

Contents lists available at ScienceDirect

Futures

journal homepage: www.elsevier.com/locate/futures



The ethics of climate generosity and the "Median Commons": An experimental future within complexity[★]



Jonathan Paul Marshall

Social and Political Sciences, University of Technology Sydney, Level 5 Building 10, PO Box 123, Broadway, Sydney 2007, Australia

ARTICLE INFO

Keywords: Climate ethics Climate justice Community energy Commoning Complex systems Activism Energy transition

ABSTRACT

Government and business are not solving the problems of climate change or ecological destruction. Indeed, they seem implicated in them through the politics of neoliberalism. This paper is an essay on applied philosophy, attending to a case study of the organisation Clean Energy for Eternity (CEFE), in the Bega region of NSW, and their use of "climate generosity" to make a local impact. This generosity operates by gifting solar panels to public buildings, and contributing to a new ethics. The paper explores how climate generosity can work with the complex systems of the world and contrasts with: a) neoliberal ethics and politics; b) 'restricted property;' and c) climate justice, to open new pathways. Climate generosity suggests a way of building relationships, habits, and new modes of operating which are more in tune with futures we need to develop for 'civilization' to survive.

1. Introduction: background and problems

According to the IPCC and others, *a* major cause of contemporary rapid climate change is burning fossil fuels (IPCC, 2023: 4, 20, 21 etc.). Despite over 40 years of warnings, governments and fossil fuel companies are still seeking to expand fossil fuels and hence increase climate change (Gogel, 2023; SEI, 2023). Few countries or corporations are reducing emissions, let alone reducing emissions fast enough to keep global temperature rises below 1.5 °C. Fossil fuel companies are not investing in transition. "Oil and gas companies currently account for just 1 % of clean energy investment globally – and 60 % of that comes from just four companies" (IEA, 2023). Even now, wind only produces about 3.5 %, and solar 2.2 % of total global energy production (Our world in Data, 2023).

Global economic and political systems are also destroying ecological functionality and breaking 'planetary boundaries' which will almost certainly lead to ecological, financial and social upheavals (Rockström, 2015; Raworth, 2018; Rockström & Gaffney, 2021). Many governments and businesses seem intertwined with, and defensive of, neoliberal orders of economic destruction, and appear incapable of resolving the challenges generated by those orders (Fieldman, 2011; Ciplet & Roberts, 2017; Fremstad & Paul, 2022). These failures suggest that business-led large-scale projects are not working and people need new ideas and routes for curbing ecological and climate problems outside these established institutions.

Given this high-level failure, this article aims to contribute to discussing how people might proceed at local levels, by exploring complexity, ethics, local movements and generosity rather than justice. It begins with a short discussion of complexity theory and its implications for understanding real-world processes and the effective limits of human certainty, control and knowledge. Useful climate

E-mail address: jonathan.marshall@uts.edu.au.

 $[\]star$ This research was funded by the Australian Research Council Future Fellowship FT160100301. The opinions expressed in this research may not be those of the ARC.

action must work within these principles. The paper then briefly describes four overlapping systemic contexts which affect climate action: 'ecology,' 'energy,' 'property' and 'ethics.' The paper focuses on 'generosity ethics' as contrasted with 'neoliberal ethics' or 'climate justice.' Without denying self-interested action, generosity provides a model which is unconstrained by the logic, institutions, politics and restrictions of neoliberal capitalism. Generosity can also deal better with complexity as it implies effective actions depend on care for particular contexts and results. Recognising generosity also adds other perspectives to voluntary movements.

Capitalist ideas of property ('restrictive property') are important because they are anti-ecological and anti-complexity, attempting to isolate property and commodities from the conditions of their production, existence and effects. On the other side, climate justice may also inhibit action, and break relations, by insisting on an improbable and unenforceable fairness, or agreed allocation of blame, before action can happen. Property, profit and justice, synergise to hinder successful energy transitions by limiting possible actions and awareness. These limits may be better overcome by ventures in commoning and 'climate generosity.'

Climate generosity is illustrated by a field study of an experimental venture involving the voluntary organisation 'Clean Energy for Eternity' (CEFE), in the Bega region of NSW Australia, who communally gift solar panels to local community buildings, without waiting for events to be just or fair, or for property rights to be decided. The prime return sought is that which allows generosity to continue. This generosity avoids:

- a) Regulations set up to favour large companies and renewable energy farms which often require restrictive property and dispossession.
 - b) Building the organisation needed for a well-managed commons.
 - c) Establishing the blame and enforcement necessary for justice, and;
 - d) Dogmatic politics.

The gifted panels become a 'median commons' between commons and restrictive property, implementable with ease. The panels become property used by the community, but not a pure 'well managed' commons.

Climate Generosity exemplifies the *normal* non-capitalist ethics of a 'gifting economy' which accepts both co-operation and competition and is oriented at building relationships rather than profit alone. As such, it helps re-establish and reinforce non-capitalist social relations, while demonstrating to local politicians and administrators that people support action on renewable energy through putting their own money and effort into the common good, which can encourage further political action. This set of ideas may not be generalizable away from Bega, however they offer possibilities.

1.1. Methodology

The paper is primarily an exercise in empirical philosophy centered in complexity. I describe some of the interacting theoretical bases of the positions being criticised and espoused, through short literature reviews. The field study from which the argument grew has lasted over 5 years with multiple stays in the region. It involved about 24 semi-structured interviews with participants, uninvolved people, council workers and councillors, and numerous unstructured interviews and conversations. As well there were repeated interviews with at least five people involved in local sustainability issues over the five years which give a sense of continuity and change. I attended formal meetings in Tathra (7), Bega (2), Merimbula and Cobago. These meetings included public discussions of climate change, energy transition, local energy targets, starting community energy, or were fund raisers. I presented an outline of research for commentary at the Pambula Surf Life Saving Club, and to CEFE. I read reports and policy documents from Bega council, the NSW Government and CEFE as well as local newspapers. The research started in 2019 through accidentally attending a CEFE event and is part of a broader Australian Research Council sponsored project on challenges presented by climate technologies such as renewables, carbon pricing, geoengineering etc. (see Acknowledgements). Other interviews and observations made at different field sites, as part of the main project, gives some comparative understanding (Marshall, 2023). There is no pretence the method is rigorously scientistic, which may be impossible with reflexive complex systems to begin with. The article aims to illustrate generosity-ethics in action and discuss some of its problems.

1.2. Complexity

All social and ecological systems are 'complex systems' involving participants who change their behaviour in response to other participants or the state of the system. Understanding complexity helps to understand the reasons for proposing climate generosity in response to delays in climate action.

Despite its importance, there "is no such thing as an encompassing complexity theory, but rather different research traditions, using a variety of methodological tools" (Vasileiadou & Safarzyńska, 2010). A "person's idea about what complexity and allied concepts mean is often strong, intuitive and treacherously different from other people's ideas... [Complexity] works mostly as a catch-all term for problems that overwhelm us in some sense" (Andersson & Törnberg, 2018, p.118). Complexity, by its nature is slippery and hard to define. Some people (Andersson & Törnberg, 2018; Holland, 2014) have tried to classify complex systems, or argued for degrees of complexity, but the results are not convincing as yet.

Complex systems (from the microscopic to the cosmic Ayers, 2016) have various properties, which apply to realistic socio-political ventures.

Complex systems:

1) **Involve constant flux**. Relatively stable systems will oscillate around an 'equilibrium', but similar states may *not be the same*, hence policies which worked previously, may produce new problems. When a complex system has gone outside normal equilibrium ranges, then new types of event become possible, there are no precedents for risk calculation, and new tactics are required. Corporate

problem-solving and fossil fuels may once have worked, but may not anymore.

2) Exhibit massive quantities of interactive processes and participants modifying each other. They cannot be reduced to a binary dialectic.

- 3) 'Knowledge' is incomplete and involves simplifications of these massively interactive dynamics. *The only accurate model of the system is the system itself.* "Defining the present is always an act of selection" (Ahlqvist & Rhisiart, 2015, p.94). Different groups in different positions perceive the systems differently; it is probably impossible to gain uniform understanding throughout society.
- 3) **Are non-linear**. Small changes can have large consequences. Small increases in CO₂, in comparison to the whole atmosphere, change climate dynamics everywhere. Once 'tipping points' are triggered, the system may change rapidly, with little chance of returning to previous equilibrial oscillations. With increasing climate change: large quantities of methane will be released from beneath melting ice; land ice-sheets will stop refreezing; the Amazon or Cerrado will die off, etc. (Lenton et al., 2019; Pereira & Viola, 2018), which will trigger further climate and social change. Stability is precarious.

'Non-linearity' also suggests that small social changes may have large beneficial consequences, even if social tipping points may be theorised over-optimistically (Milkoreit, 2022).

