'climate change' as part of a six point glossary for journalists).

So the change did not come about overnight. Carbon Brief, which broke the story (see here including the policy and email) pointed out that 'The move follows a ruling earlier this year by Ofcom, the UK's broadcasting regulator, which found that BBC Radio 4's flagship current-affairs programme Today had breached broadcasting rules by "not sufficiently challenging" Lord Lawson, the former Conservative chancellor' [a notorious sceptic]. Another precipitating factor, as described in this Newsletter, was that Rupert Read, who has since become a leading-light in Extinction Rebellion, had led a small campaign of potential BBC contributors to refuse to debate climate deniers and so create false balance.

But Unsworth also pointed to the need to reflect a more general change in public expectations, related to actual extreme weather events and other real-world signs of climate change:

'After a summer of heatwaves, floods and extreme weather, environment stories have become front of mind for our audiences. There are a number of important related news events in the coming months – including the latest report from the UN Intergovernmental Panel on Climate Change and Green Great Britain Week in October – so there will be many more stories to cover. Younger audiences, in particular, have told us they'd like to see more journalism on the issue'.

These factors preceded the emergence of XR and GT's visit to the UK but also created fertile ground. By autumn 2018 real world drivers were bearing on both public and media attention, priming them to respond to the compelling nature of Thunberg's interventions and XR's sustained disruptiveness. This,

combined with the mass participation of the school strikes and rebellions, events like the IPCC report and Attenborough's tv programme, combined to create a perfect storm of elevated concern. The mass participation also humanised and personalised climate change in a way that reached beyond the participants in protests, and will have exerted a positive feedback on the media, given that many journalists would have known someone involved, or who knew someone involved.   It was a genuine 'movement' effect.
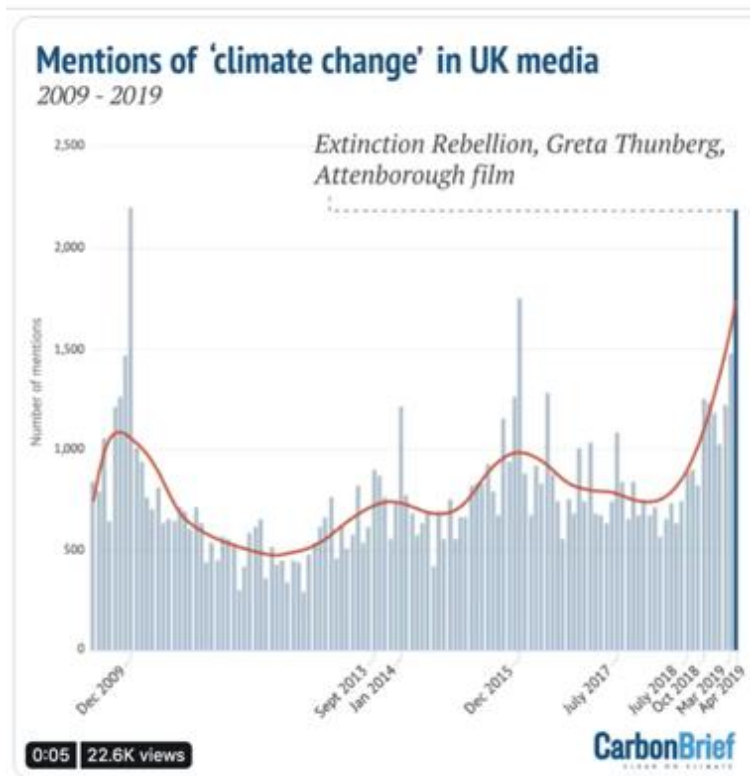
This (animated) chart from Carbon Brief shows the decline in UK media mentions of climate change from 2009 to 2010 and it's gradual increase, particularly from 2014 through to 2018 and 2019.

Even so, it took a while for the media to recognize XR and GT as players worthy of reporting. A completely different approach to polling is qualitative 'discourse analysis' which identifies changes in the way a subject is reported.

In a May 2019 blog, Patrick Thelwell showed how BBC coverage had changed between the October 2018 rebellion (where XR's name was not even used) and its demands were effectively dismissed as not credible, to April 2019 where its views were 'legitimated' by using quotes from authority figures Michael Gove and Ed Milliband: '"Environment Minister Michael Gove said the activists' "point had been made". He added it was time to have "a serious conversation about what we can do to collectively deal with this problem". Mr Milliband said global warming would get "far worse" if the government did not act with "greater urgency".' This Thelwell put down to the national political discourse being affected by 'the tactics of sustained civil disobedience'.

Possible Green Wave Considerations For the New Climate Movement

What might I say about this, if I could talk to people in the 'new climate movement' ? Two main things:

1. Context: you are operating on a new wave, a climate emergency wave. In recent years there has been a deluge of real-world evidences of the horrible reality of climate change taking effect. Extreme weather including droughts and floods, disappearing sea-ice, melting land-ice, fires, coral bleaching and, consequent human deaths, social and economic losses, lost rainfall from lost forests, and species extinctions. That and scientific confirmation is what's ultimately been driving the wave you are riding, not only your own actions, even though these have made it real and personal through mass participation – a significant new contribution of great importance.

This context means your movement can 'easily' generate social agreement, expressed for instance in polling. And as in the first green wave, almost all of the media are back onside. Even during the recent dramas of the UK General Election, the BBC carried almost daily headline news stories about climate change. But agreement's not meaningful change in itself, unless you are sure that it is a step up along Roger Hallam's revolutionary path, and unless that in turn will inevitably lead to emission elimination and creation of an entirely new social-economic system (more below).

Climate coverage UK 2014 – 2020, from How Do We Communicate Climate Change - Coastal Futures 2020.

2. Politics: during the previous 'green wave', the governing political class did react in the UK and elsewhere.   But an international moment of opportunity was lost on climate and a domestic UK political moment too. There are many reasons for that. For one thing, aside from a handful of US environmental lobbyists, NGOs representing civil society were not ready to play a significant role in influencing the international climate process. That was kicked off by activist diplomats and scientists, and by the time any significant public campaigns began, the die was largely cast, as a science-dependent and so, easily-gamed political process, and an effective fight back by vested fossil fuel interests had begun. This was based on sowing doubt, using techniques and teams previously applied to undermine control of tobacco and chemicals.   The greening of mainstream politics did not occur in the UK or the US, and the residual post-UNCED 'sustainability' process could not deliver.

Directly or indirectly, if you are not to miss the opportunities of this new wave, your movement needs to segue or work in tandem with the existing NGOs and political actors who share your environmental aims. And with businesses and public bodies (ie governments and agencies at all levels) which can

provide the means to translate them into achievable objectives of eliminating emissions. Plus for political push and pull reasons, people will need to be with you: and not just the small fraction who are most like you. Most of all you must avoid polarisation.

Here lies a problem because at least in the case of Extinction Rebellion in the UK, it has doctrinal baggage which makes this difficult. It comes in the shape of a rejection of democratic representative politics, a 'pathway' strategy designed to overthrow and replace government rather than deliver instrumental emission reduction, and, albeit inconsistently, a rejection and dismissal of campaigning and 'NGOs', and sometimes, advocacy of polarisation. This dogmatic 'theory of change' also rejects 'incrementalism' on the grounds that so far it has not delivered the goods but it has next to nothing to say about how real change could actually be delivered step by step (ie incrementally). This is in contrast for example to the 'Green New Deal' type ideas of Alexandria Ocasio-Cortez and others, and XR is in denial of the decades of successful campaigning to bring about solutions reducing the climate problem (see sections below). You have created a powerful new force but unless XR in particular makes its ship more politically seaworthy, that resource will be at risk.

## PART 4 - Extinction Rebellion's Narrative And Organising

Extinction Rebellion's topline public narrative is clever and brilliantly concise but also misleading. It is designed to funnel people into the organisation's 'pathway' into rebellion, while stopping them asking awkward questions such as "how do we know this will work?", "is it the best way to get change?" or "who's actually in charge?". There are several key steps.

- Frighten people with the science
  - If you are young, you may not live to be old because of climate change
  - If you are a parent, your children may die because of climate change
  - Six billion people will die because of climate change

- Tell them nothing is being done and conventional means have failed
  - NGO campaigning has failed
  - NGOs are corrupted by neoliberal incrementalism and reformism
  - Parliamentary Democracy has failed (for similar reasons)
  -
- Government has failed
  - Government is fatally corrupted by fossil-fuel neoliberalism
  - Consequently nothing effective is being done or can be done

- Tell them Extinction Rebellion has discovered a proven way to resolve this problem by mass civil resistance – the only way out

This boils down to 'there is an emergency, it's real immediate and catastrophic' > 'nobody is doing anything' > 'only we have the magical solution: join us and be part of it'.

Organising For The Rebellion

For those who become more engaged, Extinction Rebellion has an 'organiser' training programme which while not part of the topline narrative, is at least partly explained online.
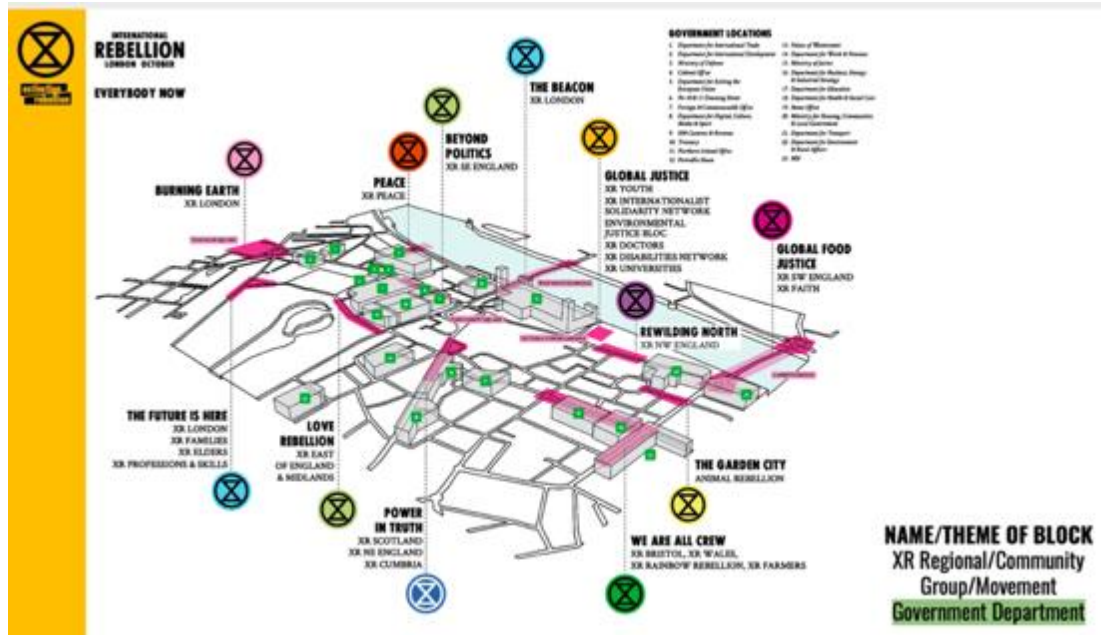
From 'October Action Design' – part of Extinction Rebellion's beautiful graphics depicting its plans for the October 2019 rebellion, posted online in advance

Extinction Rebellion is very well organised and has placed a great deal of material online to facilitate 'self starting' groups acting in accordance with its principles*, and recruitment into it's system, while remaining 'above ground' (not attempting covert action, including talking with the police before undertaking illegal activities such as blocking traffic).

[*The notorious 'self organised' Canning Town action perhaps shows how these principles are not in themselves a sufficient set of criteria for taking action].

For example at its 'communities' page there is How to start local group, how to do door knocking to get people to come to a local meeting (includes a script), while 'tips on running meetings' includes a quick facilitation brief specifying detail down to seven different correct hand signs to use, a Template for general Meeting Structure, and How to organise an empowering open meeting which is a document drawn up by Roger Hallam for Radical Think Tank in 2016. This is heavy on applying psychological theory and includes advice on when to emote, how to get people to make conditional commitments to one another, and tactical details like use of food.

[Hallam claims, perhaps rightly, that Extinction Rebellion's design has reconciled a long running debate within 'organising' between 'mass' and 'local group' organising. Some organising experts say it is a type of US-style 'momentum' organising].

Hallam writes:

"… talks and speeches are out – small group discussion and practice exercises and role plays are in. My own research shows that people coming out of the participatory type meetings laid out below are 80% empowered while those coming out of the old 4 speakers and a short question and answer period come out with 20% empowerment" … and … "Personalisation is the key to the persistence of commitment and continued involvement. And immediately being given stuff to do and small responsibilities – people like to have something to do. Again the body/action informs the mind. The process is I act and therefore

am committed not I am committed and then I act". [This is an example of the consistency heuristic – people rationalise their behaviours – see VBCOP].

Two or so of the most enthusiastic participants are then selected to be trained and ruin their own meetings, leading to a 'conscious and systematic and micro-designed' cascade of new meetings run by a growing band of organisers. The purpose is to catch more participants, who can in turn, be turned into arrestees to overwhelm the resources of the legal system, police and jails, and increase public sympathy and followers.

'After a few meetings you can then predict an average increase in commitments. So for a direct action with a conditional commitment target of 500 people you might need 25 meetings each of which gets 10 people to make the commitment. That is 250 people in the bag, and then through other channels and then with the momentum effect of 250 asking others they personally know to come on board you get to your target of 500. The meeting then is to get to the 30% of the target identified by research as the tipping point where things take off of their own accord'.

Putting in the hard work of a lot of face to face local meetings has been a vital part of Extinction Rebellions success in organising. Before launching Extinction Rebellion in October 2018, from March that year the founders from the Rising Up network (of which Extinction Rebellion is legally a project), 'held around 60 discussions' across the country, called *Heading for Extinction*.

The Extinction Rebellion 'pathway' system is effectively designed to prevent people dropping out of the 'funnel' (my term, not theirs) for example by getting their own ideas about how to combat climate change, or being diverted into things like NGO campaigns or politics. This is done by telling 'the story' and by engaging people face to face in a 'facilitated' (= controlled) discussion process based on discovering raised and shared emotional convictions – 'really feeling' the threat – and together resolving to do something (emotional disclosure, 'embodiment' (speaking aloud about feelings and intentions) and bonding).

THE EMERGENCY   OUR DEMANDS   ABOUT US   FAQS
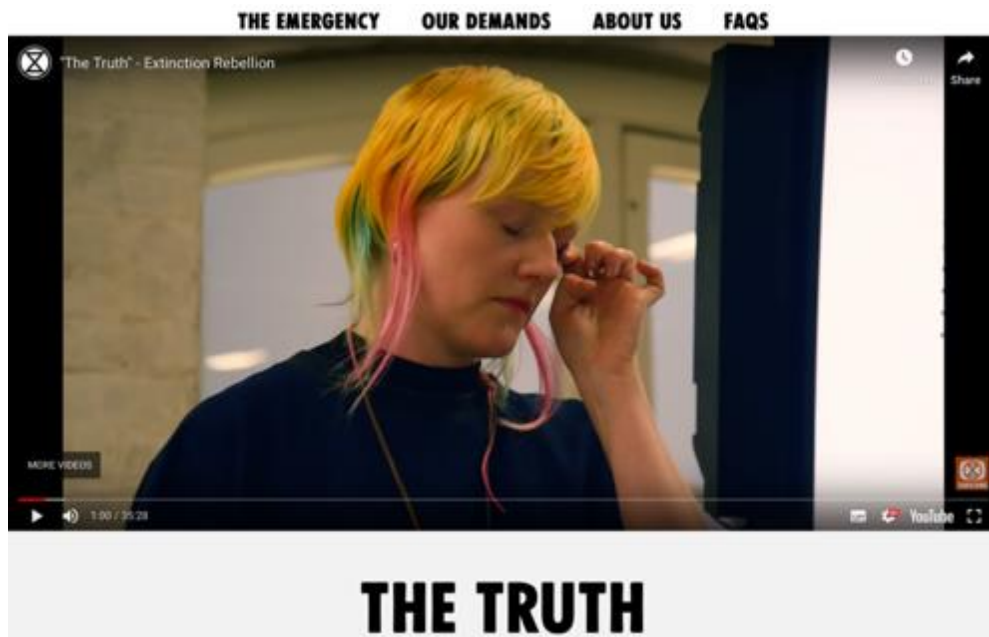
THE TRUTH

"Really feeling it" is an idea frequently repeated by XR public speakers, often coupled to grief-prompting (eg Clare Farrell in The Truth part 1, complete with zoom-in as she brushes her eye when she introduces 'grief is welcome'). In his talk 'The Time Is Now', Hallam says:

"one of the things I've realised over the last year, is that you can know about climate change … but the fact of the matter is that you can know about it but you don't really know about it – right ? … and when you really know about it you haven't really felt, and when you think you've felt it, you haven't really felt it - right ? So it's a bit like grief, you know, it comes in waves, you're shitting yourself one day and then the next two weeks you sort of forget about it, the sun's shining, there's plenty of food in Tesco's … and then you read a Guardian article and you think what the fuck and then someone comes in and they're crying or something and "bang" … it like that – right ?"

This video: How To Build A Mass Movement (filmed at a Bristol training for XR local Coordinators) gives a good idea of how Extinction Rebellions sets out to use 'facilitation' to produce a highly directed result. It's somewhat wobbly but if you can bear it, the video is worth a watch.

Hallam advises that the "first lesson is don't tell them what to do, get them to discover what to do" (this is good advice and applies to many situations), and 'get them to embody the organising; get them to speak it themselves'. Some of it shows Hallam in his disarmingly frank mode. He acknowledges that "activism does attract people that are a total nightmare" and, to "…oohs" from the audience, he stresses the need to "be a head hunter to find the one super-duper worth 100 not-very-good". He says the general rule of thumb "is autonomy creates empowerment" but it's autonomy on XR's terms.

In one section Hallam explains how to deal with 'difficult people' such as who might get in the way of the XR recruitment agenda.

Roger Hallam's diagram of the 'difficult people' who get in the way of building the movement.

The top circle is 'political' but 'practical' people (like the trainees) who "want to get stuff done". The middle circle is highly political people who come along with their own agenda, which gets in the way. The bottom circle is the many 'very concerned people who want to do something to happen about the politics but are not very political' (the target).

Hallam says this is the "major reason why many movements fail": the top people reach out and involve the very political mid-circle people and "they grind it to death for very good reasons". The main 'tribes' (which Hallam says he also embodies) who want to get everything perfect before things happen, include "extreme veganism … extreme hard left … extreme intersectionalism" and adherents of "diversity" and "anarchists". They typically say: "you can't do that until 'that' is sorted out". For example, "you can't have a movement until everyone in it is vegan" or "you can't have a movement until you make clear that capitalism has got to disappear on day one" or unless " … [an] extreme form of diversity is introduced on day one …" or (the anarchists) "unless we're all totally participatory", it can't go forward.

"All points of view are right" he says "but all effective movements have a central concept – balance – balance the need to be effective with the need to be ethically consistent". The "mature orientation" is "to accept that wherever you are everything is a mess". So these very ethical groups clog the process and the answer is: "bypass them and go down here to big circle – and that's how we have managed to mobilise thousands of people in three months: public meetings based on participatory principles".

This way, he says "you won't have the SWP guy standing up at the end when everyone's feeling good, and giving a rant about it has to be socialist or else its rubbish". He advises: to "avoid a Q and A" as "it encourages absolutists … there to appropriate your energy … design out people who clog you up".

'Not The Struggle We Need'

This is an element of Extinction Rebellion's 'organising' which has attracted criticism, including, not surprisingly, from the left. For example a LibCom post by 'Out of the Woods', Extinction Rebellion: Not The Struggle We Need denounces the 'difficult people' point as 'an extraordinarily bad-faith and patently incorrect reading of these tendencies, which do not grind struggle to a halt but are vital parts of struggle'.

It also criticizes XR's method of organising and mobilising as 'a form of "institutional fetishism", abstracting formal institutional structures from relations of power'; says 'XR's "leaders" gain from the risks undertaken by its participants' (meaning arrests and jail terms) and, 'XR's claims to non-hierarchical organising obscure the ways in which informal hierarchies and structural oppressions operate within the group'.

It attacks XR's claims to be a leaderless movement, saying:

'many of XR's specious claims and functions to reinforce the sense that they are the only alternative to ecological crisis. But the opportunities generated by XR's position remain unevenly distributed, and are too frequently afforded to its 'leaders': in particular XR founders Roger Hallam and Gail Bradbrook. Since XR's rise to prominence Hallam and Bradbrook have, between them, written for The Guardian, The Ecologist and The Telegraph; been interviewed by The Times, BBC television's Victoria Derbyshire programme, Today on Radio Four, BBC Radio Four's Profile, the Financial Times, the Evening Standard, the Morning Star, Chris Hedges on RT America, RT UK, Sky News, the Korea Times, the Sustainable Food Trust and on Good Morning Britain; been featured extensively in The Guardian's video documentary on 'life inside Extinction Rebellion'; and spoken at an Amnesty International conference, Campfire Convention and the HSBC sponsored CogX. … their voices dominate media discussions of XR and, by extension, they have become the movement experts on ecological crisis.'

The post details some of the history and works of Extinction Rebellion, noting that although in theory it is not hierarchical (being a self-proclaimed form of holocracy), in practice it is 'riddled' with 'informal hierarchies', stemming from its inception by Compassionate Revolution, which led to Rising Up!, which is controlled by a 'Holding Group' that 'decides what is officially part of the Extinction Rebellion, and is, thus, able to exclude individuals and groups from the movement'.
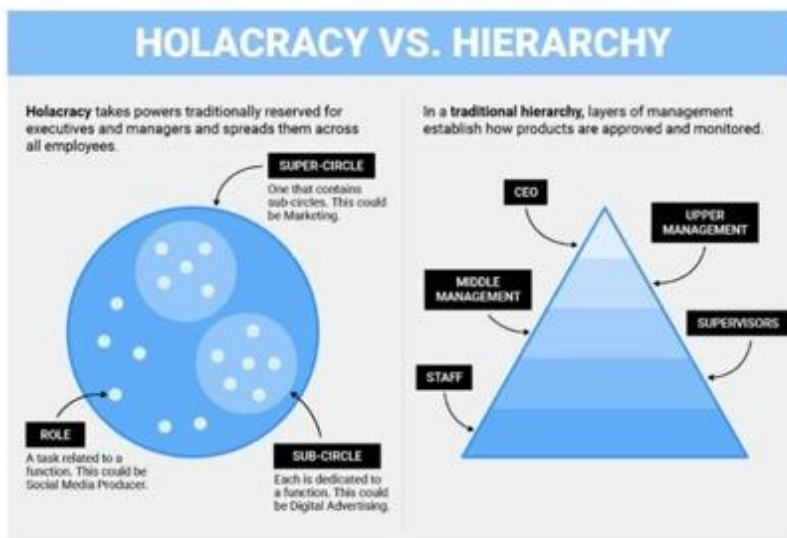
From the XR Handbook

Opaque

I have a lot of sympathy with Hallam's desire to avoid being bogged down or derailed by PC agendas. Most conventional NGOs with set campaign objectives also focus on whatever the organisation has decided its objectives are. But that's usually an upfront and explicit matter. In contrast, Extinction Rebellion has been rather opaque about both its techniques and control, and the reasons behind it's

rather one-eyed public narrative which amounts to solutions denial. 'Facilitation' is a politically correct 'neutral' sounding term but in practice it's being used to corral people without them realising it.

Once committed, people join rebellion actions which are also structured according to Extinction Rebellion's particular formula for successful civil resistance, designed to leverage public support through sacrifice (eg getting arrested) and the provocation of oppressive over-reaction by the authorities.

This leads to increased participation and escalation of commitment buy those participating, in a cycle of rebellious 'dilemma actions' posing which is continued until government is forced to capitulate to Extinction Rebellion's demands. The principal magical gift which Extinction Rebellion's research has provided is that success becomes (more or less) inevitable once participation hits 3.5% of the population. A subsidiary necessary discovery is how to resolve the internal 'movement' making conundrum of mobilising versus organising.

One of the demands is to set up a temporary alternative governance system (not just in the UK) involving Citizens' Assemblies, for the purposes of eliminating the causes of climate change, in so far as that is possible.

The theoretical basis of this design was developed by a group led by Roger Hallam and Gail Bradbrook as a project of 'Rising Up!' and the 'Radical Think Tank'. Extinction Rebellion is organised (partly) as a 'holacratic' organisation, a system inspired by Silicon Valley companies for whom the benefit is increased motivation flowing from greater autonomy for workers or teams. The Extinction Rebellion (UK) version of this is a 'flat' 'non-hierarchical' structure which involves 'circles' which appear to have departmental or committee/ network style responsibilities (eg media, finance, legal), including a Guardians Circle which may include the original founders. Find diagram below here

There is also a spreadsheet (possibly out of date ?) setting out the roles, responsibilities and co-ordinators of the circles and sub-circles. This is the mandate of the Guardians Team (coordinator April Griefsong):

* To offer information and insight to the XR Organism on why things were done a certain way over the history of RisingUp and the Extinction Rebellion, including historical context, processes that took place, how and why particular decisions were made, and other pertinent information.
* To watch the changes the Movement Strategy Team make to the XR Purpose, Principles & Values, Vision, Mission, Aims, and other strategic documents and statements, and if they are found to be significantly different in spirit from previous such documents, to raise such concerns to the XR Council.
* To track the start dates of members of the 3 Strategy Teams, remind those teams of term limits within a timely manner, and ensure term limits are not exceeded
* To decide upon the initial process of selection of the membership and term of the XR Council (Likely to be comprised of older and younger people).

There is also the XR Counsel (= Council ?):

Proposed XR Counsel Mandate pending approval from the Anchor Circle

The Circle of Counsel will meet on the days of the waxing and waning moon quarters. 🌗🌓
On the Waning moon they meet (online) to discuss how XR is appearing to them. This will be viewable publicly and recorded.
On the Waxing moon they meet online to take questions from the XR community, who might ask them for guidance or to diallogue on a topic. Questions could be submitted in advance, and a Counsel email will be created for people to send questions.
The Circle of Counsel would make agreements on facilitation between themselves.

The Circle of Counsel also has the mandate to call a UK Anchor Circle meeting (and there to make a proposal for another/wider circle meeting if they desire), to call the participants/community to pause, and to become more conscious about what is presently happening. The Counsel will pay particular attention to the power dynamics within XR, seeking to mitigate for power.

The Circle of Counsel has a seat in the UK Anchor circle.

One Circle of Counsel member could also (optionally) have a place in any Restorative Circles called.
Full details here:
https://docs.google.com/document/d/1j0eqf8pBqKsaMBHUTXeSxvRg1gmDYUjxYV4hBualr9l/edit#

And a Movement Strategy Circle coordinated by Gail Bradbrook, whose mandate is or was:

> * To discern, decide and communicate the overall
> strategic direction for the Extinction Rebellion.
> * To take feedback and stay attuned to the movement
> (including the other XR Strategy Teams and communities
> of resistance around the world that share a close
> alignment of purpose with XR) through debrief and
> feedback processes, and advocate for perceived needs
> of the movement.
> * To decide upon the strategic use of resources, where it
> is not otherwise decided within other teams.
> * Drawing upon the wisdom of the XR Guardianship
> Team, to decide upon and clarify the XR Purpose,
> Principles & Values, Vision, Mission, Aims, and other
> strategic documents and statements (such as the XR
> Rebellion Overview document and the RisingUp
> documents, in other words these things need pulling
> together, not a huge rewrite), and to make them easily
> and publicly accessible.
> * Taking into account the proposals of the Political
> Strategy Team, and seeking advice from XR Council, to
> make decisions for the Extinction Rebellion regarding
> endgame scenarios – e.g. a win which will lead to calling
> off civil disobedience.

Which in other organisations might make her the director by another name.

The Magical Gift
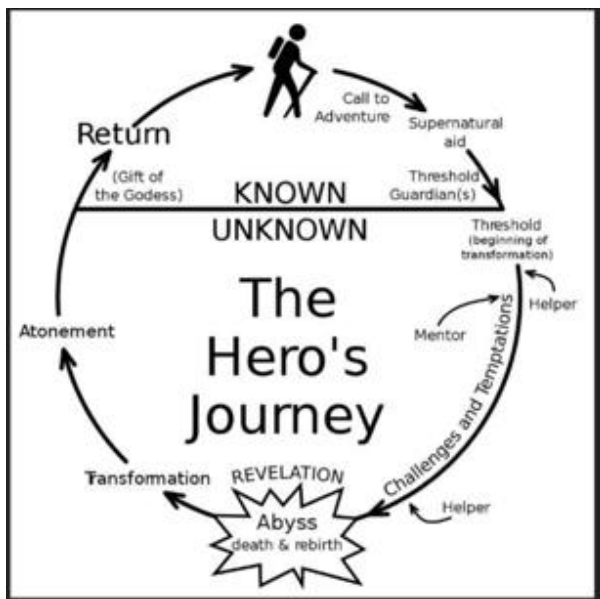
From Wikipedia – the magical gift or here, Gift of the Goddess

Elements of the Extinction Rebellion narrative and system are similar to a range of others. The idea of the 'magical gift' is central to the 'Hero's Journey' story format which has become a cliché in business and NGO brand stories. That also appears in the famous, perhaps infamous 'Stop Kony' campaign by Invisible Children (IC), which in 2012 broke online records for public engagement. (In the IC-Kony case the magical theory was that, enough public attention in the US could force US government action to take out this worst-of-the-worst human rights abuser, and this could be achieved simply by 'making Kony famous' as 'nobody has heard of him'. 'Stop Kony' also promoted the idea of exceptionalism: only you, uniquely, can solve this problem where others have failed,

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because as Facebook followers of celebrities, you have a special power. It particularly attracted young female Facebook users.

Many other 'Organisers' of emotionally expressive movements use the technique of emotional disclosure to create bonding (liking, empathy and trust), as in 'telling your story' in the 'Story of Self, Us and Now" formula developed by Marshall Ganz and more recently 'practitioners' such as Hahri Han. A focus on commitments, keeping agreements and shared cathartic experience featured heavily in the notorious EST or Erhard Seminars Training of the 1960s, and its descendants. The idea that 'ruling elites' are fatally corrupted and must be over-thrown is of course common to many revolutionary movements and in this case is an article of faith for Extinction Rebellion.

A Cult ?

Extinction Rebellion supporters have rejected the idea that it is 'cultish' (lots of people have said it is and it isn't) but these are techniques used in many cults, which is perhaps why some think it appears be like a cult.

The cult-like impression may also be reinforced by Hallam's at-times rather prophet-like delivery. In his conversation with John Sauven at Greenpeace for instance he speaks of "the extremity of the threat … communicated through me, to me, through the science" (about 62.19), and although he isn't necessarily saying the Science selected him as the channel, he is trenchant in demanding that his interpretation of the science is correct, or as Sauven puts it, "the gospel according to Roger".

Then there is Gail Bradbrook's story that (FT version) she 'travelled to Costa Rica to take a high dose of iboga — a psychedelic compound derived from a west African tree bark renowned for inducing visions. As the ceremony began, she offered up a prayer to be shown the "codes" for social change'. Or as she puts it in her own article 'I ingested a flood dose of Iboga (a type of tree bark), worked with Kambo (the frog medicine) and had three experiences with Ayahuasca ... I wanted answers to how I could bring about social change ... It was a specific prayer for what I called the "codes for social change."'   After feeling her brain being 'rewired' she ended her marriage and on returning to the UK,

'I was introduced to Roger Hallam and together we began to create the movement that would become Extinction Rebellion ... at the end of our first meeting … he joked that he had just given me "the codes for social changes". The hairs on the back of my neck stood up'.

Both Bradbrook and Hallam sometimes talk in these terms of revealed truth.

Then there's the 'people in red', the Red Rebels created by Invisible Theatre, and the brainchild of Doug Francisco who set up the Invisible Circus street performance group.   They do a lot of parading about and doing photo opp's while looking very serious, are said to represent the blood of children or 'all species' and are part of XR's visual branding. They look a bit cultish or a bit like extras from Bram Stoker's Dracula. They stress it is 'mythic' and not street theatre. Bradbrook is an advocate of Theurgism which can involve the use of ritual to engage with divine truths.

Red Rebels on a trip to Wells next the Sea to 'raise awareness about sea-level rise'.

But most of all the 'cult' impression probably derives from the repeated scripted XR meetings and presentations, the doctrinal adherence to 'the way', the rewriting of history and editing of evidence, and the controlling 'facilitation', including the none too subtle invitations to change your emotional state to one of grief.

I've met a variety people who have gone along to Extinction Rebellion (recruitment) talks and used the term 'cult-y' or 'religion', including one ex roads-protestor who found their attitudes to emphasising impending death and the need for arrests "too harsh", and others who felt that although XR spoke of "plenty of other roles", it was made obvious that the "right answer" was to put your name down to be arrested. (Wanting to do something that made a direct difference, they went off to set up a orchard).

A central belief in the integrity of 'the way', exceptionalism and literal belief in the founding story is also common to many cults, leading to reference to founding beliefs in order to reconfigure the meaning of any conflicting evidence, as in the Planet Clarion story from 'When Prophecy Fails', in which impending doom also looms large.

The celebration of discovering loss and immersion in grieving raises the emotional intensity of engagement, and in XR rhetoric becomes an implicit test of becoming 'one of us': " …if you are not really feeling it …" etc.

In his Hard Talk interview Roger Hallam justifies provoking rage and grief on motivational grounds: 'because when people go through depression and rage they come out and decide to do things'. But these are risky techniques, especially when combined with 'stretching the truth' and recruiting naive participants.

Blogger and critic of XR 'Out of the Woods' writes: 'Laurence Cox has rightly pointed out that XR seek to position themselves as the only viable game in town, a move that simultaneously helps firm up their image and allows them to avoid critical scrutiny from the off'.

Cox is an Irish academic and author of *Why Social Movements Matter.* He posted a blog entitled "Dear XR why aren't you more honest with your participants?". It began 'When people ask me what I think of XR, my usual answer is that I'm worried it will be many people's first and last experience of ecological activism'. He draws a parallel with the history of XR and that of the (consequently much diminished) Social Workers Party, based on their "groupiness", and "the crucial importance of Their Way".

