

Notes from the debate held at the Cambridge Union on the 22nd November 2021: Can clean growth provide prosperity whilst being sustainable

Organised by Cambridge Cleantech, sponsored by Michael Page

In the chair: *Sophie West, Debates Officer*

Taking the minutes: *Auriane Cirausolo, Cambridge Cleantech*

Proposition

Side Chair: David Quan, Equalities Officer Elect

Pippa Gawley, Investor

Pippa is a climate tech investor for early-stage businesses creating scientific innovations to accelerate the zero carbon transition. She is the Founder and Director of Zero Carbon Capital.

Mark Riminton, Business Development Manager

Mark is the Business Development Manager at Clean Growth UK, a national innovation network of over 2000 businesses & universities.

Dr. Douglas Crawford-Brown, Professor

Douglas is a Professor Emeritus of Environmental Science and Policy at the University of North Carolina at Chapel Hill. He retired in 2017 from his role as Director of Cambridge Centre for Climate Change Mitigation Research (4CMR).

Opposition

Side Chair: Luiza Aguilar

James Murray-White, Green Party

James is part of the Green Party and is an upcoming candidate for the Castle Ward. He also is a writer and filmmaker with a focus on neuroscience & cognition, the natural world, and rewilding.

Meg Watts, Writer and Activist

Meg is a writer and activist working towards global climate justice and equity through accessible and intersectional climate communication. She works with Rewriting Extinction, the Any Last Words? Climate Writing and Art Competition, BBC Radio Norfolk and Norfolk Wildlife Trust.

Clara Todd, Co-Founder

Clara Todd is a founder member of Cambridge Doughnut, a local group bringing principles of Doughnut Economics to Cambridge: 'meeting the needs of all people within the means of the living planet' (Kate Raworth). She is currently studying Regenerative Economics at Schumacher College.



Proposition 1: Pippa Gawley

I'm going to start by defining the key terms in the motion. A lot of what we believe in relation to this statement will relate to our own concepts of growth, prosperity and sustainability, so it is important to start by defining these terms clearly.

I'll start with perhaps the hardest definition: "Clean Growth", as it is not an expression found in the dictionary. The UK Government defines clean growth as "growing our national income while cutting greenhouse gas emissions."

The UN defined "Clean Growth" as Goal 7 of the UN's sustainability goals (distinct from the SDGs), which first published in 2009. They defined it as "economic growth that is energy efficient, uses sustainable agricultural practices, and uses renewable energy technologies... In other words, it is economic growth tied to conscious and sustainable principles with the aim of reducing, minimising, or eliminating altogether (where possible) the potential negative side effects that economic and income growth can have on the environment.[2]"

"The overall principle is that industries, businesses, and consumers work together towards economic growth that is both sustainable and clean, and does not compromise an individual nation's healthy income growth.

For the other definitions, we can rely on the dictionary, the Cambridge dictionary of course.

Prosperity: a situation in which people are successful and have a lot of money. So, the concept of prosperity is linked with money and financial wealth. **Sustainable:** causing little or no damage to the environment and therefore able to continue for a long time.

So, on the face of it the motion is an internally consistent statement. "Clean Growth" by definition is environmentally sustainable. However, the reason we are gathered here to have this debate is that untrammelled economic growth has, up to this point in time, resulted in severe environmental degradation. Leaving aside issues around inequalities arising from the unequal and unfair distribution of wealth, which are not the focus of this debate, we believe that increased prosperity is a good thing. It is linked to improved health outcomes and other important indicators such as education, living conditions, happiness, security and freedom.

Since 1970, global GDP per capita has increased from \$684 to \$10,926. Life expectancy at birth is often taken as a measure of development, and this has increase from 58 to 72 over that same time period (Our World in Data). However, over the same time period, we have seen shocking biodiversity loss, so bad it is threatening our global food security. According

to IPBES, since 1970, we seen a 68% decrease in animal population sizes. We have also seen increasing pollution including greenhouse gas emissions which are causing climate change, and our world is now around 1deg warmer than in pre-industrial times. The point is, what we have been doing is “economic growth as if resources are infinite and pollution is free”.