- 4) **Are 'Limitedly predictable'.** Flux, lack of complete knowledge and non-linearity, lead to limited predictability. Events are possibly predictable by *trend* (weather will become more chaotic) but are unpredictable *in specific* (little idea of the exact weather next week), and hence are surprising, and difficult to control. This reinforces the importance of working *experimentally* with care and attention to ongoing process.
- 5) **Have fuzzy boundaries**. Cultural categories of event are difficult to isolate from each other. 'Economies,' interact with, and are part of, 'ecologies,' 'politics,' 'ethics,' 'energy systems,' 'technologies' etc. Changes in one category will likely affect others. Listing some relevant systems can direct attention towards intersecting factors. However, attempting to list *all* relevant factors becomes unmanageable. Changes cannot always be contained in the one category.
- 6) Have emergent properties, which appear different from those which might be deducible from the participants alone. Emergent systems are not necessarily 'good' for all participants. For some participants they can appear maladaptive and self-destructive. Hence the importance of attending to those hurt by 'beneficial' actions. Attending to emergent patterns, may help people perceive both oncoming maladaptation, and new ways of adaptation.
- 7) **Require diversity for 'resilience'**. Reducing diversity increases the likelihood of failed responses (Peterson et al., 1998; Oliver, 2015). Lock-in to particular solution-sets indicates that systemic power or path dependence are blocking systemic adaptation. Neoliberalism, and climate justice seem to *inhibit* diverse and creative approaches to challenge facing, by narrowing responses. Climate generosity could encourage multiple responses to the challenge.

In summary: within complex systems, surprise and uncertainty are normal, little can be 'reasoned' from 'first principles,' or through a non-empirical but foundational 'praxeology' of the kind used in neoliberal economics (cf Mises, 1998). Uncertainty is fundamental, acts have to be circumstantial. Complexity draws attention to the lack of clear separation between categories of system as they interact with each other. Consequently, for constructive ethics and politics, actors must be aware of 'multiple contexts,' the rarity of single causal factors, inherent uncertainty, and the possibility of unintended consequences elsewhere. Complexity implies a successful politics needs to be 'experimental,' rather than 'dogmatic,' trying actions out, responding to events, looking at other fields and modifying failure. It implies acting locally is easier. Awareness of these properties and constraints seems rare. Later on, the paper briefly discusses how neoliberal and Generosity ethics work, or don't work in complexity.

2. Four contexts for climate change response

As contexts in complex systems, interact I suggest four contextual systems to help thinking about climate futures from different perspectives. More could be added, but these four seem basic for understanding the problems that the idea of climate generosity seeks to address: 'ecology', 'energy', 'property,' and 'ethics.' 'Ecology' because human life depends on ecologies and human actions can drive ecological disruptions and vice versa. 'Energy' because climate change is tied to energy systems, and the energy capacities of systems limit responses. Property regimes seem basic to relations between production, ownership, ecology and energy. Neoliberal restrictive property contrasts with commoning. Ethical systems are relevant as they seem connected with human expectations (imagining of futures), modes of interaction, judgements, and the 'proper' distributions of property and damage.

2.1. Ecology

The crises largely originate in the interaction of economies, energy provision and ecologies. Human societies exist *in* and *with* ecologies which are complex systems in constant change, subject to tipping points, largely unpredictable and imbalanced (Botkin, 2012; Kricher, 2009). Ecologies are not external to human life, or infinitely submissive in human interaction. New ecological or weather patterns may cause repeated 'natural' disasters (high temperatures, extraordinary bush fires, flooding, drought etc,) which produce social instability by stretching a society's capacity to organise, or finance, recovery. The sixth 'great extinction' (as opposed to ordinary background extinction) is happening (Cowie et al., 2022; Almond et al., 2022) and loss of biodiversity further increases systemic instabilities. Potential solutions to some issues, like renewable energy, require relatively stable geographical and ecological features such as open sky, stable patterns of wind, low risks of violent flooding, lack of fierce grass fires, and so on, and such solutions are endangered by violent ecological and weather change. The longer the pressures producing crises continue, the worse they will get.

2.2. Energy

Energy provision and use is important for social dynamics and capacity for action. Humanly used energy is usually distributed by social power; as the more power a group has the more energy they use to keep and extend that power (Cottrell, 2009). Changing the energy system will be resisted by dominant groups especially when energy reduction is possible, as with Renewable Energy after fossil fuels (Odum & Odum, 2001: 75–6). Fossil fuels enabled modern large-scale societies and power relations by requiring a low energy input to produce previously unseen energy outputs (Hall, 2017). Fossil fuel companies became integrated into these power relations and social systems (Mitchell, 2011). Oil companies have suppressed their own research showing that burning fossil fuels promotes climate change, while using their connections and riches to fund networks of think-tank misinformation and continue fossil fuel use (Dembecki, 2022; Mulvey & Shulan, 2015; Walker, 2020: 29, 98). Brett Christophers (2022) suggests that by not requiring continual sales of fuel material, renewables do not harmonise with the profit maximisation ethics of contemporary capitalism and hence are resisted, despite their cheapness.

However, cheapness makes renewables ideal for organisations not as concerned with profit. Renewable energy, particularly solar, can be patterned differently to fossil fuels. It is cheap, modular and scalable. It can be built, used and controlled by individuals and small groups as finance becomes available; something impossible with coal or gas energy. It adds to resilience in climate change, with local energy potentially functional after grid collapse, or loss of fuel supply. Many scholars propose that community renewable energy promotes community engagement and connection, independence from the corporate sector, local jobs, co-ownership, benefit-sharing, manufacturing and educational opportunities, and positive attitudes towards energy transition (Acosta et al., 2018; Bauwens & DevineWright, 2018; Brummer, 2018; Hicks & Ison, 2018; Bauwens, 2016; Mirzania et al., 2019; Wirth, 2014). However, governments and companies can obstruct these benefits. Mirzania et al. (2019) point to the negative effects of UK policy on CRE, while van der Schoor et al. (2016) criticise corporate players who capture regulations to inhibit change. Other problems include finance, maintenance and support, billing and metering arrangements, optimisation of distribution and benefits, community conflict, and exhaustion of members (Narayanan & Nardelli, 2021; Brummer, 2018). In Australia these obstacles have stymied community energy, even though approximately one third of Australian households have rooftop solar (Clean Energy Council, 2023, p.7). Successful moves towards low-emissions societies would seem to require citizens' acceptance, support, and collective action (Walker, 2008). As shall be shown, climate generosity seems a way around some of these multiple problems.

2.3. Property regimes

Relations of property also effect social and ethical abilities to deal with climate problems. While many types of property exist, this section only considers 'Restrictive' and 'Common' property.

2.3.1. Restrictive property

Restriction of property to 'private owners' with others being excluded, underlies neoliberal values. Every neoliberal thinker I have come across, insists restricted property solves problems. Historically, capitalism and proto-capitalism has turned commons into restricted property, and treated pollution and destruction of commons (rivers, seas, atmosphere and 'waste' land) as 'externalities' to the economy. Marx (2010): Part 8) called this process of appropriation 'primitive accumulation,' not referring to so-called 'primitive societies' but to the early stages of capitalism. Destruction of the commons and dispossession of people, created populations unable to support themselves through farming or trading, making a 'working class' dependant on 'jobs' for survival. "For wage-labor to triumph, there had to be large numbers of people for whom self-provisioning was no longer an option" (Angus, 2023, p.10). To survive, capitalism may continually need to expand into areas of non-restricted property to appropriate material, or dump pollution (Luxemburg, 2015). This process is sometimes called 'accumulation by dispossession' (Harvey, 2003).

Restricted property owners have the legal (and ethical) right to cut 'their' property off from both those who make it and the ecology it developed within. Breaking complex links in, and between systems, seems fundamental to creating and distributing riches in capitalism. Land improved by indigenous peoples was 'legally' appropriated in India and Australia, by violence and lack of recognition of local labour and use (Whitehead, 2012; Pascoe, 2018). These enforced and imagined boundaries of property are so sharp that Australian, American and Canadian politicians regularly say that emissions from burning fossil fuels supplied from their countries are not their problem, not being counted in their emissions totals.

2.3.2. Commoning

Commoning suggests another ethics of property, more sensitive to complex social and ecological linkage. Humans depend for their existence on shared 'commons' such as language, culture, breathable air, drinkable water, energy from the sun, functional ecologies, and so on. Commoning suggests recognition of sharing arrangements which might be more responsive to ecological wellbeing, changing circumstances, and to *maintaining* the commons for future use, as it does not separate owner from all others, or break the system into separate parts.

Discussion of commoning usually refers to the 'tragedy of the commons' (Hardin, 1968), which proposes that 'commons' will always be threatened by "rational" individuals seeking to maximise gain, destroying commons through over-grazing, over-cropping, over-fishing, etc. The same argument applies to pollution:

The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of "fouling our own nest" (Hardin, 1968).

Those who engage in voluntary restraint will be outcompeted by those who don't.

