IS FOOD FORESTRY THE WAY FORWARD?

Diverse economies and convivial conservation in the Cloud Forest Organics food forest in Ecuador.

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Cover picture:
Cloud Forest Organics project site
Source: Vicente Torres

Abstract

Our food system is broken. Deforestation, loss of biodiversity, unequal power relations are only a few of the issues caused by our industrialised and capitalist food system. In response, initiatives, like food forestry projects, are emerging to harmonise food production with nature conservation and local communities. In this research, I will zoom in on one food forestry project, Cloud Forest Organics (CFO) in Baeza, Ecuador, through participant observation and interviews, to analyse how this project is sustained by using two theoretical frameworks: diverse economies as proposed by Koretskaya and Feola (2020) and Büscher and Fletcher's (2019) convivial conservation. Both approaches attempt to find ways to move beyond the capitalist system, diverse economies by revealing the diversity of economic practices outside of capitalism, and convivial conservation by looking for conservation approaches that celebrate the interconnectedness of human and nonhuman nature and decouple 'capital' from nature.

The findings of this research suggest that the CFO project is sustained through a diverse array of economic practices, both capitalist and post-capitalist, and through value creation that is embedded not in capital but in the social, cultural and environmental context of the project. As such, the project opens up spaces of possibility in economic dynamics, spaces that allow us to move beyond the hegemonic capitalist system and into more sustainable ways of food production.

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Introduction

Our food system is broken. Deforestation, climate change, loss of biodiversity, labour exploitation, unequal power relations, and rising food prices are only a few of the issues caused by our industrialised food system (Koretskaya & Feola, 2020; McMichael, 2009). This is facilitated by a global context where large multinational corporations dominate and where innovation is more focused on increasing profit than on diminishing those environmental and societal impacts (IPES-Food, 2016; Weis, 2010). In the food systems, these tensions take the form of conventional capitalist food industries or 'corporate food regimes' of which the main purpose is to maximise output and profit, through increased efficiency, industrialisation and standardisation (DiVito Wilson, 2013; McMichael, 2009). In response, however, more initiatives are emerging that attempt to harmonise food production with nature conservation while also including local communities. Such initiatives are usually alternative forms of agriculture, based on traditional farming methods and/or indigenous knowledge, creating space for nature and for us to conserve and regenerate, and supporting small holder farmers and local production (Goodman et al., 2012; IPES-Food, 2016).

One important type of alternative forms of agriculture is food forestry (FF), which is a sort of agroforestry. Agroforestry is the umbrella term for agriculture systems that deliberately involve trees with crops and/or animals to exploit its sustainability attributes and production benefits (Nair et al., 2021). FF takes this approach a step further by cultivation of food through mimicking the ecosystem of a natural forest (Albrecht & Wiek, 2021a).

A food forest is usually made up of minimal an acre of space, planted with predominantly edible, perennial species in different layers of the forest, and with most of the 'work' carried out by natural cycles. Consequently, food forests need less artificial inputs like chemical fertilizers or pesticides than industrial agriculture or other forms of agroforestry. Since they stimulate biodiversity and natural ecosystems, food forests can be of great use in efforts of conservation and regeneration of nature (Albrecht & Wiek, 2021a, 2021b).

Food forests offer a broad range of services, which can be split between 'food production services', 'social-cultural services', and 'environmental services' (Albrecht & Wiek, 2021a). Some of these services are similar to economic practices of more conventional, industrialised food systems, for example, capital accumulation via food production for markets and (eco)tourism-oriented activities. Nevertheless, all activities are deeply rooted in a strong, interdependent relationship with nature, founded upon (re-)connection between the human and the natural environment.

One example of a food forest is the Cloud Forest Organics (CFO) food forest project in Baeza, Ecuador. This food forest is a pilot project covering a 170-acre site in the upper Amazon. The objective to prioritise wildlife and native edible plant species, and to collaborate *with* nature to counteract deforestation and biodiversity loss, makes it a revolutionary agribusiness project. The non-traditional farming methods used, restorative approach, and ambition to protect endangered species, demonstrate the potential this project has for 'convivial conservation' – a new approach within conservation that centres around the political-economic issues regarding conservation and aims for approaches that go beyond capitalism and the nature/culture dichotomy (Büscher & Fletcher, 2019). Experiences on the project site show that nature is bouncing back and ready to collaborate with humans to produce without destruction (respondent 1, personal communication).

Image 1: Cloud Forest Organics. Source: Cloud Forest Organics, n.d.-b.

Image 2: A picture of the CFO project. Source: Cloud Forest Organics, n.d.-b.

Throughout the study, interviewees have used the terms food forestry and agroforestry interchangeably when talking about the CFO project. However, for this study the CFO project is considered a food forestry project. This is based on the definition provided by Albrecht and Wiek (2021b), as the CFO project is a multistrata space, they are working to have a majority of edible plants and provide forest-like ecosystems services.

Building on the current food forestry literature, I will conduct research on diverse economic practices that take place in and around the CFO food forest project in Ecuador. In that, I will follow J. K. Gibson-Graham in revealing hidden pathways people on the ground are working with and practices that they carry out – so called 'diverse economic practices'; these are pathways that go beyond the conventional, capitalist ways forward (Gibson-Graham, 2002). This will in turn contribute to changing the narrative that a business, one like a food forest, that seems not profitable at first, may in fact be economically valuable. Furthermore, I want to enrich the diverse economies framework by connecting this to the newly-developed idea of convivial conservation – which advocates for conservation practices that go beyond capitalism and beyond the nature/culture dichotomy. This connection is thus based on the mutual belief that we need to look for ways to go beyond the capitalist system, but will also be explored further. As such, by analysing the CFO project through the lenses of both diverse economies and convivial conservation, I will explore the value of and economic diversity in food forestry.

In order to effectively do so, I have developed the following research question:

How do the people of the CFO project in Baeza, Ecuador, sustain the food forest and does this demonstrate economic diversity and/or convivial conservation strategies? If so, how?

This research question is divided into the following two sub-questions:

1) *What diverse economic practices take place in the CFO project?*
2) *Are there convivial conservation elements that can be distinguished in the CFO project and if so, which?*

While research on agroforestry as a whole is quite extensive, the body of research on FF is still meagre, though upcoming in recent years. Previous research on food forests has focused on practical knowledge and social-cultural and ecological/environmental aspects, but as Albrecht & Wiek (2021a) point out, research on the economic viability of food forestry is still lacking. They emphasise the importance of economic sustainability, next to socio-cultural and environmental criteria, for the overall sustainability of food forests. Knowledge about the overall sustainability of FF is crucial for its ability to achieve sustainable transformation in agri-food systems. As such, the societal relevance of this study is derived from enabling potential sustainable transformation in our agri-food systems.

Additionally, this study will contribute to existing literature about FF in the Majority World which is still scarce, and therefore enables a comparative study between FF practices in the Minority and the Majority World. Moreover, exploring the connection between diverse economies and convivial conservation enriches the existing bodies of work since this connection has not been made yet, but could potentially be very interesting and beneficial for both theories. Finally, the link between FF and convivial conservation enriches the still relatively thin body of work of convivial conservation by presenting FF as potential application.

Theoretical framework

Before going deeper in on the research methodology and discussing the findings of this study, I want to elaborate on the two relevant theoretical concepts that were mentioned in the introduction: diverse economies and convivial conservation. I will first expand on Gibson-Graham's diverse economies framework, complemented by the elements proposed by Koretskaya & Feola (2020). Next, I will move on to the recent paradigm of convivial conservation. Finally, this chapter will be closed by an account on the relevance of combining these approaches for this particular study and the benefits that combination has for the literature of these concepts.

