"Strange Markets" and the Climate Crisis

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Introduction: "Strange Markets" and the Financial Crisis

"Strange new markets arose . . . " So writes David Harvey in his new book *The Enigma of Capital*, describing the post-1980 period when the world's wealthy, enriched by a successful campaign to repress wages globally, were looking for places to put their money.

Turning up their noses at conventional investments, and ultimately disappointed by the bursting of the dot.com and other bubbles, the rich poured billions of dollars into new, high-yield financial products with bizarre names like credit default swaps, collateralized debt obligations, currency derivatives, etc.

These products were strange indeed. Essentially they were the result of an attempt to mass-produce a tradeable form of certainty. Banks imagined they could package up and sell the uncertainties connected with their loans to other parties so that they would not need to maintain so much capital reserve for each loan and could lend out more money. Businesses tried to use the new "certainty commodities" as protection against oscillating exchange or interest rates, commodity price swings, supplier default, or other hazards of a globalized economy from which the state could not protect them. And cash-flush speculators loved the new products as money-making opportunities. By 2005 the trade in mass-produced "certainty" amounted to nearly \$250 trillion per year (up from roughly zero in 1990), at a time when global economic output stood at only \$45 trillion. At the time, finance accounted for about 45 per cent of all US corporate profits, compared with less than 5 per cent from manufacturing.²

There was only one catch. In reality, "certainty" or "security" can't be mass-produced in a universal, commodified, decontextualized, neatly quantifiable form. Of course, insurance companies have successfully sold a commodified form of "security" for a long time. But they have done so only against risks that are "measurable, bounded and well behaved." Similarly, while casinos create profitable little uncertainty markets in odd corners of the landscape, they tend to attach prices only to the outcomes of a restricted range of well-understood games whose odds are calculable and independent, like roulette or blackjack. What happened in the financial markets of the 1990s and 2000s was different: an attempt to construct a floating pool of abstract, infinitely tradeable uncertainty circulating worldwide, a set of commodities made up of an unprecedented range of unknowns whose original contexts became almost impossible to trace.⁴

The mathematical models that seduced banking chiefs into believing that such commodities would

¹ David Harvey, The Enigma of Capital and the Crises of Capitalism, Profile Books, London, 2010, p.21.

² Ibid., p.22.

³ Swiss Re, "Innovating to Insure the Uninsurable," Paper No. 4/2005, Zurich, 2005.

⁴ Alfred Steinherr, *Derivatives: The Wild Beast of Finance*, London, Wiley, 1998, p. 101, quoted in Edward LiPuma and Benjamin Lee, *Financial Derivatives and the Globalisation of Risk*, Durham, NC, Duke University Press, 2004, p.81.

work were deceptive. To imagine that the unlimited privatization and circulation of uncertainty could help business achieve secure growth turned out to be as crazy an idea as to think that privatizing water could provide secure water for all, or that making land into a completely liquid commodity was the best way of ensuring against famine. Like land, like water, uncertainty can never be packaged and commodified in the sweeping ways that economics department idealists and Wall Street dreamers and had imagined.⁵

In the euphoria of a new market bubble, the rich had little incentive to pay attention to these realities. The result is now known to everybody. As the "subprime crisis" erupted, traders realized that the "certainty" they thought they were buying and selling was bogus, and stopped believing in the new market. Massively overcommitted to the new products, the global financial system crashed. From New York to Sao Paolo, millions lost their homes and jobs. In 2008, desperate to preserve their class position, Wall Street banks staged what was in effect a financial coup d'etat against the US government in order to get their hands on the hundreds of billions of dollars in handouts from tax revenues that they needed in order to start over again.

Another "Strange Market"

But vast markets in uncertainty were not the only strange and dangerous economic beasts being born in the 1980s and 1990s. As Harvey points out, odd new "ecosystem service markets", including carbon pollution rights markets, were getting under way at the same time. First proposed in the 1960s, pollution trading was developed by US economists, derivatives and commodities traders, "Big Green" Washington environmental groups and business alliances. It then underwent a series of failed policy experiments before becoming the centrepiece of the US sulphur dioxide control program in the 1990s at a time of deregulatory fervour. In 1997, the Bill Clinton regime successfully pressed for the Kyoto Protocol to become a set of carbon trading instruments (Al Gore, who carried the US ultimatum to Kyoto, later became a carbon market actor himself). In the 2000s, following the US's about-face on the Protocol, Europe picked up the initiative to become the host of what is today the world's largest carbon market, the EU Emissions Trading Scheme (EU ETS). The project of building a single, liquid global carbon market worth trillions of dollars remains the default international approach to the climate crisis. The market grew rapidly until 2008, when, according to the World Bank, it amounted to US\$135 billion, although it has stagnated following the financial crash and the failure of the US Congress to pass proposed carbon trading legislation.