However, the supposed inevitable tragedy contrasts with the fact that commons have survived for hundreds, and possibly thousands, of years with locals caring for them and hindering freeloading and over-exploitation (Ostrom, 2015). In a later, much less quoted article, Hardin (1998) acknowledged that 'well managed' commons can survive, and that a self-destructive ethics of individual maximisation can be restrained by group action. However, as Lloyd (2007) argues, in capitalism destroying commons makes ethical sense:

[Corporations] have continuously resisted government and international efforts to regulate the Commons in terms of alleviating pollution and establishing sustainable environmental management....

[Neoliberal economist Milton] Friedman... is the well-known advocate of the doctrine that "the social responsibility of business is to increase its profits"...

[T]he Commons is in far more danger from large corporations than from individuals.

Hardin's article could be better titled "The Tragedy of Commons under Capitalism."

This paper proposes that 'median commoning' mitigates social conflict between 'restricted property' and commoning while modifying both. Median Commons acknowledge restricted property, *and* relations with other people and ecologies, making property less restrictive and destructive than capitalist property.

Such a commoning movement is more likely to arise from the bottom up than from the top down, because, in capitalism, higher social levels depend on restricted property for riches and power. However, powerful ideas can emerge from marginal or interstitial populations and be developed in what Geels (2012) calls 'niches', outside both the problem generation fields and regulation by States and Companies. Commoning teaches group self-management and is, in the current situation, 'revolutionary' as restrictive property is associated with vast inequalities of power, while commoning, like generosity, opens mutualised sharing and *care* for the world. Commoning seems likely to increase diversity, flexibility and local response to challenge.

2.4. Ethics

Ethics may not determine human behaviour, but they mesh with how people think the world and humanity works, they provide guidelines for behaviour and, generally, change with time and situation. As Danahar (2021, p.1) states "Axiological change is a constant feature of human history... This is true even if you think that there is a timeless and unchanging set of values". However, neoliberal and climate justice ethics can hinder needed change.

Ethical systems are important to futures studies because people use ethics and the associated worldviews, to orient themselves to the future. Ethics implies that "doing this" will result in 'virtuous,' or 'beneficial,' consequences, as the world works that way and acting ethically seems 'natural', leads to reward, improves the person acting, helps society function well; and so on. Acting in accordance with neoliberal cosmologies will likely produce different results to acting in accordance with complexity or commoning cosmologies. Changes in understanding of the world could change ethics and behaviours.

2.4.1. Ethics 01: neoliberalism, developmentalism or climate justice

Neoliberalism is primarily a pro-corporate political movement justified through an economic cosmology. It began with the Austrian 'free market' school of Hayek and Mises joining up with the US Chicago school, building membership through the Mont Pelerin society and networks of corporately sponsored think tanks. It uses the State to protect corporations and The Market (Mirowski & Plehwe,D, 2009; Slobodian, 2018). Not all capitalisms are neoliberal, but the dominant form of contemporary capitalism largely is. While it is something of a caricature, neoliberal ethics posits humans as selfish profit-maximisers and judges actions as moral if they protect big business and increase profits. The worst sins involve trying to 'interfere' in markets or aiming to reduce the harms of business action through legislation. "Intervention in the ongoing economic system is a threat to the natural order of things, and hence to future human welfare" (Dobell, 1995). The Market 'knows' the correct price of everything, is the main allowable power, and everything must work on Market principles (Cox, 2016).

Margaret Thatcher, UK prime minister between 1979 and 90, exemplifies neoliberalism's limits. Firstly, reading 'the science' she told the UN, that:

mankind and his activities... are changing the environment of our planet in damaging and dangerous ways....

continued economic growth... must... not plunder the planet today and leave our children to deal with the consequences tomorrow...

[F]ree markets... would defeat their object if by their output they did more damage to the quality of life through pollution than the well-being they achieve... (Thatcher, 1989).

However, by the 2000s she had changed her mind after reading neoliberal climate material from the Cato Institute, Heritage Foundation, Institute of Economic Affairs and so on. Climate change becomes "ridiculous," a "new dogma" and "economically damaging". She asserts the "golden rule" that "all government interventions are problematic, so intervene only when the case is fully proven." Any sense of harmful consequences arising from markets has vanished and corporations and markets must be protected (Thatcher, 2002: 445–56).

Neoliberal relations to the State often seem confused. Neoliberal economist F.A. Hayek, by his support for dictatorships in Chile, Argentina and Portugal and his response to criticism, appears to have thought that governments who murdered, tortured and 'disappeared' their citizens and protected markets, were far less terrible than governments who planned for citizens' betterment by regulating markets (Farrant et al., 2012; Birsen, 2018; Filip, 2018). Hayek also supported violence to ecologies, as there is no need to keep the "total stock of natural resources... intact." Maintaining soil fertility is pointless, as used up land can be abandoned. The Market will find substitutes for consumed resources, there is no obligation to think about future events, and government interference will disrupt replacement processes (Hayek, 2011, p.492-4). Assuming capitalist ecological destruction can continue without harm, also illustrates this politics' lack of realism or care.

Wendy Brown (2015, p.17) points out that neoliberalism shifts attention from *homo politicus* to *homo economicus*, and converts "the distinctly political character, meaning and operation of democracy's constituent elements into economic ones." Neoliberal economics becomes 'natural' stripped of opposition. Divination of futures is based on "archetypical and simplistic 'future imperatives:'" such as 'without support investors will disappear'; 'constraints on Markets threaten 'business confidence' and prosperity', etc. (Ahlqvst & Rhisiart, 2015). Neoliberalism prevents citizens interfering with capitalist powers and riches even if the powers are harmful to all. It builds a destructive simplicity, everything is to be fixed through business (Bloom, 2015, p.5).

Developmentalism involves the search for increased material national benefits. Those who object to the processes, or to dispossession in the national interest, tend to be regarded as inferior, ill-educated 'obstacles' who can be disregarded (Hirschman, 1965). Developmentalism merged easily with neoliberalism, initially through the so-called 'Washington Consensus' enforced by non-elected bodies such as the IMF and World Bank demanding national openness to foreign corporations and cutbacks in social welfare. Selling fossil fuels to developing States, boosting fossil fuel company profits, increasing lock-in to fossil fuels and their long-term emissions can be justified by claims of eradicating poverty through The Market.

Deprived of coal as a major source of energy, developing countries could find it virtually impossible to improve their quality of life in any significant way.... With roughly 774 million people in the world still without access to electricity, the need to harness and process rich reserves of coal is self-evident (Mackowiak, 2023).

2.4.2. Climate Justice

The main opposition to Neoliberalism and developmentalism's downplaying of climate and ecological problems has been climate and environmental justice (UN, 2019; UNDP, 2023). These have been powerful ways of approaching ecological problems, pointing to the obvious injustice that those who contribute least to the problems suffer the most from them. However, it has not been effective against neoliberalism and it may obstruct climate action, as it seems modelled on conventional and institutionalised legal ideas of justice (without necessarily being a legal movement), which involve:

Having to identify people as unjust or guilty and hence promoting ongoing conflict and power struggles.

People's defence of their own innocence and desire to blame others.

Different ideas of what is just or fair in different groups. Justice is always disputable.

Remedying problems when justice is decided.

Breaking complexity into good and bad, rather than recognising multiplicities and scales of grey.

Demanding that others do something.

'Justice' being used to justify more GHG emissions to provide the energy to reduce injustice and poverty, or to claim it is unjust for countries to have to cut back emissions if others do not.

An international mode of enforcement, which currently does not exist, and,

Governments agreeing to action, which is the problem in the first place.

Not only can neoliberal cosmologies and ethics dismiss social justice as harmful interference in The Market, or co-opt it to sell more fossil fuels, but climate justice has not succeeded in increasing the range of behaviours available or producing other useful sustained results. Diversity and challenge may be better provided by generosity and commoning, which disrupts the restricted property basis of neoliberal ethics, and does not depend on denunciation and conflict.

2.4.3. Neoliberalism and complexity

While neoliberalism recognises uncertain, distributed knowledge and limited predictability, it *reduces* all useful knowledge to the price system (and neoliberal economics), even when the price system only covers commodities, and is distorted by corporate collaboration, profiteering, transfer pricing, advertising, hype, and so on. In proposing this theory, Hayek (1948) assumed that local members of a corporation can, improbably, always react to local prices rather than to top-down direction.

Neoliberalism cannot recognise that systems overlap. Property is ripped out of its connective social and ecological background of existence. The political power of riches is ignored. Corporations dominate ecologies for profit, rather than operating with them, appearing to claim that ecological systems are controllable, linear, isolated and can be regenerated, repaired or replaced. Contemporary neoliberalism is fundamentally hostile to demands for less harmful pollution and less destructive extractions, except when such demands delay renewables (Walker, 2020).

Neoliberalism does not value resilient diversity. It only supports corporate organisation and the heteronormative nuclear family operating within The Market (Cooper, 2019). Political neoliberalism does not support varied families, community action or co-operation, non-market activity, or non-market power. While neoliberalism recognises 'spontaneous order,' it apparently only supports emergent pro-corporate market-based orders, which may be maladaptive, lowering the plurality and diversity required for resilience. Neoliberalism does not match well with the complexity of the world.