Diverse economies

In their analysis of diversity beyond capitalism in food initiatives and alternative food networks, Koretskaya & Feola (2020) build upon the diverse economies approach developed by J. K. Gibson-Graham (e.g., Gibson-Graham, 2002). This approach illustrates the heterogeneity of economic and capitalist practices in food systems. The diverse economies framework is a poststructuralist approach based on the belief that we need to rethink the capitalocentric view of economics. This capitalocentric view of 'the economy' is characterised as a closed system with specific laws of supply and demand and a constant need for competition and economic growth. In that, it overlooks and excludes labour and livelihood activities that are not considered capitalist (McKinnon et al., 2018). Gibson-Graham therefore advocate for a need to include *all* economic activities when analysing socio-economic entities in order to reveal (new) ways forward. That is to say, next to 'conventional' economic practices, they explore all activities by which we produce, exchange and distribute value (in the broader sense of the word), including for example theft, cooperatives, and (informally) caring for children or elderly (Fickey, 2011; Gibson-Graham, 2002; Gibson-Graham & Dombroski, 2020).

In the specific context of agri-food systems, some advocate that these structures are inherently capitalist (McMichael, 2009). However, there is a different body of literature emerging that has observed the presence of diversity, or diverse economies, in agri-food systems, coexisting with the conventional, capitalist ones (Koretskaya & Feola, 2020). This literature builds on Gibson-Graham to produce a framework that reveals the diversity in food systems and therefore renders visible activities that are alternative-capitalist or even non-capitalist. In other words, food systems are complex economic spaces including both capitalist and alternative- or non-capitalist enterprises and organisations carrying out business and activities that can be anywhere on the spectrum from capitalist to non-capitalist.

While this framework reveals the overall diversity of our food system and allows for both capitalist and non-capitalist enterprises to engage in 'non-capitalist' activities and vice versa, the very concept of 'alternative' has increasingly become disputed (Koretskaya & Feola, 2020). Scholars scrutinizing the discourse of alternatives argue that using this term perpetuates a dichotomy between alternative and conventional which assumes that one is good and the other bad. This in turn allows for judgement based on an abstract idea of being 'alternative' or not, instead of on the actual content or components related to sustainability and social impact. In addition, as Holloway et al. (2007) argue, the binary approach of conventional versus alternative renders it difficult, if not impossible, to clearly define 'alternative'. The conceptualisation of 'alternative' does not tell us anything about the specific elements that are regarded as 'alternative' and in this case, what that means in the bigger picture of the food systems. It is therefore important to be critical about what 'alternative' means and how it impacts the social and ecological element of the food systems (DiVito Wilson, 2013; Gibson-Graham, 2020; Holloway et al., 2007).

This tension is visible in the work of Gibson-Graham. Whereas in their earlier work (e.g. Gibson-Graham, 2002) they still use the categories 'capitalist', 'alternative', and 'non-capitalist' to classify the diverse economic practices, later they remove these labels (e.g. Gibson-Graham & Dombroski, 2020). They explain this in one of the footnotes: 'In the current iteration the term 'alternative' has been removed to avoid the common misconception that this framing elaborates an 'alternative economy'' (Gibson-Graham & Dombroski, 2020, p.21). In this, they refer to Healy (2009) who analyses the debate around diverse and alternative economies and points to how Gibson-Graham's work perceives the economy as a space of difference and as such replaces this binary view. Koretskaya and Feola (2020, p.304) build on this to argue that those categories of practices emerge 'from diverse arrangements of elements', and therefore cannot beconsidered 'either capitalist or alternative/non-capitalist. In this research, I adopt their understanding and as such follow a non-binary conception of diversity.

A framework for economic diversification

In their work *The end of capitalism (as we know it): a feminist critique of political economy*, J. K. Gibson-Graham developed the foundation of the diverse economies approach (Gibson-Graham, 1996, in Fickey, 2011). Gibson-Graham write that capitalism is to be understood as a 'hegemonic discourse' rather than an 'all-encompassing entity' and argue that as a result, alternative and non-capitalist practices remain invisible. Activities that don't fit within the dominant capitalist system are then regarded as subordinate or inferior to capitalistic activities and unable to create sustainable long-term livelihoods for people (Duojie, 2022). Concluding

The end of capitalism, they call for an end to defining the whole of the economy by merely capitalism (Gibson-Graham, 1996, in Fickey, 2011). In order to create space for alternative and non-capitalist practices, and thus a possible world outside of capitalism, researchers must 'read for difference' in the economic landscape. In other words, they argue, researchers need to 'actively adopt an open, exploratory stance' (Gibson-Graham, 2020b: 482) that allows for multiple (future) trajectories, rather than feeding into the hegemonic discourse of capitalism (Gibson-Graham, 2020b; Koretskaya & Feola, 2020).

The way to do this is, according to Gibson-Graham (2014), by conducting ethnographic thick description. They derive this from Clifford Geertz's (1973, in Geertz, 2008) assertion that thick description reveals often neglected elements that make up the complexity of our society. These elements, examples of which are nuances, silences in conversations, different codes of meaning and so on, receive its meaning from interpretations of the researcher shaped by social discourse. It is in revealing these elements that thick description is beneficial for diverse economies as it helps rendering the otherwise hidden or neglected pathways to a different (economic) future visible (Gibson-Graham, 2014).

Adding to this methodology, Gibson-Grahams's 'reading for difference' in the economic landscape feeds into their conceptualisation of economic diversity by allowing us to portray and understand 'the full diversity of economic transactions, labour performances and economic organisation that produce social wellbeing' (Duojie, 2022, p.14). Economic diversity is often visualised using an iceberg as a metaphor (e.g. Gibson-Graham, 2002). In this analogy, the tip of the iceberg represents what society usually regards as 'the economy'. These are typical capitalist elements, among which are wage labour, transactions in the commodity markets and enterprises. The part that is submerged, and thus invisible, represent the multifarious activities that people engage in, in order to create sustainable livelihoods and relations (Duojie, 2022; Fickey, 2011). To organise these diverse practices, scholars contributed to Gibson-Graham's body work by developing five categories, or identifiers, which conform to different aspects of 'the economy': enterprise, labour, transactions, property, and finance (Duojie, 2022; Gibson-Graham & Dombroski, 2020).

While Gibson-Graham's body of work is very thorough in identifying diversity in *economic relations*, other scholars argue that this lens is limited. Koretskaya and Feola (2020) therefore present a more comprehensive framework, including the economic relations suggested by Gibson-Graham *and* socio-ecological elements. The framework they propose consists of four categories: economic relations, relation with the state, ontology, and knowledge production. Like the economic relations mentioned above, the other categories can be further divided in more specific elements.

The original framework of Gibson-Graham (in e.g. Gibson-Graham & Dombroski, 2020) divides *economic relations* into five types of economic activity to analyse an inventory of economic practices. Koretskaya & Feola (2020) adopt this as part of their extended framework. First of these elements is enterprise. Enterprise incorporates the organisational context in which production and distribution of profit and surplus take place. Economic diversity comes the type of class process that represent the production relations taking place, like communal, independent, or capitalist. This class process includes the production, appropriation and distribution of wealth and surplus. Secondly, the way in which labour is organised and compensated tells us something about the extent of diversification of the economy. It involves the expenditure of energy that is put in the production and how this is compensated, in monetary or non-monetary terms. Third, transactions connect economic systems and units, which can be individuals, communities and nations. Whereas the capitalocentric view centres around market transactions, from a diversity perspective this element can include a lot more. Examples of other transactions are sharing, allocating, reciprocating and stealing. The fourth economic relation is property. Property is generally understood as a material object that one can own. In this framework, however, the meaning of property is based on the relation between people regarding material *and* immaterial things, and is diversified by looking at who has access to the property, who benefits from it, and how is that regulated. Finally, finance deals with how 'the economy' and economic entities are financialised. While in the global economy, the financial sector has become very powerful and dominant, economic diversity demonstrates that there are many ways in which people interact with finance that are not dependent on market relations, like donation, family lending, bribery or cooperative banks.

