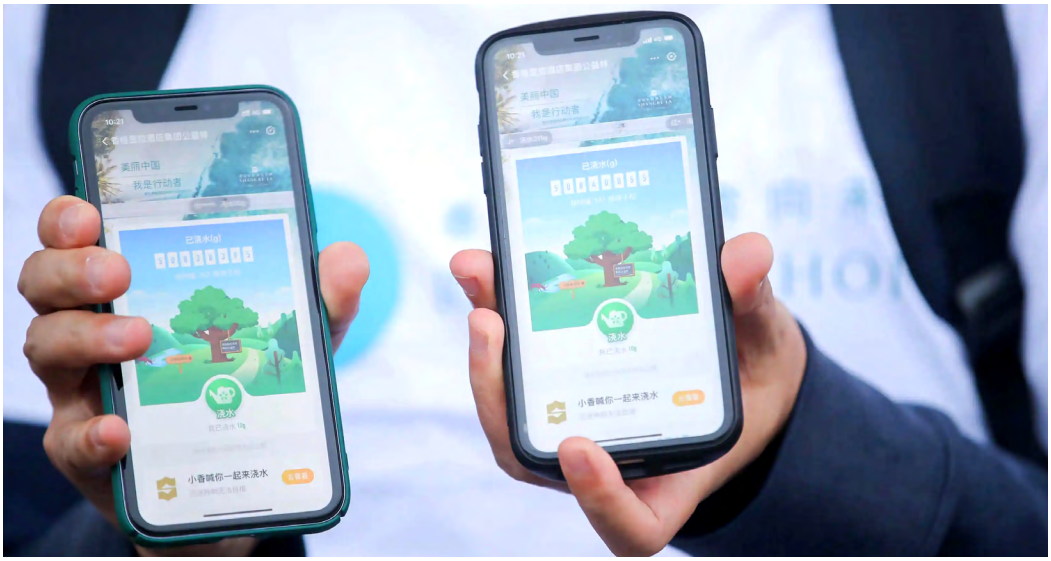

Ant Forest Mobile App. PC: Shangri-la.com.

The Promethean Ant Forest

Alibaba's App as a Financialising Environmental Tool

Giulia DAL MASO

Ant Forest is a Chinese app developed by Alibaba that claims to leverage its technology to solve environmental problems within and beyond China. By financialising and gamifying individuals' carbon footprints with scores and rewards, it allows users to participate in tree planting as they consume online. Through the frame of 'environmentality', this essay discusses how Ant Forest manipulates the environment as a site of financial and biopolitical calculation. In contrast with accounts of Chinese authoritarian environmentalism, the article calls for a wider reckoning with the ongoing process of nature's financialisation, which is both reinforcing and reinforced by forms of sovereign and governmental power.

Ant Forest is a Chinese app that connects users' behaviours to an environmental protection scheme. Developed in 2016 by Ant Group's Alipay—an affiliate of Alibaba's gigantic mobile-payment platform—Ant Forest has gamified carbon footprint tracking, allowing users to participate in tree planting and conservation as they consume online. If you buy sustainable products, choose paperless options, take your bike instead of your car, and correctly manage your waste, you are rewarded with virtual green energy points that go towards planting and growing a real tree. Significantly, Ant Forest matches virtual experience with reality. By collaborating with a Chinese nongovernmental organisation (NGO), the app claims it has managed to plant trees covering

112,000 hectares and protect 12,000 hectares of conservation land in Inner Mongolia in north-western China (UNEP 2019).

Ant Forest promises to leverage digital technologies to solve environmental problems on a large scale. It has promoted its business model beyond China's borders by partnering with e-wallet GCash, which is an extension of Alipay's multiple branches in the Philippines. GCash has replicated Ant Forest under the name GCash Forest, which has further partnered with the Philippines Department of Environment and Natural Resources, the United Nations Development Programme's Biodiversity Finance Initiative, and the Worldwide Fund for Nature (WWF), promising to plant 365,000 seedlings across the country. Like Ant Forest, GCash Forest allows users to plant trees via their mobile phones by earning green energy points.

Precisely because it embodies Prometheanism in the sense of an 'unlimited confidence in the ability of humans and their technologies to overcome environmental problems' (Dryzek 2013: 51), Ant Forest has been heralded by the international community as the best green fintech product to tackle environmental issues (UNFCCC 2019). In 2019, the United Nations bestowed on Ant Forest its highest environmental honour: the Champions of the Earth award. It praised Ant Forest as the best and largest private sector green initiative in China, which not only is able to foster 'massive individual efforts to tackle climate change' but also 'fundamentally [redesigns] how we interact with the planet by leveraging technology' (UNFCCC 2019). Thus, in contrast with globally circulating racialised narratives of a high-tech dystopic and eco-apocalyptic China, Ant Forest seemed to have globally redeemed China as a champion of environmental goals and solutions.