Cox captures some of the risks of Extinction Rebellion's method to both the efforts of the 'new climate movement' and wider civil society to radically ramp up efforts to fight climate change:

'Often there is little or no awareness within such organisations that other people have also been working on these issues for a long time, perhaps even with more success, and that there are other organisations and approaches both in one's home country and in the rest of the world. Part of the reason for this is a good one: that the organisation is bringing in new people, with little or no previous experience of activism, or who have been inactive for long periods. The downside is when the more experienced members allow or encourage the newcomers to believe that their way is the only way worth taking seriously, and not being honest with them about the crucial question: "how can we know what will actually work?"

Raising this sort of question about XR does not mean taking the climate crisis lightly, refusing to engage in radical action, or being hostile to new approaches. The climate strikes, for example, have mobilised far larger numbers of people, on a far more international scale, but do not run these same risks. For a start, they don't involve the claim that this is the only way to resist climate change or to force political action. The strikes are not scrupulously branded, but involve the participation of a wide range of different organisations. And while their participants are in many cases equally new to activism, the school students at least can be expected to learn as they go, and eventually move into other forms of struggle'.

Cox describes XR's 'trainings' as 'telling people how to do things "the XR way"'. He points out that although XR frequently cites the Irish abortion referendum in support of its call for UK Citizen's Assemblies: 'no XR person I have talked to has had any sense that defeating the 8th Amendment took a 35-year struggle involving feminists, LGBTQ+ activists, liberals and the left, culminating in several years of radical direct action on the issue'.

[He also points out that the Irish political parties only set up the Assemblies as a way of getting difficult issues off their desks but this also shows that it is possible to secure such Assemblies without resorting to revolution, which ought to be food for thought for XR in the UK].

Cox also relates how 'mostly parents and well-educated' 30-50 year olds at an XR event came to ask him about achieving social change ('prompted by the Cool Kids'), his point being that all they knew was what XR had told them, and says XR:

'seem almost entirely ignorant that there might be more research about how social movements work, and what works in social movements, than the problematic piece of research that is frequently misrepresented [Chenoweth] as justifying their approach'.

Unfortunately in my view, you can say much the same thing about XR's blithe dismissal of NGO campaigns and politics in relation to change and climate change.

Some Of Extinction Rebellion's Own Explanations

'Key Elements'

"My claim is that the research I've done is some of the most important research in the world… at the moment we're facing existential crisis – one of those posh academic words for "We're all fucked and we're going to die" and if you're not aware of that then I suggest you look at the science."

That's the trail for *Key Elements In Radical Political Mobilisation* two RealMedia videos of talks given by founder Roger Hallam at Kings College in February 2019. It continues:

Roger Hallam is the author of the paper "Pivoting to the real issue"* which he produced in 2018 for the Rising Up! activist network.

It outlined a strategy to create a social movement to engage in mass direct action over the climate and environmental catastrophe.

This led to the formation of Extinction Rebellion and the largest act of civil disobedience seen in the country for decades when 6000 people occupied 5 London bridges.

Hallam covers six key elements across the two talks, which he believes can deliver success in the current climate of political degeneration. Part 1 covers "Truth", "Speech" and "Action". Part 2 (below) looks at "Dilemma", "Love" and "Sortition". His aim is to reconstruct the way we think about creating radical change, and to provide practical pathways to effective collective action.

*Pivoting to The Real Issue, written in January 2018, was not published but became Hallam's booklet *'Common Sense For The 21st Century: Only Nonviolent Rebellion Can Now Stop Climate Breakdown and Social Collapse'* now published by Chelsea Green and available in draft form at his website. There you can also find one of his standard talks, "The Time is Now".

Hallam's 'civil resistance model' is also explained in a chapter of *This Is Not A Drill, An Extinction Rebellion Handbook* published by Penguin.

Hard Talk

One of Hallam's most-watched TV interviews was on BBC's Hard Talk (August 2019), featuring his claim that six billion people will die from climate change. Transcript here. See also a BBC interview by Andrew Neil with Zion Lights, XR spokesperson, about the 6 billion claim. Transcript here. In it, Lights says "unfortunately, you know, alarmist language works".

Holacracy

In this video Bradbrook explains how XR UK works (as of 20 April 2019) as a series of 'holacratic' 'circles' (similar to groups, teams or committees). *She describes it as a "self organising system" of circles and mandates, including actions, political and media-messaging and movement circles and smaller ones within them such as community, along with the 'guardians' team (the 'heart' "where did we come from and where do we need to go" which sounds a bit like the board), a SoS team to sort out issues with other teams, and the "anchor circle" drawn from representatives of the smaller circles. In the video she also reiterates the 3.5% "win line".*

Rupert Read

In November 2018 Rupert Read (a philosophy academic from the University of East Anglia, Green Party candidate and another prominent figure in XR) gave a talk '*This Civilisation Is Finished So What Is To Be Done?*' at Churchill College in Cambridge to an audience of mainly students and academics ([video here](#)).   Read's take is more similar to that of Jem Bendell, with an emphasis on immersive despair.

It begins:

"so I want to start out by addressing the younger people in the room which is the majority of you younger than me … your leaders have failed you, your governments have failed you, your parents and their generation have failed you, your teachers have failed you and I failed you, and what I mean by that is that we have all failed to warn adequately and to prevent the dangerous climate change that is now here and that is coming and that is definitely going to get a lot worse … because of that failure I'm afraid for you. I have fear for you. I fear that some of you are unlikely to grow old ..".

He then outlines three possible futures *1. a transformed civilisation with renewables, less transport, eating etc, "radical" and "don't bet on achieving this"; 2. A 'post collapse successor civilisation' – "very likely to be best scenario"; and 3. 'total collapse' He also says James Lovelock talks about a few thousand breeding pairs of humans being left in Antarctica, or much worse, the impact of a 'methane dragon' runaway, and cites Jim Hansen as talking about the Earth becoming the same as Venus with the oceans boiling off.*

Read describes his involvement with the Greenhouse Facing up to Climate Reality project:

- "this waking up process is not particularly pleasant or easy – it may involve for example if you are willing to go through it, experiencing some despair. It certainly should involve you experiencing some fear, and a lot of sadness. If you are not sad about what's happening, if you are not afraid in the context of the kind of things I'm saying, then you're not paying attention".

"In fact we can go further. There's a wonderful new branch of ecology called eco-psychology. And what the eco-psychologists argue is that the despair, the fear, the sadness, the rage that we feel in this kind of context, is rational, and could even be described as a kind of consciousness arising from the earth itself, in the sense that we are feeling what we are doing to our beautiful planetary home, and those kind of feelings are appropriate. As I say if you are not feeling some of those feelings, if you are not feeling them right now, then there might be something wrong with you".

"So what the eco-psychologists say is don't as conventional psychology does, is focus on the individual that this person is sad, they need to be fixed – right ? Look at that individual and say 'ooh' this individual is feeling sad ooh that tells us something reliable … in relation to what's happening to the earth".

… So if you are experiencing bad feelings you are not alone and you may be more rational than people who are not experiencing those bad feelings".

He goes on to talk about seeking help from eco-psychologists or therapists and 'deep adaptation', Britain being unable to feed itself and the need to rethink freedom of movement. (Read gave a similar version to of the talk to school age children at UCL in London in 2019, leading to complaints from several climate scientists – see section on XR and science).

In July 2019 Read posted a very slightly more upbeat version of his talk as a [XR blog](#), promoting his new book *[This Civilisation is Finished](#).*

He writes:

It has been a huge privilege to be involved with Extinction Rebellion, for nearly a year now. For the first time in years I feel a growing glimmer of hope for humanity. Finally, we are seeing a mass mobilisation of people who are not willing to die quietly. An upwelling of people unafraid to call for the radical initiatives that we need to limit the scope of global overheating. As a spokesperson for Extinction Rebellion, I have been among those privileged to put the case for the action of our rebels to those [in the media](#) and [in Government](#)

In July 2019 Read also published a 'memo' [*Truth and Its Consequences*](#) to the Extinction Rebellion network, arguing for actions to be targeted at the wealthy and City Airport, full of business flights, rather than Heathrow. This seems to have been a departure from the Roger Hallam strategy.

XR Website and Youtube

There are also many XR videos on Youtube and a lot of material at the Extinction Rebellion (UK) [website](#). These include The Truth video [Part 1](#)) and ([Part 2](#)) presented by XR co-founder Clare Farrell.

Read and Hallam shared an Extinction Rebellion platform in Oxford in September 2019 ([video](#) and link to part 2) to debate its theory of change, targets for the October rebellion, the role of arrests, the media, and the drone controversy. (Long and detailed).

Rupert Read and Roger Hallam took part in a public discussion at the Byline Festival in 2019 ([video here](#)) where they discussed Jem Bendell's paper *Deep Adaptation*. Hallam said he found it "invigorating and annoying at the same time", while Read said that he agreed a social crash was the most likely outcome but was more optimistic than Bendell. Read says that a NGO person told him in April "you've achieved more in two weeks than we achieved in 20 years". But he adds (regarding Bendell) "it's not enough just do the doom – some of us have concerns about Jen Bendell's framing". Marc Lopatin, also speaking, says Roger Hallam is "the brains behind the theory of change".

The Time Is Now ([video](#)) – Roger Hallam's Penzance talk also at his website

[Mallen Baker interview](#) with Hallam – more relaxed and revealing than most of the material, for example Hallam explaining that he sees XR as a gamble

Media Strategy

In XR's handbook, *This Is Not A Drill*, Ronan McNern, XRUK's Media And Messaging Co-ordinator explains that: 'Our media messaging is based on research by Erica Chenoweth and Maria J Stephen, which demonstrates that to achieve social change the active and sustained participation of just 3.5% of the population is needed. It's that 3.5% that we want to engage'.

Germany and The Holocaust

Hallam's book version of *Common Sense*' was about to be published in Germany in November 2019 when he made some very ill-judged remarks about The Holocaust, leading it to be pulled by the German publisher, and disowned by Extinction Rebellion's organisation in Germany. Fortunately for Extinction Rebellion in the UK, this coincided with intense campaigning for the UK General Election, a major media story on Prince Andrew's tv interview about his friendship with disgraced financier Jeffery Epstein, and the start of the impeachment of Donald Trump.

Hallam [had told](#) the major German newspaper Die Zeit that "The fact of the matter is, millions of people have been killed in vicious circumstances on a regular basis throughout history" and, cited 'other mass killings in the past 500 years' such as the Belgians' slaughter in the Congo, in this context, the Holocaust was "almost a normal event … just another fuckery in human history."

Hallam had used the Holocaust as a reference in describing climate change before. In his 53 page paper *How To Win: Successful Procedures and Mechanisms for Radical Campaign Groups* (2016, for Radical Think Tank and something of a precursor for XR though with strategy differences):

'Whether we get things right or wrong over next 30 years is set to determine whether humankind emerges into a period of genuine post scarcity or reverts into war and savagery in the context of a degraded ecological environment. The impending climate holocaust presents the greatest political challenge in the history of humanity. It's the greatest challenge because unlike the nuclear threat, nothing needs to happen for it to come about.'

and in *Common Sense'* while arguing that government's are genocidal for giving continued support to the fossil fuel industry while knowing the consequences:

'The word genocide might seem out of context here. The word is often associated with ethnic cleansing or major atrocities like the Holocaust.'

This time though it seemed entirely gratuitous, as according to the report in The Guardian, he also said:

'Germans were being constrained by what he referred to as their obsession with the Holocaust, describing it as a national trauma the extremity of which "can create a paralysis in actually learning the lessons from it".'

The Guardian added: 'in the interview he repeated calls he has made in the past for the climate crisis to be treated with as much emotion as Auschwitz, the largest Nazi concentration camp, where 1.1 million people died. "Emotionality is the only way you can get people to do something," he said'.

The newspaper also reported that XR Germany '[accused Hallam](#) of "often paralysing" Extinction Rebellion's work through other controversial statements on sexism, racism and democracy, several of them made in interviews with German media' and called for his exclusion'.

Hallam said he'd been taken out of context and [subsequently apologised](#). Extinction Rebellion UK "unreservedly denounced" Hallam and then began a 'restorative process' regarding his comments. Its Third Update, following a meeting of a range of XR groups in Bristol on 15 December, was released two days before Christmas [on 23rd December](#) 2019 'in the spirit of transparency'. It said that 'agreement has not been reached on next steps, and in the meantime Roger Hallam is continuing to pause engagement with the media'.

Hallam made a public appearance on 17 January 2020 [speaking at the World Web Forum](#) in Zurich (video at XR website).

Encouraging Climate Grief And Despair

Extinction Rebellion did not invent or discover 'climate grief' or 'climate anxiety'.
In 2007 following a report on growing 'eco-anxiety', Kate Sheppard [wrote a *Grist*](#) article titled, 'Somehow, I don't feel that bad for you':

'Symptoms: Generalized discomfort and stress related to the future of the world and possibly your personal role in said future.

Ways to fight it:

1. *Blame "the media."*
2. *Blame the IPCC.*
3. *Spend lots of money on an "eco-therapist."*
4. *Carry around minerals.*
5. *Buy greener stuff to make yourself feel better'.*

But XR may be the first significant movement to organise itself so as to actively encourage climate-grief for strategic and tactical purposes. One NGO person described it to me as the "dark side" of XR. (In the later section on science, I come back to the specific issue of encouraging despair through 'gloom-picking' the science).

It's not hard to find climate change alarming and depressing, when you first realise it's full implications. I well remember hitting the wall of horror when I first really appreciated the scale and consequences while attending the Toronto Conference in 1988.   Like other environmental campaigners I'd been working on such gloomy topics as acid rain, forest decline, pesticides, destruction of the British countryside, destruction of rainforests, toxic chemical pollution and damage to the ozone layer. They all invoked the same question: how could people just carry on as normal when these were so awful?   It's just that climate change was much bigger.

At the time I was consultant to Greenpeace International and on the way home I went to see Steve Sawyer in Washington DC. He was Executive Director of Greenpeace US at the time and about to take over as head of the international organisation. Sawyer sat and listened impassively as I did my best to outline what the scientists were saying and what I thought it could mean. At the end of about 15 minutes he simply said "so this is global ecological meltdown?" I said "yes", or words to that effect.

Sawyer went on to run Greenpeace International and then worked tirelessly [until his death last year](#), promoting the development of wind energy, not least in China. He's one of those who XR has wrongly described as having 'achieved nothing'.

I can't hold a candle to the achievements of unsung environmental heroes like Sawyer but one thing we had in common, which many other people lack, was the good fortune be in a position where we felt we could make a difference. A bit like emergency service workers who become partly but never fully inured to dealing with people who they sometimes 'lose' in a days' work, we had already fought and lost more battles than we had won in the 'planet saving' business.   So when climate change appeared it was bigger and 'the sum of fears' but not altogether novel or unexpected.

The fact that the world continued on a Business as Usual basis even though an apocalypse bore down upon us, and 'nobody seemed to notice', was for us, itself business as usual. I've still got a collection books from that period which my partner calls "the suicide shelf".

So Sawyer and I spent the next 30 minutes or so talking about small island states and what 'we' – given Greenpeace's particular assets and resources - could do to try and help tip the world into an effective political response.

The blogosphere around XR is full of very different stories. People who have hit the wall much more recently, and felt despair and powerlessness in the face of impending environmental Armageddon. If

for them it's the first time, it's awful and isolating. It can also lead to delusions, especially if prompted into it, for example by being told that 'nobody is doing anything' and 'nothing works' when that's untrue. It risks a different sort of climate runaway: one of confirmation bias.

The upside argument for exploring climate grief is captured in this FT article Extinction Rebellion: inside the new climate resistance, in which the writer, Matthew Green, talks to Gail Bradbrook and Jem Bendell, and people who took up with XR after reading his paper '*Deep Adaptation: A Map for Navigating Climate Tragedy*' and experiencing the summer 2018 Great Northern Heatwave. Green wrote:

'*Far from retreating into depression or apathy, Bendell noted that his mature students, when discussing his findings in a supportive environment, tended to experience "a shedding of concern for conforming to the status quo" and a new creativity about what to do next*'.

He also quotes psychologist Alison Green from Cambridge:

It began with the heatwave. Green noticed that the leaves of the plane trees on the Cambridge commons were parched and brown. The tarmac outside her house started to melt and the earth at her allotment was baked so hard she couldn't get a fork in to turn it. The water pumps ran dry. Seeds she planted refused to germinate, and seedlings she coaxed out of soil in cardboard boxes on her dining table died within a few days of planting out. The fields seemed empty of crops. "It was scary," Green says. "And no one was talking about it."

But the heatwave did make the front page of *The Sun* newspaper in July 2018.

For me the confirmation of climate change back in 1988 was deeply sad. From my youth as a child in love with birds I had always dreamed of going to the Arctic to see where wild birds I saw only in winter, had spent the summer in a 'pristine wilderness'. Now I would never be able to go there without it being a place consigned to an almost certain decimation.

I've still not been to the Arctic, fearing it would be too painful, and knowing I would only add to the problem unless I sailed there. I'd see signs of climate change everywhere.

Of course I also see them close to home. Indications of familiar ecosystems stressed and falling apart: the 'great thinning' of nature in the English countryside due to chemical farming and climate change, from bumble bees vanishing because it's simply too hot, to nightingales lost from the spring chorus because perhaps, their migration routes to and from Africa are disrupted, to the non-appearance this winter, of formerly familiar visitors such as millions of starlings, fieldfares and redwings which have not bothered to cross the North Sea from frozen Europe, as it's not been frozen. Almost every day I walk my dogs along the marsh at Wells Next the Sea, where I see signs of sea level rise. I know this presages much more change for the worst.

The bigger part of my own response has been to continue trying to engage people in nature, and to try and attack the causes of climate change, such as stopping the use of fossil fuels. It's something you can do individually and by joining bigger efforts. To my mind, the best political reaction that protests, NGOs or movements can offer, is that: a way to make a difference, or 'agency', open to everyone.

Some in XR have tried to exploit 'hitting the wall' (most obviously – 'your children will die') to recruit people to the rebellion (Hallam) or to find personal accommodation (Bendell) but I find the calculated use of gloom and grief magnification troubling in itself.

In my opinion, rather than encouraging people to accept 'the inevitable', we'd be doing more for our children by improving the future. The worst is not inevitable, and the strategic danger is that a fight against eco-grief becomes a therapy-substitute for action against actual climate change. The individual risk is that people drive themselves into a spiral of anxiety and depression, and quite possibly into the hands of unsuitable 'therapists' (it's a very unregulated business in the UK). If some of those 'therapists' see their role to encourage strategic use of grief, that's magnifying the risk to individuals. In the case of XR and the 3.5%, it may also be predicated on a faulty theory of change.

Climate Anxiety Pre-XR

The relationship between mental anguish and effective climate action was already a topic of debate before the emergence of XR. Julie Beck argued in Constant Anxiety Won't Save The World (Atlantic Magazine, 2017) that 'anxiety is not a pre-requisite for action'.

She wrote:

'When New York Magazine published a story about the apocalyptic dangers of climate change last month, it was shared widely, and with alarm. People tweeted things like "Read this and get very, very scared," or otherwise prescribed fear and worry as the appropriate reaction to the piece. They were mimicking the tone of the story itself, which starts by saying "It is, I promise, worse than you think," and goes on to avow that "no matter how well-informed you are, you are surely not alarmed enough."

This weirdly suggests that there is a level of alarmed that would be "enough." Enough for what? Even if the goal is to alarm people into action, there's a disconnect here: Anxiety is not a necessary prerequisite for action.'

But in 2018, XR had a use for that: driving people into the tunnel to rebellion. 'You are surely not alarmed enough' is almost exactly the script used by Hallam and others in XRUK.

Beck adds:

'… with its explicit call for anxiety, and the calls for anxiety it inspired among people who shared it. While the intentions might be good, moralizing worry distracts from the real goal by turning people's attention inward to their own emotional states, rather than outward onto the problem.'

She quotes Renee Lertzman on anxiety-sharing social media posts which create a 'whirlpool-in-a-bottle' effect just as outrage-sharing does (the metaphorical 'bottle' being a container created by social media 'bubbles'):

'These sort of posts are "a way of managing anxiety for those who are feeling deeply anxious," Lertzman suspects. "When we're anxious and we're scared, we want others to feel it too. It's contagious."'

Lertzman is an environmental psychologist. She is author of *Environmental Melancholia: Psychoanalytic Dimensions of Engagement)* and according to a 2017 article in Grist by Eve Andrews, 'Climate anxiety doesn't have to ruin your life. Here's how to manage it', Lertzman advises against 'trying to aggressively convert others to a particular course of action'.

In 2016 and 2017 the same magazine reported a nine-step programme like Alcoholics Anonymous but for climate anxiety, from the Salt Lake City support group "Good Grief".

Andrews also writes about Margaret Klein Salamon, a psychologist and founder of the Climate Mobilization' who says "The truth is: This is really fucking terrible", and has abandoned a career in psychology to push 'for a World War II-era mobilization to drastically reduce emissions'.

Lertzman and Salamon use similar therapy-sourced psychological techniques to some of those proposed in the UK and have a similar narrative about 'truth' to XR (or vice-versa) but are much more explicit about mobilising to enact solutions as well as a need to change 'the system'.

Video at https://www.theclimatemobilization.org/solution

This climate mobilization 'solutions' video mainly takes a 'progressive' perspective but does feature born-again Baptist Republican Mayor of Lancaster California, Rex R Parris, and at least Climate Mobilisation is explicit about there being achievable solutions. A common thread is that we – our communities – are "under attack" from climate change.

There's lots more. See eg depressed climate scientists, a 2012 report from the US National Wildlife Federation The Psychological Effects of Global Warming on the United States: And Why the U.S. Mental Health Care System is Not Adequately Prepared, Naomi Klein's book, *This Changes Everything: Capitalism vs. The Climate* , and this analysis of the 2019 'climate change episode' of much-watched hbo drama Big Little Lies, centred on the adult-vexing conundrum of how to talk to children about climate change.

I like [this advice](#) from an actual eight year-old.

"Adults shouldn't be like, ahhguhhhahh!!" she said. Rather, our explanation of the planet's woes should be delivered calmly. She advised parents: "Say 'We can change the future if we do this and this.' If they say it calmly instead of acting like it's something that we can't change, then we learn to do what we can."

Advice which I think XR could act on.

Therapists and Climate Scientists Are Not Public Strategists

Finally, I would be cautious about building strategic public campaigns for change based on what can work for individuals in therapy. Many of the techniques used by this movement stem from addiction treatment. I'm not an academic expert on that but from 2001-5 I did a lot of work for the UK government on communications within the drugs and alcohol strategy. 'On the ground', most of that was about enabling treatment to work. At the most general 'highest' level it was about national 'conversations'. The 'strategy' made sense in terms of reducing social harm and cost to individuals and society but it sat under a political 'reality' which was that most politicians saw these as (politically) insoluble problems which could only be managed.

What worked at the therapy treatment level did not provide many actionable insights for what might work socially and politically at scale. Nor did it offer many for anyone wanting to change the politics of the issue.

But the public discourse (in those days mainly in the 'old' media) often featured therapists, high-empathy individuals (eg relatives of drug 'addicts') and lower-empathy individuals (eg 'addicts' with chaotic lives), along with other individual 'practitioners' (eg police). Naturally 'the media' often approached the issue through individual stories. And the individuals usually projected their own professional or personal insights, to answer seemingly simple questions like "what's the solution?" and "should we legalise drugs?".

In the UK system, the officials with long experience in the issue, were of course civil servants and forbidden from public speaking on 'policy'. The Ministers they served, rarely had any personal experience (or not that they wanted to talk about) and no professional expertise. Most of them just wanted to avoid scandals and mistakes and move on to a more rewarding role as soon as possible. There were exceptional politicians, and of the public servants who could speak in public, the best informed and realistic were often from the police, including many 'legalizers'. But overall this made the system sub-optimal.

Without getting further into the detail, it seems to me that there are now many similarities between this and today's climate issue. In the search for storytellers and simple truths, the media and political system (and often NGOs) project the views of climate scientists on 'what should be done'. In a hard-to-communicate subject, climate scientists appear to be at 'the front line', in the same way as a 'hands on' drugs therapist is at the 'coal-face' of that issue.

Therapists, drugs workers or addiction experts may know little about designing national policies that are workable, especially if that's about how to change the 'politics' of drugs and alcohol. Likewise a climate modeller is not equipped by professional training to know how to affect change, for example in our energy system or land-use, any more than a landowner, farmer, engineer, economist or campaigner would know what sort of climate model we need or how to build one. And the less you know about a field, the more prone you are to unfounded pessimism, as well as unfounded optimism.

Of course the fields of expertise can 'meet in the middle' through well-designed processes, and there are individuals who build expertise or wisdom in several relevant fields. Plus institutes, think tanks and some NGOs are vehicles to acquire, aggregate and retain such multi-discipline knowledge, or should be. But one thing I'm fairly sure of is that in most cases, fronting up therapists as campaign strategists for climate change is not be a great idea, and in reverse, therapy probably does not hold 'the answer' for effective climate strategy.

Part 5

Nobody Is Doing Anything: Nothing Is Happening

One of the things Greta Thunberg and Extinction Rebellion agree on is that nobody is doing anything about climate change and 'nothing is happening'. We have a climate emergency but nobody is responding.

Hence the first of Extinction Rebellion's three demands (in the UK) that government should 'tell the truth' and declare a climate emergency, 'working with other institutions to communicate the urgency for change'. The other two demands are also levelled at the UK government: zero carbon by 2025 and effective replacement of parliamentary democracy with Citizens Assemblies to bring the second demand about.

I agree that not enough is being done to avert climate catastrophe but not enough is not the same as nothing. Saying that nothing is being done, and nothing NGOs and governments have done has worked, is wrong and ultimately counter-productive .

'Abject Failure'

In his interview with Mallen Baker in 2019, Roger Hallam explained: "Over the last 30 years the worlds elites have been telling us they've got the matter under control and the irreducible fact of the matter is that carbon emissions have gone up" and [37.01] "we're off the scale in terms of abject failure and that's one of the big starting points of extinction rebellion".

Is it really true that the worlds elites have been "telling us they've got the matter under control" ? In fact some members of the world's elites have spent a lot of time telling us it's *not* under control.

For example in 2006 Tony Blair and the Dutch Prime Minister told EU leaders meeting with Vladimir Putin that the world faced a "catastrophic tipping point" over climate change. And 'failure to act would affect economic growth and long-term energy supply and would cause conflict and insecurity'.

In 2009, assigning £800m contribution to a £13bn Copenhagen Launch Fund to help 'halt deforestation, build flood defences and boost renewable supplies in the developing world', PM Gordon Brown declared a climate emergency. The Guardian reported:

The prime minister said …the collective power of the Commonwealth must be brought together to tackle a new historic injustice, that of climate change. We face a climate emergency: we cannot wait until 2013 to begin taking action"

Before them, Conservative Prime Minister Margaret Thatcher said in 1988: "we have unwittingly begun a massive experiment with the system of this planet itself". She warned of "a global heat trap which could lead to climatic instability" and said "it is noteworthy that the five warmest years in a century of records have all been in the 1980s". A year later she was at the UN calling for a new climate change convention.

And that's not to mention Al Gore and many others. But in the alternative world of Extinction Rebellion, that never happened, perhaps because it would spoil the story if the likes of Thatcher, Blair and Brown had all sounded the climate alarm long before XR was born.

The XR Handbook (2018) states [my emphasis]:

'Conventional campaigning has failed. Carbon emissions have increased by 60% since scientists first warned of ecological collapse in 1990'.

But this refers to global emissions. In the UK, where XR-UK is based, where it is 'rebelling', and whose government it holds responsible for 'committing a crime against humanity' for failing to take emergency action, emissions have actually fallen significantly since a peak in 1973.

In it's much-watched 'The Truth Part 1' video XR states that there has been no 'meaningful' action.

FACING REALITY – LACK OF ANY MEANINGFUL ACTION

First IPCC report was in 1990 – 28 years ago

UN warned us then to keep temp rises to 1°C or face societal collapse

CO_2 levels 60% higher than in 1990

Still rising, methane even more so

At some point soon we can't reverse problems - they runaway from us
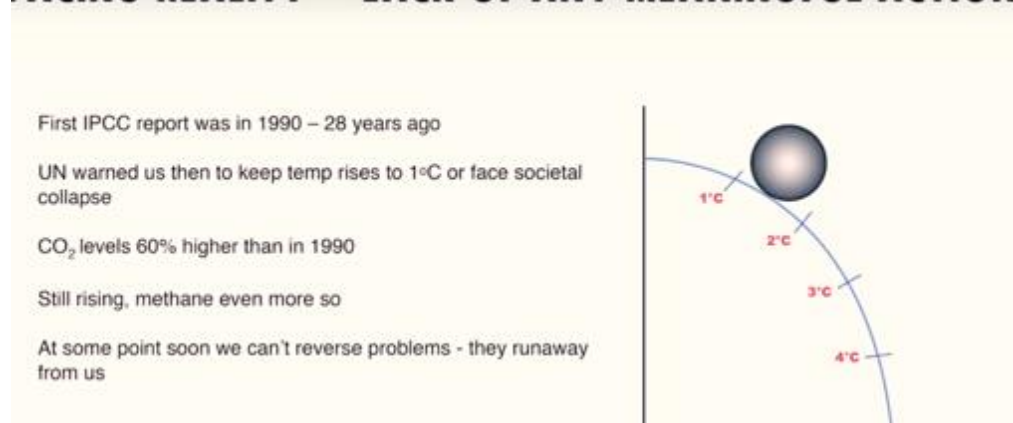
XR video

The presenter Clare Farrell states that "the government [ie UK government] is not doing anything meaningful" and details a long list of bad things happening under the current government's watch.

But it's not made clear that the figure given for CO2 refers to global emissions and in fact UK emissions have been cut by government action, which would complicate the story.

Extinction Rebellion's communication amounts to systematic solutions-denial. It gives an unrelenting impression that nothing is being done.   Referring to rising CO2 levels, during a talk in Penzance, Extinction Rebellion founder Roger Hallam said in 2019:

"there is no call to action, nowhere to be seen or heard. There is only talk interspersed with token dabbling in electric cars and solar panels and wind. The hard fact is fossil fuels were 80% of energy sourcing 50 years ago. Fossil fuels are 80% of energy sourcing today. Where's the change?"

Is that true? See later.

In August 2019 Hallam said on the BBC

"we have come to the point where something drastic has to happen. And nothing is happening and that means we have to start breaking the law in order to make change happen" and …

"things are happening, but they're not and billions of people have realized that the governments have been lying for the last 30 years and the elites have been lying and the experts have being lying and the reason they've been lying is because they've said that carbon emissions will go down and they're going to act to make sure they go down, but they haven't - they've gone up 60 percent since 1990 and they're still going up".

Hallam and Extinction Rebellion paint a picture of total failure and make a point of rejecting 'gradualism' or 'incrementalism', which appears to include anything that is not government-overthrow.

In his booklet 'Common Sense For The 21st Century" (2019), Hallam writes:

'NGOs, political parties and movements which have brought us through the last thirty years of abject failure – a 60% rise in global CO2 emissions since 1990 – are now the biggest block to transformation. They offer gradualist solutions which they claim will work. It is time to admit that this is false, and it is a lie. They therefore divert popular opinion and the public's attention and energy away from the task at hand: radical collective action against the political regime which is planning our collective suicide.'

Hallam makes no bones about the conclusion he wants his audience to reach: the only answer is to join his rebellion. In the Extinction Rebellion world view, 'positivity' is an impediment to progress because it is an alternative to revolution. When in 2018 the proto-Extinction Rebellion in the form of Rising Up! visited Greenpeace (see below), one of its demands was to drop positivity.

Aside from some annoyance at the dismissal of many thousands of people who have given their all to try and 'do something', this claim surprised me. It is of course true that nothing like enough has been achieved or is being done but is it right that nothing has worked? No it's not.

What Has Really Happened ?

Analyses published by Carbon Brief show that the overall UK carbon footprint including emissions 'imported' by trade was at its lowest level for 20 years in 2016, having fallen 10% since 1997, that renewables generated more electricity than fossil fuels for the first time in 2019, that in 2018 primary energy use was the lowest in half a century, and that UK land based carbon dioxide emissions were 51% less by 2017 than they would have been if nothing had been done, had we had remained on a Business as Usual path since 1990.

In relation to its obligations under the Climate Change Act, UK net emissions of greenhouse gases (expressed as carbon dioxide equivalent) have dropped 42% since 1990.

Figure 1: Net greenhouse gas emissions on a Climate Change Act basis were 460 million tonnes in 2017

Net greenhouse gas emissions on a Climate Change Act basis, UK, 1990 to 2017

— 2050 net zero target   — Climate Change Act basis

Mass of air emissions per year in million tonnes of carbon dioxide equivalent (Mt CO2e)

Net emissions in 2017 were 460 million tonnes

Reducing net emissions to zero will potentially require between 75 to 175 million tonnes of emissions removal by carbon capture and storage according to the Committee on Climate Change

ONS Net Zero release July 2019

However as Greta Thunberg pointed out when she accused the UK government (and others) of 'creative accounting", if you take into account shipping imports (ie emissions 'exported' as the UK is bringing in goods, for example from China, where the emissions are counted as Chinese, and those from aircraft emissions, then the 'true' reduction is about 10% [from 1997 when those calculations were first made, to 2016]. This is reflected in Anne Owen's carbon footprint analysis in a blog posted at Carbon Brief.