2.4.4. Ethics 02: climate generosity

Climate generosity, the name I have given to CEFE's actions, is based on giving *now*, rather than waiting for justice and fairness to arise, be enforced, or The Market to act. In the Bega region of NSW, this has meant gifting useful climate technologies to community buildings and organisations, without demanding control, continual profit or a formal well-managed commons. It relies on people's generosity towards their community.

Generosity is part of the way that competitive and co-operative human beings interact and is not completely unselfish. There can be wars of 'generous' display or destruction, as with the classic cases of Potlatch (possibly stemming from the interaction of tradition with traders and capitalist production), or 'fighting with food' (Codere, 1966; Young, 1971), which undermine the accumulation of riches by a minority. Generosity can be self-helping as people using gifted solar may benefit donors by lowering emissions. However, generosity challenges the neoliberal idea that all human interactions are transactional or profit based. Generosity can also act outside business structures or the State, and there is nothing unusual about generosity, just that under neoliberal ethics, it is rarely seen as normal or used to describe action. Talking about generosity implicitly suggests something outside the dominant systems.

[A] culture dominated by ideas about property ownership can only imagine the absence of such ideas in specific ways.... To talk about the gift constantly evokes the possibility that the description would look very different if one were talking instead about commodities (Strathern, 1990, p.18-19).

Reducing human motivations to self-seeking and profit clearly has not solved climate issues.

Using the idea of generosity shifts motivations for practical action towards responsive and attentive or caring encounters with the needs of others: "a practice through which 'the living together of people' is routinely sustained over time and space" (Barnett & Land, 2007, p.1070). Generosity can easily situate itself within the more 'traditional' human purposes of economic actions: of helping to build relationships, communication and mutual trust, not just extracting profit or manufacturing condemnation (Klapwijk & Van Lange, 2009; Przepiorka & Liebe, 2016).

Barnett & Land, (2007) also suggest that generosity, destabilises western assumptions about how power is used, by showing that care for, and attention to, others, can be extended to more distant humans and to ecologies competently and responsively (Fisher & Tronto, 1990) Generosity does not have to be confined to humans.

The overall message coming from the concept of generosity is simple. If one believes [there is]... a finite space where humankind has to make its living., then we should keep the fundamental opportunities of this limited space intact.... If there is a threshold beyond which climate change threatens to destroy ecosystems beyond recovery, then generosity stipulates that we do not cross these thresholds.... Generosity requires... that environmental resources are protected (Gerlagh, 2017, p.100)

Generosity also points to the non-neoliberal idea that the privileged have social responsibilities beyond increasing their own riches. Targeted generosity is also reputed to have psychological as well as social benefits (Inagaki & Ross, 2018; Park et al., 2017). It can make givers feel good, build meaning, go beyond individualised selfishness and construct generous habits (Smith & Davidson, 2014). The Abbott Organisation "has been asking a million people across the globe what one thing makes them feel most fulfilled, and GIVING is consistently one of their top three answers" (Abbott, 2017). Abbott also reports generosity is advantageous for givers, boosting health, and lowering blood pressure and cortisol levels. Some evidence suggests that close contact with natural ecologies, also helps mental health and boosts generosity (Weinstein et al., 2009). Generous actions may help relieve the depression and anxiety of climate awareness (Pihkala, 2020). Being the recipients of generosity can boost generous behaviour, in a positive feedback loop (Tsvetkova & Macy, 2014), potentially lowering the self-destructive, and maladaptive aspects of neoliberalism. Generosity builds bonds and becomes a form of future self-preservation in future disasters, where people normally help each other despite the expectations of the forces of conventional neoliberal order (Solnit, 2020). It sets a different example to neoliberalism.

Gifts can help build islands of stability and sanity, amidst the flux of complex systems. Generous systems, which share information and resources more openly gain, even in neoliberal terms, "competitive advantage" (Alam et al., 2023). Hence a move towards generosity suggests useful emergent and 'contagious' behaviour, which may overcome the limits of neoliberal ethics, property and cosmology, and encourage people to act locally and now (where they can observe systemic responses), rather than wait for others to

act.

2.4.5. Complexity and climate generosity

Climate generosity seems happy with complexity; flux, multiple interactions, divergence, fuzzy boundaries, emergence and checking for ignorance. It assumes local people have the best local knowledge but may need help to get going. It hopes that small local actions can lead to emerging system change, without enforcement. It also recognises that systems may be shifting into social maladaptation which increases people's incentive to support emergent local resilience and diverse responses. Generosity can recognise human and ecological interaction, and that the 'ecology's generosity' does not require ecologies to be submissive. Generosity does not have to engage in forceful or centralised planning. It can function under conditions of flux and allow emergence, as its basis is helping people do what they want to do to help themselves. In this usage generosity differs from institutional charity where money is given to others to administer, it is more hands on and involved with the systems.

2.4.6. Final ethical comment

Danahar (2021, p.2), suggests that effective ethical change is more plausible than the arrival of new technologies solving the problems. Ethical change is also something we accomplish and teach *with* others. "If having a future is a valuable thing then knowing something about the values that [could] get sustained in the future [and by that future] matters" (ibid: 3). Generosity also accepts uncertainty of actions. People don't know how actions will work until performed but, when not demanding a return, this is a learning experience, not a failure. Danaher (2021, p.9) also suggests that changes in ethics can result from expansion or contraction of the circle of moral concern, or the field of empathy, when there is a change in how we prioritise or rank moral subjects. Generosity connects 'property,' other people and 'ecologies' to us and others, as part of our conditions of existence, and subtly attacks the ethics, common-sense and world view of neoliberalism.

Reality is complex. While neoliberalism could be compatible with complexity, its politics of supporting corporate power and reducing all processes to capitalism undermines both diversity and the ability to deal with the problems neoliberal capitalism generates. However, climate generosity, seems an effective non-delay tactic, which is more compatible with attention to complexity.

3. The case study

3.1. Bega Valley

The Bega Valley is relatively sparsely populated agricultural area, famous for its greenery (forest and field), milk and cheese. It occupies 6200 square kilometres with a population of around 36,000. The Local Council claims that the economy, has an "estimated \$1.78 billion annual Gross Regional Product", with "over \$797 million in exports each year and 3153 local businesses" (Bega Valley Shire Council, 2022). Politically, the National Party is prevalent, although not completely dominant. Nationals are largely, despite floods and fires, part of the neoliberal climate indifferent Coalition which governed Australia between 2013 and 2022 (although the Coalition in NSW pursued quite different policies). Nowadays, the area faces long-term drought and suffered fierce bushfires in 2018 in Tathra and over the 2019–20 'Black Summer'. Bega Valley Shire Council's general manager said that the Bega Valley was one of the two most-damaged regions in NSW (McKnight, 2020). Because of the area, grid geography, and forests, it is relatively easy for conventional electricity supplies to be cut off, particularly in remoter areas. In terms of the system intersections discussed above Bega seems to be moving into a more markedly precarious ecology with energy supply becoming precarious as a result, and possible difficulties with repairing damage. While land is largely privatised, there are areas of common appreciation, beaches, rivers and so on, and a country ethical tradition of co-operation and pulling together. Changing and unpredictable climate and ecology (threatening forestry, tourism and agriculture) motivates activism, while simultaneously destabilising, and distracting from, action. Energy, its complications, regulation and costs are also important motivating factors in trying to adapt to the changes, as is the attempt to build a new ethics of generosity.

3.2. Community energy

Community energy projects in Australia, frequently fall apart because the Corporations Act, various Energy Acts, and government policy are not set up for localised community energy, but neoliberally for large scale 'privatised' corporate energy. There is little sign of change over the last 10 years (Buckley et al., 2023). State government policies on community energy have been repeatedly described to me as confusing. One council worker recommended ignoring State regulations (all interview subjects are anonymous except where obvious):

Okay, let's do our own thing and keep moving on, moving forward in our own direction until some leadership comes from above (Council interview Feb 2019).

Another Council worker suggested that people should keep pushing the rules until they broke, and then they might be improved (Anon, Feb 2019).

As well as confusion over regulations and available help (Marshall 2022), which leads to confusion over finance, big renewable projects can set up local conflict, advantaging some people who have gained rental income while disadvantaging others by changing loved landscape and ignoring community benefit (Marshall, 2018). Community Energy can be heavily dependent on dedicated

volunteers, and this was undermined by environmental turmoil: the bushfires, followed by Covid, followed by flooding. People faced more immediate problems.

3.3. Clean Energy for Eternity

Clean Energy for Eternity (CEFE) began in 2006 because of climate change. Spurred on by the hottest day in memory, its founder, orthopaedic surgeon, Mathew Nott began reading books on climate change. For three to four months, he read everything he could:

from every angle I could imagine. What the politicians had to say, what the sceptics had to say, what the science had to say... then I organised a public meeting in Bega.... Just like that. And it was a pretty big rollout, we had 3–500 people turn up (Matthew Nott interview 2020).