POINT 1: “CAN”

1. We are arguing that it **is possible** to have economic growth that is environmentally sustainable.
2. “Clean Growth” marries together these two concepts that are often held in opposite regard: economic growth and sustainability; and do so in a way that ensures neither is compromised.
3. The underlying belief is that “Clean Growth” is the surest way to improve the overall standard of living and quality of life of people around the world, but that it does not happen on its own. We have to **develop policies** that ensure increased positive impacts and decreased negative effects resulting from increased economic growth around the globe.
4. It is important to note that we are not suggesting the environment **will not be altered** by clean growth activities, but that it is not damaged by our activities to the extent that its ability to support future generations is not diminished.
5. The key word in the motion here is “**can**”. We are not arguing that the current state of the world represents sustainable growth, clearly it does not. But we are arguing that it is possible to combine clean growth which brings prosperity and is sustainable. It is possible for governments to act, and give nature a chance to recover and provide everything we need. There are many examples of projects, regions and whole countries which give us hope that this is possible.

POINT 2: THE SYSTEM IS SHIFTING: Economic growth is not the baddie. We are.

The opposition are likely to argue that the economic growth powered by capitalism is the root of all the damage done to the natural world that we see today. This is an over-simplification. The capitalist system is the surest way to achieve economic growth that we know of, and that it is also responsible for delivering amazing innovations and technologies that enable us to enjoy the best standard of living that humans have ever had.

The over simplification is that capitalism will only deliver monetary wealth at the expense of everything else. This is incorrect.

Capitalism is a set of beliefs and mechanisms, designed to optimise financial returns, but it is not the master of us, and it constantly changes to reflect our society’s evolution. The machine of capitalism will optimise what we tell it to value. We decide what we value and what value to place on it. When it becomes clear that our valuations are wrong, and pure market forces fail, it is up to us - through government intervention and regulations - to correct it.

The tragedy here is that “Nature’s resources are not valued unless they are priced”. When it became clear that there are real costs associated with industrial activities, governments have started to respond, for example with clean air regulation, carbon taxes and prices.

We can probably all agree that these actions have been too slow, and do not currently go far enough. However, there are reassuring signs that this is being corrected through various mechanisms:

- Government regulation - carbon taxes, carbon prices. The EU trading scheme cost of carbon emission is currently Eu 60, and is forecast to be Eu 90 by 2030. More sectors are being added to the scheme, and the direction of motion is to close loopholes.
- Consumer and shareholder pressure
- Financial markets - cost of capital, cost of insurance. The cost of capital to build a oil rig is ten x higher than a renewable energy asset (Goldman Sachs). Projects have been cancelled because they couldn’t be financed (example).

If we look at this as purely a financial problem - that the costs of economic growth need to be considered by the creators of that growth - it is clear that the mechanisms to achieve this are swinging into action, and getting stronger every day. The good news is that our ingenuity at creating new economic models and new technologies will enable us to continue economic growth in a way that meets these requirements - and is sustainable.

In summary, we are arguing that “this house believes clean growth can provide prosperity whilst being sustainable”. We have argued that, although historically, economic growth has delivered prosperity but has not been sustainable, we believe that there are ways of combining economic growth and sustainability to provide clean growth. It will require shifting the mechanisms of our market to protect our natural resources, to push humans to use their ingenuity to achieve their goals without degrading our world for future generations. But, we know it is possible, and we see the necessary forces starting to align in the financial markets, in the awareness of the population, in the boardrooms of multinationals and in all the seats of power. It is up to us all to support this movement and hold economic growth accountable for delivering sustainability as well as prosperity.

Opposition 1: James Murray White



Myself and my colleagues, Meg and Clara will spend our allotted half an hour making our argument against this motion with the following points:

- Looking at the environmental and ecological cost of economic growth...
- Looking at the human cost of economic growth...i.e colonialism
- Looking at system change - the new goal for the economics in the 21st century : meeting the needs of all people within the means of a living planet.

