Analyse a case of green market expansion. What kinds of public roles do two different types of experts play in that market.

1. Introduction.

Carbon markets seem to be an innovative reaction to the climate crisis. However, from the beginning, there was a focus on economic development and market protection. In its current iteration, carbon trading is a mere commodification of nature. This has blocked the necessary pathways of development away from fossil fuels and could also lead to ecological collapse once nature is subsumed into a market logic. The stage for this theatre is a political landscape that can aptly be described as post-political. Scientific knowledge legitimises the expert management of a technocracy, whilst there is an implicit silencing of debates of more fundamental ideas. Carbon markets are ultimately problematic because of their existence within a politico-economic framework that refuses to question its own foundations or inner-workings. I'll begin by sketching a rough picture of the carbon markets, focussing primarily on the European Union Emissions Trading Scheme. After this brief history, I will move onto an analysis of carbon markets. Building on work by Nancy Fraser and Larry Lohmann, I will explore what the commodification of nature could mean. I will end with an analysis of how the carbon markets reflect a post-political technocratic landscape, as imagined by Erik Swyngedouw.

2. European carbon markets.

Conceptually, carbon markets are an elegant and creative tool that uses the collective intelligence of the market to achieve policy goals. One 'way of conceiving of the commodity is as universally fungible greenhouse gas pollution rights backed by an implicit government guarantee' (Lohmann 2010:237). So carbon emissions rights are packaged into financial products that can then be traded on the open market as if it was a currency or company stock. Thus allowing companies to essentially purchase the right/privilege to pollute. All whilst allowing the machinery of economic growth to continue. These emissions rights can be thought of as a financial product abstracted from its source in the sense that the thing being traded is not carbon itself, but the commodified representation of carbon. The scheme promises to limit the amount of carbon that is emitted through a quantified cap on emissions. However, because the emissions are tradeable, economic activity can continue unabated. Purely *as a financial market*, this market could be seen as a raging success.

As of 2023, this market was worth $949B. Multiple jurisdictions – including China, Britain, and the United States – have constructed their own market. However, by far the largest, accounting for 87% of the global market, is the European Union Emissions Trading Scheme (EU ETS) (Twidale 2024). 'Introduced in 2005, the EU ETS…operates in the European Economic Area' (Koumpli 2024:88). It was 'the world's first international emissions trading system' (Koumpli 2024:88), and despite some initial scepticism 'even environmental NGOs like Greenpeace and WWF…ended up hailing it as an important achievement' (Bailey *et al.* 2011:688). Carbon trading is now 'regarded as playing a crucial role towards meeting the 1.5°C temperature limit of the Paris Agreement' (Koumpli 2024:88). Despite this apparent success, one of the core problems plaguing this market is evident from its conception; and to fully understand these markets, it is important to emphasise the initial intention of the scheme:

> ‘The EU’s central task in the aftermath of the Kyoto negotiations was to find a practical strategy to show that EU leadership on climate change would not be economically ruinous in the absence of similar commitments by other major countries. By reframing emissions trading from a tactical device to dilute emissions commitments to an effective and efficient instrument for reconciling environmental protection with economic growth, the Commission was able to build a strategic coalition for the creation of an EU climate-governance regime’ (Bailey *et al.* 2011:690).

In other words, the primary concern was to protect markets and competitive advantage. From the very beginning, ‘carbon emissions trading was…intended to lower the overall costs of achieving the Kyoto Protocol emissions targets’ (Koumpli 2024:87-88). There *does* seem to be genuine efforts by policymakers to enact change, but the actions taken emphasise the need to avoid excessive economic burden and risk. This may be understandable in a globalised marketplace, but this emphasis on economics and markets dramatically changes the policy goal underlying these carbon markets. The primary goal of carbon markets is reframed from climate mitigation to market protection. Albeit market protection with the secondary goal of environmental protection. This early seed foreshadows the ideological dilemmas that continues to plague carbon markets, and it points to one of the key criticisms we can level at carbon trading. The unfortunate reality is that the carbon markets are not a genuine solution to the problems they were built to solve. What these markets achieve is a financialisaton and commodification of carbon alongside the undermining of the real political action needed to mitigate climate change. This is profitable for the firms engaged in this highly complex global marketplace, but as a policy tool, it falls far short of its potential. Ultimately, its true achievements are financial and economic, not environmental.