The UK's carbon footprint is at its lowest level for 20 years

But consumption-based emissions have fallen more slowly than domestic CO2

— Consumption emissions   — Territorial emissions

1998
Territorial emissions
620.1MtCO2
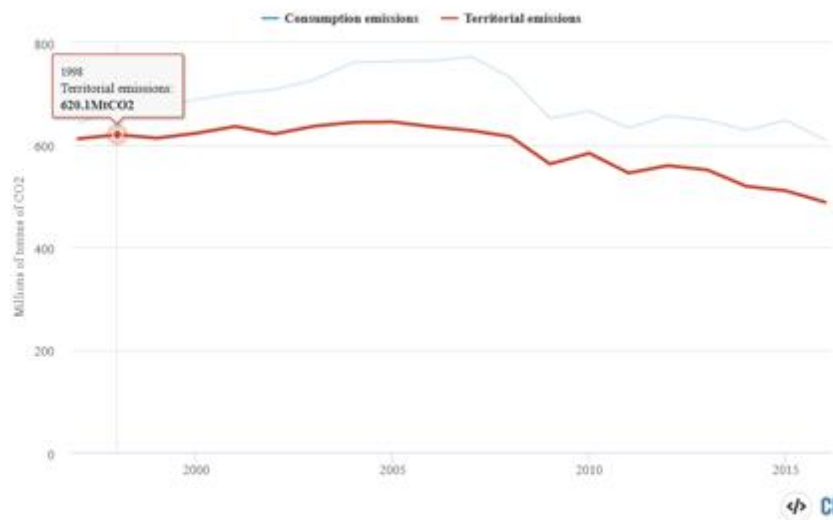
The UK's consumption-based carbon footprint (red line) compared to its production-based emissions (blue) during 1997-2016, in millions of tonnes of CO2. Source: University of Leeds estimates for Defra. Chart by Carbon Brief using Highcharts.

Analysis of UK carbon footprint by Anne Owens and John Bartlett at the University of Leeds (Carbon Brief, April 2019). Territorial emissions means greenhouse gases emitted directly from the UK itself.

Owen and Bartlett's studies show that the total UK footprint including 'imported' carbon is going down, not up. This is mainly due to UK policy actions but also to decarbonization in exporting

countries (less carbon 'embedded' in exports), the increased importance of services in the economy, and changes in household 'needs' (consumer choices).

Seeing as the UK government also funds the analysis by Owen and Bartlett, it is perhaps more accurately accused is guilty of creative 'presentation' rather than 'accounting' but a 10% reduction is very different from a 60% increase. By repeatedly linking the global 60% figure to attacks on the UK government for doing 'nothing', XR could also be accused of creative presentation, and may well have misled many people into thinking that UK emissions are increasing when they are falling.

Household and Individual Level Actions Do Make A Difference

Anne Owen has also unpicked the detail behind the UK's shrinking carbon footprint. An interesting feature is that she detects the 'signal' of changing household needs in driving carbon emissions. In other words, choices made at an individual or family level. It is not the largest driver but before the recession starting in 2008, it was a factor reducing the footprint because as households got richer, they spent more on lower carbon goods or services (such as a trip to the cinema). During the recession they prioritised things like transport and heating. After the recession 'changed need' once again became a force squeezing the footprint.
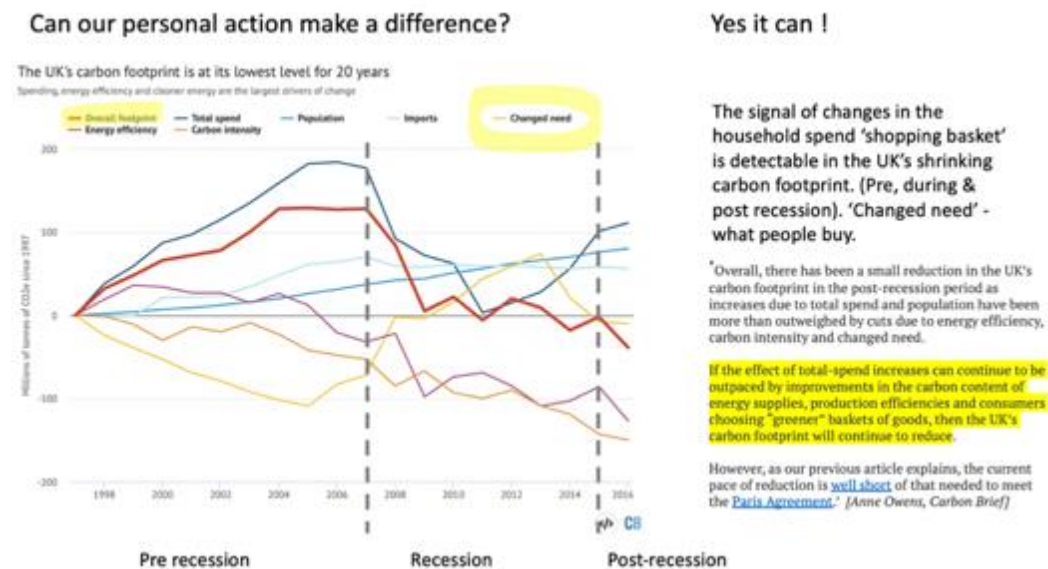
(Slide from talk at Coastal futures 2020, incorporating graphic from Carbon Brief)

Anne Owens explains

"The best way to interpret the chart is to imagine each of the lines as meaning – this would be the emissions if each of the other factors remained at the 1997 levels.

So the blue line shows that 'total spend' is the largest positive driver of UK emissions, and if the population, emissions intensities etc etc all stayed at 1997 levels and only total spend changed, the UK's footprint would have been a lot larger than the result we see today. Fortunately, there have been negative drivers, such as efficiency improvements which have had a reducing effect and brought the total down (the actual footprint is the red line).

So similarly the effect of changing needs can be interpreted in this way. During the recession the proportion of household spend shifted towards food and fuel. Households were not necessarily spending more on food and fuel, rather the share of spends on these items was a higher proportion of their annual budget than previous years. And this has the effect of increasing emissions (or rather it would if all the other factors remained at 1997 levels)".
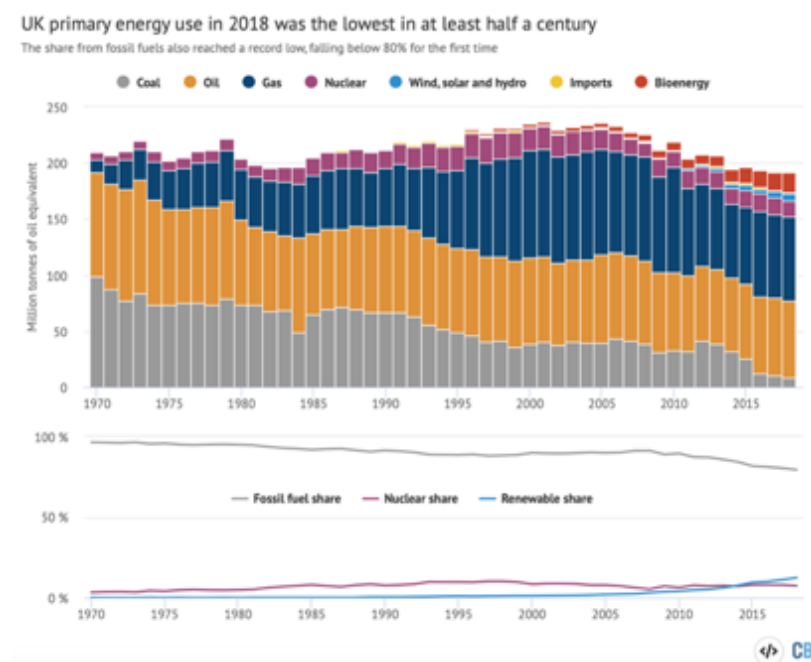
It's often said that nothing an ordinary individual can do can make a difference to climate change, and by extension, action by individuals as a whole, can't make much difference. This is particular favourite of some who don't like 'consumer campaigns', which in turn is often because they see 'consumption' or 'capitalism' as the true demon. But Owen's work suggests this is not the case and if you stop and think about it, it ridiculous to think that individual decisions could not have an effect. Many areas of life include individual, unregulated choices which make a big difference in the aggregate.

Flying is one example, and another is the global trend to buying SUVs rather than smaller cars, which according to International Energy Agency data analysed by Transport and the Environment, was the second biggest reason for a rise in global carbon emissions between 2000 and 2018. Individual emission-reducing action has not been part of the XR narrative and it is not very 'revolutionary' but they are within the power of individuals and give personal self-agency. If the 'new climate movement' and mainstream NGOs are not going to organise it, then a new complementary movement to maximise such domestic action needs to exist alongside the 'rebellion' (see Conclusions).

'Fossil Fuels: Where's The Change ?'

What about Roger Hallam's "hard fact" that 80% of energy is sourced from fossil fuels and that was the same 50 years ago, so "where's the change?".

It's unclear if he means globally (according to World Bank figures, the global proportion declined about 5% from the 1970s to around 80% in 2015) or in the UK but government data analysed by Carbon Brief shows that while he's right that 79% of UK 'primary energy' (everything, not just for electrical power) was from fossil fuels, this was a record low. Add up the fossil fuel segment in the Carbon Brief chart (interactive at the website) and it shows that in 1970, 96.5% of UK energy was sourced from fossil fuels – so it dropped 17.5% between 1970 and 2019.

UK primary energy use in 2018 was the lowest in at least half a century
The share from fossil fuels also reached a record low, falling below 80% for the first time

Top: UK primary energy use by source, millions of tonnes of oil equivalent (Mtoe), 1970-2018. Bottom: Shares of UK primary energy use (%). Note that this measure tends to exaggerate the contribution from fossil fuels, since much of the energy contained in coal, oil and gas is wasted as heat during combustion*. Source: DUKES 2019 Table 1.1.1. Chart by Carbon Brief using Highcharts. (* About half

64

the energy in gas is lost as heat if it is used to generate electricity in a thermal power station, and two thirds of that in a coal fired power station, against about 1% in renewable generation, so the fossil fuelled section is about half as 'useful' as it looks).

On this evidence it's not a "hard fact" that there has been no change: that's simply wrong. What constitutes 'fossil fuels' has changed, and with it, the carbon emissions.

The chart above also shows that peak total use of energy in the UK was in 2001 and it has been declining since, despite continuing economic growth, due to decoupling of energy from economic activity (efficiency).

Primary Energy Use in the UK (read from Carbon Brief/BEIS UK gov data)					
year	1970	2001	2018		
percentages					
coal	47	17.2	4.4		
oil	44	32	35.8		
gas	5.4	40.3	39.2		
nuclear	3.3	8.8	7.4		
imports	0	0.4	0.8		
bioenergy	0	1.1	9		
renewable	0	0	3.4		
* wind, solar, hydro'					

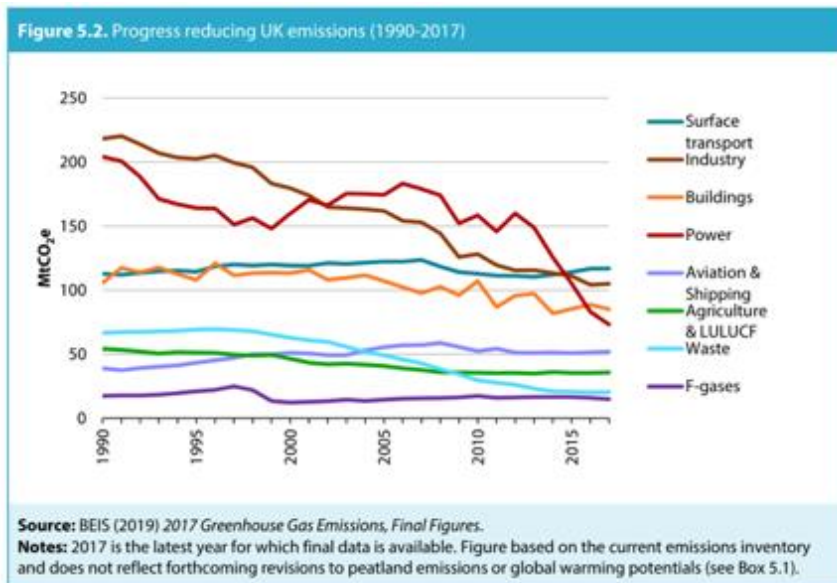*Example years*

In addition, in 1970 the UK population was 56m and in 2018 it was 66m but despite this 10m increase, both total energy use and carbon emissions fell (see Owen's carbon footprint analysis). The chart also shows the near-elimination of coal, the most carbon-intensive of the fossil fuels, the growth and then much slighter reduction of ('natural') gas**, and relatively little change in oil. The main reason for the last is the lack of progress in reducing oil use in transport.

(**North Sea 'natural gas', mainly methane, was discovered in 1965. The conversion of millions of household gas supplies (formerly using 'town gas' made from coal) started in 1968 and was completed by 1976, in a government directed campaign. This involved 'converting 40 million appliances reaching a peak of 2.3 million a year in the 1970s'. This had the effect of reducing carbon dioxide emissions).

Carbon emissions have more dramatically than the overall reduction in fossil fuels because for each unit of energy they yield, coal releases about 100 units of carbon dioxide, petrol or diesel release about 70 units and natural gas releases about 50. This is why gas was seen as a 'bridging' fuel, buying time to develop renewables but now that time has run out.

The official UK Committee on Climate Change details the emission reduction challenge in Net Zero: The UK's contribution to stopping global warming (May 2019). The main sectors where the UK needs to rapidly rack down emissions include transport and domestic heating.

Figure 5.2. Progress reducing UK emissions (1990-2017)

Source: BEIS (2019) *2017 Greenhouse Gas Emissions, Final Figures.*
Notes: 2017 is the latest year for which final data is available. Figure based on the current emissions inventory and does not reflect forthcoming revisions to peatland emissions or global warming potentials (see Box 5.1).

The obvious 'next step' is to replace gas and petrol /diesel in heating and transportation, with electricity or hydrogen.

Post 1973 UK carbon emissions fell because of increased energy efficiency, and replacement of oil and coal partly due to Mrs Thatcher's war on coal mining, with nuclear, gas and renewables. In the past decade renewables have eaten into emissions from gas and have been a significant downward driver. Policy agreed by the UK as part of its membership of the EU has played a huge role, including directives aimed at cutting acid rain, cutting climate-changing emissions, and at increasing renewables generation.
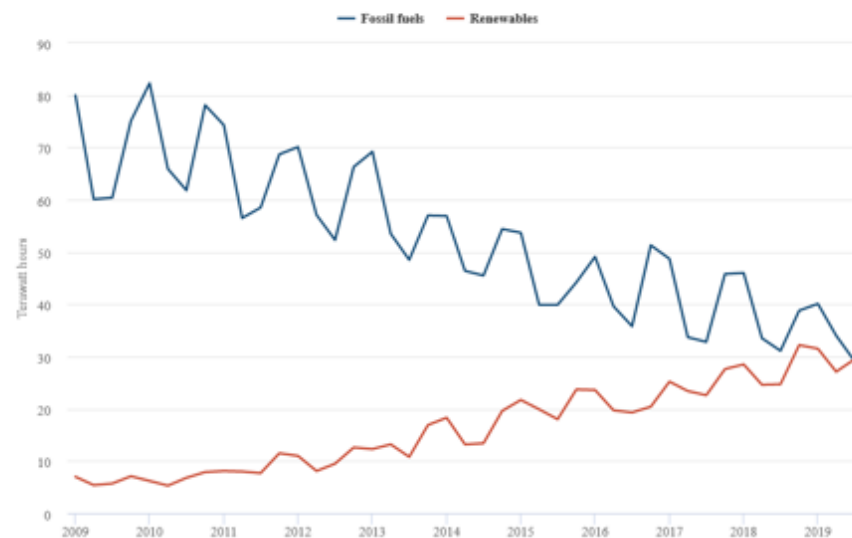
UK Renewables

When I'm not staring at a screen, if I look out from my office window I can see the horizon of the North Sea. Back in 2001 it was uninterrupted water, lit at night only by the twinkling lights of some passing ships. Now on a clear day, you can just make out hundreds of wind turbines. And on a clear night, the entire distant horizon is studded by rows of synchronous winking red lights. The first wind farm 'near' to us is Sheringham Shoal. It was built in just four years (by a consortium involving Statoil) and became operational in 2012. It supplies enough electricity for every house in Norfolk, and now, it's far from the largest in this area. So it seems to me that something has been done. Is it just a token effort, like the little solar pv and thermal panels on our own house ? Apparently not.

Here's a chart of the contribution of fossil fuels and renewables to UK electricity, from an October 2019 analysis by Simon Evans of CarbonBrief (visit the article for an interactive timeline graphic).

UK renewables generated more electricity than **fossil fuels** for the first time
The third quarter of 2019 was the first ever to see this switch

Simon Evans writes:

'This is the first-ever quarter where renewables outpaced fossil fuels since the UK's first public electricity generating station <u>opened in 1882</u>. It is another symbolic milestone in the stunning transformation of the <u>UK's electricity system</u> over the past decade'.

The dramatic increase in the use of renewables to generate UK electricity is a direct result of government policy including as a result of agreeing to EU targets, and the efforts of campaigners (Greenpeace for instance has been running renewables campaigns since 1991).

No one government or political party can take credit for what has happened. The first UK commercial wind farm opened in 1991 and more have followed under every government since (<u>story here</u>). All these governments would be condemned as 'neoliberal' by Hallam and Extinction Rebellion. Yet decarbonization of UK electricity generation has been the <u>fastest</u> among 25 major economies. Hallam <u>calls</u> the UK government "the carbon corporate state" but it has proved it is capable of moving to decarbonize, albeit still too slowly and only partially. [Why was there a focus on CO2 emissions from electricity generation? For a number of reasons. It was the biggest source, it was replaceable by renewable technology and efficiency even in the 1980s (and often at negative cost), and the initial targets adopted by governments did not require (although it was soon apparent that they should) wholesale decarbonization of the economy. What we see now is the result of a series of decisions taken over decades].

Not Business As Usual

Carbon Brief's <u>Zeke Hausfather analysed</u> how the UK's carbon dioxide emissions fell (on Carbon Brief's estimate) 38% from 1990 to 2017. Most of these changes were directly driven by government policy, mainly in the electricity generating sector which (still)accounts for about 80% of total UK carbon dioxide emissions.

- UK CO2 emissions are 38% lower than they were in 1990.
- Emissions would have been twice as large today if underlying factors had not changed. Electricity-sector emissions would have been nearly four times higher.
- The largest driver has been a cleaner electricity mix based on gas and renewables instead of coal. This was responsible for 36% of the emissions reduction in 2017.
- The next largest driver is reduced fuel consumption by business and industry, responsible for about 31% of the emissions reduction in 2017.
- Reduced electricity use – mostly in the industrial and residential sectors – was responsible for 18% of the emissions reductions.
- Changes in transport emissions from fewer miles driven per capita and more efficient vehicles accounted for around 7%.
- Domestic emissions reductions were largely offset by increased CO2 embodied in imported goods until the mid-2000s. However, reductions since around 2007 have not been offset by CO2 in imported goods.

Box: Carbon Brief 2019

So it's not true that nothing 'meaningful' has happened and 'nothing has worked'. Within the UK, policy action has 'bent the curve'. Hausfather wrote: 'overall, emissions in 2017 were 51% lower than they would have been without these changes'. The factors are shown below:
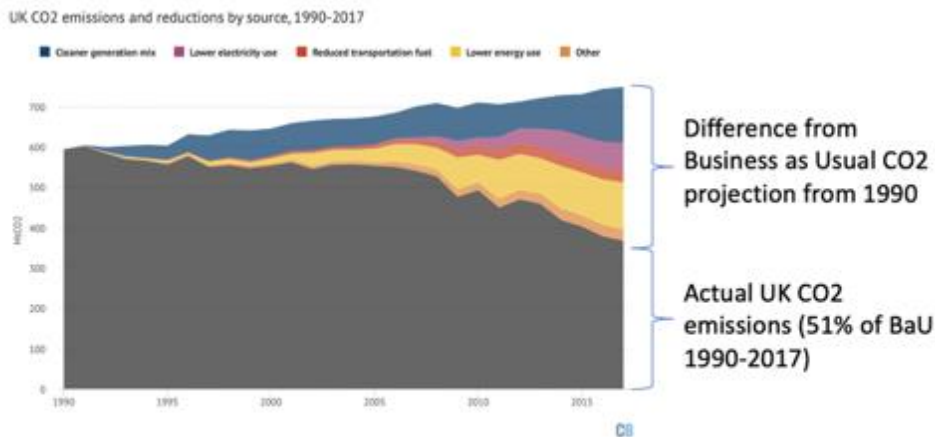
Annual UK CO2 emissions (in million tonnes) from energy in black, with estimated reductions by sector shown by coloured wedges. Chart by Carbon Brief using Highcharts.

From Coastal Future 2020, incorporating a Carbon Brief graphic

The issue is not whether this is enough, nor whether it's happening quickly enough – no on both counts - but whether, when it's applied, policy works. To my mind, it's clear that if government puts its shoulder 'to the wheel' then it can reduce emissions, and it's wrong and ultimately counter-productive to claim otherwise.

Historical UK Emissions

Here, for interest, is a graph of long-term UK carbon emissions (not just from electricity generation) from David Hendry at Oxford University.

Figure 1a UK CO$_2$ emissions in millions of tonnes (Mt), 1860 to 2017
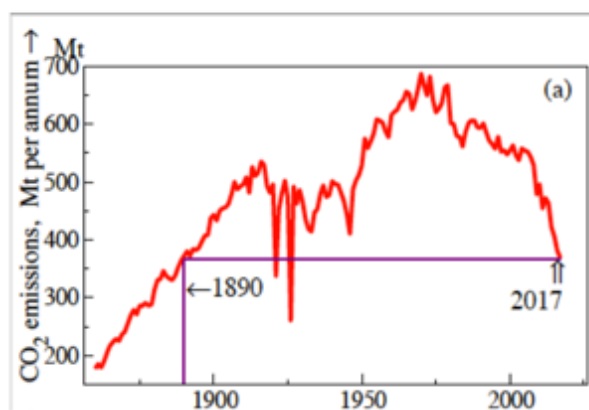
Peak CO2 emissions were in 1973. By 2017 they had fallen back to 1890 levels. Per capita emissions returned to 1860 levels by 2013.

A mixture of factors led to these changes, including deliberate policy to reduce air pollution. A 2019 study found that between 1970 and 2010 deaths from air pollution in the UK fell by 56% in the case of PM$_{2.5}$ (particulates) and 44% in the case of NO2. This is the effect of 'incremental', 'reformist' policy by elected governments, plus of course campaigning by 'neoliberal' NGOs.

Is it enough ? No. CarbonBrief makes it clear that progress made in decarbonizing electricity is not enough in itself.

'Nevertheless, a lack of progress in other parts of the economy means the UK remains far off track against its upcoming legally-binding carbon targets, let alone the recently adopted goal of net-zero greenhouse gas emissions by 2050'.

Yet the very fact that the UK is off course on its "legally binding targets" illustrates that the fact that the Extinction Rebellion narrative is wrong on campaigning because these targets derive from the work of the Committee on Climate Change, which in turn exists only because of the Climate Change Act, which only came into being in 2008 as a result of The Big Ask campaign started by Friends of the Earth in 2005.

(It should also be noted that even once the 'green wave' of top-level public concern had subsided, a combination of campaigns and lobbying along with governments responding to the science [the latter being Track 2 analytical communications], continued to make progress, although it was harder to initiate major new changes than continue existing initiatives).

Although we now do have to do 'everything', rapid new and additional reductions could be achieved by government action in the short, medium and longer-term. For example, in November, the Dutch government lowered speed limits by almost 20 mph in order to cut emissions. During the 1973 Oil Crisis the UK introduced a temporary maximum speed restriction of 50 mph on all roads. Cutting the speed of ships would also immediately cut emissions. Changing road layouts using white-lines painted on roads and creating new bus lanes, and using government funds to improve bus transport and restricting private vehicle road-space, can be done in months, whereas building new rail, light rail or tram systems takes years, as does vehicle fleet-turnover. (See electric buses).

Rejection of 'Incremental Change'

The above are all examples of conventional 'incremental' responses with engaged policy communities and established expertise, and in the gift of government to decide and implement. In reality, given the multi-facetted nature of greenhouse gas emission sources and the steps necessary to remove

them, even 'emergency action' demands step by step incremental action, just quickly. But 'incremental' does not fit the Extinction Rebellion revolutionary narrative.

In 'Common Sense', Hallam states: 'it is no longer possible to save our society through small incremental steps'. He decries 'false gradualist improvements' and writes:

'a Climate Emergency is not a rhetorical call for accelerated climate action, it's a call for a major transition of the economy.'

What this entails apart from eliminating climate changing emissions is less clear. Extinction Rebellion is itself quite literally demanding 'accelerated climate action' - elimination of emissions by 2025 - and that is not possible without 'a major transition of the economy'.

In his booklet '*Common Sense for the Twenty First Century*' Hallam produces a list of necessary changes which are nearly all much the same as those advocated by campaigning NGOs, some of them for decades:

Eliminate fossil fuel use and close that industry down

We need to eliminate fossil fuels from the economy and we need to do so inside of 20 years, with most of the job done in the next 10. That means immediately banning all new investment in fossil fuel exploration and developments.

• Close down all coal fired power stations - the dirtiest within 5 years and the remainder within 10.
• Close down all gas fired power stations, most in the next 10 years.
• Convert all transport to electricity, with the electricity generated by zero carbon energy sources.
• Manage this process with a massive reduction in energy use even if that means rationing.

This all means we will reduce the income of fossil fuel companies worth trillions of dollars, including all of the world's oil, coal and gas companies. They had the chance over 30 years to transform and chose not to. Now they must work with a transition process and reinvest in renewables or go broke. Governments will have to provide education and retraining programs to help people who lose their jobs and address the impact on the communities. The financial implications for the national and local authorities and the pension funds who have investments in fossil fuels will also need to be addressed.

We need to eliminate the use of gas as an energy source in less than 10 years

We need to dramatically lower consumption of animal products. Vegetarian and vegan diets are ideal, but everyone can simply reduce or eliminate meat and dairy consumption.

There can be no burning of fossil fuels in the world within a short time. Whether this is 5, 10 or 20 years is for later. [XR subsequently said 2025]. Whatever path we take means there will be no oil, coal or gas industry. Either they go or we go (and then they go anyway – no industry on a dead planet).

The only significant difference is that XR insists on first overthrowing the government.

Curiously, at one point XR founder Gail Bradbrook directly acknowledged that solutions exist. In an article for Resurgence magazine in January 2019 (text also repeated in a video) she wrote:

'We need a new approach in the face of this catastrophe. We need the world's governments to introduce a world-war-two-style mobilisation. The kinds of thing it would involve are reducing carbon emissions and reducing demand; a massive investment in finding safe ways of taking carbon out of the atmosphere; improving transport; regenerative agriculture and restoration of ecosystems. It's all technologically and economically possible in a short space of time. Solutions are there'.

So why isn't this XR's main public narrative? Because it's fixated on driving rebellion rather than solutions. She continued:

'The absolute key issue is how to create enough political pressure. It's up to us to create that political will and there are tried and tested techniques for doing that. We're talking about civil disobedience that escalates into a rebellion – an uprising'.

XR's communications strategy appears to involve solutions denial until after the successful revolution. That's a dangerous game.

I don't suppose those in XR have ever read it but my own basic model for an engagement sequence awareness> alignment> engagement> action also involves first establishing the problem, and then the solution (alignment being when the 'messenger' and the 'audience' see those two things in the same way. But a critical point is that you can't hold people at the problem-only step for very long before you have to provide evidence of the solution. People tend to turn away from gloom, misery and tragedy unless they have a psychological problem, and if not it may give them one.

Moreover, while it might be possible to control the signals reaching some of the most devoted followers inside the tunnel of XR, most of the public are exposed to a lot of conflicting real world signals, such as the obvious existence of solar and wind power, and information from NGOs, media and the 250,000 – 500,000 people in the UK now working in environmental roles, many in climate-solutions industries. The tunnel is likely to be quite porous.

XR's game plan has so far relied on withholding rather than using evidence of solutions, apart from the 'magical' power of its rebellion model. This is not sustainable.

Political Systems 'Have No Ability' to Curb Emissions

In *Common Sense'* Roger Hallam states:

"the world's present political systems have facilitated a 60% increase in global emissions since the beginning of the crisis in 1990 and have no ability to stop a continued rise in CO2"

It's absolutely true that taken together, "the world's present political systems" have not stopped the 60% increase. But what about the UK emission reductions in the UK? Isn't that one of the world's "political systems" ? Or others, which are reducing emissions?

In 2019 a study in the Nature Climate Change, found that while CO2 was rising globally, in 18 countries developing renewables and 'moving away from fossil fuels', emissions were falling. Together these countries accounted for 28 per cent of global emissions. Corinne Le Quéré, from the UK's University of East Anglia told the Canadian Broadcasting Corporation, " we found that, in the countries where there's more policy in place, the decreases in emissions were larger … that suggests that the policies do work."

Many countries in Europe, and the US, have decreased their emissions from fossil fuels, mostly with energy efficiency and demand reduction

Many more mitigation opportunities exist in transport

Many mitigation opportunities exist for consumer-facing innovations

Tyndall Centre UEA

The 18 were (above, CBC graphic) Austria, Belgium, Bulgaria, Croatia, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Portugal, Romania, Spain, Sweden, UK and the USA. This is not to say that any of these countries had done or are doing 'enough'. But it shows that XR would be wrong to say their 'political systems' means they 'have no ability' to reduce or eliminate emissions. To me it suggests that they have done things that do work and they need to do more of them.

How much more? A lot more, as do many other countries. Climate Action Tracker (a collaboration of Climate Analytics and New Climate Institute) monitors 'government climate action of 32 countries making up 80% of global emissions. It measures their efforts 'against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C"' and is clear that the world is off-track on even committing to act in line with the Paris agreement. Overall, governments 'still show little sign of acting on the climate crisis'.
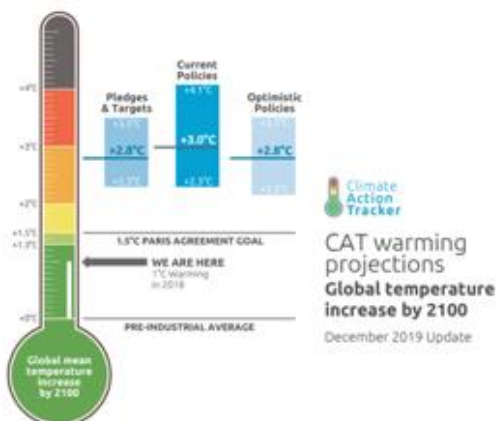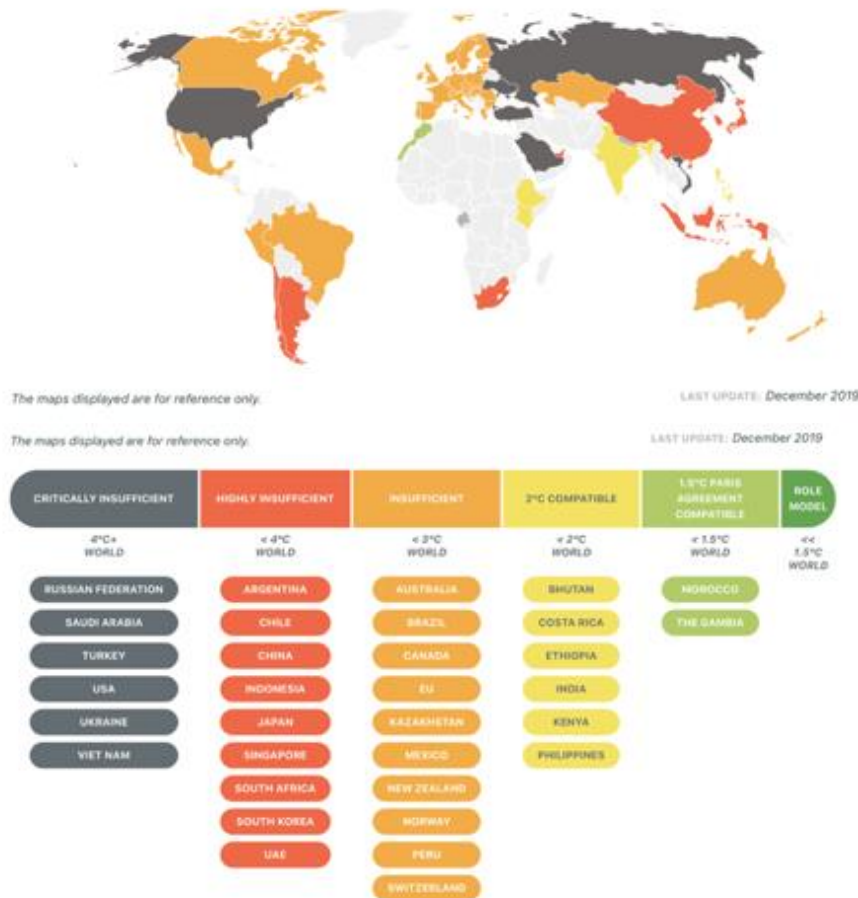

The CAT 'Thermometer' comparing net national commitments to what's needed to stay within 1.5.C

So far no country has plans that get a top rating by CAT. Only Morocco and The Gambia have plans compatible with the 1.5.C target. None is yet a 'model (more ambitious than 1.5.C, more ambitious

than a 'fair share' under Paris). Some (<u>visit map here</u>) have plans compatible with 2.C, including <u>India</u> and Costa Rica.

CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT	INSUFFICIENT	2°C COMPATIBLE	1.5°C PARIS AGREEMENT COMPATIBLE	ROLE MODEL
4°C+ WORLD	< 4°C WORLD	< 3°C WORLD	< 2°C WORLD	< 1.5°C WORLD	<< 1.5°C WORLD
RUSSIAN FEDERATION	ARGENTINA	AUSTRALIA	BHUTAN	MOROCCO	
SAUDI ARABIA	CHILE	BRAZIL	COSTA RICA	THE GAMBIA	
TURKEY	CHINA	CANADA	ETHIOPIA		
USA	INDONESIA	EU	INDIA		
UKRAINE	JAPAN	KAZAKHSTAN	KENYA		
VIET NAM	SINGAPORE	MEXICO	PHILIPPINES		
	SOUTH AFRICA	NEW ZEALAND			
	SOUTH KOREA	NORWAY			
	UAE	PERU			
		SWITZERLAND			

As a rich developed country surrounded by wave energy and blasted by wind, the UK ought to be well placed to get on track but it's ranked 'insufficient' along with the rest of the EU, Norway and New Zealand. China, Singapore and Japan rate worse at 'high insufficient', while Russia, the US and Saudi Arabia are models for a 4.C+ world.