Koretskaya and Feola (2020) add three other components to the framework. *Ontology*, is split up into the four components of time, space, human nature, and logic of relation, and forms the foundation for economic and power relations within and beyond capitalist systems. Economic diversity is derived from relational ontological categories. From a capitalocentric perspective, time is predictable, homogenous and linear – and this is used to maximise productivity – and enables ordering in for example stages of societal development. Diversity comes from relational ontology of time, where future and past generations are included and other notions of time that are characterised as 'slow' time, among which are critiquing growth over time, slowing down and following natural or seasonal cycles. Space is in the capitalist modernity abstract and universal, and therefore open for expansion to advance productivity. Moving beyond that notion, Koretskaya and Feola (2020) state that relational notions of space can be observed in that it is socially produced and given meaning to by people. The human nature of people is in capitalist terms understood as rational, self-interested and utility-maximising. Diverse economies opposes this notion and instead argues that human beings are able to

reciprocate and cooperate and to consider the interests of larger groups instead only their own. Finally, logic of relation addresses the power relations and explains that capitalist economies are usually characterised by different structures of domination. Alternatively, in diverse economies, this element emphasises interdependence, re-connection, caring and sharing.

Relation with the state is divided in two categories and is based on the premise that socio-economic entities, like the CFO-project, 'do not function independently from the state' (Koretskaya & Feola, 2020, p. 305). These entities affect forms of governance and regulations by how they engage and participate in the regulatory framework. Diversification can be realised legally but in ways that extend beyond state legislation, like voluntary practices and standards, but also in the form of parallel governance arrangements that have the potential to challenge and destabilise dominant regimes. Additionally, entities seek legitimation from the state and in that way produce relations with the state. Whereas in a capitalist mode, legitimation primarily comes from an entity's contribution to 'the economy', diversity is observed in other modes of political legitimation, like contribution to ecological conservation or social inclusion or by positioning an entity vis-à-vis the state's political project.

Finally, forms of *knowledge production* indicate economic diversity according to Koretskaya and Feola (2020). To explain this, they point to the way knowledge production, circulation and legitimation of knowledge are subject to structures and social relations. From a capitalocentric perspective, scientific knowledge is considered superior over other forms of knowledge, with unidirectional circulation and a centralised production. Diversity in knowledge production emphasises co-production and networked forms of production and this structure rests on a multiplicity of actors.

Koretskaya and Feola (2020) build on and extend the framework of economic diversity provided by Gibson-Graham. Yet, they highlight that this framework is not finished yet and can be further expanded by other potential dimensions of difference and different understandings of capitalism. Including other dimensions of difference, however, is an important step in identifying and revealing diverse practices beyond capitalism. The application of this framework becomes particularly relevant when analysing (potential) livelihood constructions as it opens up 'spaces of possibility'. It is therefore that I will apply this framework (including the economic relations provided by Gibson-Graham) in an attempt to identify economic diversity at the CFO project.

Gathering the multifarious practices in socio-economic entities reveals alternative livelihood strategies and potential steps for sustainable economic transformation, thereby challenging and possibly undermining the hegemonic power of the capitalist discourse (Duojie, 2022). Subsequently, it opens up space for integrating work on the more-than-human nature in

livelihoods and in the economy, and the interdependence that exists between them. In the following part, I will elaborate on a new body of work that emphasises the importance of the integration nature and conservation with livelihoods and the (more-than-capitalist/beyond-capitalist) economy: convivial conservation.

Convivial conservation

The idea of convivial conservation was proposed by Büscher and Fletcher (2019) as a potential fourth pathway to conservation, next to mainstream conservation, Anthropocene, or 'new', conservation and neo-protectionist conservation. Convivial conservation aims for conservation approaches that work beyond capitalism *and* beyond the nature/culture dichotomy. It thereby rejects the idea of fortress conservation – keeping people and nature separate in order to protect nature – as well as the capitalist imperative of capital accumulation and continuous economic growth that is included in new conservation. They argue that actually dealing with the underlying political and institutional issues is needed to take on the conservation challenges that we are facing today, instead of 'just tackling' the symptoms (Büscher & Fletcher, 2019). With their proposal for convivial conservation, they 'explicitly start from a political ecology perspective' that is immersed in a 'critique of capitalist political economy' (Büscher & Fletcher, 2019, p. 286). As such, they insist that addressing the capitalist political economy is imperative to halt the current ecological and environmental crisis.

Convivial conservation believes in a system without a human/nature dichotomy (Büscher & Fletcher, 2019). That is to say, a balanced system where human influence in nature (conservation) produces mutually beneficial outcomes for both humans and the environment and where destructive behaviour is understood to have negative repercussions on the people's livelihoods. Nature needs to be valued in terms different from capital and we need to refrain from economic practices based on overconsumption and exploitation (Massarella et al., 2022). As a second element, Büscher and Fletcher (2019) advocate for a move beyond capitalism in conservation practices. Like diverse economies, they call for an approach that looks beyond the capitalist discourse and opens up space for alternative livelihood strategies and multiple economic trajectories – with a focus on conservation.

In their conceptualisation of convivial conservation, Büscher and Fletcher (2019) propose five key elements: 1) from protected to promoted areas; 2) from saving nature to celebrating human and nonhuman nature; 3) from touristic voyeurism to engaged visitation; 4) from spectacular to everyday environmentalisms; 5) from privatised expert technocracy to common democratic engagement. In this research, I will focus on the first two and the last one, as they are the most relevant in the link with food forestry.

The first key element is about moving away from a separation between human and nature by creating ‘promoted areas’ instead of ‘protected areas’. Rather, they propose, these promoted areas should be spaces where connections between human and nonhuman are celebrated, creating an understanding that nature needs to be promoted ‘for, to and by humans’ – but not in capitalist terms (Büscher & Fletcher, 2019, p. 286). The second key element also emphasises this celebration of human and nonhuman nature and implies that we need a shift from the idea that ‘saving nature’ is only about nonhuman nature. Instead, we need to recognise that humans are a part of a larger entity consisting of nonhuman elements as well. Put differently, human and nonhuman nature should be considered ‘integral elements of an overarching whole’ (Massarella et al., 2022, p. 60). The last key element they discuss deals with democratic engagement and criticises top-down technocratic fixes for conservation. Through democratic engagement and bottom-up approaches, value is created that is embedded in the here and now, instead of derived from economic worth. In this context, decisions regarding nature and conservation should be made based on non-capitalist needs, wants and actions and the embedded value (Büscher & Fletcher, 2020).

These elements of convivial conservation are highly relevant to food forestry. At the first glance, the main connection between convivial conservation and food forestry can be found in the ambition to move beyond the nature/culture dichotomy and thereby celebrating (positive) human influence on nature and harmonizing human and nature instead of protecting one from the other. The study will use the above mentioned elements of convivial conservation to further explore this connection and as such analyse how food forestry fits in the theorisation of convivial conservation.

The connection between the two theories of diverse economies and convivial conservation is one that has not been explored much. However, bringing these conceptualisations together, could potentially be mutually beneficial. In the following section, I will further elaborate on this assumption.

Bringing the theories together

On the surface, the combination of convivial conservation and diverse economies is easy to spot: both frameworks aspire to find ways to move beyond capitalism and both provide the tools to either move beyond the capitalist political economy or to identify the ways socio-economic entities already do. However, there is a more deep-rooted connection to be uncovered that potentially enhances both theoretical frameworks through their interaction. In this section, I will introduce this connection.

Koretskaya and Feola (2020) emphasise that the framework they outline is still unfinished and recognise that different understandings of capitalism and society may identify different and potentially new dimensions of diversity. Even though they have already expanded the original framework for diverse economies of Gibson-Graham by including socio-ecological elements, convivial conservation can help further explore these dimensions. Convivial conservation examines the socio-ecological aspects, of conservation specifically, more extensively and as such may inform the socio-ecological dimensions of Koretskaya and Feola on a deeper level.