Is it just a coincidence that two such ambitious and novel markets were created at roughly the same time by some of the same people in the same country? To many environmentalists, it might seem so. What could a project spearheaded by Wall Street investment banks possibly have to do with the Kyoto Protocol? What possible parallel could there be between carbon offsets, say, and the financial products that caused the 2008 economic disaster? Surely pollution markets are about saving the world; uncertainty markets are just about making money. Why waste time looking for connections?

But more serious students of political ecology might want to do just that. Despite appearances, the new uncertainty market and the new carbon pollution market not only are cut from the same cloth, but also interact closely with each other and pose many similar dangers.

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⁵ Larry Lohmann, "Uncertainty Markets and Carbon Markets: Variations on Polanyian Themes," *New Political Economy* 15 (2) 2010, pp.225-254 http://www.thecornerhouse.org.uk/resource/uncertainty-markets-and-carbon-markets.

⁶ World Bank, State and Trends of the Carbon Market 2010, World Bank, Washington, 2010.

The Parallels

Both markets claim to enable business to deliver a social good more cost-effectively. Just as uncertainty markets are supposed to distribute risk more efficiently, enabling banks and businesses to allocate capital more productively for the greater good, carbon markets are supposed to distribute government-mandated greenhouse gas pollution reductions where they can be made most cheaply, encouraging swifter global warming action while preserving corporate profits.

Both markets, too, feature intangible commodities, which are created largely by state action. The market in complex derivatives is dependent on the manipulation of regulation (for example, by the removal of the divide between ordinary commercial banking and speculative banking or through the relaxation of reserve limits). Carbon commodities are created by governments imposing overall limits on pollution, which is why carbon markets are thrown into confusion when the UN cannot reach a decision about a successor to the Kyoto Protocol or when US legislators cannot decide on a carbon trading bill. European corporations with access to officials designing the EU carbon market are able to reap huge benefits. In the global South, only those companies with the resources to exploit a complex UN regulatory system are capable of producing carbon offset commodities for sale through the Kyoto Protocol carbon market. In fact, it is not too much to say that, in the case of both uncertainty and carbon commodities, conventional distinctions disappear between market and regulation and between regulation and corruption.

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As is customary, both markets advertise themselves as helping the poor to mobilize lucrative assets. The new uncertainty markets were supposed to be a boon to lower-income homeowners in the North because they encouraged banks to offer them huge loans on the strength of the predicted future prices of their houses. The carbon market, meanwhile, may soon allow poorer countries or regions to cash in on their standing forests by selling carbon storage capacity to rich industrial emitters. Individualized carbon trading systems, similarly, would enable the poor (who emit less) to sell surplus pollution rights to the rich (who emit more). There are also proposals afoot that would encourage Southern countries to use carbon credits as collateral for green development bonds sold to the private sector.

As is usually the case, however, such claims of overall social benefit conceal elite class projects. One reason Northern governments and multilateral development banks welcomed the expansion of credit was that it promised to sustain effective demand following the breakdown of the postwar high-wage Keynesian deal that had been fuelled by cheap oil. So what if salaries were falling? With banks offering easy loans, people could keep buying consumer goods anyway. And under the new global debt regime, the goods could be sourced from Southern countries restructured as low-consuming export centres.

Similarly, pollution markets are attractive to Northern elites partly because they offer a way of counteracting the threat to fossil fuel use – and the associated challenges to labor productivity,

⁷ Richard B. Stewart, 'Privprop, Regprop, and Beyond', Harvard Journal of Law and Public Policy 13, 1990.

⁸ Larry Lohmann, "Regulation as Corruption in Carbon Offset Markets," *in* Steffen Bohm and Siddhartha Dabha (eds.), *Upsetting the Offset: The Political Economy of Carbon Trading*, Mayfly Books, London, 2010, pp.175-191, http://www.thecornerhouse.org.uk/resource/regulation-corruption-carbon-offset-markets.