But there are signs of change. In December 2019 Carbon Action Tracker <u>reported</u> that:

'South Africa's emissions are projected to decline for the first time; Switzerland is working to increase its already high carbon price to significantly accelerate emissions reductions. Norway, New Zealand and Germany have adopted zero emission targets for 2050; New Zealand's is now enshrined in national law, and in 2018 the EU's emissions decreased by around 2.1%, driven mainly by a decrease in the energy sector'.

In December 2019, campaigners celebrated when the Danish Parliament <u>introduced a new law</u> requiring a reduction of 70% in its greenhouse emissions by 2030, including its impact abroad, such as through climate finance to developing countries.

It's a mixed picture but it's hardly consistent with governments being inherently unable to make a difference.   As in the UK, some of the most rapid positive change involves electricity generation. Carbon Brief reports that global coal use for electricity production <u>fell by a record 3%</u> in 2019, due mainly to 'record falls in developed countries, including Germany, the EU overall and South Korea, which are not being matched by increases elsewhere'. Growth is 'flattening' in China and 'the largest

reduction is taking place in the US, as several large coal-fired power plants close'. In India, 'coal power output is on track to fall for the first time in at least three decades'.

These reductions are mainly due to changing economics including slowing growth. But also, and varying by country, as renewables capacity increases along with gas and nuclear. New coal power stations often lie unused, particularly when overall demand for electricity falls due to economic slowdown or increased efficiencies. Although China has been building new coal-fired power stations at the rate of one every two weeks, utilisation rates fell to 48.6% in 2019, and have been at under 50% for the past four years. Renewables are expected to be as cheap as coal for making electricity in China this year.   The global utilisation rate for coal power is 54%.

CAT says:

'Many governments are still firmly embracing coal even if it is more expensive than renewables. It is especially problematic in Asia, where China, Japan and South Korea are all funding coal offshore, as well as building new plants themselves. An example of the expansion is the proposed Lamu coal-fired power station in Kenya, which would be both Chinese funded and built.

The world is not tracking towards a Paris Agreement-compatible phase-out of coal. We observe a net increase of 63 GW of operating coal-fired capacity between 2015 and 2019. However, this was accompanied by a significant decrease in plans to expand the coal fleet. The coal pipeline has shrunk by nearly 75% between 2015 and 2019.

… The conclusions of the IPCC's Special Report on 1.5°C are clear and direct: Governments need to rapidly reduce CO_2 emissions to net zero by 2050 and of all greenhouse gases by 2070, and in order to get there reduce emissions globally by 45% by 2030 from 2010 levels'.

It points out that gas use is growing rapidly, as well as renewables. At the Madrid 2019 COP meeting Bill Hare of Climate Analytics said: "Gas is a major concern. Governments are acting as if this fossil fuel is somehow clean - yet gas was responsible for half the increase in CO_2 emissions from fossil fuel consumption in 2017-18, But let's be clear: for a 1.5°C pathway, emissions from gas need to peak before 2030, halve by 2040, and be only a tiny part of global electricity demand by 2050."

So the thrust of Extinction Rebellion's position is right in that governments as a whole are still failing to put the world on a climate-safe pathway and emergency action is needed. Yet it is not true to claim that nothing has been done to make a difference, that only token efforts have been made, and that governments are somehow incapable of delivering.   This is more important than just misrepresentation. By denying the capacity of governments to deliver solutions (solution-denial), it forgoes the opportunity of pressuring them to do more by showing the scandal of their inaction – see below.

Scandals

If nothing can be done then no matter how urgent the problem feels or how severe the problem impact may be, there is no scandal, only a tragedy.

Bendell's *Deep Adaptation* makes climate change a tragedy.   It takes 'as its starting point the inevitability of societal collapse', because it is 'too late to avert a global environmental catastrophe in the lifetimes of people alive today'.

XR indulges in systematic solutions-denial by asserting that 'political systems' worldwide, the UK government specifically, and NGO campaigns, have all failed and proved themselves incapable of making a difference to climate change. That's wrong but it's done to leave just one possible escape route open – that of 'rebellion'.

For there to be a scandal, the problem needs to be understood as *avoidable*. For that there needs to be a proven solution. Proof that "it doesn't have to be like this". The party to blame is then the one with the power to implement that solution but which is not doing so.

The effective policy measures and campaigns mentioned above, are examples of proven solutions: cases showing what can-be-done. There are many more, and it is these which XR and GT could use to put far greater pressure on politicians and governments. Those could also form a series of escalating steps, driving down emissions and changing 'the system'. By not doing so, they are failing to utilise one of the most powerful campaign opportunities. Of course you can't do it if you deny the existence of solutions.

Elements of a scandal are captured in the 'scandal equation'. A scandal is in proportion to awfulness, multiplied by the difference between what can be done divided by what is being done, multiplied by immoral profit being made from that.

It's a Scandal

Many news stories are driven by 'scandal'.[13] Obviously, a scandal revolving around a terrible problem is bigger than one that's only slight, but there's more to it than this. My scandal formula is:

$$\text{Scandal} = \text{Awfulness} \times \frac{\text{What can be done}}{\text{What is being done}} \times \text{immoral profit from it}$$

'Awfulness' is often the first port of call for a news report. 'Just how bad is it?' Like most useful news story constructions, 'just how bad is it?' is a question that can be asked with an air of authority but without any knowledge of the subject matter.

Most scandals start with some sort of damage report. The 'immoral profit' factor is where the media go next, if there is the slightest hint that malpractice was involved. A favourite line of enquiry after a disaster is whether safety measures were compromised to save money. After the Potters Bar rail crash in the UK in 2002, where maintenance was meet the demands of cheese-paring managers'.[14]

Immoral profit is the reason, for instance, why deaths from illegal drugs are more scandalous than deaths from substances whose sale was legal. Paracetamol, for example, kills around 200 people each year in the UK through accidents or suicide. Few of those make headlines, whereas ecstasy deaths (27 in 2000[15]), cocaine (57) or amphetamines (19) are more likely to be reported.

Implicit in the media construction of a scandal is that it was *avoidable*. If there's no solution, if nothing can be done, then there is no scandal, only a tragedy. The world is full of problems, but there are far fewer clearly avoidable ones.

If alternatives are overlooked – or stronger still, neglected or *suppressed* – then a problem builds into a scandal. In this way, a solution-driven campaign can become highly newsworthy.

Check if:

- A solution to an accepted problem is being suppressed;
- A solution to an accepted problem is being neglected;
- If someone is doing something awful (check also for grossness – see Chapter 7);
- If an immoral profit is being made from a problem continuing;
- If an immoral profit is being made from a solution going unused; and
- If those responsible could do more.

Journalistically, scandals can be just awfulness × repression or secrecy. Newspaper proprietor Lord Northcliffe once said: 'News is what somebody, somewhere, wants to suppress; everything else is advertising.'

Extract from 'How to Win Campaigns: Communications for Change'

XR's strategic narrative is focussed primarily on maximising awfulness, in some cases by exaggeration of imminence, scale or specificity. For example by announcing that your children will die, and not just yours but billions more, and soon. It also alludes to immoral profit involving the vaguely defined corrupt fossil fuel neoliberal politicians and businesses. But its dogmatic denial that anything is being or can be done means that its narrative paints no scandal, only a tragedy.

So it has boxed itself and those followers who take its pronouncements literally, into a corner. What's the point of putting pressure on government to act, if it cannot act ?

Of course, if the intent is solely to enlarge a revolutionary following of enraged and despairing people, this makes a sort of sense. I say 'sort of' because there are doubts about the feasibility of the revolutionary pathway, even if you accept the premises behind it.

If it's to deliver environmental outcomes through strategies and tactics based on evidence of what's possible, it does not make sense. And it seems that Roger Hallam at least, does not want to hear that there may be 'solutions'.

In his August 2019 BBC interview Hallam was challenged by the interviewer, Stephen Sackur:

 "There are many scientists who actually will not just focus on the negative, the bleak and the dark but will say, you know what we human beings are making some progress, we are cutting emissions, for example in the energy sector".

To which Hallam replied:

"I've just told you that's total nonsense, it's total nonsense, you shouldn't be saying it".

But as we've seen it's not nonsense. Extinction Rebellion seems to set great store by the pedigree of its 'campaign design' but here it seems to be missing a very big trick. It's own 'theory of change' has become a sacred object. It's a victim of its own path dependency, and a dogmatic purveyor of solutions-denial.

In the UK, the scandal is that is applied government-led effort can produce this sort of dramatic decline in emissions in one sector, it is not being done in others. And within that sector, that available technology and measures is not being applied to finish the job even more quickly (eg on storage, solar potential and <u>onshore wind</u>).   Plus, if it can be done in Britain, it's scandal if it's not being done elsewhere. And if much more dramatic results can be obtained through government action in other countries, then it's a scandal if the UK is not doing the same.

So with its current cosmology, XR can't say that failure to implement solutions to climate-changing emissions is a scandal because the evidence base for those solutions comes from actions by governments, campaign NGOs and businesses which their rhetoric says have achieved nothing and are achieving nothing. Hence climate change is a very awful tragedy. Within XR's *own* logic the scandal might be that the British public knows how to rebel but isn't …. (blame the public, or NGOs ?), or that Citizens Assemblies on the XR model (which is hyper vague) could solve the problem but are not being used, etc.. but it can't be down to a failure to use available proven tools and mechanisms to reduce emissions. Which to my mind, is mad, and creates an unfounded false sense of hopelessness. This is why I don't agree with the idea that we should eschew hope in favour of 'courage'.

Don't Reject Hope

XR uses popular climate scientist Kate Marvel to reinforce its case against 'positivity'.
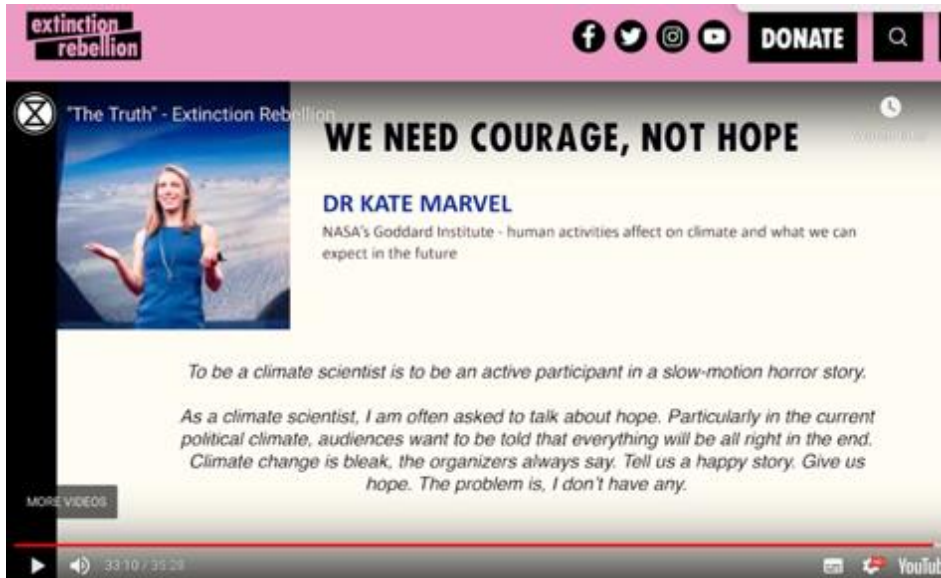
This is a false dichotomy. If you read Marvel's <u>essay</u> where the above quotes appear, it's not an analysis of what can or can't be done about climate change and what has or has not worked, which is the action-oriented agenda that XR claims to be addressing, but poetic, philosophical, personal and existential reflection.   Her status as a climate scientist (computer modeller) is being used by XR to spin solutions-denial.

True, she says: 'There is now no weather we haven't touched, no wilderness immune from our encroaching pressure. The world we once knew is never coming back' but that's been widely known for decades, and in relation to human change in 'natural forests' and other ecosystems, well before 'climate change' was de facto confirmed in the late 1980s.

If that's enough to prevent you from doing anything to save and restore as much nature as you can, with as much naturalness as you can, then there not have been any point in the activities of any conservation group, ever. The fact that ecologists hotly debate whether there was ever any true 'wildwood' in Europe or which beetle remains or pollen first indicate some human induced change in the Holocene forests (yes I admit to being a plant ecologist) doesn't mean that trying to protect nature in the Anthropocene has no value. In some ways it seems that climate scientists may now be being drawn into the science-meets- philosophy debates of human value that have been going on in the conservation world for much longer.

Marvel also says [climate] 'Change is already underway; individual worries and sacrifices have not slowed it'. Which makes for a neat line but at least at the margin, that's not true. All the actions that have made emissions less bad than 'Business As Usual' would have been, will have made some positive difference.

She writes: 'the opposite of hope is not despair. It is grief.' That's very arguable but I can see why XR liked it. The best linguistic case for an opposite of hope is hopelessness but there are many others and vice-versa.

She adds: 'Even while resolving to limit the damage, we can mourn'. Yes we can mourn extinctions but it's better to spend our time preventing them. So I agree, mourn the loss but more than mourn, use it to mobilise action, and that can exist alongside hope that we can make a positive difference 'to limit the damage'. Spending all your time mourning the loss is a recipe for despair, anxiety, depression and rage. Dismissing hope is daft. Adding to the net human grief over climate change is not in itself

going to 'limit the damage'. It's caused by pollution, not an excess of joy and optimism. Any idea that trying to cut climate pollution is 'hopeless' will undermine your 'resolution' to 'limit the damage'.

Marvel is <u>also worried</u> about her young son and telling him about the thermal inertia of the oceans.

'The heat is mixed deep into the ocean, a long slow slog to equilibrium. There is no way to stop it. What do I tell my son? A monster awaits in the deep, and someday it will come for you. We know this. We put it there'.

At present this is true. It appears inescapable and inevitable. But in the future even this may not be true. History is littered with strongly held convictions about what's held to be impossible, including by scientists, which turned out not to be so.

Some years ago I heard an eminent climate scientist announce that NGO calls for large emission cuts were 'unrealistic' because 'no government would ever close a coal fired power station' to cut carbon. He was speaking from assumptions, from his imagination not analysis, and his imagination was limited by his understanding of energy, campaigns and politics.

History has often been changed by people who refused to believe that things were impossible. We should not resolve to do nothing, because it seems like we can only do a little. And we should act on the things which we already know are proven to work.

Marvel says: 'We need courage, not hope. Grief, after all, is the cost of being alive. We are all fated to live lives shot through with sadness, and are not worth less for it. Courage is the resolve to do well without the assurance of a happy ending'. Maybe but I find this hard to translate into a useful plan for tackling climate change. I prefer the old chestnuts, "when in a hole, first stop digging", and "the optimism of the action is better than the pessimism of the thought".

For anyone who actually does want to stop climate change as much as possible, it's not a question of choosing a happy story versus a sad one but of making the future as good as we can, as fast as we can. That requires effective, motivational stories, and strategies that can close down the bad, and multiply the good. This, we do know how to do.

The un-used tools, the un-taken opportunities, the weapons left idle in the war against climate change, are part of the scandal. Attempts to deny solutions are also part of the scandal – and here XR has bizarrely put itself on the same side as climate sceptics onboard with the fossil fuel industry who not only deny climate change but also try to undermine the use of renewable energy technologies and personal action to cut emissions.

The failure to do what could be done, should make people angry, in a constructive way. It needs to be focused on the people and institutions with the power to make a difference, and on the appeasers of the climate problem. Anger however is written out of the Extinction Rebellion tool-set in favour of grief and being tactically respectful to opponents in the anticipation that it will induce 'security forces' to disobey orders or defect to join the rebellion.

I'm not proposing any violence, nor anger at the police. I don't see them as the opposition. To my mind the main opposition is the fossil fuel industry and other emitters, their backers including in

government, the climate-deniers and their lobby. If pushing them out of business by pushing in solutions is what 'positivity' means then I'm for it.

Proofs Better Than Targets

A focus on specific scandals as the waypoint campaign objectives has another advantage. It can help avoid the problem of generating general indicative commitments, which can then become something distant which is aimed for, rather than something which has to be immediately started on. *Guardian* columnist and XR supporter George Monbiot raised this in an article in January 2020: [Let's abandon climate targets, and do something completely different](#).

Monbiot writes that 'several governments and parliaments, the UK's among them, have declared a climate emergency. But no one in government acts as if it is real'. (True perhaps although that's partly because it was parliament not the UK government which declared it, which means it's not actually government policy).   He criticizes objectives set by the Committee on Climate Change as inadequate and calls for maximisation: 'In the climate emergency, our aim should be to maximise both the reduction of emissions and the drawing down of carbon dioxide already in the atmosphere'. True again although that's the difference between an aim and an objective.
He adds: 'As soon as you set a target, you pull back from maximisation. Even if you say "this target is the minimum", as the CCC does, politicians treat it as merely the line they need to cross'.

Each scandal requires a 'proof' of the thing that can be done. For instance pointing out that the government has done it before, or that something or someone similar is successfully doing it. Or that a technology or system or practice is available. The objective at that stage then becomes to get implementation of the solution. This is better than an objective to 'set a target' because it can be tested as a visible, detectable change: using the fly-on-the-wall test. So for instance the UK could bring forward its target for achieving net zero by a few years and give the impression that this is a response to the climate emergency but it would not be bankable as a real success in the same way as closing a gas fuelled power station would be, or letting new onshore wind back into the electricity system, or lowering the speed limit on highways.

The Incongruence Risk

It's no secret that a 'messenger' is more credible and trusted if they practice what they preach: if their actions match their words. Denying solutions builds a risk of mass-incongruence into XR's plans. Similarly, this is why climate scientists flying to conferences when they could use video-links [is a bad idea](#), and why it was a good idea that Greta Thunberg crossed the Atlantic by sail.

Because it doesn't want to talk about solutions, XR does not ask or encourage its supporters to switch to green energy supplies or do anything else which directly cuts emissions.   I know several people who have enthusiastically attended 'rebellions' but do not much about greening their own lives, and sometimes say they can't even afford a renewables electricity tariff. But do regularly take cheap flights. A degree of incongruence is hard to avoid but it can be minimised at a personal level by actively doing as much as you can, and at an organisational one, by design.

XR turning its back on solutions is an example of ethical-excusing, or ethcusing. I or we are on an ethically more important mission, therefore the same rules I'd like to see apply to others, don't apply to me. It's not a new problem for 'ethical activists' but XR is incubating an incongruence problem which could get quite big. A scandal even. Taking some active measures to promote solutions would help: by campaigning for them and by encouraging its own followers, as many conventional NGOs do.

But that sounds incremental and 'it can't make a difference', although of course it does make a difference.

Likewise I know people who dutifully drive their children to school strike events in diesel cars (public transport being awful where they live). Campaigning to improve public transport is difficult but XR and the wider school strikes community probably includes many people with electric or hybrid cars. They could at least help organise them to offer lifts to people who want to take part. Largely symbolic ? Yes but then so is GT arriving by electric car, and most of what XR has done to date.

PART 6 - NGO Campaigns Are Useless

XR has made a point of portraying what NGO campaigns and NGOs themselves as ineffective, out-dated and discredited. In a conversation with Micah White at Activist Graduate School', an XR founder Robin Boardman said in April 2019: 'for 30 years, NGOs have basically failed to do anything serious'. In 2019 Hallam said at an XR event: "environmentalism has been a complete disaster".

The main XRUK website states baldly, 'Conventional approaches of voting, lobbying, petitions and protest have failed because powerful political and economic interests prevent change'.

In this video of his talk 'The Time is Now', Roger Hallam ridicules Friends of the Earth for 'sending emails' and 'posh-people' such as the Director of Greenpeace, along with the Editor of the *The Guardian*, for "having too much skin in the game" to do what is effective. In his booklet 'Common Sense' Hallam wrote: "Whilst they seemed like a good idea at the time given the unwillingness of the media to cover environmental issues, small scale direct actions (for example by NGOs like Greenpeace) have had minimal to no meaningful impact on government policy".

I agree that over the years, many conventional climate campaigns became tired looking and formulaic, often trapped in the political frame rather than the personal or cultural, rarely reaching outside the Pioneer ghetto, and obsessed with media or social media rather than instrumental outcomes. I have often criticised them myself. But that's not to say, as XR have, that they have made no difference can make no difference.

There is plenty of evidence that campaigns do sometimes achieve their objectives and create significant change, as politicians, officials and business leaders have often confirmed. But few of them rely solely on direct action, or for that matter sending emails or signing petitions, in a one step process. Even petition-making or aggregating specialists like 38 Degrees, which Hallam also singles out for criticism, rarely rely solely on a direct effect of petitioning but rather add their specialism to make a difference to ongoing campaigning with multiple strands.

I get emails from Extinction Rebellion. That doesn't mean it's the only thing they do.

So far, most established campaign NGOs have remained silent in the face of XR's more ridiculous sweeping assertions about their ineffectiveness. Partly because this is what new (and not so new) activist groups often say, and partly because they admire some of them for their energy and innovation, and envy their freedoms. Others perhaps because they are intimidated, and many because they see they such movements are making a valuable difference. Often I think it's because of romance: movement activists embody the ancestral "call of the wild" for many NGOs. More prosaically but perceptively, Michael Silberman of Mobilisation Lab has pointed out that many NGOs simply struggle to understand how to engage with new 'decentralised' movements.

In an April 2019 FT article, journalist Matthew Green quoted Bill McKibben, activist and founder of 350.org, a major supporter of Greta Thunberg and the school strikes:

'it would be a mistake to judge such movements solely on whether their immediate demands are met. "The prize that activists are playing for is to change the zeitgeist, to change people's idea of what's natural and normal and obvious … And if we can change the zeitgeist, then legislation and so on will follow fairly easily."

McKibben was talking about the 'new climate movement' but his comments apply just as much to many 'conventional campaigns' of groups like Greenpeace. In the 1990s for instance that organisation conducted direct action campaigns which pitched renewables against fossil fuels, in order to change the conversation on climate from just about 'emissions' to real energy choices. Simply getting media and politicians to start talking about 'fossil fuels' was the first objective in a 'carbon logic' sequence aimed at changing policy to keep fossil fuels in the ground.

Most campaigns rely on achieving a sequence of sub-objectives, in which a petition, or advocacy, protest or direct action may be one of a number of tactics used to get to an objective. The final objective often involves a change decision by a power-holder. Such campaigns are primarily exercises in influence, not in seizing power, whereas revolutionary movements, along with labour strikes, are at least intended to be power struggles, as 'bargaining strategies'.

In reality, it seems likely that Roger Hallam knew this but positioning campaigns along with politics as impotent, was necessary to single out XR's mass civil disobedience plan as the only available route to success.

One relevant example of effective campaigns are the divestment campaigns in UK Universities and Colleges. These have been run by groups such as the 'grass-roots student-led group' People and Planet, which it would be hard to describe as 'corporate' or 'neoliberal'

University Fossil Fuel Divestment Campaigns

Since 2017 76 colleges and universities have committed to withdraw funds from fossil fuels or never to invest in them. Most of these campaigns pre-dated XR.

UNIVERSITIES & COLLEGES COMMITTED TO PURSUING FOSSIL FUEL DIVESTMENT

So far **76 UK universities and 2 Irish** have committed to divest from fossil fuels in some form. These commitment cover endowment wealth of over £11bn.

- Oct 2014 – **Glasgow University** commits to fully divest £18mil from fossil fuel companies over the next 10 years.

- Jan 2015 – **University of Bedfordshire** put in policy to not invest in any fossil fuel companies.

- Mar 2015 - **SOAS, University of London** commits to fully divest £1mil from fossil fuel companies over the next 3 years and VC calls on other universities to divest.

- April 2015 - **Queen Margaret University** commits to fully divest it's £45mil endowment from all fossil full companies.

- May 2015 – **University of Oxford** campaign gets a partial victory with the announcement that they don't directly invest in coal and tar-sands as it is unethical.

- May 2015 – Two victories with **London School of Hygiene & Tropical Medicine** committing to divesting from coal companies and **Edinburgh University** committing to divesting from coal and tar-sands companies in the next 6 months after a high profile student occupation in response to an initial decision to engage rather than divest.

- Aug 2015 - **University of Warwick** commits to fully divest £1mil from fossil fuel companies over the next year.

- Oct 2015 – Four Victories with **University of the Arts London** fully divesting it's £3.9mil from fossil fuels, **University of Surrey** committing to fully divest it's £42mil endowment from all fossil fuels, **Wolfson College Oxford** committing to divest it's £42mil endowment from coal and tar-sands and **Oxford Brookes University** committing to fully divest it's £1.6mil endowment from fossil fuels. Research conducted with NUS also uncovered that six other institutions had divested from coal and tar-sands by investing with divested CCLA (**Birmingham City University, Cranfield University, Heriot-Watt University, University of Portsmouth, University of Westminster and De Montfort University**).

- Nov 2015 – Two victories with the **University of Sheffield** committing to fully divest it's £40mil endowment from fossil fuels and the **London School of Economics** committing to divest it's £97.2mil endowment from coal and tar-sands. Both committed to reinvest in renewables.

- Jan 2016 – **Sheffield Hallam** University committed to not invest it's £0.5mil endowment in fossil fuels.

- May 2016 - Three more victories with **Southampton University** and **Newcastle University** committing to divest from coal and tar-sands, while **Queen Mary University London** committed to fully divest it's endowment. Their combined endowment wealth is £100mil.

- June 2016 - **Cambridge University** commits to 'blacklist' coal and tar-sands from it's £5.9bil endowment. Falling short of a solid policy commitment to never invest in these sectors again.

- Sept 2016 - **Kings College London** commits to divest it's £160mil endowment from coal and tar-sands.

[September 2016 was the campaign Roger Hallam was involved in].

■ Nov 2016 - Research by People & Planet for our University League uncovered that 14 more universities had committed to divest in the last 12 months. Ten of these were commitments to divest: **Nottingham Trent, Kent, Lincoln, Wales Trinity Saint David, Abertay Dundee, Worcester, Arts Bournemouth, Cardiff Met, Bournemouth** and **Manchester Met**. Five committed to or divested via their fund manger CCLA from coal and tar sands: **Gloucestershire, Aston, Goldsmiths** and **Greenwich**. In the same month the **University of the West of Scotland** also committed to fully divest it's endowment. Their combined endowment wealth was £46.5mil.

■ February 2017 - **University of St Andrews** divest it's £50mil endowment fully from fossil fuels.

■ March 2017 - **University of Bristol** commits to divest it's £58mil endowment and **Kings College London** up it's commitment to divest it's £160mil endowment from all fossil fuels rather than just coal and tar-sands. In Ireland **NUI Gallway** commits to fully divest £3mil out of fossil fuel companies.

■ August 2017 - 9 universities sign the Fossil Free Declaration and commit to never investing in fossil fuel companies: **Canterbury Christ Church University, Newman University, University of Chester, University of the Creative Arts, University of Cumbria, University of Winchester, Wrexham Glyndŵr University, Writtle University College** and **York St John University**.

■ November 2017 - **University of East Anglia** releases a statement confirming they hold no investments from their £8,897,939 endowment in fossil fuel companies, after a four year campaign by students at UEA People & Planet.

■ January 2018 - **University of Huddersfield** confirmed to student campaigners at Fossil Free Huddersfield University and the local press that they hold no investments in fossil fuel companies and have no plan to. They become the 60th UK university to divest from fossil fuels.

■ February 2018 - **University of Sussex** now invests its money in Liontrust's 'Sustainable Futures Managed Fund' that excludes investments in the Fossil Fuel industry after a four year long student campaign. **University of Edinburgh** divests its £322million endowment from all fossil fuels over two and a half years after its partial divestment following a prolonged student campaign.

■ March 2018 - **Anglia Ruskin University** signed the Fossil Free Declaration confirming they have no investments in the fossil fuel industry and they never will. This came after a student campaign. **Durham University** divested fully after several years of campaigning by generations of Durham University People & Planet. **University of Bristol** fully divested around one year after their partial divestment following sustained student pressure. **Cardiff University** committed to divest its entire investment portfolio by 2021. This came after Cardiff People & Planet's long-running campaign culminating in an escalation strategy including a hunger strike by two campaign members.

■ April 2018 - **University of Nottingham** pledged divested its £50million endowment fund from oil and gas within 12 months, withdrawing from coal and tar sands immediately.

■ May 2018 - **University of Bath** committed to fully divest from fossil fuels. **University of Gloucestershire** also committed to fully divest with immediate effect.

■ June 2018 - **Buckinghamshire New University** became the eleventh university to sign the Fossil Free Declaration. They confirmed they had no investments in fossil fuel companies and said they never will.

■ July 2018 - **University of Leeds** confirmed they had divested companies deriving more than 5% of their revenue from coal & tar sands, pledging to make a decision on full divestment by the end of November 2018. **Loughborough University** committed to divest from all fossil fuels within three years. **Northumbria University** declared that they do not, and will not, invest in fossil fuel companies.

[October 2018 – first XR rebellion events]

■ November 2018 - **University of Liverpool** announced their partial divestment of coal and tar sands.

■ January 2019 - **Keele University** made a commitment to divest from all fossil fuels.

■ February 2019 - **University of Essex** made it policy to not invest in companies deriving more than 10% of turnover from fossil fuel extraction. **University of Exeter** updated their ethical investment policy to include divestment from coal & tar sands. **University of Ulster** updates its ethical investment policy to exclude oil, coal and tar sands companies.

■ March 2019 - **University of Stirling** committed to divest from fossil fuels after a campaign from Stirling Students' Union. **Swansea University** committed to cease investing in fossil fuels within 12 months.

■ August 2019 - **Goldsmiths University, University of Liverpool** and **Ulster University** all updated their divestment commitments to exclude all fossil fuels having previously had only partial commitments.

■ October 2019 - **University of York** and **University College London** announced their commitment to divest from all fossil fuels, following two exemplar campaigns lead by students.

■ November 2019 - **Leeds Trinity University** joins the list of UK universities to sign the Fossil Free Declaration.

Join the Campaign	University links to the Fossil Fuel Industry - Investments, Research...

[Note also the November 2014 entry above, finding that 14 more universities had divested in the previous year, presumably without People and Planet campaigns. Many such decisions were influenced by decades of campaigning on carbon divestment by groups ranging from 350 to Friends of the Earth and WWF in networks such as gofossilfree. Bill McKibben's 350 chalked up 1000 divestment successes between 2012 and December 2018. The idea behind divestment is not simply to starve fossil fuel companies of development funding – their share price is mainly tied to declared reserves and their profits to fuel prices – but to erode their social licence.]

Along with the Kings College campaign (featuring Roger Hallam) which XR UK has used as a proof of concept for its civil disobedience escalation strategy, it has also laid claim to two more of these campaigns (Bristol and Cardiff). But as with many other climate campaigns, the vast majority of these did not use XR's template strategy and yet still succeeded. Of course, many included tactics (such as occupations) in common with XR, alongside other forms of pressure but the results of these efforts hardly supports the claims by XR that nothing was being done or achieved and conventional campaigns had failed.

From the Guardian

In May 2019 Roger Hallam authored an opinion piece in The Guardian 'Now we know: conventional campaigning won't prevent our extinction'.

It began 'I helped to found Extinction Rebellion because only non-violent civil disobedience will stop the destruction of our natural world'. Campaigning had 'failed so catastrophically' in the past generation. The rest of the article was a pitch for the XR pathway – the 'ground-breaking' discoveries of Erica Chenoweth, three key observations behind XR's 'civil resistance strategy' ('only through

disruption, the breaking of laws, do you get the attention you need … only through sacrifice – the willingness to be arrested and go to prison' are you taken seriously, and 'only through being respectful to ourselves, the public and the police, do we change the hearts and minds of our opponents', making 'it easier for them to negotiate with us').

The actions had to be disruptive, 'crucially' they had to go on 'day after day', be 'fun' and not political, and 'conventional campaigning – sending emails, payments to NGOs and more reports – is not going to stop the outrageous destruction of our natural world. It is not going to stop our children entering the hell of social breakdown'. The piece concluded 'we now have a pathway to effective action. Go out with others and break the law. Let's get on it while there's still time'.

The tone of XR's statements about campaigning varies wildly, from angry dismissal of previous campaigning to humble acknowledgement. For instance the web page explaining its 'Theory of Change' (which is rather general) states: "We acknowledge what we owe to our predecessors and are grateful for the mountain of work that has been done to enable us to be where we are today. We truly stand on the shoulders of giants". But perhaps that refers to celebrated movement makers like Mahatma Gandhi or theorists such as Gene Sharpe, rather than the likes of Friends of the Earth or 350?

In practice XR is the direct beneficiary of what it decries as 'thirty years of failed campaigning'. Its mobilisation around the climate emergency stands on ground drained and rolled by decades of previous campaigns advocacy and political efforts.

For instance, XR UK is not having to convince people that climate change is real or happening. Those trying to convey the need for ambition in action on climate change have often cited the US government approach to the 'moonshot'. In July 2019 the New York Times opined:

'The original moon shoot inspired billions. Calling climate action a moon shot isn't a perfect parallel — but maybe we should try it anyway'.

The NYT quoted John Lodgson, historian of the US space programme who wrote a book, 'The Decision to Go to the Moon' in which he identified four conditions that made Apollo possible. The final one was that "the objective has to be technically feasible." 'Scientists and engineers had told Mr. Kennedy that "there were no technical show stoppers in sending humans to the moon — it would just take a hell of a lot of engineering."'

As the editorial noted, at least 'President Kennedy did not have to convince people that the moon existed'. For decades, campaigners struggled in trench warfare with the climate sceptics. In the UK (though not the US Whitehouse), they have now been largely defeated, and Extinction Rebellion profits from that. It has not faced widespread climate scepticism or tolerance of climate sceptics in the UK media.

Nor does it have to persuade politicians and the public to directly link oil, coal and gas investments and energy policy to climate change, or to demonstrate that climate change will have negative impacts in the UK itself, or to convince MPs that it is a concern of more than a minority of the 'usual suspects', or just something that "the green lobby" (Alastair Campbell, New Labour) or the "environmental Taliban" (George Osborne, 2011) cares about, or to convince media, public and the political class that there are credible, available solutions, or to persuade people that there are jobs and opportunities and economic benefits in transitioning to a non-fossil fuel economy. All that work has been done for it but these were the essential front lines of many previous campaigns.