Additionally, both theoretical frameworks approach the imperative to move beyond capitalism in a different way. Whereas diverse economies is actively looking for ways in which this move is already happening, through economic diversification and non-capitalist practices and refrains from criticising what *does not* work, convivial conservation is highly critical of the capitalist political economy. While this seems to be a point of incompatibility between the two theories, this can in fact be a key point of complementarity. Originating from an ontological assumption based on performativity – where knowledge is understood have a productive power – diverse economies is criticised about being too optimistic or naïve. Convivial conservation on the other hand, is centred around a critique on the current capitalist system and scrutinises what does not work for conservation, and derives from that what should work.

While diverse economies could benefit from more critical thinking, their thought is more constructive, more focused on what *does* work and how can we use this is our search for sustainable transformations and potentially conservation. As such, diverse economies could enhance the convivial conservation theory by analysing potential solutions or spaces of possibilities that may be overlooked by the critical attitude of convivial conservation. In turn, including convivial conservation thought in the diverse economies framework could be a step in addressing the concerns of critics about the naïveté of diverse economies. It is for these reasons that connecting the theoretical frameworks of diverse economies and convivial conservation could be mutually beneficial.

Methodology

In order to answer the research questions, a qualitative, descriptive case-study research was conducted at the Cloud Forest Organics food forest project in Baeza, Ecuador. In this chapter I will elaborate further on the methods I used to conduct this research.

Research design

This research was designed as a qualitative and descriptive case study and was predominantly conducted in Ecuador. To gain a holistic understanding of the case-study, I went to Ecuador by myself to perform the field research through participatory observation in and around the project-site and by conducting 7 semi-structured interviews with people related to the project. This data is supplemented by literature on diverse economies, food forestry, and convivial conservation and some additional data received about the project through personal communication. This qualitative research design allows for practicing thick description and reading for (economic) difference as Gibson-Graham (2014, 2020) suggest. This helps to fully understand the context with all its chaos and complexity, and as such makes otherwise invisible patterns and nuances apparent.

The choice for ethnographic thick description and reading for difference as methodology is underpinned by the poststructuralist thought as it builds on the belief that there is no one Truth to be uncovered. Rather, there are hegemonic discourses that produce our truth and knowledge and thus our existing reality (Sandland, 1995). Reading for difference as well as thick description helps the researcher co-create the data with the participant and uncover their knowledge and truth. In the context of this study, it provides the researcher with ‘a means to destabilize the fixed identity of capitalism’ while opening the economic field to multifarious practices and diversity (Gibson-Graham, 2004, p. 410).In other words, the study allows for challenging the prevailing capitalist discourse by acknowledging and exploring discourses of economic difference.

In addition, ethnographic thick description contributes to the reliability and validity of this research. By presenting the data and findings in detail, the study allows the reader to ‘transfer information to other settings’ (Creswell, 2013, p. 252) and as such to determine whether the findings are valid in a given context. Furthermore, thick description gives the reader insights in how the findings results from the data and enhances awareness about potential biases and interpretations and thus enhances transparency of the findings. This, in turn, contributes to the researcher’s trustworthiness.

The sub-questions – *what diverse economic practices take place in the CFO food forest?* and *Are there convivial conservation elements that can be distinguished in the CFO project and if so, which?* – are answered on the basis of field notes from participatory observation, data from the food forest, and the semi-structured interviews.

This research seeks to contribute to a doctoral research at Wageningen University on food forestry and diverse economies. While the focus of that research is on FF in the Netherlands, my findings may further a comparative study on food forestry and diverse economies, comparing elements in the Minority and Majority World.

Data collection

Field data for the study was mostly collected during time spend in Ecuador in January and February of 2023. The final two interviews took place virtually after returning to Wageningen, During time in Ecuador, information and data from the participatory observation and from traveling around and familiarizing myself with the country, was gathered the form of field notes, short texts and pictures.

Case-study selection

The case-study was selected based on the pre-requisite that it was a food forestry-project outside of the 'minority world' as that may benefit the doctoral research. In order to find food forestry-projects that meet this condition, I contacted different NGOs and other organisations that have something to do with agroforestry, food forestry, community conservation and/or community economics – mainly found via Google – as well as personal contacts that may have connections in the area. Finally, I encountered the case of the Cloud Forest Organics food forest in Baeza, Ecuador. After gaining some more information about the project, I decided that this was the best project for a case study. The reason for this was their collaboration with an NGO and the community around them as well as their emphasis on nature conservation as that also allowed for the combination with convivial conservation.

Participant observation

In order to gain a full understanding of the case study and its context, I conducted participant observation in and around the CFO project. Unfortunately, the project site was not accessible without a guide and Craig, the project owner, was only in Ecuador once, so I only had one opportunity to visit it. During this visit I took the opportunity to take pictures, ask some

questions, and write down as much information as possible – notes about what it looked like, what people were doing and so on. Additionally, I accompanied the ground manager of the project two times a few days to do some tasks for the project in different places in Ecuador. This allowed me to see what happens behind the scenes and to have a fruitful dialogue and gather a lot of information about the project. Finally, being in Ecuador and being completely immersed in the culture and environment, helps me understand the bigger national and regional context behind the CFO project. This may bring up new questions or connections that may otherwise be overlooked.

Interviews

In addition, in-depth interviews were conducted with people that were involved in the CFO project in different ways. Craig – who was my main contact person– provided the introduction and contact details of people that might be of interest because of their different connections to the project. This was a list of about 14 people and all of them were contacted. Unfortunately, only five them responded or were able to do this interview with me. Below, you can find a table with the interviews I conducted as part of the research (see table 1).

Interview 1 took place after visiting the CFO project site to elaborate on the context of the project and to give me more information on the project that could be used for the rest of the study. Before conducting interviews 2-6, an interview guide was created to make sure that the most important data was gathered and the interviews had some structure (appendix 1). It was important that the interviews felt more like conversations than a one-on-one interview, to create space for interviewees to open up. Interview 7 was based on follow-up questions and ambiguities that occurred while analysing the findings. While five of the interviews were in English, two of the interviewees did not speak English. Therefore, one of the interviews was conducted in Dutch (with some Spanish parts) and the other in Spanish. For the transcripts, I translated these interviews myself, supported by Google Translate.

For some of the data gathered, the ‘member checking’-technique was applied to enhance the validity of this research (Creswell, 2013: 252). Ambiguous data, interpretations and conclusions were in some cases taken back to the participants, after the interviews or after transcribing, and they were asked about the accuracy and credibility of those findings. In other instances, follow-up questions were asked to verify interpretations and conclusions.

Respondent 1	Interview 1: January 17th, 2023; Interview 7: May 8th, 2023; Personal communication	Project owner (Craig).
Respondent 2	Interview 2: February 10th, 2023	Employee of Aliados, working together with the project.
Respondent 3	Interview 3: February 17th, 2023; Participant observation: February 15th-17th, 2023; Personal communication	Project manager of the CFO project.
Respondent 4	Interview 4: February 17th, 2023	Owner of a similar project in Ecuador, has collaborated with CFO (e.g. knowledge and seed exchange).
Respondent 5	Interview 5: February 23rd, 2023	Owner of the ice cream shop that sells and experiments with products from the CFO project.
Respondent 6	Interview 6: March 16th, 2023	Biologist that works for both Aliados and the CFO project.

Table 1: Overview of the respondents.

Data processing

Interviews were recorded and transcribed afterwards. In addition, accompanying every transcript was a block of text about the context of the interview and specific, and potentially important, aspect and characteristics of the interview – for example that someone talked about a certain topic passionately or tone of voice when talking about a particular matter. Notes taken in the field and during the travels were written down quickly on a mobile phone or notebook. These were elaborated upon later and put together in a digital document.