In dialogue with recent debates about the Anthropocene and the role of Western modernity in the development of technological exploitation of nature (Descola 2013; Danowski and de Castro 2017), philosopher Yuk Hui (2016) has engaged in a genealogical exercise that shows how a Chinese historical relationship to technology stems from more diverse premises than a Western Promethean attitude. Perhaps as a provocation, it would be interesting to ask him whether Ant Forest could be an example of a virtuous Chinese approach to developing technology—one that brings 'new meanings and forces to our epoch' (Hui 2016: 318), as the app claims to do.

Furthermore, given that the app claims to embody the Chinese slogan of Ecological Civilisation (生态文明), it theoretically promotes an ideal harmony between humans and nature that taps into Chinese classical texts and Marxist theories of people-focused 'ecocentrism' (生态中心主义)—something to be undertaken by developing new forms of technology and energy that are less environmentally destructive than those in the West (Pan 2006; Hansen et al. 2018). In theory, given that China's economic objectives are less impeded by the vested interests of private capital, there should be greater potential for these kinds of developments (Gare 2012). As noted by Sigrid Schmalzer in this issue of the *Made in China Journal*: '[I]t is hard to find fault with such an inspiring vision.' However, she also mentions that 'if there is a flaw in the paradigm, it is one that the public is often inclined to embrace: the techno-optimistic mentality that humans can solve the twin crises of poverty and ecological destruction'. As I will explain in this essay, providing these solutions is what green finance and the type of environmental disciplining it is producing promise to do.

Rather than a perfect match between technology and environmentalism, Ant Forest emerges as a paradigmatic case to explore the evolution of digital platforms within the new shade of 'green' in which global financial capital has cloaked itself. It thus might be better explored and contextualised from a distance from its 'Chinese-ness' and within the particular role fintech is assuming in the growing and ubiquitous financialisation of capitalism (Bernards 2019; Hendrikse et al. 2018; Pollio and Cirolia 2022). This is not an example of the type of authoritarian environmental intervention with which China is often associated (Li and Shapiro 2020), nor is it a virtuous Chinese technological deployment in harmony with an ecological model of civilisation, but it is a type of global environmental power that operates at the subjective and financial levels.

Specifically, by looking at Ant Forest through the prism of 'environmentality' or 'eco/green governmentality' (see also Dal Maso and Maresca 2021), I underscore how Ant Forest does not embody a monolithic sovereign or governmental power. Rather, it matches and mobilises moral and symbolic ecological scenarios (Dal Maso et al. 2022) that reinforce the ongoing process of financialisation in that it allows distinct financial logics to spill over into people's environmental behaviours and decision-making. In this sense, Ant Forest performs as a governmental tool—a decentralised form of technical governance active at the microlevel, which is nevertheless functional to the legitimacy and ruling capacity of the Chinese Communist Party both within and beyond China's borders (Gruin 2021).

China's 'Ecological Turn' in the Realm of Financialisation

It is striking to see how, after the past 150 years of modernisation, which culminated in unprecedented economic growth largely achieved by burning half the coal consumed in the world (Shapiro 2012), China has a new ambition: to transform itself from the 'factory of the world' into an example of green sustainability. To achieve this, China has chosen financialisation as a key driver to reach its ambitious environmental objectives. The declared aim of the Fourteenth Five-Year Plan (2021–25) is to 'expedite the transition of China's growth model' (NDRC 2022) to one of green development through a powerful nexus with green finance. New guidelines explicitly appealing to the idea of the Ecological Civilisation evaluate the activities of both state-owned enterprises (SOEs) and private actors while engaging in domestic and overseas investments (NDRC 2021).

In line with this development, Ma Jun (2018), Chief Economist at the People's Bank of China and the main proponent of Chinese green finance, has argued that China requires RMB2–4 trillion (US$315–630 billion) in green investments to address its environmental challenges. However, 'given that the government alone can't bear those costs and can only provide a maximum of 15 per cent, the rest must be provided by private capital through the financial system, with the development of the green products' (Ma 2018). What this official declaration conveys is that the Chinese capacity to achieve its environmental objectives depends on the involvement of private capital, which should provide 85 per cent of the costs.

To advance this process, China has already emerged as a carbon-market leader in the global architecture of market-based solutions to the planet's environmental degradation—a trend that has been encouraged since the Kyoto Protocol. Recently, the Chinese Ministry of Ecology and Environment introduced mandatory data-reporting requirements for companies that will be included in its carbon emissions-trading system. By systematising the pricing of Chinese corporations' negative externalities into the web of green metrics, the financialisation of emissions effectively abstracts carbon, and thus the problem of pollution, from its real space and time, inserting it into the space–time compression that finance enacts (Knox-Hayes 2013; MacKenzie 2009).