Although XR UK has so far probably not achieved any reduction in climate emissions itself, the level of general public support for its London 'rebellions' particularly in October 2018 and April 2019, is testament to the work already done to 'educate' the UK population about what's happening and what needs to happen. Blocking bridges for climate change would not have received the same general tolerant approval ten, twenty or thirty years ago. But now there is majority support for more effective, quicker, more radical action – thanks to those who were active before 'the new climate movement'.

Ironically, Hallam himself has pointed to the importance of widespread support before embarking on a campaign. In 2016 he published a 53 page document "How To Win: Successful Procedures and Mechanisms for Radical Campaign Groups" on the Radical Think Tank blog. It contains most of the subsequent game plan for Extinction Rebellion, and is worth reading if you are interested in campaign/ movement strategy.

'Majority Support Helps Enormously'

In that document he states (p24) 'For a campaign to win it helps enormously if there is already clear majority support for it within the relevant political field'. This may sound self-evident but "the fact is" that it was simply not the case with climate change, for most of the period Extinction Rebellion portrays as wasted decades of failed tactics and strategies.

As an aside, Hallam also acknowledges that there are 'of course some campaigns, which fight for minority rights for instance, [and which] may not have this [majority support] but still should be pursued'. Yet this was for many years, exactly the situation with 'climate change', and particularly so once you broke it down into support for specific changes which might appear to threaten individual aspirations or vested interests. XR's version of history is misleading, possibly even to itself.

Like any organisation which has successfully attracted people new to 'the issue', XR isn't short of followers who tend to attribute successes to its own activities. To the great annoyance of Donald Trump, Greta Thunberg was declared 'Person of The Year' by TIME magazine and made the front cover in December 2019. It reminded me of the January 1989 TIME cover during the first 'green wave' so I looked for a comparison image online and found this post at an Extinction Rebellion Reddit.

Perhaps unsurprisingly, it drew this response:

People have been standing up as you put it since the 60s. Just nobody else listened. Greta is a great person and certainly its good people are listening. But there are thousands of climate activists that just

never got heard. Don't imply she's the first to care that's very rude to all the generations before who fought.

It's certainly true that Extinction Rebellion (unlike Greta Thunberg herself) has not been exactly shy of singing its own praises. It's October 2019 Newsletter for example refers with no intended irony, to "our brilliance".

Reaching Out To NGOs

Hallam's 'Common Sense' plan for Extinction Rebellion did foresee a role for NGOs and others, shortly before the main 'rebellion' (p48).

'Potential political and cultural allies should be lobbied and briefed in the months before … The message should promote the three key motivators for revolution in contemporary western democracies: the accelerating climate/ecological crisis, extreme inequality and corrupt politicians and governments. … The Rebellion has to morph at the last moment into a general rebellion against 'all government failures' in order to catch the regime off guard.'

This, he says, would avoid the 'key miscalculation' which 'elites repeatedly make with uprisings', namely that 'they think it is just about one issue or group, not anticipating how rapidly it can change into a general rebellion against the all- encompassing illegitimacy of corrupt elite power'.

Around the same time 'People's Assemblies' would be set up, similar to the desired Citizens Assemblies which would follow the final success, only without sortition. These would be on the theme of "What is going on with the climate crisis and everything else?"

'Experts from around the world can help train facilitators and produce agendas … The assemblies have an attractive format which draws in ordinary people … Taking over large public spaces to have these assemblies would create dramatic political theatre, particularly if they happen in the context of disruptive and sacrificial direct actions. All this new bottom-up political energy would be funnelled into a new revolutionary political agenda – 'we have had enough, and we want a new political system'. '

Regarding NGOs:

'Environmental NGOs – such as Avaaz, Friends of the Earth and Greenpeace - are potential partners for mass civil disobedience actions. However, if they do not come on board, they may require a well-designed direct-action campaign which minimises the chances of alienation while maximising the chances of cooperation. This will be done by a 'maximum respect and maximum disruption' process.

The framing is positive: 'they have done great activism in the past, but now it's time to change', combined with short, but noisy, occupations which escalate and media-attracting symbolic actions. These actions should be combined with a specific demand; that the institution or group declare a climate emergency and provide specific resources for mass civil disobedience.'

XR did indeed go and visit UK NGOs in 2018 and 2019. One told me "they basically wanted our database". (That NGO like others, remains on supportive terms with XR).

In October 2018 XR "occupied" Greenpeace's offices in London, bringing a cake and flowers and a letter declaring "we love you" and "we have marvelled at your courage" but also demanding Greenpeace gave up "positivity" which was "limiting action". It also demanded that Greenpeace email their 'members' about the October 2018 rebellion. See account here at the Rising Up website.

In April 2019 Greenpeace and Friends of the Earth both declared their broad support for XR. On 16 May 2019 Roger Hallam and Larch Maxey from XR went to see John Sauven, Executive Director of Greenpeace, for a third XR visit. The entire meeting is at Youtube here (1h 21m).

Amongst XR's demands, expressed in a letter and face to face, was that Greenpeace should be 'de-corporatized'.   In the video, Larch Maxey explains (watch at around 14 mins) that they want Greenpeace to become 'less like a company' and 'more like a grass-roots organisation'.

LM: "*so the first one* [demand] *is reducing the pay differential … something like 1:3 pay differential …*"

John Sauven: "*do you know what our pay differential is between my pay and the lowest paid person here?*"

LM: "*No*"

It turns out the differential is 1:2.8, in other words already under 1:3

JS: "*we have a very flat pay structure here and I haven't had a pay rise for five or ten years … if you want to know my salary it's on the website*"

Sauven agrees that Greenpeace should do more "and we will" to involve more people in direct action but takes issue with XR's dismissal of previous campaigning. Sauven disagrees that "everything that anybody has done for the last 30 years is a complete waste of time" adding "we're only here today because of what everybody has done for the last 40 years (21.41)" … and "the current awareness hasn't just come out of nowhere" (21.51).

LM: "*I certainly have never said and wouldn't say that everything that was done in the last thirty years was a waste of time …*"

JS: "*Roger does say that …*"

The discussion ranges over training for NVDA (non violent direct action) , participation of Greenpeace staff in the Easter rebellion (which had happened) and other issues before XR's next demand (48.34) that Sauven should resign. Hallam reads out part of XR's letter to Greenpeace:

RH: "*To prepare GPUK for an existential non violent struggle with the genocidal UK political regime … the present director, yourself, steps down from the role of chief executive … and needs to be replaced with a person who will lead the organization in direct action, get arrested, go to prison and go on hunger strike. Leaders now I have to lead from the front and engage in the sacrifices required to save our younger generation from an early death from starvation or worse*".

Sauven suggests XR should write to the Greenpeace Board about finding his replacement as it's a board decision.   He points out that Greenpeace is an activist and relatively non-hierarchical organisation and he's "just an individual", implying it might not change everything.   "It's assuming you know I am the king or queen who decides everything …"

Hallam's next demand is that Greenpeace leadership goes on an national speaking tour to tell it's 'members' and other environmentalists that "the time is up for the present political system and we need to rebel against the government" (53.27).

They should encourage members to "form affinity groups, engage in massive civil disobedience, and bring down the government to replace it with a Citizens Assembly".

Around 58 minutes in, Sauven finally loses patience with Hallam who is pressing for Greenpeace to provide more people to undertake civil disobedience in his rebellions. It's not "some kind of factory or mass production system" says Sauven, "everyone is an individual and everybody makes individual decisions and have to think about this in terms of their own personal situation and their family".

JS: "*sometimes these are difficult … I was once in a decision where both my wife and I were both arrested and we both faced two to three years in prison, the charges were extremely serious because we shut down the Atomic Weapons Establishment of Aldermaston and we had a young baby at the time - so for us this was a much tougher decision than if we didn't have a young baby*".

"*The thing is Roger, know you nothing about me. You know nothing about the risks I've taken, the number of times I've been arrested, the fact that I've been thrown out of Indonesia as a threat to National Security, … how many injunctions I've broken you know nothing but you're prepared to insult me continuously in the bullshit that you write here [the XR letter]. I find it very offensive*".

"*You know, you've taken lots of risks in your life, you've been arrested and so on and so forth, and so have I but I'm not on an ego trip about this. Why ? Why is this like some kind of badge of honour – 'I've been arrested six times you've only been arrested four times' ? Why ?*"

"*So please don't patronize me or say find a leader who will be prepared to take risks: this is bullshit Roger. It's insulting, it's demeaning and I don't know why you do it because I'm not against you. I'm not against what you're doing I'm not your enemy but you treat me like I'm the CEO of the big oil corporation or some nasty imperialist government*".

After I started collecting this material to try and better understand XR, I came across the interesting three-part critique of XR's plans, by Gabriel Carlyle in *Peace News*. In one of his posts, he makes the same point:

'*We're not starting from nothing. Likewise, it was UK campaigners that forced the coalition government to cancel its plans for a third runway at Heathrow (now risen from the grave, still being resisted) and helped to prevent the building of a new generation of coal-fired power stations here*'.

More recently, another significant UK 'climate' campaign advance which took years of multi-facetted campaigning, including targeted non violent direct action at sites but not to try and overthrow the government, was the moratorium imposed on fracking in November 2019. "We think this hopefully means the end of fracking in the UK" said Craig Bennett of Friends of the Earth.

PART 6 - Gloom-Picking The Science

The online environmental magazine Grist calls itself 'A Beacon in the Smog'. It purveys clarity about problems and solutions. Extinction Rebellion has largely made itself the opposite: a purveyor of maximum gloom, in which the landscape is illuminated only by fires of rage, grief and frustration, in order to foment rebellion. For those inside the XR tunnel of engagement, the world looks very dark indeed, especially as they quite literally are being 'kept in the dark' about solutions other than revolution.

XR has drawn on the science to give itself credibility (and both Gail Bradbrook and Roger Hallam have emphasised their own academic status) but strayed further outside peer-reviewed papers and beyond the work accepted by the IPCC and UNFCCC than Greta Thunberg's operation, in order to paint a darker and more frightening picture.

One climate scientist who has been centrally involved in both campaigns and the mainstream science process since the 1980s commented to me that "the school movement sticks very close to the science which I know is causing problems for governments in a number of places". Extinction Rebellion hasn't always stuck that close to the science.

Even so in my view, most of the time (eg here and here), Extinction Rebellion is *broadly right* about what the climate science says about the severity of the threat.

As Cambridge climate scientist Scott Archer-Nicholls says: 'the core premise of XR and similar movements is correct', (Physics World, September 2019). But he adds:

"The inaccuracies, exaggerations and misinterpretations of the science are largely details against this broader backdrop of a legitimate call for action. However, I think they can do real damage by undermining the credibility of the movement, putting off important actors from being involved and basically contradicting the first demand – 'tell the truth'."

The 'science' XR has used to try and drive a sense of urgency and impending cataclysm includes a lot of mainstream and high certainty evidence. It has also used a lot of lower certainty more speculative science but from authoritative sources. And some apocalyptic speculative interpretations of the climate science in terms of social consequences, from outside the peer-reviewed literature and not authored by climate scientists. It often does not distinguish which is which, and has sometimes made up "facts", most obviously Roger Hallam's claim that 'the science says' six billion will die.

It's also systematically picked out the gloomiest most alarming parts from within papers and the body of work by individual climate scientists or groups, and excluded parts about solutions, feasibility of preventive action, and what is being achieved. Rather than cherry-picking evidence across published scientific papers, this is a more subtle selective gloom-picking from within evidence.

In addition it has sometimes removed caveats such as 'may', 'could' and 'if', giving a false impression of certainty, immediacy and inevitability.

Plus in its enthusiasm to show that the protocols of the IPCC system mean it can under-state risk, for example where there is no agreed data (true), it has made careless claims such as 'there are no feedbacks in IPCC models' which are obviously just wrong. In fact the IPCC has acknowledged the additional threat of feedbacks, for example reporting in 2014 that their combined effect is likely to be positive (ie making climate change worse). XR has also cited papers as references in support of specific claims where the paper concerned does not contain the claim.

Live By The Sword, Die By The Sword

One problem with this is that in campaigning-through-use-of-science, as in other areas of life, the rule applies: "live by the sword, die by the sword".

It creates 'hostages to fortune' in that you can be shown to be wrong on particulars, and lose credibility, even if you may have been right in general terms. Which runs the risk of puncturing your credibility.

XR could have just declared a rebellion out of outrage at the failure of governments to act sufficiently on the findings of the IPCC and other scientific evidence, and the manipulation of public and political views by climate sceptics and fossil fuel funded campaigns – for which there is abundant and incontestable evidence. It could then have manifest public feeling through mobilisation and disruption. Instead it has chosen, presumably for reasons of trying to bolster its authority, to make its own interpretation of the science and 'push the envelope' to make it even more alarming, and make it a major part of its induction and indoctrination programmes, and to fuel its very questionable campaign to tell the young that they may have no future. It's in doing this that it has generated risks and vulnerabilities that were not really necessary.

Another problem is that it has created a diversionary conflict, defining the IPCC and the inter-government science system as the problem, rather than the inadequacy of government and corporate action in eliminating climate-damaging emissions. The 'IPCC issue' is a long-running controversy inside the 'climate community' so it's not just XR which is critical of the IPCC. See eg Is it true climate change will cause the end of civilisation by 2050? by Adam Vaughan in *New Scientist*, and these scientists' responses to a *New York Times article '*How Scientists Got Climate Change So Wrong', at Climate Feedback. But scientists who take issue with the adequacy of the IPCC 'warnings' almost invariably also urge more and quicker action, so it's questionable what value is added if a populist movement like XR involves itself in such a dispute.

Plus, resting on the authority of the IPCC at some points while attacking it at others, is hard to translate into terms which make sense to a public audience which does not have a lot of prior knowledge.

'12 Years Left'

In April 2019 Myles Allen, the lead author of the IPCC Special Report on Global Warming of 1.5°C , published an article in *The Scotsman* 'Why protesters should be wary of '12 years to climate breakdown' rhetoric'.

He began:

'Today's teenagers are absolutely right to be up in arms about climate change, and right that they need powerful images to grab people's attention. Yet some of the slogans being bandied around are genuinely frightening: a colleague recently told me of her 11-year-old coming home in tears after being told that, because of climate change, human civilisation might not survive for her to have children'.

And wrote:

My biggest concern is with the much-touted line that "the Intergovernmental Panel on Climate Change (IPCC) says we have 12 years" before triggering an irreversible slide into climate chaos. Slogan writers are vague on whether they mean climate chaos will happen after 12 years, or if we have 12 years to avert it. But both are misleading.

Myles described how on the World Meteorological Organisation's 'standard measure of pre-industrial' temperature, 'we just passed 1°C and are warming at more than 0.2°C per decade, which would take us to 1.5°C around 2040'.

… these are only best estimates. We might already be at 1.2°C, and warming at 0.25°C per decade – well within the range of uncertainty. That would indeed get us to 1.5°C by 2030: 12 years from 2018. But an additional quarter of a degree of warming, more-or-less what has happened since the 1990s, is

not going to feel like Armageddon to the vast majority of today's striking teenagers (the striving taxpayers of 2030). And what will they think then?

I say the majority, because there will be unfortunate exceptions. … So please stop saying something globally bad is going to happen in 2030. Bad stuff is already happening and every half a degree of warming matters, but the IPCC does not draw a "planetary boundary" at 1.5°C beyond which lie climate dragons.

What about the other interpretation of the IPCC's 12 years: that we have 12 years to act? What our report said was, in scenarios with a one-in-two to two-in-three chance of keeping global warming below 1.5°C, emissions are reduced to around half their present level by 2030. That doesn't mean we have 12 years to act: it means we have to act now, and even if we do, success is not guaranteed.

And if we don't halve emissions by 2030, will we have lost the battle and just have to hunker down and survive? Of course not. The IPCC is clear that, even reducing emissions as fast as possible, we can barely keep temperatures below 1.5°C. So every year that goes by in which we aren't reducing emissions is another 40 billion tonnes of CO_2 that we are expecting today's teenagers to clean back out of the atmosphere – a giant industry of the future that presents particular opportunities for Scotland – in order to preserve warm water corals or Arctic ice.

… Get angry by all means, but get angry for the right reasons ... Climate change is not so much an emergency as a festering injustice. Your ancestors did not end slavery by declaring an emergency and dreaming up artificial boundaries on "tolerable" slave numbers. They called it out for what it was: a spectacularly profitable industry, the basis of much prosperity at the time, founded on a fundamental injustice. It's time to do the same on climate change.

See also - Helena Wright of E3G Do we really have 12 years to save the planet? Based on carbon budgets Wright argues that 12 years is 'too optimistic' as to stay inside 1.5C we must immediately halt all further fossil fuel use.

And on the UK carbon budget - in a 2019 paper Zero Carbon Sooner Tim Jackson of CUSP at Surrey University argues on the basis of a UK carbon budget in line with a global reduction achieving a 1.5C warming limit:

'for a linear reduction pathway … the target year would have to be 2025' and for 'nonlinear pathways, such as those with constant percentage reduction rates … [those] high enough both to lead to zero carbon (on a consumption basis) by 2050 and to remain within the carbon budget require absolute reductions of more than 95% of carbon emissions as early as 2030'.

He argues 'in favour of setting a UK target for net zero carbon emissions by 2030 or earlier, with a maximum of 5% emissions addressed through negative emission technologies'.

'6 Billion will Die'

On 17 August 2019 Roger Hallam was interviewed on BBC TV's 'Hard Talk' by Stephen Sackur (video here) and claimed it was a 'fact' that science showed 6 billion people would be killed by climate change . Hallam's claim gained very widespread publicity. While I agree with most of what he said, his key statement was:

"I am talking about the slaughter, death and starvation of six billion people this century. That's what the science predicts …".

(You can read a transcript of the whole interview [here).](#)

Shortly after the interview, the BBC radio statistics programme 'More or Less' [reported](#) on Hallam's claim as follows:

"his suggestion that six billion people – that's nearly the entire current population of the planet, could be killed by climate change over the next eighty years, sounds alarming, if true. So we tried to figure out which scientific papers had made such a forecast – we couldn't find any. So we emailed the XR press office … they replied "It looks like this figure may be Roger's own estimation of the situation".

The BBC journalist commented: "which is I think a polite way of saying he made it up off the top of his head"

The XR press office added: "some scientists are saying that these absolutely horrifying scenarios could become a reality … many of us are terrified"

The BBC said that XR provided three references to support the claim but

"none of them mentioned six billion deaths. One of them a German atmospheric physicist called Hans Schellnhuber, did say that if we had unlimited global warming, of eight degrees warming, that maybe the carrying capacity of the earth would go down to just one billion… now that does indeed imply either death or birth control on a massive scale but eight degrees of warming is very much a worst case scenario. It's well above the range discussed in mainstream forecasts of global warming".

(This is important because most of the current scientific-political debate is not about whether we should allow climate pollution to continue so that we reach 8 degrees of warming but restricting it to 1.5C or 2.C in the period up to 2050, and the possibility that we are already 'committed' to for example 3.C).

The BBC then spoke to Andy Haines, Professor of Environment and Public Health at the London School of Hygiene and Tropical Medicine, about studies in the period 2030-50. Haines pointed to three pathways leading to climate-related deaths: direct (eg effects of heat, floods, drought); those mediated by consequent effects eg vector borne diseases like malaria and dengue fever; and those mediated by socio-economic factors like poverty conflict and migration. The first category has highest certainty and the last the least.

The BBC noted that the World Health Organisation had suggested that between 2030 and 2050 climate change could lead to an extra 250,000 deaths per year globally: "an enormous amount compared to things we worry about such as terrorism and sharks". Haines pointed out that this was an under-estimate as it excluded factors such as river flooding, water scarcity and economic damage.

The presenter also noted that WHO also estimates that four million already die each year from indoor air pollution and nearly three million from obesity. What's more worrying they said is the 'tail risk', outcomes less likely but much worse than the central forecast. Here Haines pointed to adaptation routes (eg changing housing) and, the win-win of cutting deaths from air pollution if you eliminated fossil fuels (citing a study finding 3.6m such deaths a year would be avoided).

From a campaign point of view, Hallam's 'six billion deaths' claim is needlessly risky because he put it in such definitive terms. Schellnhuber is no garden-shed eccentric (as the BBC's description of him might imply) – he was founder of the Potsdam Institute for Climate Impact Research and first director of the Tyndall Centre, is a significant contributor to the IPCC and was the first proposer of the 2.C 'guardrail' first adopted by the EU in 1996 and subsequently incorporated in the Copenhagen Accord of 2009. His Wikipedia entry records that he won a Nobel Prize in 2007 and in 2017, said that unless climate action is taken by 2020, the world "may be fatally wounded."

But Schellnhuber's credentials are not the point. The issue is the impression that an ordinary listener might gain from the way Hallam and XR used his work. Hallam stated that the science showed six billion will die, as if this was an agreed and unarguable fact.

(In 2009 at the Climate Congress held in Copenhagen before the Conference of the Parties of the UNFCCC, John Schellnhuber said that taking together modelling evidence on emissions, agricultural (food) and development need, long-term sea level rise in relation to warming, and tipping points on land and in sea, in a *5.C rise world*, the estimated carrying capacity would be one billion people (Video at 58.07). However that would not have been sea-level rise before 2100).

The 6 billion claim prompted this exchange on twitter:
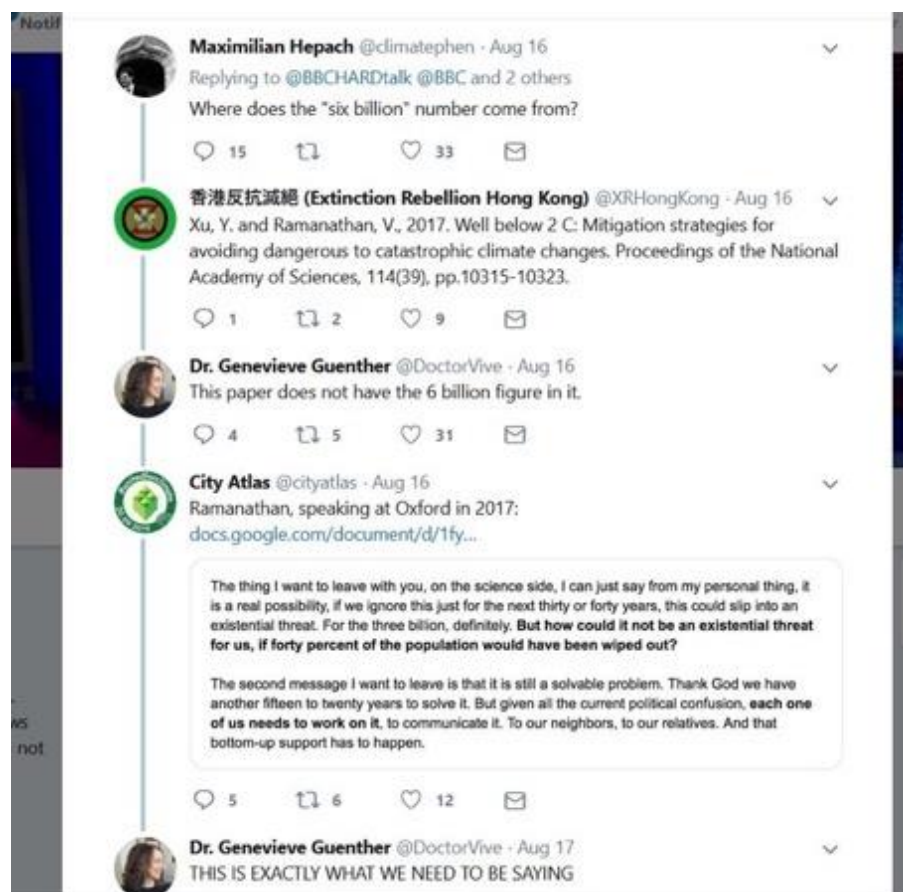
Note that at the Oxford Conference Ramanathan said "thank god we have another fifteen to twenty years to solve it", not just five or ten and not (as Bendell concluded) that it is insoluble/inevitable. (Veerabhadran Ramanathan is one of the world's leading climate scientists, Guenther is director of End Climate Science, a NGO working on climate and media).

Telling Children They Will Die

Adam Vaughan has written in support of Extinction Rebellion and is a Guardian and New Scientist journalist. But in November 2019 he wrote under the title '[Health impacts of climate change on children don't need exaggerating](#)':

'A child born today faces far-reaching health impacts from living through a world 4°C warmer than humans have ever experienced, according to a major assessment released today. But the research doesn't support claims by some climate activists that children may not grow up at all.'

This remark matches assertions by Roger Hallam (online video) at the point it shows 'a final message':

Extinction Rebellion - The birth, the theory and the practice
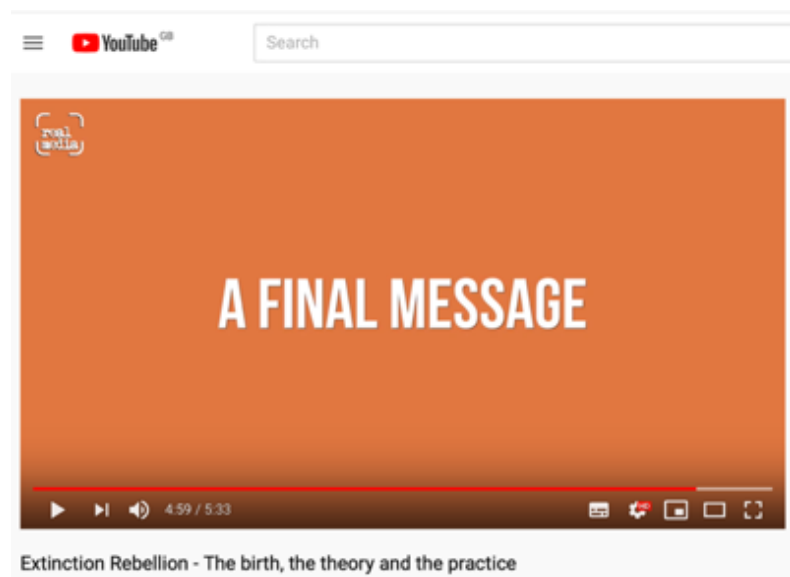
"[Our children are going to die in the next ten to twenty years](#): *think about it. And then think about it again. And think about it again until you cry. And get up in the morning and do your duty to your kids and get out there. We're not playing games. It's not a game."*

Or it might be Gail Bradbrook (to Reuters):

"*Has it landed with you that your kids probably [won't have enough food to eat](#) in a few years' time?"*

Or Rupert Read ([to children in London](#))

'You are in a terrible predicament It's worse than you've been told almost certainly, probably a lot worse. Dangerous climate change and the extinction crisis - the crisis of many many species going extinct as we speak - if they're not stopped will mean that you do not have normal lives like your parents have. This is about whether you have a future. People probably sometimes ask you what are you going to be when you grow up but we've reached a point in human history where the question also has to be asked, 'what are you going to do if you grow up?'

Vaughan's article was about [a report](#) in the medical journal *The Lancet*, on health and climate change. It raised concerns about dangerous bacteria multiplying in warmer coastal waters, reduced crop yields and more polluted air trapped in cities. These were raised by Nicholas Watts, a medical doctor at UCL but he also noted that because of planned pro-climate actions, "a child born in the UK today will, by the age of 6 years old, live in [a country without coal power stations.](#) By 21, they will be unable to buy

a petrol car – a date that [politicians have hinted](#) may come much earlier. When 31, they will live in a society that should have hit net-zero emissions, with cycling and walking much more prevalent".

"By the time you reach net zero, you have cleaner air, healthier diets, more liveable cities, you have stronger, more resilient health systems," said Watts. Which one of those two pathways we pick is entirely a political question, he added. "It's now entirely a question of implementation, of getting on with it."

Rupert Read's talk prompted a Tweet from climate scientist Tamsin Edwards who described his claims as wrong, while Mark Maslin from UCL called the talk 'awful' and Sam Appleton said one of Read's talks had affected his mental health and "too many people have been taken in by this and deep adaptation. Its dangerous". Another tweeted that Read had appeared at a conference in Oxford and said it was ok for XR to "stretch the truth". ([see thread](#)):

Dr Tamsin Edwards
@flimsin

@GreenRupertRead Rupert, I am shocked at this talk. Please stop telling children they may not grow up due to climate change. It is WRONG and deflects from the fact it is poor people who are at risk due to inequality exacerbated by shifts in weather.

Rupert Read: How I talk with children about climate breakdo...
This is a video of my talk at the Schools Climate Conference held at University College London on the 3rd of July 2019. ...
🔗 youtube.com

10:05 PM · Oct 26, 2019 · Twitter for iPhone

151 Retweets   **482** Likes

Dr Tamsin Edwards @flimsin · Oct 26, 2019
Replying to @flimsin
I thought @ExtinctionR had grown out of this "many people in the UK will die very soon" phase. I thought you wanted to be supported by evidence, and if quoting speculation about worst-worst-worst-worst case scenarios from 2-3 people, to be very clear this is not a mainstream view

♡ 13   ⟲ 21   ♡ 123

Dr Tamsin Edwards @flimsin · Oct 26, 2019
I know many of my conversations with the What's App group of which you were a member were since this date. I sincerely hope you no longer tell such untruths as "IF you grow up", and that you will now take it offline.

♡ 2   ⟲ 8   ♡ 75

Dr Tamsin Edwards @flimsin · Oct 26, 2019
With these kind of statements you undo all the hard work of the scientists and pro-science XR people who I know are trying to keep to the (complex) evidence base, and be clear when they are citing outlier or extreme predictions

♡ 10   ⟲ 10   ♡ 96

Mark Maslin @ProfMarkMaslin · Oct 27, 2019
Replying to @flimsin and @GreenRupertRead
@GreenRupertRead I completely agree with @flimsin this is an awful talk - this is as bad as 'climate change denial'. Scaring children is not big and not clever - the philosophy of fear does not work and basically you undermine everything scientists are doing. So STOP these talks

♡ 22   ⟲ 14   ♡ 72

97

7 more replies

Rupert Read 🌍 @GreenRupertRead · Oct 27, 2019

Replying to @flimsin

It is not wrong. You are fab, but you have no expertise that can to show that it is wrong.

There is a serious risk of societal collapse within a generation. 'Societal collapse' means that MANY wld die.

If we continue to shy away from these hard truths, we only probabilify them.

💬 34   🔁 4   ♡ 39   ⬆

matthew huber @climatedynamics · Oct 27, 2019

@flimsin is if course right. There lots that can be done to prevent collapse and it won't be infinitely harder at 3C than 2C. While I empathize with the panic people feel it's not a great basis for planning well for the future.

💬 4   🔁 2   ♡ 10   ⬆

6 more replies

Jem Bendell @jembendell · Oct 27, 2019

Replying to @flimsin and @GreenRupertRead

I recommend chatting to psychologist @Carolinehickma who is working on projects talking with children about the worst of climate change (including in communities in the global South faced with going underwater). Also this film from a 13 yr old youtu.be/MzyOSAUHvE4 @flimsin

▶

Sand Castle (ecological breakdown through the ey...
What learning makes sense in a collapsing civilization? Inspired by Greta Thunberg, Fridays Fo...
🔗 youtube.com

💬 2   🔁 5   ♡ 19   ⬆

Caroline Hickman @Carolinehickma · Oct 28, 2019

We need to listen to what children are actually saying they feel. We are not frightening them. They are afraid when they look at the evidence. They are even more afraid when adults fail to face their own fears and claim to be protecting children @Carolinehickma @ClimatePsychol

💬 7   🔁 23   ♡ 44   ⬆

5 more replies

Thread

Dr Alexandra Jellicoe @alexjellicoe · Oct 27, 2019
Replying to @flimsin and @GreenRupertRead
Whilst alarmism aimed at kids may be questionable there are other very well respected climate scientists who are very alarmed - unless I've misunderstood this tweet?

> **Peter Kalmus FFF** 🔥❌ @ClimateHuman · Oct 19, 2019
> Replying to @ClimateHuman and @neilhimself
> At this point I'm basically just grateful to have food, water, air, security, and a livable planet. And I do not take these things for granted anymore. And I'm concerned billions might lose some subset of them, within my lifetime, possibly including me and my kids.

◯ 1   ⟲   ♡ 8   ⬆

Rupert Read 🌍 @GreenRupertRead · Oct 28, 2019
With respect, it's not 'alarmism'. That's the term used by the Koch brothers, Delingpole et al. Kindly don't help them out.

◯ 3   ⟲   ♡ 6   ⬆

1 more reply

Jo house @Drjohouse · Oct 28, 2019
Replying to @flimsin and @GreenRupertRead
Thanks @flimsin. @GreenRupertRead you spoke at our net zero conference in oxford, you disagreed with the scientists while you made up untrue stuff, and said it was ok that xr "stretched the truth". Please let science help you "tell the truth" instead of alienating and scaring....