This was a generous, diverse and experimental venture. At the meeting's end he suggested making and photographing a human sign on Tathra beach a few weeks later. About 3000 people turned up for the sign. This was unexpected as the 2006 Census gave the population of Tathra as 1622 people (ABS, 2006). "To get 3000 people there almost doubled the size of the town". About six people helped with organising the sign making "and that started... the Clean Energy for Eternity campaign" (Matthew Nott interview 2020). The organisation, never got many more permanent active members than this, showing that small groups of people can change things, especially if they keep interest up and keep the organisation visible. The next event they organised involved building a 'cyclone' out of nearly a thousand old washing machines donated from the community. This attracted considerable attention as a convoy of trucks moved the machines around, and the metal was later collected by a local dealer. They also did more human signs, which was risky, as:

if a human sign is going work you need everyone there. Your contribution as an individual is so small but if you don't go and your mate doesn't go, it's not going to happen. So it's about being inclusive, getting everyone involved and coming along and I think it's been a really good message these human signs and people learning or realising that you can achieve something when you all get together to do something (ibid.).

Sign making became a metaphor of working together and prompted CEFE to start thinking about getting solar panels on community buildings. "The first one was the Tathra Surf Club, one kilowatt.... we did a seven kilometre swim in the Bega River" to raise money. These repeated events, usually with a positive objective, helped local people meet and build good feeling with each other. Joint gifting builds ongoing relationships, a sense of participation or 'community', and creates exemplars of behaviour. Later CEFE helped build a solar farm at the local sewage plant, by selling panels to people who donated them to the Local Council. People could also contribute money (they claim to have raised \$25k), the Tathra Enduro mountain-bike race contributed more money, the NSW Office of Environment and Heritage added \$5000 and the council matched the investment (CEFE, nd).

"We thought the Imagine Solar Farm... would take 5 years and we had it from concept to plug in...in about 9 months," showing the potential speed of generosity. The Council also drew up a memorandum in which "electricity money saved by Council on behalf of rate-payers... gets donated into a pool that gets put into more solar panels" generously giving CEFE the ability to buy more donatable panels (Bega Meeting March, 2019). A CEFE member described this arrangement as the first such agreement between local government and an autonomous, voluntary, not-for-profit organisation (Smyth, 2022). Ethical forms can become contagious.

Then CEFE:

went to the Tathra Primary School and said look if you help us with a fundraiser we have some money from the Imagine solar farm that we can put towards solar panels on your roof. So we got 20 kilowatts on the Tathra Primary School and then last year we managed to get 12 kilowatts on the AFL footy ground so in two years we've doubled the size of our Imagine solar farm (Cobargo Meeting December 2019).

With the football (AFL) club, the Council saved electricity costs demonstrating that Renewable Energy benefits people both through energy and finance.

These processes were successful enough that:

we got every community building in Tathra powered by solar panels, every church has got solar panels and now we're going to just quietly go around R[ural] F[ire] S[ervice] Shed by RFS Shed (Matthew Nott interview, 2020).

The organisation kept interest going by organising public meetings to proclaim targets, and keep the expansion in the public eye. A meeting in Tathra Public School in February 2019, mainly about climate and energy, successfully asked attendees to vote on a 100 % renewable energy target by 2030. The meeting featured the ex-leader of the Coalition, Dr John Hewson, and a prominent academic Prof Andrew Blakers (McDonald, 2019). About a month later another similar meeting in Bega voted for 100 % renewable energy for the Bega Valley by 2030. A member of Bega Council pointed out that 11 other councils had already adopted a 100 % by 2030 goal or similar. A CEFE member argued that:

all the money we spend on energy and transport is currently bleeding out of the community. There's \$10-\$40 million each year that this shire could capture with a community-owned solar farm (Wood, 2019).

This argument is common in community energy. Corporate provided energy takes 'our money' away from local people, separating property from community and ecology, and unintendedly reinforces the idea of commons in which the money belongs to locals and

recirculates locally.

CEFE's success was recognised by the then Bega Mayor:

CEFE has worked really hard at getting that message out there and they do very well in Tathra and it would be great to be able to replicate that in other towns and villages across the Shire (Mayor interview, February, 2019).

Narratives of CEFE's success are embedded in voluntary attention-grabbing events and meetings, creating locally shared experiences that build connection, and achievement as well as a sense of possible futures. CEFE demonstrate climate generosity can come from anyone, and needs only a low-level ideology and the ability to experiment. It produces exemplary events for people in other communities to imitate. Nowadays although still pointing to climate change and the fires, fund-raisers seem less politically marked, involving concerts with local musicians, with proceeds being used to buy panels for specific venues. CEFE does not claim the generosity, pointing to the community itself. Currently the focus is on giving local fire sheds solar and batteries, as fire sheds easily lose electricity in fires. CEFE have now powered, and provided storage, for fire sheds at Rocky Hall, Kiah, Brogo, Numbugga, Towamba and Tanja through concerts and the continued income from panels on Council buildings. The gifts are fairly unconfrontational, although some stories imply higher-level official resistance was bypassed. This generosity arises from the severity of local fires and people's realistic fears about subsequent fires. A community leader in Cobargo stated that for that town: "Everybody lost power in the bushfires. Even those who didn't lose their homes had to evacuate. There was no power to pump fuel, no access to money, the vets lost all their medications, and sewage couldn't be pumped away" (Smyth, 2021).

CEFE works by ignoring the rules, moving outside neoliberal power, ethical and property structures, while ignoring conventions about investment creating its own niche. However, CEFE once became involved with a conventional investment-based solar farm. A year of struggle resulted in no progress despite Council and NSW government support, largely due to complicated regulations, grid problems, and having to guarantee investor returns (Don, interview November 2021). This experiment failed and CEFE returned to its simpler generosity model, which strained volunteers less and gained results.

One principle of complexity is that small actions can have large consequences. As Matthew Nott told Australia's leading current affairs program Four Corners:

I hear the excuse all the time that Australia's only worth one percent of global emissions so why bother doing anything...? In Tathra, my back of envelope calculation tells me that we're worth about point zero zero five percent of global emissions. So we're a very, very small part of the problem, but we want to be a big part of the solution (March, 2019).

3.4. Influence?

CEFE's influence has been nonlinear and out of proportion to its size. Connections between fields and organisations are blurred in complex systems. Its engaged members operate voluntarily and can cross over with other organisations. There is another nearby branch in Bermagui (founded in June 2007 at a meeting with over 350 attendees (CEFE, nd2)), and one on Sydney's Northern Beaches. CEFE has mutually influenced the Social Justice Advocates of the Sapphire Coast (with whom it worked on getting solar panels onto a Church and the portable buildings being provided for locals dispossessed by fire). The SJASC has an arrangement to organise bulk buys of high quality solar which leads to every 30th installation being free for a community building (SJASC member interview June 2022; Don interview November 2021). This may be based on a similar scheme organised by CEFE Bermagui. CEFE has weak connections with the only community-controlled energy project in the Bega region 'Renewable Cobargo'.

Renewable Cobargo, resulted from the Cobargo and District Energy Transition (CaDET) team, "in the aftermath of the 2019/2020 bushfires" which burnt down much of the town and surrounds. In July 2021 the Cobargo and District Energy Transition team gained \$1.36million for a feasibility study for a community microgrid, largely funded by the NSW government (Renewable Cobargo, 2023). One of the local leaders said after the fires: "The scars run very deep, and the healing is going to take a long time. We do need to work together as a community, putting aside whatever political differences there might be" (Cornish & Duncan, 2020). Renewable Cobargo have also installed solar on Emergency Hubs for people fleeing disasters, and public EV charging spots in Cobargo, Bermagui and Tathra, which shows more generosity in action, which promotes more use of renewables.

Relationships between CEFE and Renewable Cobargo have, reputedly, been occasionally difficult, but nowadays members of CEFE Bermagui work with Renewable Cobargo, and CEFE put on at least one event in Cobargo before the fires, with influential speakers, and a full hall. CEFE and Renewable Cobargo together promote 'Electrifying Everything' in the Bega Valley. Pathways of influence and reaction, are hard to trace, but present.

CEFE Northern Beaches (established 2012), uses different generosity models. Clearsky is "a not-for-profit social enterprise established as a result of an initiative of the Sydney Northern Beaches Chapter of Clean Energy for Eternity (CEFE)" (ClearSky, nd). The main reason for investing is to help other people gain renewables. It connects investors to renewable energy projects in need of financing, builds on vacant roof space, sells power to an end user, while paying returns to investors until paid off. A 2023 CEFE report states that \$24 million has been invested across 85 sites totalling 18 MW of solar (ClearSky, nd2; CEFE, 2023).

CEFE's influence reached the National level as the leader of the then Opposition Bill Shorten recognised CEFE during the election of 2019, coming to Bega to launch a major renewable policy initiative and promising to fund a local Community Power Hub;

the Opposition Leader named Tathra as the first Power Hub location as part of Labor's \$100 million Neighbourhood Renewables Program.... The program is aimed at helping renters and social housing residents benefit from cheaper and cleaner renewable energy, by supporting local community renewables projects, [He posed for photos with CEFE members] (Campbell, 2019a).