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Under this economic-cum-environmental guise, ‘the seemingly intractable problem of climate change has been reframed as an opportunity to construct a new carbon economy’ (Bailey *et al.* 2011:682). The environmental crisis was no longer a crisis of epic proportions and urgency. It was transformed into an opportunity to profit from a newly created financial product. This focus on finance over carbon can be seen in the ensuing development and key players of this market, and ‘today, the same institutions that are most active in derivatives are also moving to dominate carbon’ (Lohmann 2010:236). Goldman Sachs has its own ‘carbon trading desk’ (Lohmann 2010:236). Elite financial firms, investment banks such as 'Deutsche Bank, Morgan Stanley, Barclays Capital’ (Lohmann 2010:236), are 'among the main investors and speculators in carbon commodities' (Lohmann 2010:236). These are profit-maximising companies that seek a strong balance sheet and annual profits, not climate mitigation. In other words, the carbon trading markets have become a market for a complex and profitable financial product, not a policy tool being used to reduce carbon emissions. Evidenced by its early history and development. So ‘the question of what the new market was *for* got lost amid ever more ambitious attempts to maintain and extend it’ (Lohmann 2010:247).

3. The commodification of nature.

However you interpret this history and development of carbon emissions as an “asset,” the end result of this commodification of nature is a distancing from the on-the-ground realities of an ecological collapse engendered by climate change. ‘By abstracting from

place, technology, history and gas type' (Lohmann 2010:237), carbon markets have 'entailed losing touch with what was supposedly being costed' (Lohmann 2010:225). The value is now found in this 'thingified' (Lohmann 2010:238) carbon, in the carbon emissions *commodity*, not the carbon emissions *themselves* that these financial products are intended to merely represent. So the commodity is valued intrinsically and this obscures the *real* value, which is the climate and environment. Lohmann summarises the net effect of this reframing of value from emissions to commodity, arguing that 'the goal of overcoming fossil fuel dependence…is changed into the goal of placing progressive numerical limits on emissions' (Lohmann 2010:237).

We will revisit the problems with excessive commodification. However, this "thingification" is an immediate problem because carbon trading is 'the main official approach to climate change worldwide' (Lohmann 2010:225). If carbon markets were just one tool among many, all being directed towards combating climate change, then perhaps we could defend their use under certain conditions. Nancy Fraser argues that 'the promise of quick speculative super-profits draws capital away from the long-term, large-scale investment that is needed to develop renewable energy and to transform unsustainable modes of production' (Fraser 2014:555). This shifting of investment capital is surely a factor, and renewable energy is of course needed, but the real danger is that carbon markets are framed as a solution to the climate crisis when they clearly fail from this perspective. This obscures the real solution. The most immediate danger of carbon markets in their current iteration is that they obscure the problems and risks of the climate crisis by reframing the solution. The solution becomes a market mechanism and financial product rather than the political action that is needed. Carbon markets are framed as if they were a universal solution to climate change, evidenced by the reliance that governments have on these schemes. When in reality, as we have just seen, carbon markets consist of financial products veiled as environmental policy. The real solution to climate change is not found in financial creativity, as proponents of carbon markets would have us believe. Solutions are found in fundamental and lasting changes to the way humans create and build and consume and produce (Lohmann 2010:239-240).

Such a broad and deep change to the way humans live will not happen within the constraints of a climate change policy that is dominated by carbon markets. This is because embedded within the carbon market, there is an 'inbuilt bias against the structural change demanded by the climate problem' (Lohmann 2010:241). So rather than being the solution that is needed, carbon markets have had the real effect of protecting markets under the appearance of environmental policy whilst also 'blocking prospective historical pathways toward less fossil fuel dependence' (Lohmann 2010:225). That is, carbon markets 'recreate a neoliberal hegemony…whilst…locking out approaches that could lead to deeper change' (Bailey *et al.* 2011:700). In a contradictory way, carbon trading has actually 'exacerbated the climate problem' (Lohmann 2010:225) by continuing a widespread reliance on fossil fuels. Carbon trading abstracts away and obscures the main source of emissions and in doing so distracts policymakers from the longer term and more difficult work of moving industry and society away from a reliance on fossil fuels. It cognitively blinds us by developing the narrative that climate change is being effectively managed through financial instruments. When in reality, these financial products offer no solution but have only 'entrenched fossil fuel infrastructure, undercut the political mobilisation needed for a climate solution and undermined low-carbon practices' (Lohmann 2010:247).

4. Ecological collapse?

Nancy Fraser's paper is much broader than our relatively narrow focus on carbon markets. Her focus is an 'integrated structural analysis' (Fraser 2014:541), and this is beyond the scope of this paper. However, we can draw one key insight from this analysis when she articulates a critical view of the commodification of nature and its constituent parts. Her argument is nuanced, so to avoid confusion, I will quote Nancy Fraser and then interpret the passage as it relates to our discussion of carbon markets:

> 'In the case of the ecological condition of production, what is at stake are the natural processes that sustain life and provide the material inputs for social provisioning…each strand of crisis lends itself to a structural critique…An ecological variant claims that neoliberalism's increasingly invasive subsumption of nature as a fictitious commodity today is irreparably eroding the natural basis that sustains life and supplies the material inputs for commodity production' (Fraser 2014:549).