◯ 3   ⟲ 5   ♡ 33   ⬆

Dr Tamsin Edwards @flimsin · Oct 28, 2019
Damning. Thanks Jo

◯   ⟲   ♡ 1   ⬆

Sam Appleton @SamAppleton1 · Oct 27, 2019
Replying to @flimsin and @GreenRupertRead
Thank you for speaking out against this. I am a young person and one of Reads talks last year made my mental health spiral and I almost made some awful life decisions. Too many people have been taken in by this and the deep adaptation stuff. Its dangerous

◯ 8   ⟲ 4   ♡ 16   ⬆

Dr Tamsin Edwards @flimsin · Oct 27, 2019
Oh, Sam, I am so sorry. I hope things have improved for you. It's fear of consequences like this that have made me more forceful than usual today. Wishing you well, T
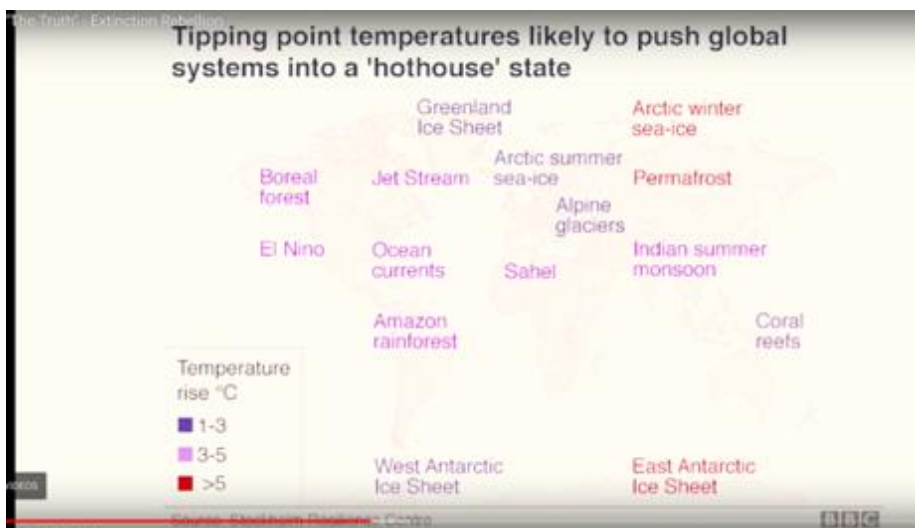
◯ 1   ⟲   ♡ 11   ⬆

7 more replies

99

'The Truth'

In Part 1 of the 'Truth' video at XR UK's website, XR shows a screenshot from a BBC report of the hothouse Stockholm Resilience Centre report on possible climate tipping points, which could trigger one another like falling dominoes, leading to a 'hothouse earth'. (Rockstrom says they identified 300 potential tipping elements).

A 'Hothouse Earth' presentation (see video here) by former SRC director Johan Rockström was given at the Davos World Economic Forum.

Former centre director Johan Rockström introduced the "Hothouse Earth" scenario at the World Economic Forum's annual meeting in 2019.

GLOBAL WARMING

The Centre explains:

'An international team of scientists has published a study in Proceedings of the National Academy of Sciences (PNAS) showing that even if the carbon emission reductions called for in the Paris Agreement are met, there is a risk of Earth entering what the scientists call "Hothouse Earth" conditions.

A "Hothouse Earth" climate will in the long term stabilize at a global average of 4-5°C higher than pre-industrial temperatures with sea level 10-60 m higher than today, the paper says.

The authors conclude it is now urgent to greatly accelerate the transition towards an emission-free world economy.

"Human emissions of greenhouse gas are not the sole determinant of temperature on Earth. Our study suggests that human-induced global warming of 2°C may trigger other Earth system processes, often called "feedbacks", that can drive further warming - even if we stop emitting greenhouse gases," says lead author Will Steffen from the Australian National University and Stockholm Resilience Centre.

"Avoiding this scenario requires a redirection of human actions from exploitation to stewardship of the Earth system."

Currently, global average temperatures are just over 1°C above pre-industrial and rising at 0.17°C per decade.

… "Hans Joachim Schellnhuber, Director of the Potsdam Institute for Climate Impact Research, says, "We show how industrial-age greenhouse gas emissions force our climate, and ultimately the Earth system, out of balance. In particular, we address tipping elements in the planetary machinery that might, once a certain stress level has been passed, one by one change fundamentally, rapidly, and perhaps irreversibly. This cascade of events may tip the entire Earth system into a new mode of operation."

"What we do not know yet is whether the climate system can be safely 'parked' near 2°C above preindustrial levels, as the Paris Agreement envisages. Or if it will, once pushed so far, slip down the slope towards a hothouse planet. Research must assess this risk as soon as possible."

(Rockstrom and Schellnhuber were both among the authors of the study).

In his presentation, Rockstrom shows the tipping points identified in his paper which could be triggered at 2.5-3.C rise, leading to a new stable hothouse at maybe 4-6.C. But he also presents potential solutions, which XR does not mention. First, a food diet plan which could halve climate changing emissions. Second, he says at current rates of growth, solar and wind energy are "doubling every fourth year" and could create half the world's electricity by 2030. "We've not crossed the hothouse point yet" says Rockstrom, and that is the "biggest challenge of all, to now get the fourth industrial revolution to occur inside this safe operating space on earth".

Growth of renewable energy, "doubling every fourth year"
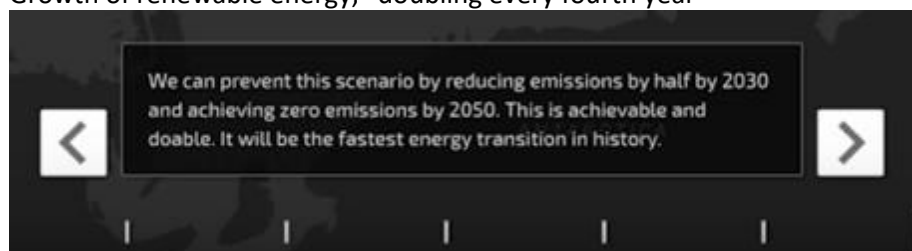
"achievable and doable" – from Rockstrom presentation
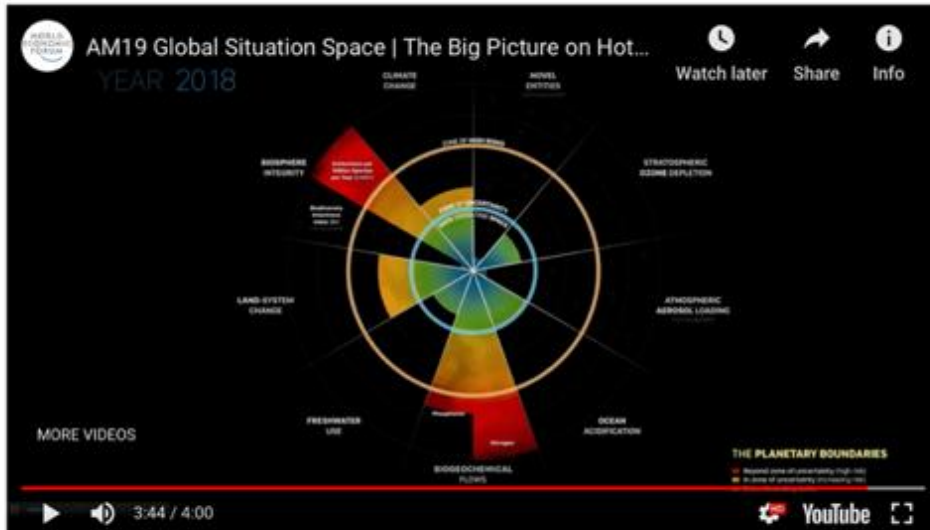
Former centre director Johan Rockström introduced the "Hothouse Earth" scenario at the World Economic Forum's annual meeting in 2019.

"we've not passed the hothouse point yet" – Rockstrom

In the paper itself ('Trajectories of the Earth System in the Anthropocene') the authors write:

'Humanity's challenge then is to influence the dynamical properties of the Earth System in such a way that the emerging unstable conditions in the zone between the Holocene and a very hot state become a de facto stable intermediate state (Stabilized Earth) (Fig. 2). This requires that humans take deliberate, integral, and adaptive steps to reduce dangerous impacts on the Earth System …'

'there is no doubt that the normative, policy, and institutional aspects are highly challenging. However, societies could take a wide range of actions that constitute negative feedbacks, summarized in SI Appendix, Table S5, to steer the Earth System toward Stabilized Earth. Some of these actions are already altering emission trajectories'.

In its current web page on science and 'the truth' XR references the same feedbacks paper (track to the bottom) and adds that 'feedbacks in the real climate are unlikely to cause "runaway" heating', which is quite a different 'fine print' spin from its motivational talk video. For an accessible but fairly comprehensive round up of this topic and a 'fact check' listing of feedbacks from ClimateTippingPoints.info see here, and for a Resilience paper spelling out the case that there is systematic under statement of the risk see here).
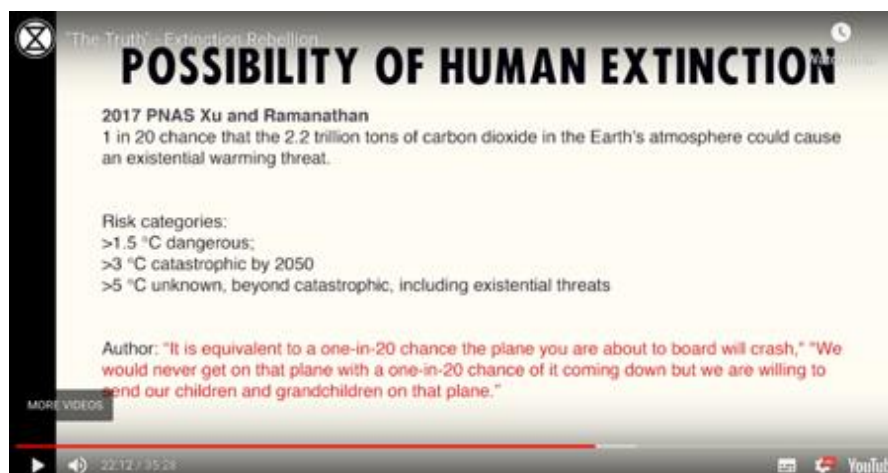
In the same 'Truth' video, XR uses a 2017 paper by Xu and Ramanathan to illustrate the possibility of human extinction. It says the '2.2 trillion tons of carbon dioxide' in the earth's atmosphere could cause an existential warming threat.

[In a critique of what seems to be a similar talk but delivered by Gail Bradbrook, Gabriel Carlyle takes issue with this, pointing out that there is already more carbon in the atmosphere and 'the paper says that there is 5% probability of reaching >3 degrees Celsius by 2050 in *two scenarios without climate policies* (called baseline-fast and baseline-default in the paper). The 2.2 trillion figure does appear in the paper, but as an end-of-century *target* for CO2 levels, in a scenario involving carbon extraction and sequestration'.]

The Scripps Institute, where Ramanathan works, quotes him as saying '"When we say 5 percent-probability high-impact event, people may dismiss it as small but it is equivalent to a one-in-20 chance the plane you are about to board will crash … "We would never get on that plane with a one-in-20 chance of it coming down but we are willing to send our children and grandchildren on that plane."

It points out that the paper also identifies what needs to be done to avoid catastrophic or beyond-catastrophic effects. 'Aggressive measures to curtail the use of fossil fuels and emissions of so-called short-lived climate pollutants such as soot, methane and HFCs would need to be accompanied by active efforts to extract CO_2 from the air and sequester it before it can be emitted. It would take all three efforts to meet the Paris Agreement goal to which countries agreed at a landmark United Nations climate conference in Nov 2015'.

It adds:

'Xu and Ramanathan point out that the goal is attainable. Global CO_2 emissions had grown at a rate of 2.9 percent per year between 2000 and 2011, but had slowed to a near-zero growth rate by 2015. They credited drops in CO_2 emissions from the United States and China as the primary drivers of the trend. Increases in production of renewable energy, especially wind and solar power, have also bent the curve of emissions trends downward.'

And:

'Short-lived climate pollutants are so called because even though they warm the planet more efficiently than carbon dioxide, they only remain in the atmosphere for a period of weeks to roughly a decade whereas carbon dioxide molecules remain in the atmosphere for a century or more. The authors also note that most of the technologies needed to drastically curb emissions of short-lived climate pollutants already exist and are in use in much of the developed world. They range from cleaner diesel engines to methane-capture infrastructure'.

'"While these are encouraging signs, aggressive policies will still be required to achieve carbon neutrality and climate stability," the authors wrote'.

[In fact the authors wrote about 'encouraging' signs that carbon-neutrality is possible, citing '52 cities, 65 businesses, and numerous universities … already embarked on the CN pathway' and 'hopeful' signs that it is possible to bend the global emissions trajectory, based on the slowing rate of growth, down from 2.9% a year 2000 − 2011 down to 1.3% in 2012-14 and 0.2% 2014-15. Since the paper was published in 2017, global emissions have continued to rise: 2.1% in 2017, 1.5% in 2018 and 0.6% in 2019.]

In 'The Truth', XR says nothing about what the authors say can be done and is being done.
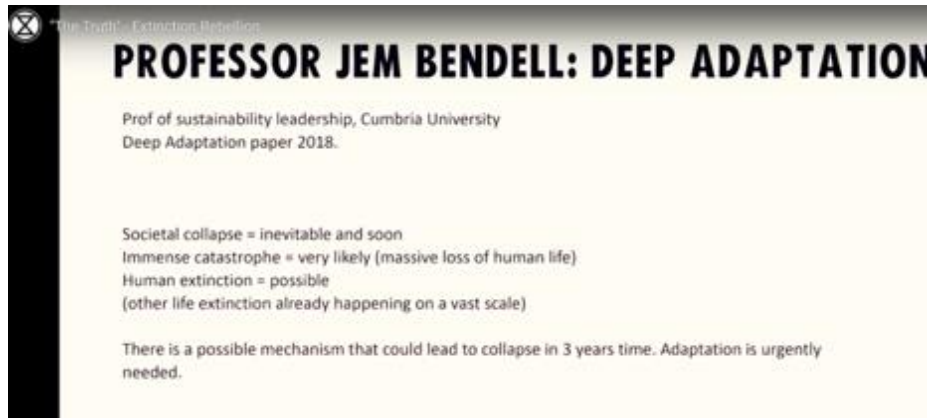
In 'The Truth' video, presenter Clare Farrell makes the point that the Xu and Ramanathan paper is peer reviewed and so the authors have to be able to 'back it up'. She then goes straight on to quote work by Jem Bendell (above). She says this is "another terrifying paper that came out last year .. Professor Jem Bendell … Deep Adaptation".

'Deep Adaptation' of course was not a peer reviewed publication – Bendell himself explains that it was rejected by a journal and why he self-published it – which is not necessarily bad in itself but XR makes no distinction between the peer reviewed and non-reviewed work, although describing it as 'an academic paper'. According to Bendell, social collapse is inevitable, may happen by 2021, massive loss of life is very likely, and human extinction is possible. No gloom-picking is necessary here. (For one of Jem Bendell's defences of his paper see here).

After a large dose of grief encouragement as per the XR organising script, the video ends with the audience being prompted to stay in touch with one another (likewise on method) and consider the "appropriate response … to the systemic failure of our society and our politicians to do anything".
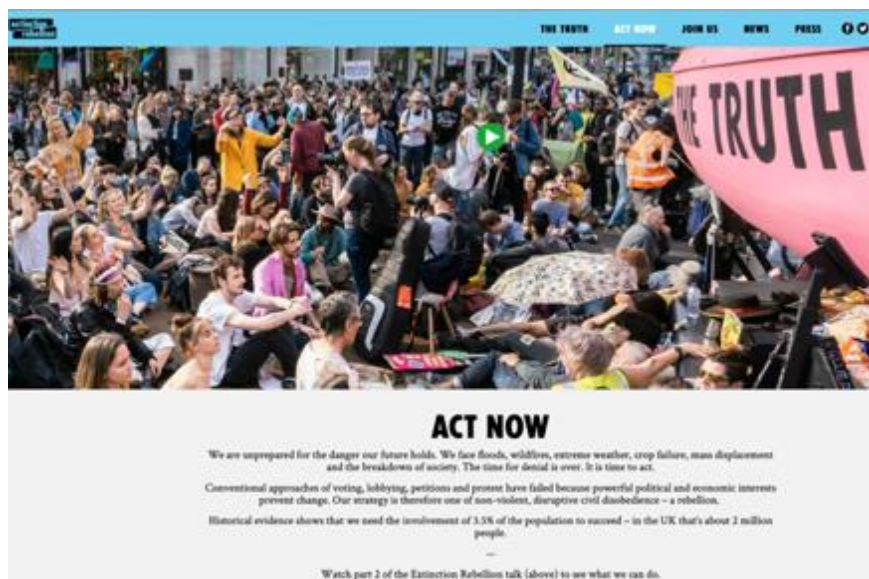
The 'Appropriate Response'

XR's 'The Truth' Part 1 makes a lot of use of scientific papers. The authors of those papers evidence the threat of climate-changing gases and make the case for various formulations of urgent action to eliminate emissions and recover carbon from the atmosphere.

In Part 2 XR however has a different 'appropriate response' based on the the threat of climate-changing gases, which is 'rebellion'. It baldly states that conventional approaches 'have failed' and claims that at 3.5% participation, a rebellion would 'succeed'.

ACT NOW

We are unprepared for the danger our future holds. We face floods, wildfires, extreme weather, crop failure, mass displacement and the breakdown of society. The time for denial is over. It is time to act.

Conventional approaches of voting, lobbying, petitions and protest have failed because powerful political and economic interests prevent change. Our strategy is therefore one of non-violent, disruptive civil disobedience – a rebellion.

Historical evidence shows that we need the involvement of 3.5% of the population to succeed – in the UK that's about 2 million people.

PART 8 - Issues With XR's Social Change Theory

Extinction Rebellion's design for mass civil disobedience draws on multiple sources, including previous 'resistance' and civil rights campaigns, and social and psychological theory. It cites the US 'freedom-riders' tactic of overwhelming the police/prison system with numbers (although critics point to differences), and in *Common Sense*', Roger Hallam writes that three factors 'optimise chances of success': 'mass disruption, mass sacrifice, and respectfulness'. The last of these is designed to avoid an impression of individual aggression or conflict, enabling XR to explain 'the symbolic and sacrificial aspects of law breaking'.

It's a clever design but the pivotal part used to sell the theory to potential followers is the idea that there is a predictable critical level of sustained public participation in non-violent civil resistance, at which the government 'regime' will crumble or concede. It rests on interpretation of the work of Erica Chenoweth. This magic figure of 3.5% is repeated by XR again and again, and has been widely cited as 'a magic' figure, for example 'The Magic Number Behind Protests', and The '3.5% rule': How a small minority can change the world.

Does The Magic Number Apply?

The issue many critics have picked up on is not whether Chenoweth was wrong about effectiveness of violent or non-violent attempts to overthrow oppressive regimes (although

academics do debate it, for example regarding Ukraine) but whether it applies to what Extinction Rebellion is trying to do.

Erica Chenoweth

Chenoweth's work is famous in her field and known to many movement 'organisers' but I first came across it in a video of a Gail Bradbrook Rising Up! talk (slides here), given at SOAS in March 2017: '*Rising Up! How Things Change: The Duty to Disobey*'.

After making the case for uprising, Bradbrook explains "we don't need to convert the Daily Mail readers thank goodness": Chenoweth had found that "you need up to three to four percent of the population to rise up and be in active rebellion for change to happen".

This, she said:

"is probably the number that gets me out of bed in the morning and excited. Because in the UK that's 2.2 million people and there are 10 million people in this country who vote Green or Labour … I think there are already 2.2 million people in the UK that know this system's fucked and want to do something about it, so we have to create a vehicle for them to rise up and act as a collective to do something about it"

Chenoweth is an American political scientist. In her 2011 book with Maria Stephan, *Why Civil Resistance Works,* Chenoweth describes their study of 200 violent revolutions and over 100 nonviolent revolutions from the C20th. They categorized 26% of the violent attempts as successful but 53% of the nonviolent ones.

Every sustained non-violent campaign which attracted over 3.5% of the population in peak activity was successful, and some with fewer than that. Plus the non-violent successes were 10 times more likely than violent ones to transition to democracy within five years.

Chenoweth has won many plaudits and awards. In December 2013, *Foreign Policy* named her in the Top 100 Global Thinkers of the year "for proving Gandhi right". Chenoweth's work was rigorous, considering '160 variables related to success criteria, participant categories, state capacity, and more', and her story is all the more compelling because before she started the project, she had believed the opposite to be true – that violent revolutionary campaigns were more effective.

I read Chenoweth's book to find the 300 cases she studied (they are in fact at her website in this appendix) and was struck by how unlike most of them were to what Extinction Rebellion was attempting. Every 'regime' opposed was a dictatorship, totalitarian government, or an occupying force. And with the possible exception of apartheid in South Africa (where the struggle also involved opposition to an undemocratic government), the objectives tended to be simply the downfall of the regime, or self-determination (secession).

None were in open societies with functioning democracies, campaign groups, a free press and politics. Nor were they about something which, however serious, is essentially treated as a 'matter of opinion' as the climate issue is in the UK. Not now in the sense of whether or not climate change exists but contested opinion about how best to address it. In other words it's an 'issue', one of many on the political agenda, and XR's campaign is not a response to widely experienced oppression.

Although Extinction Rebellion misleadingly rolls in Gandhi and the US civil rights movement (Martin Luther King) and the British Suffragettes along with Chenoweth's cases (as in its video The Truth Part

2), none of those feature in the book, and none of those directly attempted regime overthrow but instead sought specific changes to laws or rights. (I later discovered that other people had also noticed the same thing – see below).

Nor could I find the 3.5% but in fact she worked it out afterwards, and explained it at her TED Talk in 2013. Chenoweth is reported to be 'interested in Extinction Rebellion, recently popularised by the involvement of the Swedish activist Greta Thunberg'. She says: "they are up against a lot of inertia but I think that they have an incredibly thoughtful and strategic core. And they seem to have all the right instincts about how to develop and teach through nonviolent resistance campaigns."

In *Common Sense'*, Hallam writes:

'We must adopt the most successful model for regime change shown by the social scientific research – the civil resistance model. This involves mass participation civil disobedience: tens and hundreds of thousands of people blocking the centres of cities to demand change.

There are a number of tactical options, but the main process is as follows:

- *The people conduct mass mobilisation – thousands need to take part.*
- *They amass in a capital city where the elites in business, government and the media are located.*
- *They break the law – they cross the Rubicon. Examples include blocking the roads and transport systems.*
- *They maintain a strictly nonviolent discipline even, and especially, under conditions of state repression.*
- *They focus on the government, not intermediate targets – government is the institution that make the rules of society and has the monopoly of coercion to enforce them.*
- *They continue their action day after day – one-day actions, however big, rarely impose the necessary economic cost to bring the authorities to the table.*
- *The actions can have a fun atmosphere– most people respond to what is cultural and celebratory rather than political and solemn.*

    After one or two weeks following this plan, historical records show that a regime is highly likely to collapse or is forced to enact major structural change. This is due to well established dynamics of nonviolent political struggle'.

One of the (more recent) 'civil resistance' examples Roger Hallam gives, is Jana Andolan II, Nepal. In 2005 the king sacked the government and assumed direct powers, creating an absolute monarchy, 'ostensibly to put an end to ten years of civil war'. Opponents formed a new coalition, Maoist insurgents set aside their arms, and civil disobedience and strikes lasted 19 days. After arresting 15,000 people the king gave in and 'allowed the political parties back into politics'. In 2008 Nepal was declared a republic. The first demand of the protestors was 'a return to democracy'. But what of countries such as the UK which is *already* a democracy ?

Other Views Of XR's Theory of Change and Strategy

Extinction Rebellion UK has attracted a lot of comment, positive, negative and analytical. A lot comes from inside the 'progressive' or PC or anti-capitalist parts of society, finding fault with it for being insufficiently diverse, inter-sectional, truly revolutionary or working class enough. Some conservative or authoritarian critics see it as subversive and anarchist. Others take issue with particular elements of its plans on a more pragmatic basis, and not surprisingly in a new movement, exhausted or

disaffected staff and volunteers have voiced disenchantment. It also generates a huge amount of 'internal' debate.

Gabriel Carlyle

Perhaps the most comprehensive critique is Gabriel Carlyle's in four articles in *Peace News*, June - July 2019:   Where XR and the climate movement need to go now; XR: The dangers of apocalyptic organising; XR: The Plan, and XR: The 3.5 percent rule.

He begins:

'Extinction Rebellion's impact has been positive, but its current strategy is doomed to fail'.

In XR: The 3.5 percent rule he notes that 'very few' [none?] of the Chenoweth cases applied to a western democracy and the dataset only considered 'antiregime, antioccupation, and secession campaigns'. He says: 'I've no doubt that if two million people in the UK were to engage in something like mass non-co-operation in a sustained way for nine to 18 months then they could accomplish incredible things. However, I strongly doubt that XR's block-roads – mobilise-to-block-more-roads – block-roads-again cycle is capable of getting us there'. I agree, that was exactly my impression when I first came across the XR plans.

In XR: The dangers of apocalyptic organising Carlyle lays into XR for the way it has attempted to frighten people into joining its activities. 'It would be difficult' he says, 'to exaggerate the scale of our current ecological crisis. But not impossible'. Carlyle accuses XR of crying wolf about a near-term global apocalypse, not because the threats do not exist but because exaggerating imminence 'makes for a bad strategy': 'recall that crying wolf is dangerous precisely when there are real wolves around'.

In the third, XR: The Plan, Carlyle takes issue with the feasibility of XR's three demands within its own timescale, and with the credibility of the way it intends to achieve them (the 3.5% issue). Net zero by 2025 means a 50% cut a year for seven years, and politicians simply declaring emergencies does not mean that commensurate action immediately follows. He ridicules Bradbrook's version of the process to bring down the 'regime' by mobilising 'only' 2m million people in Britain, saying:

'I'm reminded of a cartoon by Sidney Harris of two mathematicians surveying a complex calculation on a blackboard, the second step of which reads: 'Then a miracle occurs'. "I think you should be more explicit in step two", one says to the other.'

He writes 'XR's end-of-the-world-ism appears to be blocking clear strategic thinking'.

In Where XR and the climate movement need to go now, Carlyle argues that a 'fourth option' is preferable to the three put forward by Hallam in the XR video, 'Why International Rebellion?. Hallam says there's only "more cheques to NGOs", "violence" or "mass participation civil disobedience" … "loads of people going to the capital city and… clos[ing] down that capital city until something dramatic happens"… "there's not, like, a fourth option out there".

Carlyle cites Hallam's anticipation in *Common Sense'* that "historical records show" that after one or two weeks of continued action in London (blocking roads etc), the economic impact would "bring authorities to the table", and rejoins: 'needless to say, despite 11 days of remarkable and often inspiring protests this April, the UK government did not collapse. Nor was it 'forced to enact structural change'.

His 'fourth option' is 'building strong movements out of focused campaigns', which he says is the route taken by 'many of the most famous and successful examples of activism, such as the US civil rights movement'. He also cites the UK Poll Tax campaign (1989-90) involving 18m people in the UK refusing to pay a tax, carbon divestment campaigns and the US freedom rides.

Carlyle says of the civil rights achievements: 'These victories were *not* won by demanding a civil rights act at the outset and then repeatedly mobilising people to block traffic in Washington DC until the US government gave in to this demand – XR's 'mass participation civil disobedience' model'.

He also argues that XR's plan fails 'the achievability test' as it should 'have a specific target, a demand that 'seems achievable' but which need not be easy and which can escalate over time, 'if there are the people resources'. He argues for intermediate objectives and recognizing that the task is 'a marathon not a sprint'.

Oscar Berglund

Oscar Berglund of the University of Bristol argues that while it is obviously not a classic anarchist organisation (witness it's positive orientation to the police for example), nor is it in the tradition of liberal civil disobedience, using the tactic as a last resort to demonstrate unjustness of policy and changing it. In a July 2019 'Conversation' blog 'Extinction Rebellion uses tactics that toppled dictators – but we live in a liberal democracy' he wrote:

'XR's tactics are not based on how social movements have achieved policy change in liberal democracies. It is based on how dictatorships have been toppled. It [mobilisation of the magical 3.5%] is: 'based on how to achieve revolutions, not on how to get governments to respond to the will of the majority'.

He concludes that thanks to disenchantment with politics and conviction that climate change anyway promises 'societal breakdown' (referencing the XR book '*This is Not A Drill*') 'if they continue to make the protests a bit of a festival, then the chances are we'll see more disruption from Extinction Rebellion – even if it does alienate many others'. Which leaves open whether XR's strategy to date will actually lead to the UK making the changes it advocates, by one route or another.

Andre Spicer

In a Guardian article 'The Extinction Rebels have got their tactics badly wrong' in April 2019, André Spicer, professor of organisational behaviour at the Cass Business School at City, University of London criticised XR on grounds of political strategy. In the article Spicer writes:

'hearts and minds will not be won with protest puppetry, guerrilla gardening and talk of 'climate justice …… A movement must reach out beyond true believers and connect with a wider base of potential supporters – wherever they might be found on the political spectrum … Climate activists talk about saving the natural environment from "harm", "caring" for the planet and working towards climate "justice". Such language appeals to the left but antagonises the right….

… 'Extinction Rebellion's call for "ecological justice" will appeal to people on the left, but it will miss out those in the centre and alienate folks on the right. If the rebels want to reach out, they could instead talk about "preserving the purity of nature" or "saving our national natural heritage". Their tactics are also likely to push away many potential supporters. Acts of civil disobedience such as occupying

bridges, guerrilla gardening and protest puppetry may appeal to seasoned activists, but are a turnoff for thousands of potential supporters who might walk past such occupations. If the rebels want to reach out, they should use social rituals which other groups are familiar with – instead of glueing themselves to DLR trains, they might hold tea parties at local fetes'.

'*... the majority of people who could potentially be won over to their cause don't see themselves as "rebels". Instead they identify as parents, workers, neighbours, members of ethnic or religious groups and many other things*'.

But he also adds:

... '*perhaps the Extinction Rebels do not want to reach out. Their avowed aim is to encourage 3.5% of population to undertake system change. If the Extinction Rebels continue to focus on attracting a relatively small group of activists they will open up a space for a mass movement which can appeal across political boundaries. If such a mass movement does indeed come about, the Extinction Rebels are likely to provide an important service. This will be due to what's called* the radical flank effect. *This is when more extreme groups make us aware of the problem, in turn forcing the authorities to work with more moderate movements to create the solutions.*'

Nick Wright

In October 2019, writing in the left-wing *Morning Star*, (From Extinction Rebellion to revolution: strategies compared**)** Nick Wright comments:

'*Its daring tactics have wrong-footed political authority and the bourgeois media as well as giving the public-order police a more entertaining job than normal.*

While the exotic behaviour of some XR activists gives Daily Mail editors apoplexy, the more common — and common sense — reaction from most people is to enjoy the anti-authoritarian exuberance in the same spirit that put-upon peasants and inebriated artisans in feudal Britain revelled in subverting authority when a successful armed rebellion seemed impossibly remote.

The circle of people who deny the importance of action to halt climate change is getting smaller, and politicians will make a big mistake if they think that this powerful movement can be disregarded and its demands dismissed because its style departs from the po-faced procedures of conventional politics'.

Wright is sceptical about the 3.5% and XR's optimism (and this was before the landslide Conservative General Election victory) that the powers-that-be will feel compelled to accede to its demands, saying: 'our ruling class is the most experienced and cunning in the world and will concede when the cost of not compromising threatens its ownership of wealth and command of the state apparatus'. He adds: 'They will take a hit on their profits if this is the price for retaining power and critical control'. I think that's about right.

He also writes:

'*What makes the environment crisis different is that time is not on our side and that those that profit from the exploitation of carbon fuel reserves know that these are not infinite.*

The more far sighted of them, and the more rational, understand the science — those blinded by profit discount it.

This rather suggests that more than one kind of tactics are appropriate. Mobilising a decisive weight of public and scientific opinion to command action from government and international institutions combined with decisive action against the head-in-the- sand crowd would be a start'.

'… Mass movements, to achieve their aims, must necessarily combine leaps of imagination with hard-headed realism in assembling the social forces that can compel change … [and this] also requires a measure of transparency around decision making, something which Extinction Rebellion is vulnerable to criticism over.

Nafeez Ahmed

Also in October 2019, on Medium, Nafeez Ahmed of Insurge Intelligence took XR to task for 'the flawed social science behind its change strategy'. Explaining that he is a supporter of the new climate movement, Ahmed says he'd nevertheless long had 'concerns about XR's strategy'.

He remained silent about his concerns but felt he had to speak out after the Canning Town debacle which: 'alienated commuters from East London, where many are black and ethnic minorities in poor housing with low paid jobs and often zero hour contracts'.

'The basic problem with the 'logic underlying XR's method' says Ahmed 'is that it is based on flawed science — specifically, demonstrably flawed misreadings of the social science. It's not that the entire method is wholly wrong; it's that the failure to grasp its wider context and limitations means that without an upgrade, it will lead to XR's failure'. He adds:

'Despite ostensibly being derived from studies of nonviolent movements around the world (overwhelmingly though not exclusively by people of colour), the most important learnings from these movements have been overlooked'.

The first of these shortcomings (read his post for detail) concerns the mass arrests strategy. Beneath the criticism that XR's go-to-prison-it's-ok approach effectively marginalises black and ethnic minorities as they are worse-treated in the criminal justice system, a 'fundamental problem' with the analysis, 'is that the black civil rights and Indian independence movements were *not* about pushing for *comprehensive system-change*, but had more specific goals'.

He goes on to argue that XR has misunderstood and expropriated the iconic movements 'it draws its inspiration from', giving as examples, the American civil rights movement, and the 'Indian independence movement' which inspired it:

'These movements were designed to disrupt an existing, highly visible regime of repressive violence … and which already therefore lacked legitimacy in the hearts and minds of those communities. Both were cases of resistance by people of colour against systems of white supremacism. In both cases, disruption actions aimed at directly increasing the costs of the repressive violence that those communities were resisting'.

'Hence, they were successful because the institutions they disrupted were precisely the institutions of violence that needed to be overwhelmed by mass disruption in order for them to change, so that the costs of continuing that repressive violence would be increasingly difficult to sustain or justify.

This model cannot be simplistically transplanted to the modern Western context, where structures of power are far more complex, repression more invisible, and the institutions being targeted have no intuitively obvious connection to the demand being made'.

As he points out, 'White people are not being brutalised en masse by a repressive state apparatus' and 'the idea that mass arrests of largely privileged white people will overwhelm the police system — paving the way for the government to capitulate to XR's demands about climate change — does not follow from the logic of these historical cases'.

He goes on to spell out a detailed critique of Hallam's interpretation of the 3.5% material accumulated by Chenoweth.   He notes:

'Of the 323 cases they study, all of them involved opposition forces using a wide range of different strategies with mass arrests figuring as just *one potential approach — that would only work in the right circumstances*. Most successful cases required a wide diversity of strategies building on years of community mobilisation, unlike XR's current fixation on mass arrests'.

And:

… 'Using this particular route, therefore, XR will struggle to mobilise anywhere near 3.5 percent of the population into active involvement in its movement, because the repression of the institutions it is confronting is not universally obvious, nor does it impact the communities currently being mobilised.