The principle behind... our community power hub, is to provide some modest resources to allow go-ahead communities to actually move ahead and... invest in clean energy (Shorten, 2019).

Tathra is also the home of Bushfire Survivors for Climate Action, essentially founded by an ex-Tathra based Local Councillor Jo Dodds who was active in climate issues and who valued CEFE support. The organisation grew out of impatience with reconstruction after the Tathra fires, and attempts to support the local community. The New South Wales Legal case of *Bushfire Survivors for Climate Action Incorporated v Environmental Protection Authority* [2021] NSWLEC 92 brought proceedings against the NSW Environmental Protection Agency arguing there is 'no evident or intelligible' justification for the EPA not to develop policy addressing climate change and its causes. Chief Justice Preston found that expert evidence, demonstrated the environment must be protected from Climate change. The EPA was ordered to develop programs to ensure this happened (Schuijers, 2022). Bushfire survivors have also called for a pause on fossil fuel field approvals.

3.5. Local political life

CEFE inserted itself indirectly into local political life and helped create that life along with others. A few years ago, the then Mayor of Bega Council stated the financial problem:

We have been looking at a transition to renewable energy from an economic standpoint because at this point in time our electricity bills were over about a million dollars a year... One of the big issues faced by rural and regional Councils is the cost to start that transition. Only 27 percent of our Shire is rateable, the rest is National Parks, State-forest or Crown lands, so we don't have the density of population to allow straightforward investment and we have to be creative about how we do things.

Several local Councillors told me that renewables faced some implacable opposition.

But if we have your voices behind us, if you feel strongly about the things that you have heard, you can actually have a very concrete influence by saying, just for example, more solar partnerships or farms as have been discussed tonight (Local Councillor from the floor at Bega Meeting March, 2019).

A Mayor noted that the sewage farm was "was very much a community-driven activity", but as it was a gift it was more easily resolvable even with hostile councillors, and showed that some of the community was strongly motivated for change. CEFE's presence and events made committed community support and involvement visible to pro-renewable Councillors, helping them challenge other Councillor's resistance.

This visible and generous action inspired and helped the Local Council put forward climate programs, despite opposition. Bega passed a Clean Energy Implementation Plan largely based on costs, as council paid \$2.68 million each year on electricity and fuel. A Climate Emergency Declaration, was supported by an online petition of over 5000 signatures and a pen and paper petition of 838. However, one of the conservative councillors objected that the words were designed to scare and divide communities and upset children and lodged a rescission motion the same evening. A majority of councillors opposed the rescission and "spoke strongly in favour of using the term as a way of adding importance and urgency to the document" (Campbell, 2019b). It eventually carried, and has been described as an important focus by council workers I interviewed.

3.6. Problems

The obvious problems for CEFE are in some ways its strengths;

It operates with a small number of committed volunteers, but gains large-scale support.

It is small and relatively flexible, but could factionalise.

It depends on the leadership and labour of a few people, which could lead to loss of knowledge and contacts if they retired.

Unpaid, if generous, volunteer activity is vulnerable to fires, anticipation of fire, sickness, exhaustion, people moving elsewhere, aging, etc.

While CEFE's experimental politics is influential, this influence is limited, although some Council workers also seem experimentally oriented.

Influence on the council can be lost, as Council workers move on, or get overwhelmed with other vital work (for example trying to repair fire damage to bush and river systems) and Council could regress to normal neoliberal practices.

CEFE risks getting stuck in processes which have worked.

It does not directly attack the power relations of neoliberalism, but undermines common understandings, ethics and habits derived from neoliberalism.

While the situation in Bega is uncertain, it now appears to have the potential for emergence to generate a more ecologically responsive council and population, which may not have been present 10–20 years ago. This may also be reinforced by a new Bega Cheese (2023) venture of establishing a local 'circular economy.'

Another minor problem, pointed out by the reviewers of this article, is that those gifted may need reminding that maintenance and replacement of the panels will add to costs.

4. Conclusion

It seems improbable that government or business can extract themselves from neoliberal ethics, prioritisation of markets, top-down control, and needs for restrictive property or 'development.' Ideas of climate and ecological justice have been around for a long time, without appearing to have changed neoliberal or developmental movements, indeed their arguments may be co-opted by neoliberals to promote more fossil fuel use.

Successful movements to build new futures, have to avoid depending on established high level government and business activity, to avoid becoming trapped by that activity and its non-complex worldviews. Complexity points to important features of the world, in particular limited predictability, inherent uncertainty, the need for diversity (biological and intellectual) and the need to act experimentally, looking for unintended consequences and the emergent properties of systems. I have argued that climate generosity is one simple, and possibly productive, way of working in complexity from the bottom up, rather than from the top down.

Clean Energy for Eternity, and some other small organisations in the Bega Valley of NSW have developed simple techniques which seem to help them avoid the rules and regulations of neoliberalism, development and restricted property, and act in a bottom-up manner with impact. They recognise the seriousness of the environmental conditions and how it may affect the region. The technique of gifting avoids waiting for fairness, punishment and enforcement present in Climate Justice, through relatively spontaneous and generous actions which happen now and create new forms of property, which can be used to benefit the community in general. It works with a possible emergent non-corporate renewable energy system (which could help reduce climate change and support people in climate breakdown), and campaigns for change without needing enforcement, which decreases lack of recognition of unintended consequences. Generosity, and appealing to generosity, has allowed a very small group to experiment and gain considerable local influence, and effect. While they may have moved slowly and interruptedly, they have still managed to do more in the region than State or Federal government, or private companies, partly with the help of the Bega Valley Council, which has demonstrated more connection to local problems.

Clean Energy for Eternity is not a perfect movement, and has possibly fatal problems. However, it is possible to see it as an exemplar, and inspirer of action, which has avoided many of the restrictions on local action, and which works with complexity carefully and experimentally. Other local organisations aware of the technique may have more success and spread the process. It may even seem realistic to hope that a more open future can be constructed via active generosity, group action and commoning, rather than through formal justice, restricted property or the unimpeded action of corporations.

CRediT authorship contribution statement

Jonathan Paul Marshall: Methodology, Investigation, Funding acquisition, Conceptualization.

Declaration of Competing Interest

None.

Acknowledgements

This research was funded by the Australian Research Council Future Fellowship FT160100301 Society and climate change: A social analysis of disruptive technology. The opinions expressed in this paper may not be those of the ARC. Members of CEFE, and Bega Valley Council gave their time for this research.

Data availability

The authors do not have permission to share data.

References

Abbott. (2017). Why we humans are hard-wired for generosity. Abbot Newsroom. (https://www.abbott.com/corpnewsroom/nutrition-health-and-wellness/giving-better-than-receiving.html). Feb. 27.

ABS (2006). Tathra 2006 Census All persons QuickStats. Australian Bureau of Statistics (https://www.abs.gov.au/census/find-census-data/quickstats/2006/SSC18983)

Acosta, C., Ortega, M., Bunsen, T., Koirala, B. P., & Ghorbani, A. (2018). Facilitating energy transition through energy commons: an application of socioecological systems framework for integrated community energy systems. Sustainability, 10, 366. https://doi.org/10.3390/su10020366

Ahlqvist, T., & Rhisiart, M. (2015). Emerging pathways for critical futures research: Changing contexts and impacts of social theory. Futures, 71, 91–104. https://doi.org/10.1016/j.futures.2015.07.012

Alam, M. A., Rooney, D., Lundmark, E., & Taylor, M. (2023). The ethics of sharing: does generosity erode the competitive advantage of an ecosystem firm? *Journal of Business Ethics*, 187, 821–839. https://doi.org/10.1007/s10551-022-05228-5

Almond, R.E.A., Grooten, M., Juffe Bignoli, D. & Petersen, T. (2022). Living Planet Report 2022 – Building a nature positive society. WWF, Gland, Switzerland. (https://wwflpr.awsassets.panda.org/downloads/lpr 2022 full report.pdf).

Andersson, C., & Törnberg, P. (2018). Wickedness and the anatomy of complexity. *Futures*, *95*, 118–138.

Angus, I. (2023). The War Against the Commons. Monthly Review Press.

Ayers, R. (2016). Energy, Complexity and Wealth Maximization. Springer.

Barnett, C., & Land, D. (2007). Geographies of generosity: Beyond the 'moral turn. *Geoforum*, 38, 1065–1075. https://doi.org/10.1016/j.geoforum.2007.02.006 Bauwens, T. (2016). Explaining the diversity of motivations behind community renewable energy. *Energy Policy*, 93, 278–290.

Bauwens, T., & DevineWright, P. (2018). Positive energies? An empirical study of community energy participation and attitudes to renewable energy. *Energy Policy* 118: 612625. https://doi.org/10.1016/j.enpol.2016.03.017

Bega Cheese (2023) Bega Circular Valley (https://begacircularvalley.com.au/).