⁹ IETA, "Green Sectoral Bonds: Draft Concept Note for Review and Discussion," http://www.ieta.org/ieta/www/pages/getfile.php?docID=556.

¹⁰ Martin Wolf, "Three Years and New Fault Lines Threaten," *Financial Times*, 13 July 2010; Farhad Araghi, "The End of 'Cheap Ecology' and the Crisis of 'Long Keynesianism'", *Economic and Political Weekly* 45 (4), 23 January 2010, pp.39-41.

agribusiness, globalized trade and the postwar deal with the Northern working class – that must be part of any effective climate policy. As the Chief Executive of American Electric Power stated forthrightly in October 2009, if anyone claims that the "only reason American Electric Power wants to [invest in a forest offset project in Bolivia] is because it doesn't want to shut down its coal plants, my answer is, 'You bet, because our coal plants serve our customers very cost-effectively." In Europe, ten industries that are among the most intensive users of fossil fuels are making windfall profits from the huge surplus of pollution permits they have been granted by their governments free of charge – profits that exceed the total EU budget for environment. Carbon markets, as potentially the world's biggest commodity market in the future, also offer investors a pipeline for absorbing surplus capital. In short, while seeming to respond to public demands for climate action, carbon markets mobilise them in ways that serve elite purposes. ¹²

The Decisive Contradiction

But the decisive reason why neither of these markets can be in the interests of ordinary people is that the social function (and ultimately the saleability) of the commodities they create has to be sacrificed to adapt them to the needs of "efficiency," capital accumulation and capital absorption. There's a good reason Marx used the word "contradiction" to describe the relationship between commodities' use-value and their exchange-value. There is a paradox at the heart of every commodity: it must be engineered to be exchangeable, but in order to be exchangeable, it needs to retain at least a vestige of human usefulness. Fast-food hamburgers may be hazardous to the health, but at least they fill the stomach. The new uncertainty and climate commodities fail to square this circle. Wall Street's uncertainty products of the 1990s and 2000s could not be designed in a way that that made them simultaneously hugely profitable and able to do the job they claimed to do. The obsessive pursuit of liquidity led ultimately to the drying up of liquidity. The subprime market was supposed to enrich; in the end, it impoverished. Similarly, the imperative of engineering a carbon commodity for profitable investment is at odds at every step with the project of constructing a commodity bearing what Marx might have called the "formal use-value" of addressing the climate problem. Carbon markets are supposed to help alleviate global warming; instead they are making it worse.

To understand why this is always going to be so, it's necessary to look closely at the work of the bankers, commodities traders, derivatives traders and neoclassical economists who have, together with Northern governments, generally dominated the development of the carbon commodity. To meet the profit imperative, these actors (many of whom also helped construct the new uncertainty market)¹⁴ have always focused their ingenuity not on facilitating a transition away from fossil fuels, but rather on making the new commodity liquid, commensurable with other commodities, standardized and able to be traded swiftly across a wide geographical range.

Because all commodities, in order to be exchangeable, must be divisible and measurable, carbon market architects have no choice but to construct their commodity around carbon dioxide molecules. Government departments, scientists on UN panels, and technical experts of all kinds are delegated to follow and count the molecules as they travel from fossil fuel to smokestack and from tailpipe and

¹¹ Sandbag, "The Carbon Rich List", Sandbag, London, February 2010, pp. 7-8.

¹² Erik Swyngedouw, "Apocalypse Forever: Post-Political Populism and the Spectre of Climate Change," *Theory, Culture and Society*, 27, 2-3 (2010), pp.213-32, p.224.

¹³ Karl Marx, Capital, Vol. I, Penguin, London, 1990, p.184.

¹⁴ Larry Lohmann, "Uncertainty Markets and Carbon Markets: Variations on Polanyian Themes," *New Political Economy* 15, 2, 2010, pp.225-254, p.236. http://www.thecornerhouse.org.uk/resource/uncertainty-markets-and-carbon-markets.

atmosphere, thence moving among air, ocean, vegetation, rock, fresh water, and so on. Politicians, diplomats and officials then try to assign responsibility for molecule flows, reductions and savings to various countries or corporate entities.