This question is even more pertinent given that Chenoweth and Stephan quote and affirm Rutgers University sociologist Kurt Schock's conclusion that nonviolent strategies don't work as well in democracies as they do in non-democratic regimes'.

Ahmed also explores the way that XR has based its strategic assumptions on a reading of the work of US academic Gene Sharp.

'Sharp's theory of change is focused narrowly on one goal: undermining the legitimacy of an existing overtly authoritarian regime, in order to effect regime change. But there is no evidence that this procedure implies that the British neoliberal state would capitulate in the face of, to quote Hallam, thousands of arrests. Sharp's work does not prove that such a narrow strategy, absent a context of grassroots community-organising in the city being disrupted, is a game-changer…

Ultimately, Hallam's objective of shutting down the capital is based on an unfounded assumption derived from cherry-picking Sharp's work while ignoring the characteristics of London.

He assumes that simply by stringently adopting nonviolence while provoking the state, any escalating violence from the state will be seen as illegitimate by the general public in the capital, and will end up growing and empowering the movement. But this would only be the case if XR was sufficiently embedded with and mobilised through diverse communities throughout the capital — which it is not'.

This is not something I know much about but my reading of it is that to become aligned with the situation Sharp's model might apply in, XR would need to do a vast amount of on-the-ground community organising, which it has not. Rather it has tried (and to a degree succeeded) to mobilise and then organise what is in effect a narrow slice of highly motivated people who form an elective 'visiting revolution', going to London as the capital and power-centre but not primarily arising from communities of London. Indeed, Hallam is based in Cornwall, Bradbrook in Stroud and Read in Norwich, while the errant Canning Town activists were I think from Bristol.

That's not to say it can't work, only that the context of application does not seem to match some of the historical contexts used to generate the evidence for XR's Theory of Change.

Ahmed goes on to examine issues of race and privilege in relation to XR.

D Hunter

In an article in *The Independent*, headed 'Unlike Extinction Rebellion, I know the harsh reality of prison – it's not about good literature and meditation', D Hunter, a former activist on climate and other causes, criticised the casual way XR had promoted the idea of going to prison.   Intending the message for XR activists rather than its organisers, D Hunter wrote: 'I want them to know that they will not find any peace through prison and the ways in which you find it moving will also scar you for the rest of your life, and negatively affect every personal relationship you have for decades'.

Ben Smoke

As an activist who took part in the 'Stansted 15' action against deportations, Ben Smoke wrote an opinion piece in *The Guardian* in April 2019, warning: 'Extinction Rebellion protesters who want to be arrested: be careful what you wish for'. In it he says:

'As one of the Stansted 15, I know that dealing with arrests sucks vast amounts of time and money from the cause … When I was arrested I did not hear most of the words of the police caution. I was being led from the front wheel of a deportation charter flight that I'd helped blockade at Stansted airport in March 2017'.

'As an officer put handcuffs on me and walked me to the waiting bus, he started to arrest me. "I am arresting you on suspicion of aggravated trespass. You do not have to say anything – ". When I rounded the corner, glimpsing the collection of my fellow activists, who I'd not seen since we'd cut through the fence many hours before, we all cheered, obscuring the words. Once I was arrested though, and sat alone in a police cell for hours on end, those cheers rang hollow. When we were released, and eventually charged with a terrorism-related offence – one carrying a maximum sentence of life imprisonment – that jubilance was replaced by endless worry, stress and pain'.

'…In a recent video for the Guardian, the founder of the group, Roger Hallam, tells a police officer that "arrests aren't happening quickly enough". Later, he's seen telling a town hall meeting that "letters, emailing, marches don't work. You need about 400 people to go to prison. About two to three thousand people to be arrested." After a blood-pouring action outside Downing Street, protesters bemoaned the lack of arrests. In a recent article, one protester talks about giving up their training as a dancer to devote their full time to activism'.

… 'There isn't a day that goes by that I don't feel guilty about our trial and subsequent conviction (no pun intended). Not because what we did was wrong – far from it. But because even though 11 people remain in Britain because of our action, the two years that followed the action saw an unfathomable amount of resources, time, money and energy from across the movement poured into helping us fight our case, to helping us stay afloat, and avoid a life incarcerated. It took valuable resources away from those at the sharp edges of the hostile environment that we were protesting about'.

'This is the issue with Extinction Rebellion's ethos. The notion that 2,000 arrests will evoke the kind of systemic change needed to fight climate change is naive at best. At a time when the government has cracked down on protest, to not see that this could go the other way, and be used simply as a way of increasing already draconian anti-protest legislation and prosecutions, is shortsighted and irresponsible. But beyond that, the cost to individual activists, and the movement as a whole, would be huge'.

… 'It remains a mystery how wrapping up a whole new generation of activists in lengthy and costly court battles will achieve the changes we so urgently need'.

Matt Mellen

In a practical blog at 'ecohustler' after the Autumn 2019 rebellion, Matt Mellen wrote 'the Rebellion is strong! Can it now respond to key issues putting off many potential supporters?'
He set out '3 challenges' for Extinction Rebellion.

… As the dust settles on the Autumn Rebellion this is a good opportunity to assess some of the tactics many supporters, and potential supporters, find problematic

Mellen details problems with encouragement given to XR activists about getting themselves arrested for little purpose and at a higher cost to themselves than they realise, in a strategy he describes as 'naive'; interfering with low carbon transport as opposed to targeting heavy polluters; and 'failing to effectively make the case that an ecological future will improve everybody's lives'. Mellen also suggests activists make sure to use a green electricity provider, keep themselves available for protecting ancient woodland from HS2, and glue themselves to the doors of oil company executives rather than government offices.

'It is cute repeatedly blockading the centre of London but it is vague. We have to blockade the headquarters of the world's biggest polluters and shut down their operations once and for all. The crucial next step isn't citizen's assemblies. We don't need to rewrite the bible. Decades of work has already established the policies we need to turn the situation around and a new generation of politicians are running on these tickets. Alexandria Ocasio-Cortez, Bernie Sanders, Caroline Lucas and others are very clear on what policies need to be in place to rescue civilisation'.

In another post Mellen also advises young people to think twice before getting arrested because of the life-ruining effects it can have, and instead 'let older people take the hit'.

Sam Knights

Sam Knights is an ex-XR HQ worker who in October 2019 penned a long heartfelt post on Medium about why he had left: 'Extinction Rebellion: We Need To Talk About The Future'.

It starts:

'Dear everyone.

This is a love letter to Extinction Rebellion.

A movement that I devoted the last year of my life to. Lost jobs over. Got arrested with. Put everything on hold for. A movement that I believed in. A movement that believed in me. A movement that changed the debate. And that now needs to change'.

Knights celebrates XRs achievements: 'In April, the United Kingdom became the first country to declare a climate emergency, following a fortnight of continuous protest from Extinction Rebellion' (not quite, unfortunately, as it was a Parliamentary resolution not binding on and not supported by the government). And:

… 'the Labour Party made the first step towards answering this call for climate and ecological justice … the most radical and progressive policy to have ever been tabled: the Green New Deal. If enacted, this would mean the public ownership of major industries, a radical redistribution of wealth, the repeal of all anti-union laws, and a net zero emissions target of 2030' (for readers outside the UK; Labour lost the election)*.*

Knight continues:

… A month later and Extinction Rebellion held its October Rebellion in London. For a huge number of different reasons, it did not have the impact of our protests in April. People knew what to expect this time round. Some of our actions were breathtakingly beautiful. Some of our actions were painfully idiotic. Our protests were banned. Our sites were cleared. It was a disappointing end to the fortnight'.

This is just a sample of Knight's points:

… We want Extinction Rebellion to become proactive in its anti-racism. We want the movement to develop a deeper analysis of capital and control, and to acknowledge more publicly the crises of capitalism and colonialism that are — in no small part — responsible for this crisis.

.. 'Do we continue with Extinction Rebellion? Or is it time for something new?

It pains me to write those words.

I joined Extinction Rebellion a year ago ... the movement was still in its infancy …We organised our first protest on the 31st October 2018 and, to my surprise, over a thousand people turned up. Amongst them was a fifteen year old girl named Greta Thunberg, who had come all the way from Sweden in an electric car with her dad. In the media, we were supported by Vandana Shiva, Noam Chomsky and the former Archbishop of Canterbury Rowan Williams.

Since then, I have held a number of different roles ... I have worked in the media and messaging team, the political strategy team, and — when it was functioning — the rapid response team. I love this movement with all my heart. Our activists are, without exception, some of the kindest, most thoughtful, and most passionate people I have ever met'.

… 'The last year has been one of the best years of my life. But it has also been one of the worst. I was arrested at the very start of this year and the trial has only just concluded, eight months later. In the meantime, I have lost work and been targeted by the police. I am thinking about climate change the moment I wake up to the moment I go to sleep and the effect on my mental health has been really damaging. I really need a break.

… 'If Extinction Rebellion is going to be a long-term political project, then it needs to put climate and ecological justice at the heart of everything it does. It needs to proactively defend migrant rights and to stand in solidarity with those on the frontlines of this crisis. It needs to call for reparations and for further conversations around climate debt, land rights, and ecocide. It needs to better articulate how we extend and reform our broken democracy. It needs to reimagine our global finance system and, in doing so, provide a nuanced critique of our current economic system. It needs to understand how the climate crisis intersects with issues of race, class, gender, and sexuality. It needs to stop putting out such stupid messages about how prison is lovely, and being arrested is fun, and the police are all great. This is the most important social justice struggle of all our lives. And we have to start acting like it'.

… 'For too long we have allowed indigenous communities and activist groups in the Global South to do the vast majority of our resistance work for us, before we then step in at the last moment and claim all the credit.

Extinction Rebellion has certainly fallen into this trap. Some of the people in our movement have allowed their egos to run away with them'.

… 'The infamous train action is, I think, a good case study in the limits of decentralised activism. It was planned by a tiny faction of the movement, opposed by the overwhelming majority of our activists, and yet it was still allowed to happen under the banner of Extinction Rebellion.

It is worth saying that this same group tried to do the exact same thing during the April rebellion. At the time, we still had a more hierarchical way of organising; we established a body that had oversight over the entire rebellion called the Rapid Response Team, which was supposedly representatives from different subgroups across the organisation but was basically just fifteen people from the central team. I was in the meeting when this action was finally put to bed and I can tell you that had a couple of us not threatened to publicly quit if this action took place, then it would have happened in April.

I think the time is now right for us to ditch our undemocratic ways of working. Our movement has been exceptionally efficient in mobilising thousands of people, but now it needs to think long and hard about the principle of accountability. At the present moment, there is no accountability whatsoever'.

… 'I am, to be perfectly honest, not that prepared to get arrested for sitting in the middle of a road. I see the necessity of it and I admire those who do it, but personally I wanted to do something that was more significant and sent out a clearer political message. … a targeted protest with a very specific purpose. It had messaging around the neo-colonial practises of fossil fuel companies in Africa' … In other words: if I was going to rebel, I wanted to do it on my own terms' …

… 'Extinction Rebellion is … a natural successor of the Occupy movement. I am always surprised by how infrequently this connection is made. Most of the coordinators of Extinction Rebellion were involved in Occupy'.

… 'In the October rebellion, the police banned all Extinction Rebellion activity — in a move we do not yet know was legal [it wasn't] *— after we disrupted the financial district with a series of roadblocks. We have consistently challenged the rich and the powerful and been targeted as a result. If the police response was unlawful, it would not be the first time'*

… 'we are mobilising largely middle class people who live in the countryside'.

… 'Extinction Rebellion is based on revolutionary modes of activism. It aspires to peaceful revolution, not in the conventional sense of the word, but in a deeper, more reflective, and more empathetic way. We are not set up to be a reformist activist group. We want to transform every aspect of our society. And we believe in the people — in the power of ordinary people like you and me — to do that for ourselves'.

Two Problems: Campaigns and Politics

The Extinction Rebellion plan might yet work in the UK but for me at least, there are two practical problems if it's based on the 3.5% theory, and these are the existence of politics and campaigns. In its narrative Extinction Rebellion works hard to dismiss both of these but they are, to use Hallam's term, 'structural realities'.

So far, despite the efforts of some mainly sympathetic critics, and some much less sympathetic ones, most people probably see Extinction Rebellion as a climate movement: a more activist and participative version of climate campaigns. To many, the rebellion bit probably sounds rhetorical, not literal. And it has been sheltered from greater scrutiny by the emotional umbrella of Greta Thunberg, the school strikers and FridaysForFuture.

What for example will happen, if people realise that the rebellions are not aimed at cutting climate emissions but first at overthrowing the government? Rather than unify public opinion (as Extinction Rebellion seems to assume it will) That might well divide and polarise it, causing political reactions which are hard to predict but could, for example, create a values-driven split in society in a similar way to that which developed over 'Brexit' (discussed here, here and here). All the 'expert facilitators', fun-events and Citizens Assemblies in the world (which Hallam foresees) might not be able to put that back together again for many years, by which time there might be social deadlock over climate action, rather than an emergency response.

Despite and indeed partly because of a lot of politically correct thinking by Extinction Rebellion that it is going to engage 'ordinary' and not just 'middle class' people, it is obviously a highly values-skewed Pioneer-dominated enterprise. So the 3.5%, should it materialise, will probably look very like the outriders of the Remain campaign, only more anarchic. That is an almost slam dunk for creating exactly the same values split as occurred over Brexit.

Polarization

Extinction Rebellion's thinking on polarization seems inconsistent. Talking about disruptive actions such as Rising Up's attempt to block a road tunnel at Heathrow, Bradbrook says "one of the tactics is that you have to polarise the public and win active support". This is to shift passive supporters or neutral onlookers into deciding to join in and become active. In the process it may alienate some neutrals or passive opponents and make them more "entrenched" but "that's just inevitable and it's not a problem – in fact it helps people to chose, which side they're on …".

That would be true if you don't need to generate wide or majority support. It's not true if you face a risk of failure if you polarise 'the public' into two sides with sufficiently similar power or influence to create a logjam rather than change. Extinction Rebellion's pathway theory foresees first escalating disruptive action leading to government concession or collapse, followed (second) by a national decision via Citizen's Assemblies in favour of radical climate action. The magical 3.5% could perhaps be achieved by engaging and mobilising people in the polarisation model Bradbrook describes. But the second step requires a much wider national alignment.

In practice, the two would be linked. If a lot of people see the 3.5% bringing down the government, and they don't like that, then the second step will give them a chance to reject whatever the 3.5% wanted.

In a July 2019 interview on his ChangeMaker vlog, Mallen Baker challenged Roger Hallam on this point. What if (33.50) the public recruited into Citizen's Assemblies were to say "we think what the Conservative government has signed up to … net zero by 2050, is the reasonable solution?"

Hallam argued that while there was "no guarantee", 30 years of research into deliberative democracy showed "people come up with amazingly rational solutions to the problem … and become empowered by it" so it's "almost a no-brainer that they will come up with a very radical solutions as that's what the objective science would imply".

As I happens, I agree with Roger Hallam. I think the Citizens Assemblies were, as he says a 'smart' idea. Yes, a randomly selected sample of the UK public faced with a variety of expert evidence, and conversations with a wide variety of people, would almost certainly opt for something more radical than 2050. But not if opinion had already been polarised Brexit-style, and there is a risk that the current Extinction Rebellion pathway could achieve just that.

In it's training videos, Extinction Rebellion uses a three part typology to argue that there are good reasons for people from across this political spectrum to join a rebellion against the causes of dangerous climate change.
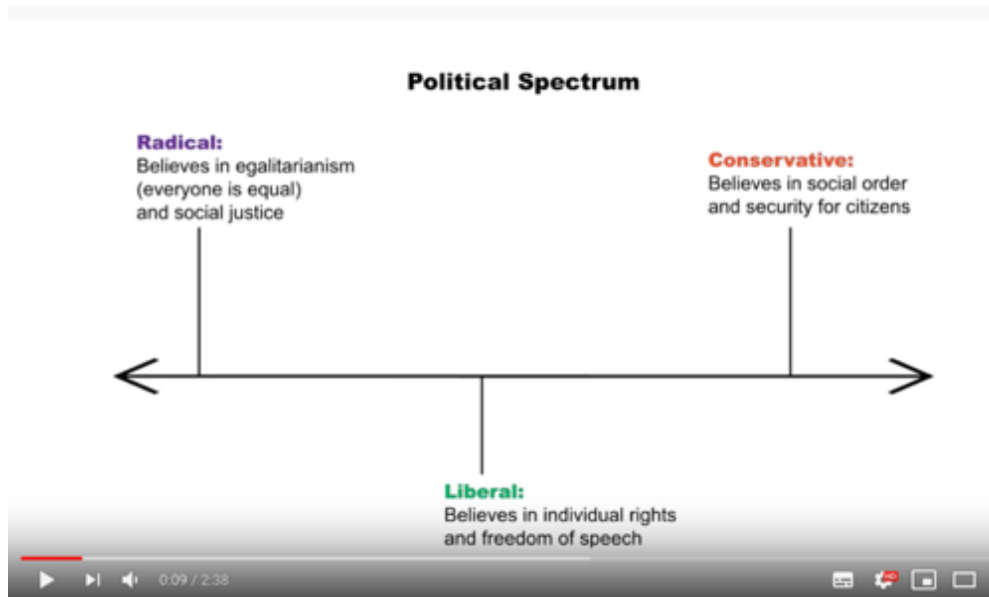
That's true, there are such 'reasons'.   But they are possibilities rather than likelihoods and without taking motivational values into account, this is an extremely rudimentary model. At the most basic level, unless the more socially conservative (Settler) and aspirational (Prospector) parts of British society felt that their security, identity and success was critically threatened by the government of the day, *before* you started trying to mobilise people, the proposition of revolution would be more likely to create opposition than support.

This would be all the more so, given the clear left-wing weighting within Extinction Rebellion. Hallam for example talks approvingly of Jeremy Corbyn in *Common Sense*:

'when this repression finds an outlet there is a non-linear political event. Politicians like Corbyn offer radical programs which are not 'credible', but the offer provides the outlet and pathway and people are drawn to the new opening in vast numbers'.

But not in vast enough numbers to vote for him it turns out: he returned the worst Labour election result since 1935 and is hugely unpopular.

Hallam also writes that

'The political culture of Western democracies has changed from a reformist to a revolutionary structure. It is no longer possible to save our society through small incremental steps. Mass political disruption is now required'.

I'm not so sure about that although I do agree that the 'political culture' has changed. I suggest that those looking at political theory for Extinction Rebellion's current rethink might do better to read the recent work of Ron Inglehart of the World Values Survey, for an insight into the political interaction of values, economics, politics and social change. [See *The Silent Revolution in Reverse: Trump and the Xenophobic Authoritarian Populist Parties,* 2018 book *Cultural Evolution* and *Cultural Backlash* with Pippa Norris.]

Disruption

Then what if Extinction Rebellion succeeds in escalating its numbers, towards the 3.5% (about twice the population of Birmingham as Bradbrook points out), and starts to cause really serious national disruption? That would be certain to bring a political reaction, not just from the government but, as we do have a functioning democracy, from Parliament, and not just from MPs but from their constituents.

For example even before the October 2019 rebellions, it was reported estimated that policing Extinction Rebellion actions had pulled away 83,000 frontline officers away from other duties at a cost of £16m, a sum equivalent to the salaries of 600 police. What if 'the public' has an opinion about that and starts to connect 'rebellions' with a failure to respond to crime around their homes?

Plus, because politics is responsive, it would probably stimulate a more intense political conversation well before the 'rebellion' caused the government to 'concede' or the 'regime' to fall, which Extinction Rebellion sees as necessary to pave the way the way to its Citizen's Assemblies. (In my view it might be a lot easier to get to the assemblies more directly, although the UK Parliament has already created one version, which may have 'shot Extinction Rebellion's fox').

In other words, an active political system is an active outlet for political concerns, and that is simply not the case in a dictatorship or totalitarian regime or under an army of occupation. Politics allows people a say, and a way for pressure to vent. It's a more 'wicked' problem in a democracy than in a rigid oppressive regime which may resist all pressure to change until it fails catastrophically.

In a democracy where people vote, they are also – to a greater or lesser degree - *invested* in the system by having voted (again, consider the angry post-referendum Brexit dynamics). At the very least this is the effect of the 'effort heuristic'. Extinction Rebellion's 'regime overthrow' theory requires them to throw that investment away.

Consequences and Campaigns

Extinction Rebellion has achieved great things in terms of mobilisation but it is trapped in its own version of the 'path dependency' that Hallam criticizes in others. Its dogmatic adherence to a questionable 'theory of change' leads it onto a path likely to fail, while adjustments to its strategy and tactics could give it a greater chance of success.

Extinction Rebellion has already had problems with the public consequences of some of its actions, even though it is still in the foothills of the Hallam escalation model (up to 30,000 people took part in the October London events, less than 0.5% of the population, and that was with the help of a lot of other groups in the background). The Canning Town tube train action provoked a strong negative reaction from the commuters on their way into London, including many who were annoyed, and in some cases enraged, by the perceived unfairness of it. They asked why Extinction Rebellion was targeted an electric train when they, and public transport in general, were part of the solution.

The media, much of which had been rather entranced with Extinction Rebellion (and a lot more so with Great Thunberg) saw Canning Town as a mistake, and evidence of incompetence. The fact that it emerged that Extinction Rebellion's internal consultation process (a telegram poll) had 'voted' overwhelmingly against the action but it went ahead anyway, only compounded that impression.

As Sam Knight observed (above), the Canning Town episode demonstrated the limits of the decentralised action model. He wanted and maybe other individualistic XR activists want to take direct action on their own terms. Fair enough but targeted at whom ? Taken to its conclusion, the October rebellion could have involved 30,000 separate one person rebellions each with a specific 'message'. Lots of diverse activities with a diversity of 'messages' end up as white noise, either captured in a generic such as 'protests' or represented by the one with most shares, tweets or the most arrests or the most dramatic condemnation – this is a zero sum game. It's the same problem as has been faced by many conventional campaign groups. XR's exceptionalism will eventually, meet the educational processes of a collision with reality, if it hasn't already.

Which brings me to the second problem: the existence of campaigns. Supporting campaigns provides a 'rival' option for action on climate change, which Extinction Rebellion has worked to discourage and that brings its own problems (see for example the video of Hallam visiting Greenpeace). But also, in an open society such as the UK which has tolerated campaigning for many decades, the public has become 'educated' about how campaigns work.

For instance I have been at numerous actions with Greenpeace - the sort described by Gail Bradbrook as 'spectator sports' - and encountered the public evaluating campaign actions. I remember lying on the ground as one of 600 Greenpeace volunteers who blocked Whitehall in a 'protest' against a nuclear power decision (science showed it would kill 600 people), and listening to nearby policemen as they awaited reinforcements so we could be dragged away. They discussed the pro's and con's of better ways we might have 'got our message across', such as an action in a shopping centre. (Two of them also assumed the 'protest' was about rainforests).
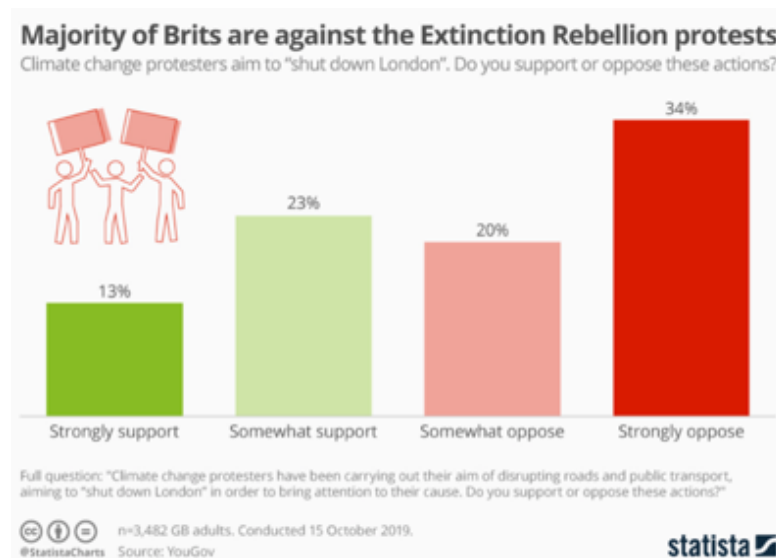

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Canning Town attack: Dramatic moment Extinction Rebellion protester is pulled down from top of London train in 'vicious' clash

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JACOB JARVIS, ELLENA CRUSE | Thursday 17 October 2019 07:41

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The Evening Standard

The Canning Town commuters were doing exactly that when they rebelled against Extinction Rebellion in October 2019. They were being what qualitative researchers call 'evaluative', of the tactics and strategy Extinction Rebellion campaign.

Their assumption was that if the purpose was to hasten action against climate change, a lot of other targets made more sense. Targeting fossil fuel-driven traffic for example, or the headquarters of fossil fuel companies in the City (where they were mostly heading to work). Or the commutes of their bosses (unlikely to live in Canning Town).

So the British public is likely to interrogate Extinction Rebellion's efforts, and it is unlikely to enjoy a free-ride if the method is unconvincing or unappealing, or seems to cause unjustified pain or distress. The public and the media will need to be convinced of the 'method in the madness' of Extinction Rebellion, if the 'movement' is to be perceived as in the public interest. At present, that means the public buying the idea that national disruption and government overthrow is necessary to bring forward the 2050 net zero target. I may be wrong but think that's an heroic assumption, and Extinction Rebellion could do well to consider alternatives in campaign design.

Statistia noted that of October 2019 'while 66 percent of Brits named climate change as the biggest global threat in a recent Pew poll, the methods employed by the Extinction Rebellion protesters have so far failed to win over the majority of the public. As a YouGov poll shows, 54 percent of the public say they are to some degree opposed to the protests, compared to 36 percent in favour'.

Majority of Brits are against the Extinction Rebellion protests
Climate change protesters aim to "shut down London". Do you support or oppose these actions?

Strongly support 13% | Somewhat support 23% | Somewhat oppose 20% | Strongly oppose 34%

Full question: "Climate change protesters have been carrying out their aim of disrupting roads and public transport, aiming to "shut down London" in order to bring attention to their cause. Do you support or oppose these actions?"

n≈3,482 GB adults. Conducted 15 October 2019.
@StatistaCharts Source: YouGov

statista

Opinion can change of course but does the above already suggest the potential for polarisation ?

I have often described campaigning as a form of public politics. It lacks formal political accountability but it nevertheless has de facto rules of engagement which give campaign groups the 'social licence' to campaign.

There has for example, to be a perceived moral deficit (climate change ticks that box) and the relevant audience has to be 'aligned', seeing the problem and the solution in the same way as the campaign does. (The Canning Town action fabulously failed to achieve that).

It also needs to be able to articulate the benefits of the proposition it's putting forward. But where an action disadvantages or inconveniences someone or something, it also has to be fair and

proportionate. It should target, or blame, the responsible party (see R in <u>RASPB</u>). That's defined by who has the power to stop the problem. And that was not the Canning Town commuters.

Canning Town was the point where Extinction Rebellion also parted company with another 'unwritten' rule (although <u>see here</u>) and that is to be, or remain onside with, the most empathetic figure in the story. The person or entity that an onlooking audience 'feels for'. Canning Town pales into insignificance of course compared to what could have happened if Extinction Rebellion had paralysed the entire Underground rail network, as it had apparently considered.   In terms of causing disruption and economic cost this could have 'made sense' but public support might have been terminated.

Revision Underway?

<u>Rupert Read</u> the philosophy academic at UEA describes himself as part of its diplomatic corps. In July 2019 he published a 'memo' [<u>Truth and Its Consequences</u>] to the Extinction Rebellion network, arguing for actions to be targeted at the wealthy and City Airport, full of business flights, rather than Heathrow.

'Before we do Heathrow, we need people to understand that this is about whether there is food on the table in the next several summers or not' wrote Read.

'They don't understand that yet … But targeting City Airport will enable them to understand very clearly that the rich need to change the most. And will provide a precedent for the idea that it might be legitimate to shut down an airport... London City can be the thin end of our large wedge. Whereas going straight for Heathrow badly risks us falling flat on our faces [with] ... less likelihood of generating stories such as the recent very difficult story in Bristol about a man who was kept by XR from attending his father's deathbed …'

In that memo, Read also proposes that as Extinction Rebellion becomes more successful, 'the so-called 3.5% 'rule' is increasingly of questionable relevance to us; to actually effect the kind of vast swift *system*-change now needed to head off collapse, we will need to take a pretty large swathe of the 99% with us'. He also says in a footnote, 'I gather than Chenoweth has recently elaborated on the alleged 3.5% rule to suggest that it is unlikely to apply in a situation where massive system-change is needed; that a much higher percentage will be needed'.

[XR UK has announced that it is in the process of revising its strategy – see Postcsript].

Will XR give up on the 3.5% and the regime-overthrow transplanted from Chenoweth's work? If so it may struggle to find one as neatly wrapped as Hallam's escalation via the magical 3.5%, not least because Chenoweth had proposed a series of intermediate steps which caused regimes to fall, notably the non-co-operation or defection of the security forces including the police.

This is perhaps a factor in XR's enthusiasm for for being respectful and polite to the police, why two of its more prominent spokespeople in 2019 were former police officers. Chenoweth identifies various forms of non-co-operation with regimes on behalf of public servants and security forces, such as not turning out or showing up for work, right up to defection. She suggests that the larger and more diverse the non-violent resistance is, the more it's likely to have social bonds with the regime forces (as in "my daughter might be in that crowd"), causing then to 're-evaluate their interests and preferences'. She writes: 'at the end of the day, most people want to survive and be on the winning side'. Plus 'backfiring' (onlookers being sympathetic to the resisters when oppressed) is more likely with large participation, resulting in more loyalty shifts.

Sending overwhelming numbers of people to prison to overwhelm the system and engender public sympathy is similar to the strategy of the early 1960s UK 'Committee of 100'. Hence Hallam apparently saying "the arrests aren't happening quickly enough" at a November 2018 bridge blocking. But to build and sustain the active involvement of millions, XR would need its actions to be supported by the majority of the population. For that it will need the backing Prospectors in terms of seeing climate change as a threat to their success, and Settlers seeing it as a threat to their identity and security, as well as the universalist and global minded Pioneers. However this requires having their support for the means and not just the ends, which may be particularly difficult if you have no attractive solutions to show.

Government Attention

In 2019 it was notable that feted by much of the media, Extinction Rebellion UK was often pleased with itself, and with some good reason. It had actualised a theory and it had seen success. In part of the April 2019 RealMedia video 'Extinction Rebellion - The birth, the theory and the practice', Roger Hallam explained:

"how power works is that if you challenge it, it's in a dilemma, as its' either going to oppress you or it's going to retreat, because it knows if it represses then you get this backfiring effect, or you risk it, because if it oppresses you it brings more people into the field"

"the state or the elites to be more precise are terrified that it's going to get out there. It's like a scandal. It's like, it's a big cover-up. And the thing that's going to make people talk about it is the public-political complex of people being prosecuted, arrested, going to prison. And they know that, so every time that we challenge them, they just retreat."

"we've had it really significantly in the last few weeks … we've had the blood of our children action … we went to see the police and we said "we're going to throw blood outside Downing Street", and they said "well yeah, that's criminal damage" so yeah … outside Downing Street terrorism zone this is serious, yeah … maybe we won't even get to Downing Street but not only did they let us get to Downing Street, then they let us throw the blood on the ground, and then they don't do anything [shrugs]. Again … do they really want 50 odd people in court for throwing blood on the ground outside Downing Street because the blood represents the death of children, due to the criminality of the fossil fuel lobby? Umm - no. [Laughs] 'Course they don't. Two or three weeks ago people decided to disrupt the court, speak their truth about the climate situation ... Upshot of it is … these people were in court handing out leaflets, never ever happened in court, that's contempt of court. No doubt about it ... the Magistrate goes out … comes back in, nothing else happens, not even a warning".

There is no doubt that in 2018 and 2019 Extinction Rebellion caught the government, the police and the judiciary by surprise. But one reason for the confused response was that Britain's government was in a state of chaos as a result of the ongoing Parliamentary paralysis over Brexit. It had almost no

'bandwidth' for anything else.   December 2019 saw a new Conservative government elected with a huge majority and that stage of the Brexit saga is over. Extinction Rebellion UK may now experience much more focused government attention. (See discussion on 'extremism' in Conclusions).

The mass action theory in which police face a cycle of dilemmas in how to respond to protests designed to elicit public sympathy caused by 'self sacrifice' and 'oppressive' arrests, seems to assume that the police and the government will be essentially 'dumb', and not alter their tactics, even though the actions are telegraphed in advance by XR's commitment to 'above ground' open strategy making. This may be optimistic.

Has There Been Anything Else Like XR in the UK?

Several people have asked if XR is like the 1990s '**roads protests**' and not only are there some similarities but some of the same people are involved (and in between the two, in Occupy and Climate Camps which conducted actions at Drax, Kingsnorth, Ratcliffe on Soar power stations as well as against the expansion of Heathrow Airport). However there are also significant differences.

Similarities between XR and the 1990s roads protests: reliance on mass participation non-violent direct action with open access and training; became popular and feted by the media (while also dividing opinion); attracted/involved a fair proportion of people in it to opposed to 'the system'; a vague but strongly felt conviction that they were outside 'the system'; and a suspicion that any established organisation including NGOs are somehow part of the problem; and both have favoured 'street party' style 'protest' events.

Dis-similarities: XR is organised systematic and branded (a name and image) with an deliberate attempt to invent its own visual language and visual branding (eg the theatrical Red Rebels, logos); XR is self-consciously promoting a theory of change which it claims is based on sociological research; XR aims to overthrow the government (the roads movement had no such aspirations, it just wanted to stop new road building); XR claims to be 'leaderless' but in practice is more led and directed than the roads movement; XR's 'actions' (rebellions) and other self-promotional activities (eg creating an XR crop circle at Womad Festival and the 'Red Rebels' parading on stage at Boomtown) not directly instrumental in reducing the climate problem (eg shutting a fossil fuelled power station like some Climate Camp actions) but designed to gain attention, sympathy and recruits; building momentum towards a magical 3.5% population participation at which the regime will fall and a post-revolutionary system will end climate changing emissions (the roads movement had no magical theory); XR has internal theory of personal regeneration and staggers its events to allow rebuilding and recovery (the roads movement had burn out).