After gathering all data, the transcribed interviews and the fieldnotes were printed and the first round of inductive coding was executed. This was done by reading all the data and writing down summarizing words or short sentences next to the sentences. Subsequently, the resulting codes were collected and categorised in overarching themes. This lead to identification of the final inductive codes. These codes were written down in the codebook together with a short description of the codes and when they apply (appendix 2). Hereafter, the data was coded in Atlas.ti, version 23, according to the codes resulting from the round of coding before. Finally, in the last round of coding, the codes and texts were checked, codes were removed when considered redundant or if needed new codes were added. The complete codebook can be found in the appendix 2.

Data analysis

To answer the first sub-question, *what diverse economic practices take place in the CFO food forest?*, the data and information that mention the outcomes of the project, the activities that

take place, and output and input of the project were considered. This information was analysed based on the previously gathered knowledge on diverse economic practices.

For the second sub-question, *Are there convivial conservation elements that can be distinguished in the CFO project and if so, which?,* data and codes that indicate activities, outcomes and output and input were determined, complemented with mentions of personal beliefs and values, and conservation. The information that followed was analysed according to current knowledge on convivial conservation practices and strategies.

Positionality

My position as western European female, who is fairly new to fieldwork and had just set foot in Ecuador, and Latin America, for the first time, may have influenced my research and findings. For instance, considering that I was in a foreign country and I had to be careful, that I was unfamiliar with the natural environment of the region of the project, and that the project site was difficult to access, it was only possible for me to visit the project site once. Additionally, especially in the beginning, certain conversations in Spanish remained somewhat superficial. Fortunately most of my interviewees spoke English and the shared passion for nature, conservation and shaping a better future for the world, created space for open conversations.

While my enthusiasm for the topics of food forestry and nature conservation may have sparked honest and open conversations with my interviewees – which in turn allow me to gain interesting and useful information for the study – this may have also created a bias on how I interpreted the information I have gathered. The interest in food forestry and nature conservation stems from a personal belief that we have to find ways to feed the people while taking better care of this planet and preserving nature. In finding these ways, I may have become overly optimistic in finding value of certain projects and missing aspects that may be unsustainable, for society or nature. I did keep this in mind while analysing the data, to be aware of any potential bias I may have during the study.

Data management, anonymity, and consent

To reach out to the interviewees, contact details were gathered and informed consent was asked to use the information they provided in this research. Personal information is excluded from the report where possible. This includes transcripts of interviews, names and roles of people working/volunteering for CFO and names and roles of people within Aliados (the NGO that collaborates with CFO). Additionally, there was some more sensitive information that Craig provided that was ‘off the record’. I only used this information to understand the bigger picture

of the food forest and did not write this down nor used it as information specifically in this study. The rest of the data that was used in this study is not considered sensitive and using this data will not have negative consequences for the interviewees nor the project. Finally, I will store the transcripts of the interviews and the gathered fieldnotes safely for ten years as for reasons concerning reproduction and validity of the study.

Findings

The participant observation and interviews attempt to illustrate the big picture of the CFO project. This chapter first zooms out to present the context the CFO project is embedded in, both global and regional, and the corresponding challenges that it faces today. It then zooms in to the project to show the components and features that make up the food forest and the considerations that have shaped the project. Following this, the chapter discusses the diverse economic practices that are performed for the project, as well as the elements of convivial conservation that can be identified.

Context

As noted in the introduction of this study, our food system is broken. Industrialised agriculture and food production seem to cause many of the environmental and social problems that we have to face today (Weis, 2010). Deforestation, soil health, climate change, but also power imbalances and exploitation of people are only a few of the concerns we have to deal with. When I asked about the role of capitalism in this, one interviewee laughed and responded: 'Capitalism, it's the rat race, it's everything, it makes people want to keep going and going and going. Without it, we would crash, we would die, we wouldn't know what to do' (interview 2, February 10th, 2023).

Interviewees agree with many scholars (e.g. Weis, 2010) that these issues are sustained by capitalism and that it is actually a political question rather than anything else. One of the interviewees critically noted that society has gotten accustomed to a situation where almost everything has a monetary value (respondent 2). Another pointed out that it seems as though many solutions are centred around tweaks and changes that create extra value in business terms and problems are often solved with technological fixes and paper-shuffling (respondent 1). As such, one interviewee addressed the need to 'think about how to be collaborative' (interview 6, March 16th, 2023) for the course of our future, and how we overlook the collective benefit that we could have by focusing on the individual benefit.

But there is also a positive note: change is in the air. While they emphasise that the transition is going slow, interviewees see and feel shifts within the political debate and in the global environment:

> I'm also positive seeing that the climate agenda seems to be coming one of greater and greater importance internationally. How that's executed, I don't know, but I feel that somewhere, somehow the work that we're doing [the CFO project] is going to find a good fit. With agencies, individuals, foundations, governments, any who are interested in climate

> issues. I believe that the climate issues will continue to evolve to include carbon quality, will continue to evolve to include biodiversity, and if it doesn't happen immediately, I'm patient (interview 7, May 8th, 2023).

In addition, Craig notices that these tensions are also picked up by the younger generations. It is the youth who is connecting to the project and all the project communicates via documentaries, activities and talks, and who care about the issues in 'a very visceral way, in a very tangible way' (Interview 7, May 8th, 2023). For a project like the CFO food forest, these developments are very encouraging.

National and regional context

With the CFO food forest being located in Ecuador, on the border of the Amazon and in an area in between three big national parks, certain characteristics of this context influence the considerations and decisions that shape the project.

The political environment of Ecuador creates challenges for both nature and the goals of the CFO project. First of all, corruption is a problem in Ecuador that has a significant impact on the environment, in particular on deforestation activities that take place (Transparency International, n.d., respondents 1 and 3). For example, while the national parks are supposed to be 'protected areas' – as many of the signs state that can be found while driving through Ecuador ('áreas protegidas') – Craig has experienced that the government neglects these areas or turns a blind eye when farmers or cattle rangers cut down trees and take over the space (respondent 1). Secondly, the Ecuadorian Ministry of Agriculture fails to address the use of chemical fertilizers and pesticides for agricultural purpose (respondent 2). While the Ecuadorian government has regulations in place for highly toxic pesticides, these are not reflected in the reality of (agricultural) usage (Sherwood & Paredes, 2014). Moreover, while failing to consider environmental repercussions, the Ecuadorian government has since the 1970s encouraged Ecuadorians to stay in rural places and work the land instead of migrating to urban regions as part of an economic development policy (Valenzuela et al., 2007; respondent 2). Craig says about this:

> and as such it was encouraged to work the lands in these areas […] Fast forward and the cloud forests of the world are being wiped out. In the specific area where you are doing your investigation here, in Ecuador, there is a lot of pressure on the cloud forests (interview 1, January 17th, 2023).

At the same time, nature appears to be crucial for the tourism industry in Ecuador. Everywhere you look, you are being bombarded with tourist agencies offering trips to the Amazon, hikes around the national parks and mountains, climbing the top of volcanoes, cycling tours to

Images 3 & 4: nature-oriented tourism activities in Mindo, Ecuador; on the left a small natural pool for people to bathe and on the right a (not recently-used) slide to the bottom of the waterfall.

waterfalls and more. Some of the interviewees suggested that the region of the CFO project also shows a lot of potential for nature tourism and/or ecotourism (respondent 2 and 6). They compare the region to Mindo, another cloud forest region in Ecuador. Based on visits, experiences and the (amount of) advertisement regarding nature-oriented tourism in Mindo, it can be said that the tourism industry in Mindo seems to be massive. This was acknowledged by one of my interviewees, who lives there (respondent 4). In the pictures on the left, you see one of the many places in Mindo where you can swim and bathe in waterfalls after hiking through the cloud forest.