The molecule-counting project is contradictory in itself. For example, if you know that your country or company can be credited with "reducing" more carbon dioxide emissions in 2020 if you don't clean up today, then you will have an incentive to stay dirty. Trying to "fix" this problem by recalculating the baseline against which savings are measured to take account of this perverse incentive merely creates another perverse incentive to change the new baseline as well, and so on. This is what the billionaire speculator George Soros calls "reflexivity," which, in the financial markets, is manifested in the periodic tendency of investors' observations and biases to influence "economic fundamentals" in a disruptive way. In both financial and carbon markets, reflexivity is an enormous obstacle to building a commodity that bears both use-value and exchange-value. To borrow the words of Soros' fellow investor George Cooper, such a commodity is in danger of becoming "like the proverbial chocolate teapot" that "works only while not in use". 16

A still more important problem with the molecule-counting fetish is that it ignores or interferes with the central imperative of dealing with climate change – how to institute structural, long-term change away from fossil fuel dependence. This is simply because the things that encourage that type of change cannot be measured, sliced and diced into a discrete commodities. Molecule-counting treats all carbon-reducing technologies as equivalent, regardless of the degree to which they foster structural change. The focus on topographical location of molecules, in addition, abstracts from the historical, social and economic drivers of climate change, while the focus on chemistry means that the climatic distinction is lost between molecules of fossil origin and molecules of biotic origin.

It gets worse. In order to achieve a maximally liquid and "efficient" market, in which every buyer can find a seller and every seller a buyer, market architects must create as large a commodity pool as possible by equating emissions from fossil fuel combustion with emissions of other greenhouse gases such as HFCs, nitrous oxide, methane and so forth. This again undermines the goal of phasing out fossil fuels. The commodity pool is then further increased (again in the interest of "cost savings") by equating hypothetical emissions reductions with actual reductions. Industrialists who can submit satisfactory paperwork to UN regulators claiming that their installations are emitting less than under a business as usual scenario are entitled to sell carbon credits to other polluters. Commodity production becomes global and focused on finding clever "equivalences" to carbon dioxide molecules rather than seeking solutions to global warming. A carbon dioxide emissions reduction at an electricity utility in The Netherlands can be traded for a reduction in nitrous oxide leakage at a chemical plant in South Korea; or the "emissions savings" achieved by a hydroelectric dam in India; or the burning of methane seeping from a coal mine in China or a garbage dump in Brazil; or a tree plantation in Ecuador. As with the uncertainty markets, it becomes difficult to trace the origin or assess the credibility of the commodities involved in any particular exchange.

¹⁵ Michael Szabo, "Kyoto May Push Factories to Pollute More: UN report," Reuters, 2 July 2010; "EU Lawmakers Wade into HFC Debate," *Point Carbon*, 15 July 2010; Herbert Docena, "The Clean Developent Mechanism in the Philippines: Costly, Dirty, Money-Making Schemes," Focus

on the Global South, Bangkok, 2010,

http://www.the corner house.org.uk/resource/clean-development-mechanism-philippines.

¹⁶ Larry Lohmann, "Uncertainty Markets and Carbon Markets: Variations on Polanyian Themes," *New Political Economy* 15 (2), 2010, pp.225-254, pp.233, 249.

Finance Makes Its Move

As the market expands, more and more investors and intermediaries get involved. Banks, for example, take on some of the risk carbon permit buyers face due to price volatility, making large profits. ¹⁷ In the first half of 2008, 99 per cent of carbon market transactions were in derivatives. ¹⁸ Among the largest buyers of UN carbon credits today are financial-sector speculators such as Goldman Sachs, Barclays Capital, Deutsche Bank, BNP Paribas Fortis and Sumitomo. Buyers of UN carbon credits from Ecuadorian businesses, for example, include not only industrial emitters like Germany's RWE, which needs the credits to avoid having to invest in industrial restructuring, but also Wall Street or City of London financial firms such as Citigroup, JP Morgan Chase, Noble Carbon, Cantor Fitzgerald Europe and MGM Carbon Portfolio. ¹⁹ A recent report from Caisse de Depots estimates that 42 per cent of carbon funds (investment vehicles that raise capital to purchase carbon credits) set up during the past decade also have "the objective of financial gains". ²⁰

Some Wall Street firms have even made a point of acquiring their own carbon companies. For example, JP Morgan has bought carbon offset specialist companies Climate Care and EcoSecurities, and Goldman Sachs owns a stake in BlueSource, a carbon offset developer, as well as in the Chicago Climate Exchange. Merrill Lynch meanwhile works with conservationist NGOs in developing carbon credits from forests, and in June 2010 Barclays purchased Tricorona, a Swedish company that runs carbon offsetting projects in the global South. Such banks can now "enrich the offsets part of their business by rallying up the price of carbon on their trading desks or issuing bullish recommendations on carbon."²¹