Ant Forest claims to transpose the logic of carbon markets at the subjective level. The app rewards users' green actions with points that are proportional to the carbon footprint avoided by changing the actions they otherwise would have taken. As a value-making process, it turns users into 'prosumers', blurring the lines between capital and labour—and between consumption and production—and thus redefining social relationships according to new processes of financial extraction (Wang and Tan 2020).

As I have explored elsewhere, in China, this process finds its roots in the final phases of the economic reforms launched by Deng Xiaoping, when the opening of the stock market by the state led to the rise of a multitude of individual Chinese investors, the so-called *sanhu* (散户, literally 'scattered players') gripped by stock fever (股票热) (Dal Maso 2015, 2020; Hertz 1998). This was the result of the powerful alignment of sovereign forces and financial mechanisms in the making of a biopolitical regime in which the adoption of the 'financialisation of everyday life' (Martin 2002) re-engineered post-socialist subjects and

instilled desires driven by financial logic. From dispenser of labour (during Maoism), the state transmuted to dispenser of profits (from Deng's reforms onwards) via financialisation and stock market trading, particularly by 'inviting' individuals to invest in shares of SOEs.

By owning and controlling the capital market, the state has been able not only to use financialisation to exert political control (Petry 2020), but also, by turning people's savings into SOE assets, to convert a huge amount of people's finances into its own (Dal Maso 2020). In parallel, given the increasing grip of the government on big fintech—its convoluted relationship with Alibaba being the striking example—the state has also benefited from the diffusion of fintech to a wider range of the population, capitalising on the conversion of data into profits.

As such, the state has strengthened its position as a major shareholder (Wang 2015)—a shareholder in the 'people'—which actively seeks to make citizens and organisations compliant with the visions and rationales of the country's investment strategy (Loubere and Brehm 2022). Yet, this path has also brought to the fore new contractual obligations with the population.

Given the increasing discontent of ordinary citizens about environmental issues, China's new domestic and global political legitimacy also centres on meeting environmental demands (Lora-Wainwright 2013; Bruckermann 2020). From being simply investors and consumers, people are now being asked to become 'responsible investors' (负责任的投资者) who are socially trustworthy and willing to spend their finances on green products.

The largest tech companies, like Tencent and Alibaba, have developed e-wallets, offering risk-free digital transactions to online consumers. They have effectively gained a form of duopoly for digital payments that has leapfrogged the card-based system and risks exceeding and disintermediating the banking system via the use of QR codes through peer-to-peer transactions (Klein 2020). Alibaba was one of the first companies to initiate a private credit system through its Sesame Credit, along with a handful of other government-sanctioned (but short-lived) tech company social credit pilot projects (Loubere and Brehm 2022). In this scheme, customers acquire score-based data linked to purchases they make within the Alibaba Group ecosystem. High scores mean 'trustworthy' profiles, which translate into rewards from Ant Financial's loans and services.

Ant Forest has rewritten this model through the addition of environmental and gaming features. It offers a way of 'gamifying' the positive externalities of green behaviour, transposing non-game contexts such as everyday conduct and tree planting with game elements, and thus defining the action of a free player in a ruled space (Zeng 2022). The app offers its users access to satellite images taken by remote-sensing cameras in the areas where these trees are successfully planted. Here, users can see positive changes happening; it is a virtual zooming that immerses users in a world in which complications and disruptions are not conceived (Nguyen 2020). As some users told me, these actions make them feel like they have accomplished something and less anxious about climate change. The app also works as an incentive to plant more and more trees, as users try to accumulate scores and exchange them with friends, who can in turn plant and water their trees by donating or collecting green points.

In this format, Ant Forest makes the technology of the app become the technology of the self, moulding its users to act not only consciously but also subconsciously. To a certain extent, gaming compromises their rational decision-making around complex environmental problems. The scores and rewards of the app channel libidinal impulses into the pleasure of responsible green consumption and green lifestyles. In this formula, concern for the environment is appeased by means of 'green consumption'. It thus lightens users' perceptions of the catastrophic impact of climate change, which in turn shields the government from its political responsibility for it. As the literature on environmentality suggests (Luke 1995; Fletcher 2017; Rutherford 2017), Ant Forest adopts a governmental model that seeks to address environmental management and climate change by modifying individual behaviours, thus rendering the environment a site of biopolitical calculation.

A worker waters Mongolian Scots pine at Duguitala Town of Hangjin Banner in Ordos, north China's Inner Mongolia Autonomous Region. PC: Xinhua.