Bega Valley Shire Council (2022). Our Place An outline of the Bega Valley Shire, our people and our economy. (https://begavalley.nsw.gov.au/business/our-place). Birsen, F. 2018. Friedrich Hayek and His Visits to Chile: Some Austrian Misrepresentations. {C}In. R. Leeson (ed{C}.), Hayek: A Collaborative Biography, Archival Insights into the Evolution of Economics, https://doi.org/10.1007/978-3-319-91358-2_11.

Bloom, P. (2015). The Ethics of Neoliberalism: The Business of Making Capitalism Moral. Routledge.

Botkin, D. B. (2012). The Moon in the Nautilus Shell. Oxford University Press.

Brown, W. (2015). Undoing the Demos: Neoliberalism's Stealth Revolution. Zone Books.

Brummer, V. (2018). Community energy-benefits and barriers: A comparative literature review of Community Energy in the UK, Germany and the USA. Renewable and Sustainable Energy Reviews, 94, 187–196. https://doi.org/10.1016/j.rser.2018.06.013

Buckley, E., Walters, K., Marshall, J. P., & Ford, A. (2023). Australian Community Energy Collective Impact Assessment 2023. Sydney: Community Power Agency. (https://cpagency.org.au/wp-content/uploads/2023/12/Community-Energy-Collective-Impact-Report 2023.pdf).

Campbell, I. (2019a). Shorten announces first Community Power Hub for Sapphire Coast. About Regional, 29 January. (https://aboutregional.com.au/shorten-announces-first-community-power-hub-for-sapphire-coast/).

Campbell, I. (2019b). "Life is about language," which is why 'climate emergency' fits. About Regional 9 October. https://aboutregional.com.au/life-is-about-language-which-is-why-climate-emergency-fits/.

CEFE (nd). Tathra Community Solar Farm. CEFE website (https://cleanenergyforeternity.net.au/current-projects/imagine-solar-farm-project/).

CEFE (nd2). Bermagui (early days). CEFE website (https://cleanenergyforeternity.net.au/chapters/bermagui/).

CEFE (2023). Welcome to CEFE's 2023 newsletter and membership renewal reminder. Sent by email 12/12/2023.

Christophers, B. (2022). Fossilised Capital: Price and Profit in the Energy Transition. New Political Economy, 27(1), 146–159. https://doi.org/10.1080/

Ciplet, D., & Roberts, J. T. (2017). Climate change and the transition to neoliberal environmental governance. Global Environmental Change, 46, 148–156. https://doi.org/10.1016/j.gloenvcha.2017.09.003

Clean Energy Council 2023. Clean energy Australia: Report 2023. (https://apo.org.au/sites/default/files/resource-files/2023-04/apo-nid322455.pdf).

ClearSky (nd). About ClearSky. ClearSky Solar Investments. (https://www.clearskysolar.com.au/front_end/about.php).

ClearSky (nd2). Home Page. ClearSky Solar Investments. (https://www.clearskysolar.com.au/index.php).

Codere, H. (1966). Fighting with Property: A Study of Kwakiutl Potlatching and Warfare 1792-1930. University of Washington Press.

Cooper, M. (2019). Family Values: Between Neoliberalism and the New Social Conservatism. New York: Zone Books.

Cornish, R. & Duncan, E. (2020). Cobargo puts climate change and Scott Morrison debates on hold as it recovers from deadly bushfires. The Drum, 5 Feb 2020. (https://www.abc.net.au/news/2020-02-05/the-drum-bushfires-cobargo-climate-change-scott-morrison/11929002).

Cottrell, F. 2009. Energy & Society (Revised): The Relation Between Energy, Social Change, and Economic Development. AuthorHouse. Originally McGraw Hill 1955. Cowie, R. H., Bouchet, P., & Fontaine, B. (2022). The Sixth Mass Extinction: fact, fiction or speculation? *Biological Review, 97*, 640–663. https://doi.org/10.1111/brv.12816

Cox, H. (2016). The Market as God. Harvard University Press.

Danaher, J. (2021). Axiological futurism: The systematic study of the future of values. Futures, 132, Article 102780. https://doi.org/10.1016/j.futures.2021.102780

Dembecki, G. (2022). The Petroleum Papers: Inside the Far-Right Conspiracy to Cover Up Climate Change. Greystone Books.

Dobell. (1995). Environmental degradation and the religion of the market. Preprint from, Harold Coward ed. Population, Consumption, and the Environment (pp. 229–250). Albany: State University of New York Press. (https://web.uvic.ca/~rdobell/assets/papers/sies.html).

Farrant, A., McPhail, E., & Berger, S. (2012). Preventing the "Abuses" of Democracy: Hayek, the "Military Usurper" and Transitional Dictatorship in Chile. American Journal of Economics and Sociology, 71(3), 513–538. (http://www.istor.org/stable/23245188).

Fieldman, G. (2011). Neoliberalism, the production of vulnerability and the hobbled state: Systemic barriers to climate adaptation. Climate and Development, 3, 159–174. https://doi.org/10.1080/17565529.2011.582278

Filip, B. (2018). Hayek on limited democracy, dictatorships, and the 'free' market: an interview in Argentina, 1977. In R. Leeson Hayek (Ed.), A Collaborative Biography: Part XIII: 'Fascism' and Liberalism in the (Austrian) Classical Tradition (pp. 395–421), Palgrave Macmillan.

Fisher, B., & Tronto, J. (1990). Towards a feminist theory of care. In E. Abel, & M. Nelson (Eds.), Circles of Care. State University of New York Press.

Fremstad, A., & Paul, M. (2022). Neoliberalism and climate change: How the free-market myth has prevented climate action. *Ecological Economics*, 197, Article 107353. https://doi.org/10.1016/j.ecolecon.2022.107353

Geels, F. W. (2012). A socio-technical analysis of low-carbon transitions: introducing the multi-level perspective into transport studies. *Journal of Transport Geography*, 24, 471–482. https://doi.org/10.1016/j.jtrangeo.2012.01.021

Gerlagh, R. (2017). Generous Sustainability. Ecological Economics, 136, 94-100. https://doi.org/10.1016/j.ecolecon.2017.02.012

Gogel 2023. The 2023 Global Oil & Gas Exit List: Building a Bridge to Climate Chaos. Media Briefing. (https://gogel.org/sites/default/files/2023-11/urgewald_GOGEL-2023 MediaBriefing final 0.pdf).

Hall, C. A. S. (2017). Energy Return on Investment: A Unifying Principle for Biology, Economics and Sustainability. Springer.

Hardin, G. (1968). The tragedy of the commons. Science, 162, 1243-1248. (https://www.science.org/doi/10.1126/science.162.3859.1243).

Hardin, G. (1998). Extensions of 'The Tragedy of the Commons. Science, 280(5364), 682-683. https://doi.org/10.1126/science.280.5364.6

Harvey, D. (2003). The New Imperialism. Oxford University Press.

Hayek, F. A. (1948). The use of knowledge in society. Hayek Individualism and Economic Order. Chicago: University of Chicago Press.

Hayek, F. A. (2011). The Constitution of Liberty: The Definitive Edition. Chicago University of Chicago Press.

Hicks, J., & Ison, N. (2018). An exploration of the boundaries of 'community' in community renewable energy projects: Navigating between motivations and context. Energy Policy, 113, Article 523534. https://doi.org/10.1016/j.enpol.2017.10.031

Hirschman, A. O. (1965). Obstacles to development: a classification and a quasi-vanishing act. *Economic Development and Cultural Change*, 13(4), 385–393. (https://www.jstor.org/stable/1152418).

Holland, J. (2014). Complexity: A Very Short Introduction. OUP.

IEA (2023). Oil and gas industry faces moment of truth – and opportunity to adapt – as clean energy transitions advance. *News*: 23 November 2023. (https://www.iea.org/news/oil-and-gas-industry-faces-moment-of-truth-and-opportunity-to-adapt-as-clean-energy-transitions-advance).

Inagaki, T. K., & Ross, L. P. (2018). Neural correlates of giving social support: differences between giving targeted versus untargeted support. *Psychosomatic Medicine*, 80(8), 724–732. https://doi.org/10.1097/PSY.00000000000000023

IPCC (2023). Climate Change 2023 Synthesis Report. (https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_FullVolume.pdf).

Klapwijk, A., & Van Lange, P. A. M. (2009). Promoting cooperation and trust in "noisy" situations: the power of generosity. *Journal of Personality and Social Psychology*, 96(1), 83–103. https://doi.org/10.1037/a0012823

Kricher, J. C. (2009). The Balance of Nature: Ecology's Enduring Myth. Princeton University Press.

Lenton, T. M., Rockström, J., Gaffney, O., Rahmstorf, S., Richardson, K., & Steffen, W. (2019). Climate tipping points —Too risky to bet against. Nature, 575, 592–595.

Lloyd, B. (2007). The Commons revisited: The tragedy continues. Energy Policy, 35, 5806–5818. https://doi.org/10.1016/j.enpol.2007.07.005

Luxemburg, R. (2015). The Complete works of Rosa Luxemburg. Vol II Ecomonic Writings 2. Verso.