This growing involvement of the financial sector results in carbon commodities' becoming still more fungible, abstract and divorced from environmental and social considerations, while their simplifications become still more hidden. In 2008, for example, Credit Suisse put together a US\$200 million deal that bundled together offset projects in different stages of completion before slicing them up for sale to speculators. Just as uncertainty commodities concealed from distant buyers and sellers the economic realities bearing on lower-income neighbourhoods in Detroit or Los Angeles, so too financialized carbon-commodity packages, with their even longer value chains, conceal the heterogeneous climatic and social impacts of assemblages of, say, coal-mine methane and biomass projects in China and hydroelectric or pig-farm projects in Ecuador. As financial-sector influence over carbon grows, so too does what the late John Kenneth Galbraith called the "vested interest in error" which occurs when "[s]peculation buys up, in a very practical way, the intelligence of those involved."²²

Goldman Sachs' success in pressuring the US government to allow the expanded use of uncertainty commodities in the 1990s, and to bail out Wall Street in 2008, helped earn the firm the nickname "Government Sachs." Striving to play a similar role in the European and global carbon markets is the International Emissions Trading Association (IETA) – a group of 176 transnational financial, law, energy and manufacturing corporations including Goldman Sachs, Morgan Stanley, Deutsche Bank, Citigroup, Chevron, ConocoPhilips, Shell, Total, Petrobras, Endesa, Mitsubishi, Duke Energy, Standard

¹⁷ Daily Telegraph (London), 29 November 2009.

¹⁸ Steven Pavett, personal communication.

¹⁹ United Nations Risoe Centre, "CDM Pipeline Overview," June 2010, http://cdmpipeline.org/.

²⁰ Caisse des Depots, Carbon Funds in 2010, Carbon Market Report No. 23, May 2010.

²¹ Michelle Chan, 10 Ways to Game the Carbon Markets, Friends of the Earth, San Francisco, May 2010.

²² John Kenneth Galbraith, A Short History of Financial Euphoria, Penguin, New York, 1994, p.5.

Chartered Bank, Vattenfall, American Electric Power, Eskom, Dow Chemical, Poyry AS, General Electric and Baker & McKenzie. By promoting increased offset use, a greater range of types of offset, sweeping standardization, rubber-stamp regulation, banking and borrowing of carbon credits across compliance periods, increased participation of financial intermediaries, and an unregulated over-the-counter market that would encourage speculation, the IETA consistently works to develop the carbon commodity in ways that would make trading in it simultaneously more profitable to the finance sector (some IETA members make money, for example, by inducing price volatility) and more harmful to climatic stability.

Recently the IETA has even proposed that carbon credits be used as collateral and interest payments for "green bonds" issued by Southern countries (with IETA members' paid assistance) to attract private sector investment in low-carbon development under the Copenhagen Accord. Instead of recognizing the climate debt the North owes the South, this proposal would create a new Southern debt to the North, backed by Southern land and Southern public funds, while encouraging the North to continue using fossil fuels. Because the bonds, "fully commoditizable and tradeable," would be sliced up and recombined according to the "risk" assessed by Northern credit ratings agencies, their value would be determined largely in derivatives markets over which few Southern countries – or, for that matter, climate experts – have any influence.

Further Blowbacks

Carbon commodities are also being commensurated with other commodities in ways that go beyond the ordinary sort of commensuration entailed by the construction of exchange-value. First, because carbon and energy costs are highly correlated, and because energy costs are important in agriculture, a large and unscrutinizable over-the-counter trade in notoriously volatile carbon commodities could well make it more difficult for some Southern countries to use futures and options contracts to guarantee the price of needed food imports. In addition, carbon derivatives could soon be mixed with other commodities, including agricultural commodities, in what are called index funds, which speculators trade as a separate entity. The more important carbon commodities become in such funds, the greater the danger that their volatility will influence the prices of food commodities, which have never occupied a dominant role in such funds.