The region around the CFO food forest project is, for this study, delineated by the area between the three national parks. As you can see in image 5, these are: *Parque. Nacional Antisana*, *Parque Nacional Cayambe-Coca*, and *Parque Nacional Sumaco Napo-Galeras*. It is located in the transition between the Sierra – the highlands of the Andes – and the Oriente, which mainly consists of the Amazon rainforest and the area is characterised by a high deforestation rate and a strong cattle ranger-culture. While nature tourism could be a promising opportunity in this region, given the rich biodiversity and astonishing landscapes, deforestation, landslides and other forms of environmental degradation lower the natural value the region potentially has (respondents 3 and 6).

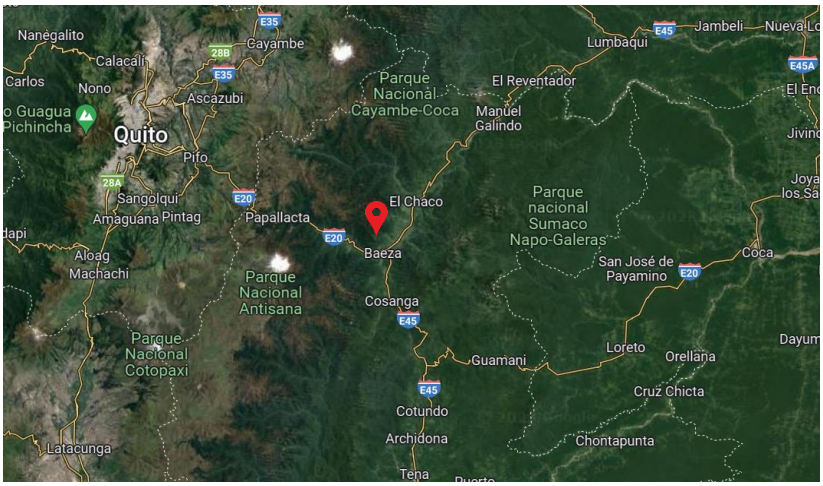

Image 5: Region of the food forest, the red drop marks the location of the CFO project. Source: Google Maps, n.d. [screenshot, red drop added].

Deforestation is a significant issue in this area. As one of my notes showed when I was driving around the area with the ground manager of the project:

> We drive through Baeza and before us we a hilly landscape with clearly visible deforested parts [see image 6]. ‘People should not do this’, says my company with a sorrowful glance on his face. […] He continues telling me that it is not good for the government as they are

> working on the infrastructure and building roads, and because of landslides caused by deforestation, these roads are damaged or even destroyed. In turn, this results in annoyance among the communities because the roads are poor.
>
> '"perdidas" [losses] for everyone', he adds sighingly (fieldnotes, February 15th, 2023, translated).

Image 6: deforested hills around Baeza visible from the car.

In the pictures on the right and below (image 6 and 7) you can see an example of what the region looks like. The green patches merely consisting of grasses used to be vibrant, biodiverse forest areas but are now used as space where the cattle can graze. It was difficult to capture the cows in the pictures, as they are relatively small, but everywhere, the green patches were inhabited by cows. The ground manager I accompanied, furthermore told me that he has seen the change in the past few years – the landscape of the region is more and more changing. He continues to explain that the cattle rangers here invade natural spaces that have not been (officially) claimed yet or are parts of national parks, cut down the trees and plant grasses so they can leave their cattle there to graze. As such, deforestation is used by cattle rangers to claim parts of the land (respondent 3).

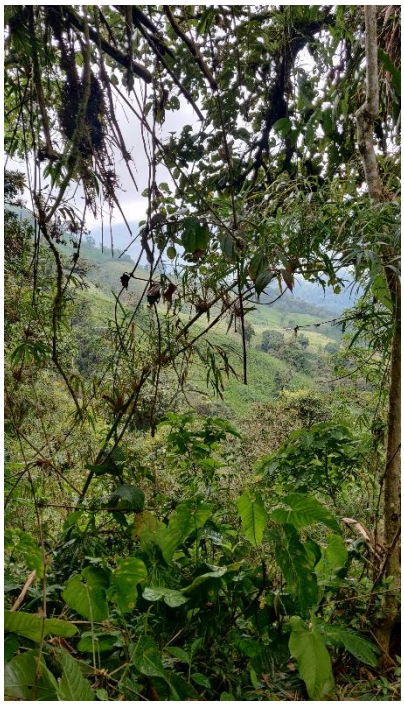

Image 7: deforested hills at the land of the 'neighbour', visible through the trees and plants at the CFO project site.

In the Baeza region, the cattle ranching culture is important. As one of my interviewees (respondent 2), one who has been working closely with the communities, noted:

> [Cattle ranching is] like a huge part of the culture there. I never knew that was a thing, but they could love their cattle so much […] They like identify in their hearts and their souls as cattle ranchers, that's their culture and their life (interview 2, February 10th, 2023).

This cattle ranching ensures a certain financial stability, according to the interviewee (respondent 2). Another interviewee working with people in the region similarly states that even though these cattle ranchers are not advancing, this is easy, they know what to do, how to do it and where their next pay check is going to come from (respondent 6).

During the fieldwork with the ground manager, we visited a friend of his who owns a permaculture farm in Ecuador. He told me that while others show interest in his permaculture practices, they often don't have a safety net to take the risk nor are able to put in the investment. It is therefore that transitioning into different, more sustainable livelihoods – like focusing on food forestry or agroforestry – is difficult.

An NGO working in this region is Los Aliados. Los Aliados, or Aliados, is an Ecuadorian non-profit with the overall mission to work on conservation through incubating sustainable farmer enterprises (Aliados, n.d., respondent 2). For them, this means producing ways of profit-making for farmers, often from indigenous communities specifically, that are sustainably managing and controlling forests. This executed on the basis of types of work: on the farm level on regenerative agriculture, within the entities as business enterprise, on conservation, and by directly linking the smallholders to new and responsible markets. Aliados has been collaborating with the CFO project from early stages of the project onwards in different ways (respondents 2 and 6). In the following section, I will zoom in on the characteristics of and practices taking place at the CFO project.

Cloud Forest Organics

The ambition of the CFO project has always been reforestation and conservation, as can be derived from Craig's description of the project:

> Within this context, there is a guy who buys a cattle farm and decides to reforest this cattle farm. In doing so, he discovers that there is some native plants that have potential as foods. Yet, there is not even a food culture around them […] the idea of this particular agroforestry model is not to introduce plants but to only grow plants that are native to the forest, that are important for the flora and development of the fauna, and at the same time try to find some alternative foods that […] were actually consumed a long time ago but that had been forgotten (interview 1, January 17th, 2023).

The collaboration with Aliados has encouraged Craig and other stakeholders of the project to explore how their project can serve the community around it, and potentially in the long run society in general.

The project site is about 170 acres and lies between roughly 1500 and 3000 meters above sea level. It has a research centre that doubles as a lodge for people to stay. The project was found by one person, Craig, the project owner who visits it about once every month or every two months, and it is maintained by a project manager who visits it twice or three times a month and two men who live there from Monday to Friday to maintain, safeguard, pass on information and other day-to-day tasks. Sometimes they hire extra hands if needed and they work together

with Aliados and researchers/scientists to gain more insights in specific parts of the project (Cloud Forest Organics, n.d.-a; respondents 1 and 6). The people working at the CFO project are further referred to as ‘stakeholders’ of the project.

Image 8: Planning the day at the project site with Craig, his employees and the ground manager.