Mackowiak, M. (2023). Coal: A Proven Path Out of Global Poverty. Politco. 6 November (https://www.politico.com/sponsor-content/2023/11/06/coal-a-proven-path-out-of-global-poverty).

 $March, S. \ (2019). \ Climate \ of \ Change. \ \textit{Four Corners}. \ 5 \ Apr \ 2019 \ \langle https://www.abc.net.au/news/2019-04-02/climate-of-change/10959830 \rangle.$

Marshall, J. P. (2018). Psycho-social disruption, information disorder, and the politics of wind farming. Energy Research and Social Science, 45, 120–133. https://doi.org/10.1016/j.erss.2018.07.006

Marshall, J. P. (2023). Comparing local energy conflicts in NSW Australia: moving to climate generosity. *Globalizations*, 20(8), 1363–1379. https://doi.org/10.1080/14747731.2022.2073067

Marx, K. (2010). Capital volume 1. Lawrence and Wishart.

McDonald, A. (2019). Tathra votes: Advocates push for new 2030 renewable energy target. Bega District News. 18 Feb. (https://www.begadistrictnews.com.au/story/5910631/tathra-votes-advocates-push-for-new-2030-renewable-energy-target/).

McKnight, A. (2020). The sombre warning from Bega council: 'Things are never going to be the same.' South Coast Register. 12 February. \(\lambda \text{ttps://www.southcoastregister.com.au/story/6627473/the-sombre-warning-things-are-never-going-to-be-the-same/\).

Milkoreit, M. (2022). Social tipping points everywhere?—Patterns and risks of overuse. WIRES Climate Change (https://wires.onlinelibrary.wiley.com/doi/full/10. 1002/wcc.813).

Mirowski, P., & Plehwe, D. (2009). The Road from Mont Pelerin: The Making of the Neoliberal Thought Collective. Harvard University Press.

Mirzania, P., Ford, A., Andrews, D., Ofori, G., & Maidment, G. (2019). The impact of policy changes: The opportunities of Community Renewable Energy projects in the UK and the barriers they face. *Energy Policy*, 129, 1282–1296. https://doi.org/10.1016/j.enpol.2019.02.066

Mises, L. von., (1998). Human Action: A treatise on Economics. Ludwig Von Mises Institute, Alabama.

Mitchell, T. (2011). Carbon Democracy: Political power in the age of oil. Verso.

Mulvey, K. & Shulan, S. (2015). The Climate Deception Dossiers: Internal Fossil Fuel Industry Memos Reveal Decades of Corporate Disinformation. Union of Concerned Scientists. (https://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf).

Narayanan, A., & Nardelli, P. H. J. (2021). Community Renewable Energy Systems. In In. W. L. Filho, A. M. Azul, L. Brandl, A. L. Salvia, & T. Wall (Eds.), Affordable and Clean Energy (pp. 176–188). Springer.

Odum, H. T., & Odum, E. C. (2001). A Prosperous Way Down: Principles and policies. University Press of Colarado.

Oliver, T. H. (2015). Biodiversity and resilience of ecosystem functions. and 16 others Trends in Ecology Evolution, 30(11), 673-684.

Ostrom, E. (2015). Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press.

Our world in Data. (2023). Primary Energy Consumption by Source, World. (https://ourworldindata.org/grapher/primary-sub-energy-source).

Park, S. Q., Kahnt, T., Dogan, A., Strang, Fehr, E., & Tobler, P. N. (2017). A neural link between generosity and happiness. *Nature Communications*, 8, 15964. (https://www.nature.com/articles/ncomms15964).

Pascoe, B. (2018). Dark Emu: Aboriginal Australia and the Birth of Agriculture. Magabala Books.

Pereira, J. C., & Viola, E. (2018). Catastrophic climate change and forest tipping points: Blind spots in international politics and policy. *Global Policy*, 9(4), 513–524. https://doi.org/10.1111/1758-5899.12578

Peterson, G., Allen, C. R., & Holling, C. S. (1998). Ecological resilience, biodiversity, and scale. *Ecosystems, 1*(1), 6–18. https://doi.org/10.1007/s100219900002 Pihkala, P. (2020). Anxiety and the Ecological Crisis: An Analysis of Eco-Anxiety and Climate Anxiety. *Sustainability, 12,* 7836. https://doi.org/10.3390/su12197836 Przepiorka, W., & Liebe, U. (2016). Generosity is a sign of trustworthiness—the punishment of selfishness is not. *Evolution and Human Behavior, 37,* 255–262. Raworth, K. (2018). *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist.* Century Trade.

Renewable Cobargo (2023). About Us. $\langle https://renewablecobargo.com/about-us/ \rangle$.

Rockström, J. (2015). Big World, Small Planet: Abundance Within Planetary Boundaries. Yale University Press.

Rockström, J., & Gaffney, O. (2021). Breaking Boundaries: The Science of Our Planet. Dorling Kindersley.

Schuijers, L. (2022). Compelled by the Court to Act on Climate Change: Bushfire Survivors for Climate Action Incorporated v Environment Protection Authority [2021] NSWLEC 92. Journal of Environmental Law, 34(1), 23–232. https://doi.org/10.1093/jel/eqab045

SEI, Climate Analytics, E3G, IISD, and UNEP. (2023). The Production Gap: Phasing down or phasing up? https://doi.org/10.51414/sei2023.050 (https://productiongap.org/wp-content/uploads/2023/11/PGR2023_web.pdf).

Shorten, B. (2019). Transcript – Doorstop – Tathra, Tuesday 29 January. (https://www.billshorten.com.au/transcript_doorstop_tathra_tuesday_29_january_2019). Slobodian, Q. (2018). Globalists: The End of Empire and the Birth of Neoliberalism. Cambridge, MA: Harvard University Press.

Smith, C., & Davidson, H. (2014). The Paradox of Generosity: Giving we Receive, Grasping we Lose. Oxford University Press

Smyth, B. (2021). Power and resilience: Cobargo district scores funds for microgrid study. Bega District News 30 July 2021 (https://www.begadistrictnews.com.au/story/7361474/power-and-resilience-cobargo-district-scores-funds-for-microgrid-study/).

Smyth, B. 2022 Solar savings bring bright smiles to Quaama volunteer firefighters. Bega District News. 8 Feb 2022 (https://www.begadistrictnews.com.au/story/7609712/solar-savings-bring-bright-smiles-to-quaama-volunteer-firefighters/).

Solnit, R. (2020). A Paradise Built in Hell (Revised Edition). Penguin.

Strathern, M. (1990). The Gender of the Gift: Problems with Women and Problems with Society in Melanesia. University of California Press.

Thatcher, M. 1989. Speech to United Nations General Assembly (Global Environment). (http://www.margaretthatcher.org/speeches/displaydocument.asp? docid=107817).

Thatcher, M. (2002). Statecraft: Strategies for a Changing World. Harpercollins.

Tsvetkova, M., & Macy, M. W. (2014). The social contagion of generosity. *PLoS ONE*, *9*(2), Article e87275. https://doi.org/10.1371/journal.pone.0087275 UN (2019). Climate Justice. Sustainable Development goals (https://www.un.org/sustainabledevelopment/blog/2019/05/climate-justice/).

UNDP (2023). Climate change is a matter of justice – here's why (https://climatepromise.undp.org/news-and-stories/climate-change-matter-justice-heres-why). van der Schoor, T., van Lente, H., Scholtens, B., & Peine, A. (2016). Challenging obduracy: How local communities transform the energy system. *Energy Research Social Science*, 13, 94–105.

Vasileiadou, E., & Safarzyńska, R. (2010). Transitions: Taking complexity seriously. Futures, 42, 1176-1186.

Walker, G. (2008). What are the barriers and incentives for community-owned means of energy production and use? *Energy Policy, 36*(12), 4401–4405. Walker, J. (2020). *More Heat Than Life: The Tangled Roots of Ecology, Energy, and Economics.* Singapore: Palgrave Macmillan.

Weinstein, N., Przybylski, A. K., & Ryan, R. M. (2009). Can nature make us more caring? Effects of immersion in nature on intrinsic aspirations and generosity. *PSPB*, 35(10), 1315–1329. https://doi.org/10.1177/0146167209341649

Whitehead, J. (2012). John Locke, Accumulation by Dispossession and the Governance of Colonial India. *Journal of Contemporary Asia*, 42(1), 1–21. https://doi.org/10.1080/00472336.2012.634638

Wirth, S. (2014). Communities matter: Institutional preconditions for community renewable energy. Energy Policy, 70, 236-246.

Wood, E. (2019). Another step forward in a clean energy future for the Bega Valley. About Regional. 20 March 2019. (https://aboutregional.com.au/another-step-forward-in-a-clean-energy-future-for-the-bega-valley).

Young, M. W. (1971). Fighting with Food: Leadership, Values and Social Control in a Massim Society. Cambridge: Cambridge University Press.