Second, in order to perform explicit or implicit cost-benefit analyses of climate change mitigation, governments and intellectuals frequently compare the expected price of achieving molecular reductions (used as a proxy for climate benefit) via carbon trading with economic indicators such as GDP projections. Because the future effects of climate change are quantifiable neither in terms of probabilities nor in terms of damages, this is to commit the same error that architects of the new uncertainty markets committed when they treated radically uncertain or indeterminate price outcomes as if they were calculable probabilities. As Harvard economist Martin Weitzman puts it, attempting to aggregate economic growth with climate predictions understates the "incredible magnitude of the deep structural uncertainties that are involved in climate-change analysis" and actually heightens systemic hazards by "presenting a cost-benefit estimate for what is inherently a fat-tailed situation with potentially unlimited downside exposure as if it is accurate and objective."

Throughout the long process of creating a climate commodity, both buyers and sellers, in both the governmental and commercial sectors, have strong incentives to ignore the way the climate mitigation

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²³ Larry Lohmann, "Regulatory Challenges for Financial and Carbon Markets", *Carbon & Climate Law Review* 3 (2), 2009, pp.161-71,

http://www.thecornerhouse.org.uk/resource/unregulatability-financial-and-carbon-markets.

goal is steadily undermined. While consumers of fast-food hamburgers, because they want something that tastes good, impose some constraints on how bad hamburgers can be, consumers of carbon commodities tend to have little more interest in the climate change-mitigation powers of the product than the sellers, since they are merely trying to satisfy quantitative regulatory requirements. A case in point is the July 2010 refusal of members of the regulatory panel for Kyoto Protocol carbon offsets from both Japan (a consuming country) and India and China (producing countries) to suspend issuance of highly suspect carbon credits from industrial HFC projects. ²⁴ In a carbon bubble characterized by increasing pressures to commensurate and commodify, and few checks and balances, an asset valuation crisis centered on "subprime carbon" is not unlikely, and could trigger severe economic effects.

Purification or Decommodification?

So far, market players, mainstream environmentalists, governments and journalists have generally assumed that climate stability will someday be an ordinary commodity like rugs, wheat or movies, and that there is nothing "strange" about the carbon market. Unsurprisingly, they have paid attention only to the most superficial manifestations of the contradiction between use-value and exchange-value in the carbon commodity. The effect has been to spark concern but also to give the impression that reform is possible. Thoughtful market actors, for example, acknowledge a conflict between the imperative to maximize carbon credit production and the imperative to maintain some market credibility, but understandably steer clear of raising the possibility that the two can never be reconciled. ²⁶ Many NGOs are happy to criticize specific examples of carbon credits being granted for business-as-usual practices, but decline to acknowledge the reality that the climatic effects of all carbon credits are unverifiable. Similarly, financial journalists often cover sensational carbon market scandals – nation-scale land swindles, ²⁷ billion-dollar tax cheats, ²⁸ electronic theft, double-selling, fraudulent accounting, perverse incentives, bribery, conflicts of interest and so on – but usually only to recycle the dogma that better "regulation" will automatically be able to take care of any dangers that result from a privatized global warming solution, just as regulation is supposed to take care of any problems that arise in the market for whisky or computer games.²⁹The result is a self-perpetuating "carbon market reform industry" which, due to its own ever-renewed failures, need never rest idle.

A recent European scandal illustrates the ideological complexities involved. In 2010, as part of the normal operation of the EU Emissions Trading Scheme, the Hungarian government received some 1.7 million tons of Kyoto Protocol carbon pollution rights called CERs from certain heavily-polluting Hungarian companies. The companies had surrendered the CERs in lieu of emissions reductions that they would otherwise have been obligated to make under EU ETS rules. The CERs in turn had

²⁴ CDM Watch, "UN Under Pressure to Halt Gaming and Abuse of CDM," press release, 30 July 2010, http://www.noe21.org/site/index.php/en/actualites/1-actualites/88-communique-hfc3-le-secretariat-des-nations-unies-pour-les-changements-climatiques-est-mis-sous-pression-pour-cesser-de-jouer-avec-les-credits-carbone-13062010

²⁵ Michelle Chan, Subprime Carbon: Rethinking the World's Largest New Derivatives Market, Friends of the Earth, San Francisco, March 2009.

²⁶ Axel Michaelowa, "Avoiding the Carbon Hangover", Carbon Trading, December 2007.

²⁷ Michael Peel and Fiona Harvey, "Police Probe as Carbon Deal Hit by Bribe Accusation," *Financial Times*, 4 June 2010, http://www.ft.com/cms/s/0/3e9cb276-6f47-11df-9f43-00144feabdc0.html.