There is much here, but to simplify and summarise the key insight as it relates to carbon markets, we can say that a commodification of nature could lead to ecological breakdown. In other words, as carbon, which is a part of nature, is subsumed into a market logic and transformed into a commodity, then the pre-conditions for life itself, in this case ecological and climate health, are eroded. So the move to commodify carbon had the effect of subsuming it within a profit-seeking logic, and constraining nature within a market logic undermines the conditions for ecological health. The reasoning underneath this is quite simple. The unregulated market operates on a different logic to the ecological needs of the planet. Simply put, markets and nature have different needs and operate on different timescales. The market cannot give the land what it needs *when the market is driven by profit*. So the ecological health of the land will be abandoned and sacrificed to the everlasting search for profit when it is commodified because the land is now constrained within a neoliberal market logic. Once commodified, nature will be treated to the same profit-driven degradation that any other commodity is subjected to in a neoliberal market. This is a serious problem because *nature sustains life*. 'Nature is an indispensable precondition both for social life in general and for commodity production in particular' (Fraser 2014:552). So when carbon/nature is sold for profit, and treated with a market logic, then eventually the ability for nature to be a source of sustenance becomes eroded as the drive for profit overrides all else in an unregulated capitalism. This further complicates our understanding of carbon markets as environmental policy tools, showing that even over longer time horizons, carbon markets are unlikely to deliver on their promises.

5. The post-political, its scientists and experts.

How did all this happen though? How did the climate crisis become absolved into a market logic and end up *exacerbating* the crisis it intended to solve? The core problem here transcends carbon markets, and we must look at the politico-economic structures in which carbon markets exist to explore an answer to this question. The potential for carbon markets to 'reduce emissions is…constrained by the socioeconomic framework within which it operates' (Carton 2014:1002). This 'underscores the need for critical examination of the ideological foundations…of the new carbon economy' (Bailey *et al.* 2011:697). Erik Swyngedouw has offered an insightful critique of this ideological problem by observing an apparent contradiction.

The climate crisis *appears* highly politicised as it is 'propelled high on the policy agenda' (Swyngedouw 2010:213), but prominent political theorists have argued for the emergence of a 'post-political and post-democratic condition' (Swyngedouw 2010:213). Swyngedouw argues that 'radical dissent, critique and fundamental conflict being evacuated from the political arena' (Swyngedouw 2010:227), and 'current hegemonic climate change policies ultimately reinforce…the socio-political status quo' (Swyngedouw 2010:214). For Swyngedouw, the antagonism and fight of politics, the disagreement over fundamental ideas, has been dissolved into a technocratic project built on a scientific consensus and driven by expert management. This aptly describes the ideology that allowed carbon markets to develop. Trading schemes can be subsumed into the dominant politico-economic systems that govern modernity. As we have seen, from the very beginning, trading schemes were engineered to be embedded within a pre-existing market logic and policymakers sought to *protect this logic*.

'Post-politics refers to a politics in which ideological…struggles are replaced by techno-managerial planning, expert management and administration' (Swyngedouw 2010:225). Scientists play an important public role in legitimating policy, and 'scientific expertise becomes the foundation and guarantee for properly constituted politics/policies' (Swyngedouw 2010:217). No more is there a difficult debate over how to live sustainably in a world of changing climates, only technical or scientific disagreement over "facts." Political elites are constitutive of this apparent technocracy by 'moving rapidly to convince the world that…capitalism can make a new climate by unmaking the one it has co-produced over the past few hundred years' (Swyngedouw 2010:224). The preceding analysis of carbon markets has demonstrated their failure as a policy tool, but elites continue the narrative that the tools of a neoliberal capitalism can meet the challenges of the climate crisis. Ultimately, this 'technocratic management…has sutured the spaces of democratic politics' (Swyngedouw 2010:214). Within the context of carbon markets, Swyngedouw's interpretation of the political landscape is insightful and he articulates the core problem that I will now end with.

6. Conclusion.

Carbon markets have been described as 'apolitical' (Lohmann 2010:238), and this is exactly the problem that carbon markets have failed to surmount. The failures of carbon markets to affect change are not intrinsic to the markets themselves. The failures are a result of an a-political landscape that relies on market mechanisms to solve political problems. If carbon markets were used *alongside* deep and broad political action then their use could be justified. We cannot deny the intellectual and technical creativity of those who conceived of and designed this policy instrument. We just need a qualification of when and how the use of financial instruments is justified to achieve policy goals. 'Carbon markets gained much of their prominence during a period of apparently unshakable faith in markets' (Bailey *et al.* 2011:699). So perhaps the EU ETS was a child of its times, and when its failure as a policy tool is made apparent then the real work and change can begin. We can only hope.

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