So, to start: History is full of failed technology transitions - and the transition to cleantech has proved no exception. I was living in Israel in 2009 when Project Better Place entrepreneur, Shai Agassi raised almost \$1 billion in start-up capital (the highest amount ever raised at that time) to transform Israel's infrastructure with inexpensive Renault electric cars and a network of electric car charging/ battery swapping stations. With the support of policymakers and the president, this was going to be Israel's major contribution to addressing climate change. But what happened next? Well you can see the dilapidated half-built charging stations still all over Israel. Technology, cleantech, even with all the best intentions, is never going to save us. In Better Place's case, it was a mixture of not getting the technology quite right, cost, range anxiety, hubris and the discovery of natural gas off Israel's waters in late 2009 that ensured its failure. It is a 21st century cautionary tale.

CLEANTECH IS DISEMPOWERING - These large scale projects may seem glamorous but that actually tell us as citizens that we don't have to worry - the machines and the scientists will save us.

Behaviour change - all the experts tell us that people are only really motivated to save what they love. We need to start from somewhere else, we need not to attempt to solve a problem with the same Industrial tech mentality that caused the problem in the first place!

THE REAL PROBLEM IS CAPITALISM - why are we really in this mess - it's capitalism and greed! Capitalism is extractive. We know about our addiction to cobalt & lithium, and the human & environmental damage this causes. we are here tonight in Cambridge - said to be the City with the highest rate of Inequality in the UK, by Rowan Williams, former Master of Magdalene College, former Archbishop of Canterbury. Who gets the prosperity? How do we

spread wealth? I feel that we also need a new ecology of the imagination - new thinking, deeper respect for the earth.

This is also the City where author/thinker C.P Snow delivered his famous 1959 lecture 'The 2 Cultures' just up the road in the Senate House, where he showed that our education system was and still is separating our heads and hearts, and mechanising this culture, which is resulting in this belief that clean/green tech equals prosperity equals growth. We need to unpick that to understand our mindset, the scale of the problem we are in, and how to truly address it, sustainably.

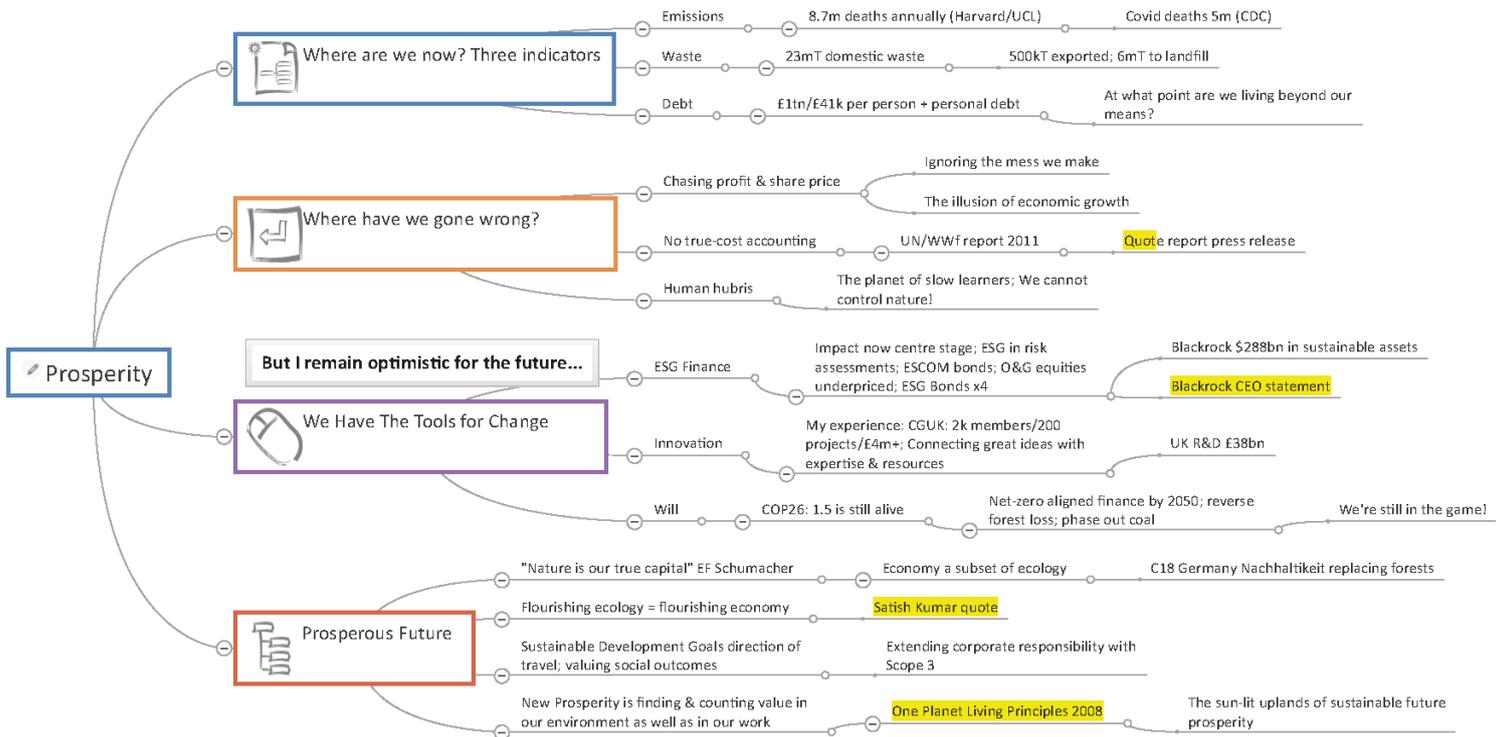
"We need a new form of economic growth that breaks the destructive relationship between economic activity and the environment" Lord Nicholas Stern, Nov. 2021