²⁸ Michelle Chan, 10 Ways to Game the Carbon Markets, Friends of the Earth, San Francisco, May 2010.

²⁹ Larry Lohmann, "Regulation as Corruption in Carbon Offset Markets," *in* Steffen Bohm and Siddhartha Dabha (eds.), *Upsetting the Offset: The Political Economy of Carbon Trading*, Mayfly Books, London (2010), pp.175-191, http://www.thecornerhouse.org.uk/resource/regulation-corruption-carbon-offset-markets.

³⁰ Michael Szabo and Nina Chestney, "Used Carbon Credit Seller Named, Deals Revealed," Reuters, 14 May 2010; Michael Chan, 10 Ways to Game the Carbon Markets, Friends of the Earth, San Francisco, May 2010.

ultimately come from a diversity of offset projects in the global South, although it is difficult to specify which countries. Once it had received these CERs, the Hungarian government, instead of stamping them "expired" and putting them in the wastebasket, decided on the advice of Deutsche Bank to agree to sell them on, at over \$11 a ton, to a trading company called Hungarian Energy Power, which had set up its website two weeks before. The government justified this move, which in itself was perfectly legal, by promising to cancel someday an "equivalent" number of another kind of pollution rights called AAUs. (Like other Eastern and Central European countries, Hungary had been granted a huge surplus of such AAUs – well beyond what it would need to license its own pollution – during the UN horse-trading that created the Kyoto Protocol. Partly because of their resulting lack of credibility, AAUs are not as easily convertible into European Union Allowances (EUAs), the main EUETS carbon commodity, as are CERs. Hence Hungary had an incentive to transform AAUs into CERs.)

After purchasing a first batch of 800,000 of the used CERs from the Hungarian government, Hungarian Energy Power sold them on to Microdyne, a British trading company incorporated in the offshore tax haven of Cyprus. Microdyne in turn apparently sold them to a trader in Hong Kong as well as Total Global Steel, a London-based metals, energy and derivatives trader, who put them on BlueNext, a Paris-based carbon trading floor associated with the New York Stock Exchange and the French government bank Caisse des Depots. Various other European members of BlueNext then bought the recycled credits at around \$15 a ton, unaware at first that what they were buying had already been used to license pollution in Europe and could not legally be used to license still more pollution under the EU ETS. Profit for the traders for a few days' work appears to have amounted to approximately \$2.6 million.

As the news of bogus products in circulation began to emerge, panicky traders who suspected that they might have had been sold used CERs tried to unload them quickly onto other unwitting buyers. At least 10 BlueNext members wound up in possession of the worthless CERs, and many credits are still unaccounted for. BlueNext and Nordpool (another carbon exchange) suspended trading for a time in March 2010 to try to sort out their procedures amid falling prices and concerns that the CER market could collapse. The IETA, fearful that industrial buyers of carbon credits would become so distrustful of the market that they would lobby governments to curb the lucrative activities of the brokerage and trading sector, offered to help the EU work out ways of making transactions more transparent.

The market quickly recovered amid news that action was being taken, and none of the deeper practical questions concerning climate commodification, liquidity creation and financialization that underlay the scandal were ever addressed or even mentioned by any of the authorities involved. For example, it was never thought necessary to ask whether CERs are in fact climatically "equivalent" to the European industrial emissions that they license. It was never asked whether the pollution rights from the diverse carbon offset projects that made up the pool of 800,000 used commodities that Hungary sold were themselves climatically equivalent to each other, nor even where those carbon projects were located. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether AAUs are climatically equivalent to ERUs. It was never asked whether A

Conclusion

The carbon market now playing a dominant role in international climate policy, like other ecosystem services markets, is often presented as an environmentalist strategy, worthy of being embraced by all who support pollution control, forest conservation, indigenous rights and so on. But a glance at the origins, development and politics of this and other "strange markets" of recent years suggests that it may be more illuminating to treat it as part of the history of commodification, capital accumulation and capitalist crisis than as part of the history of environmentalism.

The carbon market does not signify a "greening of capitalism" or an accounting reform pushed "from outside" on a reluctant business class, but rather a characteristic (if spectacularly ill-conceived) neoliberal initiative to forge new profit opportunities out of contemporary crises, only some of which involve the climate. Understanding its failures requires approaching it as such.