The way to the project site leads you through a small pathway surrounded by all forms of green. Fieldnotes and pictures from the day I spent there, paint a picture:

> To reach the project site, we had to walk up almost 1500 meter in altitude. It felt and looked like a scene from a jungle movie: there was green everywhere you looked, plants, trees, and the most beautiful flowers. One of the employees of the project guided us while cutting down some of the greens that were overgrowing the path. We had to cross small rivers and climb up a bit, but the astonishing nature made it worth it (fieldnotes, January 17th, 2023, see also the images below).

While some parts of the project site were still natural forest when the area was bought, other parts were deforested and overgrown with grasses planted by cattle rangers (see for example image 13) (respondent 1). The stakeholders of the project put in a lot of work to reforest and regenerate the soil, using solely native species, some of which were food producing. Craig explains to me that the main food

Images 9, 10 and 11: several pictures taken at the CFO project site. On the left: the walk up to the project site. In the middle: the walk through the project site. On the right: a picture of Craig posing proudly before his project.

Image 12: Craig proudly presenting chachafruto. Source: (Cloud Forest Organics, n.d.-b).

producing species of this project are *porotón* (Erythrina edulis), a tree producing beans (chachafruto, see image 12) that are fairly unknown; *nogal* (Juglans neotropica), an Andean walnut threatened by habitat loss; and *lúcuma* (Pouteria lucuma), a tree producing a very sweet fruit. These and other planted trees and plants counteract the invading grasses in a natural way and that it works is visible at the project site, as one of my interviewees points out (respondent 3). Next to reforestation, the project site creates habitats for (endangered) animals that live in the region, like the Andean bear and the Andean eagle (respondent 6).

Image 13: high, overgrowing grasses on the project site.

Its collaboration with Aliados has guided the project to further include the regional community in its aim. Craig initially contacted Aliados because he needed an organisation to partner with him so that he could get the funds that he secured for his project, as he was a single person and not a business nor a non-profit. However, since then, the collaboration has become mutually beneficial (respondents 1 and 2). The project site itself and the food forestry strategy that is implemented there allows Aliados to experiment. In this way, they gather knowledge about sustainable farming and food forestry practices in that area specifically, which they can then use for the regional rural community by supporting them in transitioning to these more sustainable farming methods. Additionally, the project's efforts to experiment with produce from the food forest (developing ice cream, chips, energy bars and so on, respondent 3 and see for example images 15 and 16) and to present these products to other parts of Ecuador, and maybe later on parts outside of Ecuador, generates markets for those specific crops, making the transition easier for farmers. The project benefits from the collaboration because of funds and other donations that they raise with Aliados. Furthermore, they have created connections between the project and other actors,

Image 14: early stages of the plant nursery. Source: (Cloud Forest Organics, n.d.-b).

both regional and national, like the community or a school in El Chaco, that serve the project in different ways and bring in both local and expert knowledge that can be beneficial for the project (respondents 1, 2, and 3).

Images 15 and 16: examples of food trials. Upper picture is of chachafruto chips, bottom picture of vegan chachafruto icecream. Source (Cloud Forest Organics, n.d.-b).

Next to the earlier mentioned regional and global challenges the project faces, there are some project specific concerns that have to be dealt with, as Craig told me after the visit to the project site. The food forestry strategy implemented in this project is one that puts conservation and nature above economic value. Along with the fact that measuring the impact is still difficult in this early stage, the project has come to be a very inefficient business model that does not attract impacts investors. Since the trees are not mature yet and the product markets are still very small, the main income of the project is via donations and fundraising. The efforts to open up markets for the produce and other 'cloud forest products' show potential, but this is also a very costly process because of the bureaucracy and testing that comes with creating new products, and subsidies for sustainable products are often difficult to get because of very specific rules and regulations (respondents 1 and 2).

However, even though many challenges come their way and they have difficulty envisioning the future of the project, the people of the CFO food forest remain positive. Since I spoke to Craig in January, they have built stronger relationships with the community, connected with other organisations and businesses that can be beneficial for them, experimented more with produce and products, managed to buy out a cattle ranger that was deforesting parts of the national park behind them, started reforesting those areas and more (respondent 1). In the following section, I will go deeper into the diverse economic practices that take place in this context of the project.

Diversification of economic practices

The different practices and outcomes of the CFO project were observed and studied through the lens of the diverse economies approach (Gibson-Graham, 2002) and the complementary

framework for recognizing diversity beyond capitalism in socioecological entities presented by Koretskaya and Feola (2020). Following these frameworks, these findings are presented in four categories: economic relations, ontological assumptions, relation to the state, and knowledge.

Economic relations

Gibson-Graham & Dombroski (2020) distinguish five types of economic activity through which an inventory of economic practices can be analysed. These are enterprise, labour, transactions, property and finance. Enterprise incorporates the organisational context in which production and profit making/distribution take place. While the CFO project is officially a business, their main objective is not to make profit or maximise production at the expense of others or the environment. Its strategy is instead focused on environmental recuperation. To date, the profit that is generated, is given back to nature in the form of sustainable investments for the project, reforestation or other ecological improvements, rather than filling the pockets of the stakeholders or owner. They do want to increase the profit that is generated from the project, but this is mainly to deepen or expand the (positive) impact they have.

Secondly, the way in which labour is organised and compensated tells us something about the extent of diversification of the economy. While the work of the main employees of the project is considered wage labour and they are paid as such, there is also some voluntary work happening in and around the project, for example in their collaboration with Aliados: volunteers at a fair that was organised in the community to present the cloud forest products (personal communication with Craig). In addition, they give out seasonal contracts or hire people when they need some extra hands during busy moments and temporarily hire scientists or experts if they need specific information about certain elements (respondents 1 and 3). Extra effort also goes into experimenting with the produce of the project, which executed as is unpaid labour. For example, the collaboration with the ice cream shop in Quito, Delizium, has resulted in extra labour by testing and experimenting with different products and flavours from the project (respondents 1 and 6, personal communication).

Transactions connect economic systems. While the mainstream capitalist economic entities are primarily concerned with market transactions, economic diversification illustrates that even more transactions take place outside of the market. This is similarly visible in the case study: though the CFO project certainly engages with market transactions to sell their products, the collaboration with Aliados seems to be more reciprocal: effort for effort. Stakeholders of the CFO project maintain the forest, including the experiment areas that are also used by Aliados, and help build knowledge that Aliados can use. Simultaneously, Aliados helps them with

among others securing funds and creating potentially valuable connections with other actors (respondents 1 and 2). The CFO project also buys up produce (chachafruto, lucuma, nogal etc.) from the local community to use in their experiments and to sell to other that want to produce food with it, since the trees on the project site are not mature enough to produce sufficiently, yet (respondents 1 and 3). Considering that there is not a competitive market for these products yet and the people of the community just 'happen to have' these products in their backyard, this can be deemed a kind of 'localised trading system' or maybe an 'informal market' (respondents 1 and 3).

Property in this economic context is diversified by looking at who has access to the property, who benefits from it, and how is that regulated. The property of the CFO project is privately owned by Craig and he, together with his employees, can decide who is allowed to access it. The closing off of the project site is partly due to it being difficult or even impossible to access without a guide and due to experiences with invaders on the project site engaging in deforestation (respondents 1 and 3, personal communication). Both the stakeholders of the project and Aliados benefit from the property by the aforementioned knowledge building and experience they gather from being there. Being located next to a state-owned national park (Cayambe-Coca), the project site is an 'open access' property for animals, plants, water, seeds, soil and other natural elements that move across the landscape.

The final category of economic activity is finance. The CFO project is considered financially diversified since finance is predominantly ensured through private donations. For the donors, there is not a monetary or material return, just a sense of purpose or doing 'the right thing' with your money. With the CFO project, they generate some income by selling products, but this mainly covers the costs of production and experimenting, and if there is profit, this is reinvested in the project (respondent 1 and 3, personal communication). Craig is considering 'selling' parts of his land or potentially neighbouring land (which he would then take over from the farmers, if possible) to interested people or organisations. These are plots of land that he will reforest, maintain and harvest, but the 'owners' can receive a part of the produce or other CFO products (respondent 1, personal communication). Both of these options are non-market ways of financing. Finally, in collaboration with Aliados, they sometimes put effort in to secure funds from organisations or governments by undertaking certain actions (respondent 2).