Environmentality and Scalability: Ant Forest in the Philippines

According to Meng Yan, Ant Financial's Global Head of International Partnerships:

> Ant Forest shows that digital technology has an incredible power to mobilize people in support of sustainable development and the fight against climate change. This movement goes beyond borders and is at our fingertips through our mobile devices … We're more than happy to open up our technology and expertise … to make the world a better place. (Sustainable Digital Finance Alliance 2019

The development of the subsidiary GCash Forest in the Philippines stems from this premise. As Prometheus committed to bringing the light of knowledge to humans, Ant Forest lands in a foreign territory as the champion of environmental causes.

Through its technology and expertise, it conveys universal moral conduct beyond borders and channels narratives and practices *en masse* that are in synergy with a global environmental discourse backed by global organisations such as the United Nations and the WWF. Appealing to a de-territorialised, neutral, and culturally homogeneous environmental expertise (Ulloa 2017), Ant Forest forges alliances between market-based financial actors (Lai and Samers 2021) and brings a universally accepted hierarchical order to the production of environmental knowledge (Li 2007; Mitchell 2002). In line with Prometheanism, Ant Forest portrays financial and economic fixes as the solution. The invisible authoritarian expertise of the app overshadows the reality underpinning its function.

In the Philippines, GCash Forest is promoted as an app that will raise a generation of 'green heroes' and as the easiest tool with which to deal with the environmental crisis. Users can become heroes merely by engaging in green behaviours from the comfort of their—admittedly environmentally smart—urban life. As one of the users I interviewed told me, he can now take care of the environment without having to leave the city. At the same time, the app allows him to know more about the natural landscape of his country. Thanks to the app, he can see himself as a subject

of improvement who is more active and knowledgeable about environmental causes. Yet, he seems glad to keep the reality of deforestation at a distance; abstracted from local and power forces, and amenable to technical rectification (Li 2007) only from above.

The app offers a way to protect its users from the complexity of environmental disasters, including the multiple problems that come with afforestation. In this exercise, there is no mention that the Philippines is one of the most severely deforested countries in the tropics, that practices of deforestation and logging trace back to colonial times, that these practices have serious implications for the survival of indigenous people, and that the loss of cultural community is tightly linked to the loss of biodiversity. As reported by an activist working for a local NGO whom I interviewed:

> [T]he problem is that even if they do plant trees, this does not mean that the trees remain standing after they leave. Most of the Philippines' once rich forest is gone and it has been proven that forest recovery through artificial means never coped with the destruction rate.

Philosopher Thi Nguyen explains that the way in which game features overlap with real-life features is at the core of what he describes as 'value capture'. This indicates a simplified encounter with the environment that transforms everything into a levelled and simplified pattern of reward and punishment, expressed through scores and metrics. Like capitalism, games 'reward the relentless and single-minded pursuit of victory' through extremely narrow value systems (Nguyen 2020: 192), omitting complexity and what is worthwhile in the relationship between life and nature. What Ant Forest and GCash Forest convey is a model of financialisation of prosumers that aligns with the financialisation of tree planting, abstracting the real problem of deforestation to something that has no origin in the country's historical social and power relations and is detached from the specificity of the area it claims to rescue.

Far from being a Chinese phenomenon, the deployment of such technology to tame the social and natural realms seems to be part of a world-making capitalist project that points to a new cycle of capital accumulation, coloured green. Yet, undisputedly, the Chinese State is using this to strengthen its political control and its domestic and international legitimacy. Because of the enthusiasm it has provoked in the international community, Ant Forest stands not only as an exception to the global apprehension about oppressive Chinese technology and the common attitude that sees China's association with technology 'projected into anxieties about China, and to an extent vice versa' (Bratton 2021: 54, cited in Franceschini and Loubere 2022: 21), but also as a challenge to the dichotomy of global eco-racialisation that associates China with the perpetuation of eco-apocalyptic events, as though they were detached from the circuits of capital valorisation (Litzinger and Yang 2020).

As Jason Moore states: 'No civilization has been more Promethean than capitalism in its aspirations of domination and management of something usually called nature' (2022: 415). Prometheus sacrificed his life to bring fire to humans. Ant Forest is only one among the multiple tools that capital has employed in its insatiable demands (Marx 1976; De Angelis 2001), sacrificing 'cheap' nature—including human nature (Moore 2015)—under its new green and gamified veil. Yet, by giving rise to new articulations of the real and the virtual, and the human and nonhuman (the latter being both nature and technology), Ant Forest brings risks and opportunities to the production of new subjectivities. By flirting with and zooming in and out of diverse realities, these will hopefully counteract and resist capital's extractive power. ■

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