THERE ARE OTHER SOLUTIONS, OR A BLEND OF 'POSSIBLE' SOLUTIONS - Including Land Reform: Without access to the land, how can humans understand and look after nature for the greater good? Tax Justice: Without tax being paid where the money is made, how can polluting industries be regulated at source? Regulation: Don't believe the hype about 'market solutions'. 'Free' and fair markets can only function within a solid legal and regulatory framework. So the 'invisible hand' needs to get busy adjusting the regulations to ensure that polluters pay and don't just centralise profits while externalising costs. Corporate Accountability: End the fiduciary duty on CEOs to maximise shareholder value at any cost. Tree Protection: Mature woodlands hold the land together and soak up passing floods. Established trees provide wildlife habitat and absorb CO2 in a way baby trees don't for decades. Adult trees, with the help of jays and squirrels etc, distribute and care for more baby trees - without plastic - than any humans could. Check planning portals for risks to nearby trees and woods. Get Tree Protection Orders. Don't let *any* mature trees be cut down unless it's a matter of health, life and death. Build tree houses. Rewild: ourselves. Let scrub grow up to protect baby trees. Let beavers create ponds to hold back floods. Adopt 'One Planet Policies'. Come back to the planet. Engage with the 'More than human'.

Proposition 2: Mark Riminton

[*Debates Officer*], Members of the Union, Ladies & Gentlemen. We've got it all wrong! Our current prosperity is an illusion, a dream from which we are only now awakening. Yes, the financial markets are at record levels. Yes, companies grow richer every day. But it is prosperity built on sand. Satish Kumar said, if the economy is growing but ecology is shrinking then such economic growth is dangerously unsustainable. Growing the economy at the expense of ecology is the fundamental cause of global warming.





In Summary, Yes, a prosperous future lies ahead. Yes, we have a positive direction of travel & a purpose. Yes, we have finance & clean growth innovation to deliver it.



Opposition 2: Meg Watts

My question: prosperity for who? Where? When? 3 POINTS:
We've touched on what prosperity means to us – what

1. Look to the past – Look at our context as a metropolis and colonial nation. Pursuit of private property resulting in colonial domination of the world through replication of existing geometries of power and signification. Ownership is one of the building blocks of achieving prosperity, ownership is

2. Look to the present - Intersectionality necessary - Kimberle Crenshaw

a. Nigeria: Case study of David and Yanda's experiences with the dam. Indigenous Kichwa community of the Pastaza province in the Amazon have been fighting the construction of a

hydroelectric dam that will have a serious impact on the Piatúa river and the communities that live on its banks. It is also recognised as one of the most biodiverse areas of the planet.