The Cold War UK anti-nuclear weapons **Committee of 100** (1960 – 68) bears an uncanny resemblance to Extinction Rebellion. It had activists with a similar mix of motivations and theories of change. For example, according to Wikipedia:

Bertrand Russell saw mass civil disobedience merely as a way of getting publicity for the unilateralist cause. Those from the Direct Action Committee were absolute pacifists (some of them Christians) who followed Gandhi, and they regarded direct action as a way of creating a non-violent society. Ralph Schoenman and others, including the anarchists who later led the organisation, saw direct action as a sort of insurrection that could force the state to give up nuclear weapons. These factions argued among themselves about whether non-violence was a matter of principle or just a tactic and whether the Committee should limit itself to demonstrations or adopt a more thoroughgoing anarchist programme. Nicolas Walter, a prominent member of the Committee, said later that it had been an anarchist organisation from its inception and that the hundred signatories were, in effect, a front.

It also had similar apocalyptic rhetoric (though about nuclear war), and much the same "fill-the-jails" and block the streets strategy, and a pre-action pledge system, but in the end it was stifled partly by police action designed to remove its organisational capacity, and partly by internal splits: in the words of one internal memorandum, it turned into "a public spectacle, a group isolated from the general body of public opinion and feeling". A warning to Extinction Rebellion?

(Few seem to have seen the similarity between XR and the Committee of 100 although Freedom News noted in July 2019 that 'Roger Hallam's primary strategy of "overloading the prisons" … [is] a tactic lifted from similar thinking in the 1960s by the Committee of 100'. I haven't noticed the Committee mentioned by XR itself but that's maybe because it was ultimately a failure).

Like a new hybrid, XRUK has attributes both of earlier organisations and movements. One friend of mine commented on a draft of this paper:

'I think I view XR as a more of a coalition of grassroots organisations. Look at the dozen or so people who met last year to agree the strategy. The picture is on their Facebook page. It includes a deputy leader of Green Party. A lot of the leading lights especially centred around Stroud are Green Party, Transition Town as well as people from the peace movement. Lots of ex Greenham women etc. It is like a tribal gathering but attracting new young and old people. You mention the Shell rig action in Scotland as not being very XR. But I think that shows another side'.

The South African Case

One of the most interesting of Chenoweth's 'cases' for XR UK's review of strategy, might be that of South Africa. It appears as the 'Defiance Campaign' of 1984-1994, at p 97 of her online appendix, and was deemed successful even though no 'loyalty shifts took place':

South African Defiance Campaign against Apartheid, 1984-1994 Summary/Description:

The repressive Apartheid political system in South Africa had resulted not only in foreign isolation and disapproval, but more importantly a massive undercurrent of dissatisfaction and resistance among the segregated and disenfranchised South African black population. The White minorities grip over the political process began to unwind in the mid 1980s, as waves of protest began to sweep through the country. By 1990, the Apartheid government was forced to legalize the African National Congress, the anti-apartheid movement that first started the Defiance Campaign in the 1950s. Finally, in 1994, following the first Multi-racial elections, the Apartheid government was removed from power, and the repressive policies of South Africa were ended.

Presence of Loyalty Shifts: No loyalty shifts took place.

Outcome: The Defiance Campaign was successful in overthrowing the Apartheid government.

In an interview with the Harvard Gazette in 2019 Chenoweth described how in South Africa:

'The anti-apartheid movement organized a total boycott of white businesses, which meant that black community members were still going to work and getting a paycheck from white businesses but were not buying their products. Several months of that and the white business elites were in total crisis. They demanded that the apartheid government do something to alleviate the economic strain. With the rise of the reformist Frederik Willem de Klerk within the ruling party, South African leader P.W. Botha

resigned. De Klerk was installed as president in 1989, leading to negotiations with the African National Congress [ANC] and then to free elections, where the ANC won overwhelmingly.'

While not similar to the UK situation and the climate emergency issue in many ways, this was a mass civil resistance strategy built around very different tactics from those being employed by Extinction Rebellion UK. The propositions and targets of a popular economic campaign to place effective pressure on a recaltricant UK government might not be too hard to work out.

It could even take some of the founders of Extinction Rebellion back to their prior preoccupations over tax and economic justice. In April 2019 Gail Bradbrook told Reuters that for the 'next phase … she wanted to provoke a mass refusal to repay debt that would upend the financial system'. She said: "That would entail a mass refusal to pay off mortgages and student loans". If they could pull off something like that, I think any government really would be worried.

Part 9 - Conclusions

Since Greta Thunberg and Extinction Rebellion entered the climate scene in 2018, the emerging science and real-world climate impacts have only validated their basic premise of 'emergency'.

For instance, in November 2019 in Nature, Timothy Lenton and others warned that we are on the cusp of tipping points, in polar ice, in the biosphere (Amazon, permafrost, ocean acidification effects), in clouds and ocean currents, and that some may already have started. They say that conventional cost-benefit assumptions of economists from only a few years ago suggesting the world could tolerate a 3.C rise are now wrong and irrelevant: 'warming must be limited to 1.5 °C. This requires an emergency response'.

They concluded:

'the intervention time left to prevent tipping could already have shrunk towards zero, whereas the reaction time to achieve net zero emissions is 30 years at best. Hence we might already have lost control of whether tipping happens. A saving grace is that the rate at which damage accumulates from tipping — and hence the risk posed — could still be under our control to some extent. The stability and resilience of our planet is in peril. International action — not just words — must reflect this'.

Other climate scientists have said 'Even if a scalable renewable technology were invented today to zero out all of the CO_2 emissions, it would be likely to take between three and five decades to spread such technology to the whole world, assuming a globally binding policy for carbon neutrality had already been put into place'.

Perhaps, although in my experience given enough resources and direction, engineers and technologists can do things much faster than economists and research scientists assume, and significant reductions could be achieved in the near-term with under-used existing tech and know-how (eg efficiency), and some almost overnight (eg speed limits, cancelling fossil subsidies and permissions), given government commitment.

(That much quoted 2016 article stating that scalable renewable technology 'would be likely to take between three and five decades to spread globally' cites on source (ref 28), which is a paper on energy

tech' diffusion from 1999. This may be a pessimistic timescale if technology change got underway first in industrial countries and if developing countries 'leap-frog' to new technologies, and if change is driven by policy not just market forces. See for example Florian Kern and Karoline Rogge who provide a series of arguments as to why technology change in response to the climate crisis could be faster.).

In reality there is only one way to find out, which is to start now and go as fast as possible, building on examples such as the dramatic decarbonization of the electricity sector in the UK. The agenda has to be one of implementation. In my view where XR will make only a limited contribution if it persists in trying to get results by doing nothing but driving up urgency and despair.

Acknowledging evidence of what governments *can* achieve if they put their shoulder to the wheel is not a weakness allowing them "off the hook". It is vital to push them into doing much more, far more quickly.

Scandals of non-implementation are pivotal strategic opportunities which XR should not forgo (see below). Denying the reality of reductions in emissions caused by government policy is not intelligent. Trying to recruit activists by misusing statistics is neither clever nor 'telling the truth'.

Retire The "Nobody Is Doing Anything"

If it wants to remain effective, one thing Extinction Rebellion could do to do in the short term is to overhaul its 'narrative' and communications strategy.

The "nobody is doing anything" narrative has probably run its course for both Extinction Rebellion and perhaps even more so for Greta Thunberg. If no-one was doing anything there'd be no electric cars and GT could not have got to her venues that way.

The real question is who more specifically is doing the wrong thing by actively making the problem worse, and by neglecting or stifling solutions. XR likes not to 'call anyone out' but in my view the worst perpetrators should be called out. There's little point in calling for 'climate justice' if there is also 'climate impunity'. Grief is ok but constructive anger is more useful because it can exert directional pressure, not just signal that pain is felt.

XR, GT and some more conventional climate campaigns need to move on to a more granular identification of the problem, so that their pressure bears on levers that can be pulled in the near term, strategically chosen to bring about instrumental outcomes reducing the climate problem in the real world, and which enable the next target, creating a critical path leading to elimination of the emissions and then drawdown.

XR wants to paint in dramatic polarities – right enough – but these have to be recognized as true by most people both at the intuitive level, and to be validated if subject to testing. XRUK has not always succeeded in this respect: it has made careless and incorrect claims, tried to rewrite history, occasionally made things up, often exaggerated imminence, and systematically withheld grounds for hope and misled its followers by denying that solutions exist, like parents in an apocalyptic cult who try to confine their children in an imaginary world.

On enquiry, the dramatic polarities need to turn out on inspection to be more dramatic and more black and white, not greyer: truer, not less true. XR needs to under-state rather than over-state its case. There is a difference between 'not enough' and 'none'. Creating artificial polarities is a deception, that will be found out. Claiming for example, that conventional campaigns have failed to

make a difference, and that there has been no effective government action, when at least 18 countries have falling emissions due to policy, Britain's electricity system is significantly decarbonized, and a huge number of universities have disinvested from fossil fuels thanks to groups such as 350.

XR has leant on science for its credibility but if it persists in misrepresenting elements of science, in gloom-picking and editing out what scientists say about solutions from its narrative, it will be called out. Magnification of gloom and grief puts the mental health of individuals at risk as well as XR's own change strategy. It's not necessary and it's unethical. And as Julie Beck noted, anxiety is not a pre-requisite for action.   XR at least needs to encourage its own followers to take personal action to reduce emissions. While this is not its primary role, that can at least help the mental well-being of those involved and makes a practical difference.

XR now matters in a way that Radical Think Tank, RisingUp! and its other predecessors did not. It will be under increasing scrutiny and if it wants to avoid becoming mired in splits or controversies, it needs to be less opaque and to tell the whole truth, not become a [mirror image of](#) the climate sceptics. There is a lot at stake here, not just XR's reputation. XR is right about many of the essentials but it risks reducing the momentum of the wider climate effort if it is exposed as untrustworthy.

XR needs to improve its relations with allies. Dissing the efforts and achievements of campaign NGOs and others while making hyperbolic claims about your own brilliance and insisting only you have the true 'way', is competitive ethical authoritarianism, which is not a good idea when in reality you need help to get the public majority onside. XR needs to cease over-claiming about its own role in driving public opinion and change, and should acknowledge that its 'rebellions' are the beneficiaries of 30 years of campaigning, policy, scientific, technical and political work by others.

Maybe this is impossible. It probably is if XR does not abandon or significantly modify its current revolutionary pathway. (See postscript on XRUK's recent revised strategy. There is a significant change in tone but it's too general to tell what substantive change there has been).

Avoid The Nail of Despair

"I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."
– [Abraham Maslow, 1966](#)

That quote is about a cognitive bias known as the 'law of the instrument'. When it fixed on a particular revolutionary pathway with the objective of overthrowing government as its instrument, Extinction Rebellion consigned itself to path dependency.   Every aspect of the climate issue became an opportunity to drive people along the revolutionary path as the only answer.

It seems to me that this is why it has been insistently striking the 'nail of despair': hit it hard enough, often enough, loudly enough, and we will win, by driving people into despair and rage, and thus to

rebel. To get people into the tunnel leading to the 3.5% rebellion, we frighten them and blinker them against distractions, such as possible alternative routes to implementing solutions without first having to overthrow the regime. In my view, what XR has been doing by giving children and young people a fear of their own imminent demise is unjustifiable, immoral and unethical (not least as it can damage their mental health), and also unlikely to be effective.

Many campaign organisations learnt the hard way that just driving the problem, just driving up the sense of concern and urgency, becomes a strategy with diminishing returns. After a time, you need to drive change through proving feasibility.

Well-founded hope that tractable practical actions can make a difference is essential to motivating individual action. Proofs that government or corporates are not acting when they could, generate scandal rather than tragedy, give people something to get constructively angry about, and create a lever to produce results. XR and GT need to focus on such scandals and help progressively drive change that way.

Showing feasibility is particularly important for the large and significant part of the population that is aspirational and success oriented. Most will not support what look like futile actions or those which risk personal failure: proof is needed that change will work, not just that it's necessary for the greater good.

It's also vital for government and corporates as it is often central to resolving internal arguments over what voters, consumers or shareholders will accept. The solutions-driving phase of campaigning raises willingness of those with a low sense of self-agency to themselves change and accept change: it creates more political space (ie broader public support). These are not ideological alternatives but two synergistic forces whose resolution drives change.

It is bizarre that by denying solutions, XR aligns itself not with NGO climate campaigners trying to decarbonize the economy, nor businesses actually doing it, nor even green politicians, but the lobbyists of the fossil fuel industry and their professional climate sceptics who also want to deny, even now, that such climate solutions are available, proven effective and affordable.

(From Coastal Futures 2020. For more on campaigning with the two forces see p162 of *How to Win Campaigns*).

If a campaign or movement eschews engagement with the motivational force of feasibility, it not only loses traction on the 'issue' but surrenders the voice of 'practicality' to its opponents, leaving itself vulnerable to being dismissed as just alarmist and gloom-mongering. This was evident in the attempts of the Trump administration to critique Thunberg at Davos but it's easily used by any pundit or government to triangulate an issue. They suggest that the 'right answer' lies somewhere 'in the middle' between you and your most extreme opponent. This 'mid' point almost invariably turns out to coincide with what they are already planning to do but no more.

XR and GT Want Different Things

It's not completely clear to me what the final objectives of Greta Thunberg and the student strikes are. Click on 'more' and then the 'big picture' at the #fridaysforfuture website and there are videos from, amongst others, Roger Hallam, George Monbiot and Noam Chomsky attacking 'neoliberalism' and calling for the overthrow of capitalism. But that's not what Thunberg normally talks about. Her original campaign was 'to continue striking every Friday until the Swedish policies provided a safe pathway well under 2-degree C, i.e. in line with the Paris agreement'. Under 'materials' it shows this graphic on 'our demands':

This is clearly different from XRUK's 'overthrow the government'. Elements of this movement also have more specific national demands, for example SchoolStrike4Climate in Australia demands are 'No new coal, oil and gas projects, including the Adani mine; 100% renewable energy generation & exports by 2030; Fund a just transition & job creation for all fossil-fuel workers & communities'. At the moment the central FFF website promotes a campaign to Stop The Fossil Fuel Money.

So if you apply the reversibility test, the de facto objectives of #FridaysForFuture are probably different to those of at least some in Extinction Rebellion. By this I mean, take the ostensible objective, imagine it's achieved and then ask if you are satisfied. My guess is that most of Greta Thunberg's part of the movement would be satisfied if governments acted on the science, and climate changing emissions were zeroed and then drawn down to achieve the maximum benefit that can be identified by the science in terms of a safer climate, and it did something to advance 'equity and climate justice'.

I'd also guess that at least part of Extinction Rebellion would not be satisfied because they have additional political goals such as the end of 'neoliberalism', and perhaps other political and social objectives, whether there is dangerous climate change or not. For some, a rebellion over climate may be only be conveniently achievable waypoint to other destinations. They may be be more interested in revolutions than solutions, and the climate issue may have simply been a salient topic enabling them to get a hearing for revolutionary ideas.

At any event, Extinction Rebellion definitely fixed its original plan around the conviction that 'government' must be overthrown in order to reach the objective of climate success. For what might be called the RisingUp! school of thought, it's an unavoidable and non-negotiable eye of the needle which we must pass through.

In my view, while XR's theory was an innovative and ingenious piece of campaign design, it was not was well founded in terms of achievability, not least because of the Chenoweth transplant issue and the risks it faces in the democracy of the UK, including the problems of campaigns and politics, and the risk of causing values polarisation. XR leaders have advocated polarisation as a tactic in recruiting the 3.5% but that could render it impossible to build majority support behind the measures necessary to tackle the climate crisis. A polarising approach – in values and or political terms – could easily create a re-run of the EU Referendum /Brexit phenomenon: a values schism. That in turn could seriously delay effective climate action. Values-bombing must be avoided.

In my opinion XR should drop its polarisation and escalation strategy based on sacrifice through arrest, as a number of activist have also argued. The example of the ultimately unsuccessful and tactically similar Committee of 100 which according to one internal memorandum, turned into "a public spectacle, a group isolated from the general body of public opinion and feeling", is an warning that Extinction Rebellion might heed.

But whether you take this view or not, XR now has an opportunity to continue with 'rebellion' only with a focus not on bringing down the regime but achieving a series of objectives which force government and corporates to make specific climate-helping changes. Some of those changes for example, listed by Hallam in *Common Sense*' but which were set aside by XR as business to be considered by the Citizens Assemblies, after the revolution.

If sufficiently ambitious, these would indeed be revolutionary changes, with big if hard to predict implications for us all, from shifting geopolitics (no more 'oil power') to radical changes in diet and land use, and some sort of rationing of carbon emitting activities going way beyond existing reporting schemes limited to large companies and organisations and intended to drive energy efficiency.

In line with Extinction Rebellion's demands, and in common with a growing number of other countries, the UK now has a Citizens Assembly (ClimateAssemblyUK). As in France, it's focus is on climate change. It's not exactly what XR wanted but XR will be in a good place to press for any recommendations it likes, to be implemented. XR deserves credit for stimulating this development in the UK but as in Ireland, it did not require prior overthrow of the democratic system.

If XR can retain and build its followers, it has a valuable resource which can be deployed to help drive positive change in the UK. If XR does decide to drop the idea of overthrowing the government then an alternative mode of rebellion might be built around ideas of economic action, as pursued in the South African case against apartheid (described by Erica Chenoweth), or Bradbrook's ideas about debt repayment. XRUK may decide to continue on the same course as in 2018-19, and it is possible that it may attract millions of followers. In which case as Gabriel Carlyle said, it could undoubtedly achieve many things, although not without risk. Personally I doubt that will happen. More likely it will be able to mobilise tens or hundreds of thousands. That could still be a formidable influence if directed at targets for which it has broad public support. Achieving that will be much more likely if it at least aligns with the efforts of many others as possible.

Co-operation and Aligning Effort

Hallam has excused himself from answering practical questions about solutions on the grounds that he is 'only' a campaign designer, and others in XR have taken a similar position to move the conversation back onto rebellion. The positive view of this modesty is that it's humility ("humble" is a word XR likes to use) but a more cynical interpretation is that solutions-denial is a tactic seen as necessary to avoid potential recruits defecting to 'hope' and 'positivity'.

In reality whether it's false modesty or not, there certainly are a lot of people in NGOs, academia, professions, businesses and public agencies who <u>do</u> know a lot more about how to create and implement solutions than XR, including how to create campaigns that shift the political decision making, and I am sure many would be willing to help if XR adjusted its rebellion. FridaysForFuture also says that it lacks the capacity to analyse solutions which is fair enough but it has a lot of links to those who can do that.

This to me, would be the optimal outcome of XR's current rethinking. If something like that does not happen, then the Greta Thunberg wing of the new climate movement should at least ally itself more with the 'green new deal' side, and ensure that its strategy works in parallel if not in consort with efforts of the broader green industries, NGO campaigns, and positive government and intergovernmental efforts, to have the biggest, quickest constructive effect. But having all the players in aligning their efforts would be better than a split.

If we are to maximise the chances of avoiding or minimising further dangerous climate change and a tipping point cascade, we need to focus pressure for change. That means NGOs and the new climate movement [GT FFF XR AOC etc] and governments and politicians need to align their efforts. I doubt that spending time trying to overthrow democratic governments is going to help.

[*As have others: it's not accident that 1010 changed it's name to 'Possible' and that Rapid Transition produces a stream of precedent examples to try and bolster political ambition – watch this video.]

Calibrating Hope: In The End, What Can Be Done ?

Aside the Jem Bendell school of (in my view somewhat prematurely) adapting to hopelessness with equanimity, most people need something worthwhile to try for: light at the end of the tunnel. While for somewhat disingenuous reasons of tactical expediency Extinction Rebellion has tried its best to deny it, we have plenty of evidential grounds for hope that we can eliminate climate-changing emissions, and with focused effort, bringing them down a lot faster than they have to date. A lot of what we know works, simply hasn't been tried very hard.

But it's remarkably hard to find much scientific evidence about what could actually be achieved if we first zeroed all climate-changing emissions and then drew down carbon dioxide and other climate-changing pollutants from the atmosphere (on technologies, see Royal Society 2018 here). In other words, restoring and rescuing the planetary system – the atmosphere and biosphere equivalent of rewilding.

Part of the reason that there isn't very much in relation to the vast literature on the unfolding problem on the one hand, and ways to cut that down on the other (see eg Drawdown), is that it hasn't been a priority for science funders.

A second reason is that many in the 'climate community' have been understandably fearful of 'magical' solutions which may be self-serving greenwash products designed to enable business as

usual, or hubristic cases of techno-optimism requiring a leap of faith and the embracing of geo-engineering with unknowable risks.

A third is that it's a wicked problem. It's apparent that the climate can't be wound back like a clock to re-set everything at a pre-industrial state when we return atmospheric concentrations of gases to pre-industrial levels. Even a rapid drawdown of carbon may in itself reconfigure natural sources and sinks. One modelling study found that 'while temperatures dropped sharply as CO2 was reduced' (to pre-industrial levels) 'the disruption to precipitation continued for several decades' due to heat-inertia in the oceans. But that would be preferable to tipping into a heat-driven runaway. (See also this 2014 study on reversibility, and 'Carbon Dioxide Removal Model Intercomparison Project' on the organisation of an international research programme on the topic).

In my view this situation has to change. Now we are in the climate end-game, we must force through the changes necessary to zero out emissions and the means to do that are pretty well known but we will also need to restore and repair our climate as best we can, and for that we need a vision. So we need the science to give us an idea of what to aim for, even if that's in arrays of scenarios with lots of caveats, and even if many of us will be dead by the time it reaches its conclusion.

Some of the 'moral hazard' fears can be relatively easily dealt with if we use regulation. For instance while 'NETs' can be (and are) abused as offsets which allow 'carbon' pollution to continue unabated, they could be used instead to force specific polluters to do more than just balance out their emissions.

For example, it would be possible to regulate the airline industry to make it compulsory to capture as much and more carbon than it emits, using Direct Air Carbon Capture NET ('DACC'). This is a new but proven technology which fixes carbon taken from the air in basalt rock. Cost is often cited as an obstacle to its deployment. By making airlines finance that, we could fast-track the rapid spread of a drawdown technology and probably reduce the unit costs. It would increase the cost of flying which could also fit with flight-rationing.

How Should The UK Government Respond To GT And XR ?

If there's one document that at least some politicians in government may have read about Extinction Rebellion it's probably the July 2019 Policy Exchange report *Extremism Rebellion* by Tom Wilson and Richard Walton. I only read this after trying to make sense of my own researches but it is a detailed investigation into XR and its radical origins. Not surprisingly, given the fact that the authors are both extremism specialists, it sets out to paint XR as a dangerous extremist entity. Some have also asked if it was funded by fossil fuel interests.

Wilson and Walton begin correctly:

'The people behind Extinction Rebellion advocate a political agenda with ambitions that reach far beyond environmentalism. It is a campaign that seeks to use mass civil disobedience over climate change, to impose full system change to the democratic order. Yet, the underlying extremism of the campaign has been largely obscured from public view by what many see as the fundamental legitimacy of their stated cause'.
The report is worth reading but to my mind at some points it treats XR in the same simplistic way as XR sometimes uses the term 'neoliberalism' to condemn any established organisation as part of 'the system' which is irredeemably 'the problem'. This leads it into eliding XR with 'extremism' in general. The 'subversion' framing adopted in *Extremism Rebellion* may have contributed to the listing of XR's ideas as an extremist ideology to be reported under the anti-terror Prevent programme. That was widely ridiculed and soon withdrawn.

[It's since turned out that an earlier police report lumped in XR, Greenpeace and Stop the Badger Cull, alongside 'the banned neo-Nazi group National Action, the white supremacist group Scottish Dawn, the National Front and Britain First'. John Finne, Member of the Scottish Parliament said: "I am disappointed that despite telling me groups like XR, Greenpeace and CND are not regarded as terrorists, Police Scotland continues to brief councils and businesses that they present a threat to the public"].

The Policy Exchange report does not confront the basic questions: "What if XR is fundamentally right about the climate emergency, and is the government response truly inadequate? And if so, what should be done instead ?"

The conclusions it reaches are framed as if the problem posed by the existence of XR is merely one of attempting to overthrow democracy and government for its own sake. While that may well have been a pre-existing reflex among some of it's founders (for instance based on economic/ political theory) it's not the case now XR / GT have such wide support as a response to the climate crisis. It is evident that the main motivation of *supporters* of XR and the school strikes is to 'wake up' society to the urgency of the climate threat. From their point of view it is mainly a call for sanity and rationalism, even if so far conducted in a way that has many flaws.

It's a wake-up call that many others have tried to give before, for example the economist Lord Stern and climate scientist John Schellnhuber before the ill-fated Copenhagen COP in 2009.

On March 12 2009 at a meeting in Copenhagen, Stern told scientists:

"You have to tell people very clearly and strongly just how difficult (a temperature rise of) four, five, six or seven degrees Celsius is … Billions of people would have to move and there would be very severe conflict"

That conference was called together by a consortium involving ten universities in a deliberate attempt to influence policy because some scientists themselves felt that what was being communicated through the IPCC was not having a commensurate impact on governments.

Is It Extremist ?

XR is obviously similar to and different from a number of other organisations which people like the authors of *Extremism Rebellion* would define as extremist: hence the multi- dimensional critiques of XR from the 'left' and 'anarchist' and 'activist' groups. XR's own cosmology, theories and narrative defies easy categorization (see a good piece by Andrew Charles for instance), leading to long and complicated attempts to interrogate it from rival 'struggle' followers.

XR is obviously and so far determinedly non violent, and has used a theory in which illegality is central but carefully titrated and tactical. As such, if its theory of change worked, it might have built a public legitimacy which might outweigh public desire to uphold law and order. It would be a defacto mass version of the 'public interest defence'. In theory this could still happen although the '3.5% route' seems to me unlikely to achieve that because we have a functioning if highly imperfect democracy, as discussed earlier. In other words, 'the majority' (and a large majority with cross-values agreement not just a Pioneer values centred majority) would need to be onside even if a '3.5%' vanguard forced a government into conceding to its demands. So it would need Hallam's "majority onside" condition to be fulfilled *before* the concession, not built afterwards.

This is essentially what happens in incremental campaign advances and policy change: as the campaigns build sufficient acceptance in 'the public' which diffuses into 'the system' and emerges via multiple routes (including articulation by think tanks like Policy Exchange) as political ideas and finally as government policy.

In the course of this process, 'extreme' views in the sense of being opinion outliers, migrate to become 'fashionable' and then normal and conventional wisdom. The usual long list of social reforms can be cited here: introduction of democracy, female emancipation, universal education, civil and human rights and so forth.

XR is absolutely right about us facing a climate emergency and needing to eliminate climate changing emissions as quickly as possible (ie before 2050 – read Tim Jackson's reasoned case for 2030 in Zero Carbon Sooner).

History also suggests that rapid change often requires disruption. But disruption can come in many forms.

Radical top down change can be delivered by decisions of those in power (eg the introduction of North Sea Gas 1968-1976) without social disruption, if they have delivery capability and control. Changes in society have made that more difficult since the 1970s but not at all impossible. These can also have disruptive effects, often unanticipated, for example the effects of closing railways and building motorways in the 1960s.

Technology and commercial dynamics interacting with social needs and opportunities can also deliver rapid disruptive change – for example the exponential increase in use of plastic packaging and just in time delivery to supermarkets in the 1980s-2000s; the rise of personal computing and online devices 1990s-present; and the rise of fossil-fuel-based mass mobility, cars, flights etc. Deliberate policy played a part in these but it mainly followed rather than led.

Then disruption can also come from events 'exogenous' to politics. Before 'modern medicine' and sanitation etc, these commonly included plagues and diseases like the Black Death, and, as XR and before them climate scientists and campaigners have been pointing out, now includes climate change. (XR is of course right that climate change poses an existential threat – it's the important details that are arguable). Other massive disruption has come about as the result of force majeure events unintended by the government, for instance in the UK, World War II, responding to Nazi aggression. Without its response to WWII the UK would probably not have got universal education or National Parks or the NHS.

So it seems to me that the material question in terms of climate response is how much disruption and of what type is 'right' to deliver the optimal result in terms of bringing forward the elimination of climate changing emissions, and then drawdown. This is a very 'wicked' problem and not one that government can deal with by optimistically leaving it to the Home Office et al to treat the school strikers or XR as a law and order problem.

What might a UK government politician respond ? The best way to reduce the wickedness and at the same time to 'deal with' the potential social threat of XR and whatever else might emerge if one tried to simply stifle it, could include: acknowledging the existential threat, declaring a climate emergency, being much more aggressively disruptive of fossil fuel use but in a planned way (accepting that this requires some planning not just hope in market forces), and sending some very obvious signals of acting on the emergency such as stopping all airport expansion and fossil fuel extraction, bringing forward the net zero target, producing some version of a 'green new deal', and putting the current

citizen's assembly set up by Parliament on a statutory but independent basis alongside the work of the Committee on Climate Change. Along with some less dramatic but effective measures such as simply implementing best practice in energy efficiency and removing the veto on onshore wind, both parties would then have achieved their immediate objectives.

Those politicians who would rather ignore this should ask themselves why such unexpected 'revolutionaries' as David Attenborough and (former EU Environment Commissioner as well as dad of Boris) Stanley Johnson have supported Extinction Rebellion. Or why Theresa May committed to net zero even though that would a few years ago, have been seen as 'extreme'. The reason is that XR and GT are basically right about the reality of the climate crisis and acting on it as an emergency.

So is XR 'extremist' ? Well yes and no, and it depends in what way extremism is defined. In one way it is extremely right. In other ways it has been wrong. But that's not really the significant issue.

A Complementary Movement Is Needed

Anne Owen's work on the impact of 'household need' (expenditure choices) on the national carbon footprint shows that many individual 'consumer decisions' can make a difference to 'carbon emissions' at a country scale. The notion that individuals can not make a difference is simply a myth.

Yet conventional NGO efforts hardly tap into this potential, and UK government efforts to guide or stimulate it have been halting, intermittent and sporadic. Very few NGOs have run sustained campaigns to stimulate directed household-level action, even though individuals make big personal financial decisions with collectively vast climate impacts, eg in transport, home-heating, and home construction and gardening choices (eg use of materials), not to mention building or buying a house or going on holiday. Changing diet, personal finance and electricity choices are partial exceptions but in the UK there is no 'campaign' for instance to promote switching to electric cars (cf for example the [Sierra Club](#) in the US).

Anyone trying to change their home heating system for example, will find a host of conflicting information, which may well end up with them making a poor choice or putting off a decision as long as possible. Similar problems exist in fields such as plastic (itself a significant source of fossil carbon pollution).

There are many long-standing practical reasons why this is the case, although some of them are pre-social media problems. One is that NGOs set up to campaign look for high leverage targets. Another is that providing information in rapidly changing fields is time consuming and can be costly. They may also fear be drawn into legal disputes with businesses and may reason that such guidance or facilitation is a role that the market or government or consumer organisations should fulfil. Yet in many cases none of these do that very well.

In my view just the fact that many active supporters of 'environmental NGOs' are spending vastly more on 'household expenditures' which exert climate-leverage for good or ill, than they are on donations of time or money to NGOs they agree with, suggests that something should be done to harness this potential, given that we live in a climate emergency. It's not the job of XR or GT but their movement models might provide part of a blueprint.

Acknowledgement

My thanks to the various people who provided helpful comments on earlier drafts of this piece.

Postscript

Extinction Rebellion's process (see here January 2020) has produced a new strategy document, 'Power Together'. XR rightly describes it as 'broad-brush'.

It has a notably less angry tone from much previous XRUK material. It says XRUK will 'bring a million people into *active* support, celebrating all roles and contributions, and ensuring 50% of the population see the Climate & Ecological Emergency as their top priority'. It also says that it will prioritize collaboration, mobilisation, supporting 'young rebels', and 'move people's hearts and minds'.

It also says

'we will … Push for leadership on solutions through internationalist solutions including an international Citizens' Assemblies on Climate and Ecological Justice to address the systemic issues causing humanity to kill life on Earth. If world governments don't run something of sufficient clout we will be ready to have an independent assembly funded and run in the most inclusive way possible'.

It says 'this year, rebellion is no longer a brief show of our strength on the streets of London'. There is no mention of the 3.5% theory, Erica Chenoweth or overthrowing the government, or of 'neoliberalism' and incrementalism, and no overt dismissal of NGO campaigns. Whether this marks a wholesale change in strategy it is impossible to say because the paper is very general, and does not acknowledge any change in approach. It does not identify what has been dropped or added.

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Also

Economist Chris Goodall who also produces Carbon Commentary newsletter mainly about energy solutions, published 'What We Need To Do Now' proposing solutions actions in energy, aviation, food and farming, transport and fashion (February 2020). He forecasts that with the right policies it would be quite possible to tip the world's oil companies into being a major part of a rapid shift to renewable energy.

On February 6 2020 Esperanza Base in Antarctica reached the continent's highest recorded temperature at 18.3C.

The Greenpeace offshoot Unearthed reported on 10 February 2020 that 'Greenhouse gas emissions from the European Union's electricity sector fell 12% last year, the sharpest drop since at least 1990, due to reduced coal-fired generation, a study has found'.

The International Energy Agency reported 11 February:

Global emissions were unchanged at 33 gigatonnes in 2019 even as the world economy expanded by 2.9%. This was primarily due to declining emissions from electricity generation in advanced economies, thanks to the expanding role of renewable sources (mainly wind and solar), fuel switching from coal to natural gas, and higher nuclear power generation. Other factors included

milder weather in several countries, and slower economic growth in some emerging markets.

"We now need to work hard to make sure that 2019 is remembered as a definitive peak in global emissions, not just another pause in growth," said Dr Fatih Birol, the IEA's Executive Director.

On 12 February 2020 it was [reported](#) that a fifth of the Amazon rainforest is now releasing more carbon dioxide than it captures.

Climate problems and climate solutions are running neck and neck.

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