This documentary, from indigenous filmmakers Tawna, tracks the fight and ongoing legal defence of the Piatúa river against corporation GENEFRAN. From violating the right of indigenous peoples to free, prior and informed consent and the arrest of a presiding judge on the case, ruling in favour of construction, who was found to be receiving a bribe of \$40 000 in cash and two bottles of whiskey. “This sentence is an important milestone in the construction of the paradigm of the rights of nature in Ecuador.”

GENEFRAN’s machinery is still on Kichwa ancestral territory – so the fight continues.

b. Indigenous people make up less than 5% of our global population - protect 80% of its biodiversity

c. Most effected and devastated areas

3. Look to the future - Continuing to replicate global inequalities. Net zero carbon - ensures that developing nations can continue along their way

What can we do? a. Ensure equitable and achievable clean tech developments, b. Collaborate and plan communally, and c. Reframe our view point.

Climate Equity: Environmental equity means both protection from environmental hazards as well as access to environmental benefits for all, regardless of income, race, and other characteristics. Global climate justice

Proposition 3: Dr Douglas

I agree with everything in the Opposition position except the framing, the facts, the reasoning and the conclusions, but that otherwise I was fully on board with them.



1. I examined Clean Growth, which I distinguish from Clean TECH Growth, as the former involves a lot more than tech solutions. For example, it includes behaviour change and restructuring the economy

2. We will not maintain prosperity if the movement towards Clean Growth fails to be guided by the best scientific, economic and social analyses, analyses that many groups at Cambridge University are supplying to society.

3. Traditional economic analyses lead to a narrative in which one is always trading off some prosperity for clean, sustainable transitions.

4. This is shown to be a false narrative when the more detailed analyses performed at Cambridge University are used, which suggest that a transition to a Clean Growth economy and infrastructure can in fact improve prosperity, including prosperity at the bottom of the global economic pyramid. But this is the case only if there are coordinated economic, energy, environmental and social equity policies.

Opposition 3: Clara Todd

More and more people - and yes even you supporting the central motion of the house - can see that the functioning of capitalism has been so much about extracting and depleting the environment, and exploiting labour, in pursuit of profit.



Point of information accepted by Clara: Not capitalism as Russia is communist and still facing and causing the same problem of an unsustainable economy. [Clara agreed to replace the word capitalism to consumerism].

1. Economy is a sub-system of the finite biosphere

a. Our models - even proposed models for 'sustainability' - have it the other way round

2. Is clean growth possible?

a. Clean growth is an oxymoron

b. only creative accounting gets us to net zero

c. We are not moving fast because of the design of the neoliberal system

d. It's easier to decarbonise if we stop growing

3. Growth is not a fit goal for a functioning, sustainable economy

- a. Growth is not fairly distributed
- b. We have 8 years to address SDGs!
- c. Continuing on the growth track is risky, unsafe and means many deaths

4. The new compass

- a. Meeting the needs of all people within the means of a living planet
- b. We still need cleantech innovators and creative thinkers
- c. Reject the motion - and actively seek a brighter future for people and planet

The new goal for the 21st century: 'Meeting the needs of all people within the means of a living planet.'

In conclusion, a focus on growth, even what you call clean or otherwise, continues the imperialist project and feedback loops of increasing inequalities, externalising costs and maximising profit. We can and must do better. In the new economy, markets, trade and businesses can still exist. The cleantech sector is essential to deliver wellbeing to more people. We need you innovators to help transition the economy to the fairer and safer place. You, idea people. You, creative thinkers. We really do need you. Your ingenuity must be for the service of a transition to an economy that functions within ecological and social boundaries. So it's actually sustainable, not 'kinda' sustainable if you ignore key parts of the supply chain.

I invite you to leave by the 'no' door, and reject the motion for 'clean' growth. Walk through that door toward a brighter future, a safe and just place for people and planet. I will be happy to chat about how that might work in the reception, we can go on an adventure. It won't be easy, but it is necessary for us and generations to come.

Results: 34 agreed with the proposition, 38 agreed with the opposition and 7 nulls. The results didn't take into account Michael Page nor Cambridge Cleantech's employees.