Ontological assumptions

The ontological assumptions form the foundation for economic and power relations within and beyond capitalist systems and as such indicate diversity. Koretskaya and Feola (2020) divide this category into four components of time, space, human nature, and logic of relation.

Diversity in the project's ontological assumption of time stems from the project's practice of respecting seasonal cycles, without attempting to manipulate time – time in the sense of for example time needed for soil to recover. This is further enhanced by recognizing the time that is needed for the trees and plants to recuperate the forest, without rushing it. For example, the project has planted the plants and trees in order to deal with the overgrowing and invading in a natural way, but this will take more time than removing the grasses in unnatural ways like with chemicals or cutting them (respondents 1 and 3, personal communication). In addition, rather than exploring how to suit maximisation of economic productivity by planting quick cash crops and influencing productivity artificially, the project embraces the natural, seasonal ecosystem of the area and plant species that may mature slower but are less harmful or are even regenerative for that particular environment.

Regarding the element of space, it is important to note that the project is strongly embedded in its ecological context, rather than seeking to alter it for production optimisation. And while they want to expand the geographical target area, it is built upon the desire to further reforest the area instead of upscaling production. Moreover, the logic that space is shaped by social relations and meanings in this context of diversity is noticeable in the human/non-human relations that work collaboratively to produce the space and add value to it (respondent 1, personal communication).

Instead of understanding human beings as economically calculating, profit maximising, and/or rational, Koretskaya and Feola (2020) consider relational notions of human nature that centre the ability of humans to 'reciprocate and cooperate, to create rather than just to profit, as well as to consider interests of larger societal groups rather than just self-interest' (p. 306). Craigs motivation behind the CFO project has always been to serve nature's interests before own the interests of the project. When he mentioned his potential options for the future, these options were always centred around finding ways in which nature would have room to thrive and not ways to maximise production, profit or utility (respondent 1). Additionally, when I asked some of the interviewees why they decided to be part of the project, one responded:

> If I dedicate myself to conservation, I know that I am not going to get rich, I will always live on a salary, but that is not my goal. […] I would do it for free, but I have to earn a salary. It is neither for economic benefit nor for personal benefit that I contribute as a human to a solution, so that the animals and nature have an opportunity. That is my profit, having contributed to something with ideas, with effort, with work, to caring for/conserving nature and giving the animals some peace of mind (interview 6, March 3rd 2023, translated).

Finally, diversity is recognised in what Koretskaya and Feola (2020) named 'logic of relation' as ontological element. This category addresses the power relations at play in socio-economic

entities. The CFO project embodies these alternative logics of relations in their strategy, which are centred around working together with nature by mimicking and using the existing ecosystems and diminishing the human impact as much as possible – also when harvesting the produce (respondents 1 and 3). This is different from usual capitalist practices where there is an imperative to exercise domination over nature and the environment, by controlling and manipulating it, and as such be able to influence productivity.

Relation with the state

Diversity is further derived from the relation of the entity with respect to the state and local governments. For the first category diversity comes from how entities engage with and participate in regulation. The CFO project works within the lines of government regulation regarding food safety and property rights (respondent 1). However, the project also engages in other ways with regulation, in ways that go beyond state legislation. For instance, when a cattle ranger illegally – but known by the local government – invaded and deforested the national park behind the project site (Cayambe-Coca), and as such 'claiming' state-owned land, the project owner went in and bought him out and is now voluntarily reforesting that area. Bypassing the government this way illustrates diversification of practices in relation to the state (respondents 1, 3, and 6).

Another example is that in the days I joined Craig to the project site, he had a meeting with the potential new mayor of the area. They were positive that this man would be chosen as the new mayor and Craig found it important to meet with him before in person and tell him about the project and his plans for the future. This personal connection and 'goodwill' among the local government may positively impact the project in certain situations. These are practices that indirectly and directly influence the position of the project vis-a-vis the state and local government, while moving beyond specific rules and regulations.

Political legitimation of capitalist enterprises usually comes from economic services or their contribution to 'the economy'. In the case of the CFO project, legitimation is primarily derived from their contribution to ecological conservation and the part it plays in the transition to more sustainable practices for the community around them. To go even further, the project contributes to broader societal wellbeing and a strong sense of purpose for the people involved in the project (personal communication). By seeking to find ways to create sustainable livelihoods and assisting in sustainable transition of the local community, the CFO project contributes to society in a way that supports the governmental practices.

Knowledge

The difference between knowledge produced for a more capitalist entity or for diverse economic entities is largely based on the purpose of the knowledge production and whether there is a social hierarchy in the knowledge produced. Knowledge production is a very important part of the CFO project (respondents 1, 2 and 3, personal communication). It contributes to understanding of food forestry practices and insight and data on the regional environment and the flora and fauna that exist there (and might be at risk of being endangered). The production of knowledge is not aimed at maximising productivity through controlling and shaping the environment. The knowledge that is produced here, in turn, may contribute to valuable research about sustainable transformations within or outside capitalist modes. For example at the project site, they experiment with different kinds of (native) food producing plant and tree species and gather knowledge on what works there, how it grows, how much it produces. This knowledge is, with the help of Aliados, translated into useful information for the local community and advise on turning (parts) of their land into productive forest (respondents 1, 2 and 3, personal communication).

Another objective of knowledge production at the CFO project is for the benefit of conservation and environmental knowledge. At this moment, they are working on an inventory of the plant and tree species that exist at the project site. This inventory will potentially provide crucial information about endangered species – like how much there still exists, or maybe even information about species that were written off as extinct (respondents 1 and 3). Similarly so, they also make an inventory of the animals that enter the project site (from the national park) or live there, via wildlife cameras and encounters (respondents 1, 3, and 6). This is important information for the preservation of endangered animals like the white spectacle bear (personal communication). They also show videoclips of the animals that the cameras encounter on their Instagram for the rest of the world to see (Cloud Forest Organics, n.d.-c). Of course, there is an element of generating profit or money from the knowledge produced, but that is based on a potential increase of donations as a result of sharing their efforts of conservation (respondents 1 and 3).

By observing nature and the environment and working together with the community, knowledge is produced in a more horizontal way instead of vertical or hierarchical: knowledge co-produced with the community, with nature, with the flora and fauna that are there in the area. Furthermore, traditional knowledge is considered to be at least as valuable as ‘scientifically proven’ knowledge and personal experience is also valued as knowledge. This is visible in multiple comments of interviewees about things that may not have been proven yet, but is experienced by them. For example, the fact that nature ‘is bouncing back’, and that some plants that are considered to be at great risk of extinction, or already written off as extinct,

are emerging on the project site (respondents 1, 3 and 6 personal communication). The connection with traditional knowledge comes from the collaboration with Aliados. Aliados works closely together with indigenous communities and as such serves as mediator exchanging knowledge between entities, like knowledge about how to harvest without harming nature (personal communication).

Lastly, I would consider much of the knowledge produced at the project site to be a common good. The boundaries of knowledge ownership are blurred and the knowledge produced at the project site is shared with the community in order to support them in transitioning into more sustainable practices. Aliados facilitates this knowledge sharing by organising 'farmer field schools' in the community of people around the project and by connecting local knowledge producers with each other. Additionally, knowledge is disseminated via fairs, documentaries, talks and other activities. A few weeks ago, they organised a fair at the Unidad Educativa El Chaco (the school they often collaborate with) to show what they are doing to the local farmers, parents of schoolchildren and the youth themselves. Visitors could try hummus made of chachafruto and other products of the cloud forest (respondent 1). Visitors could be anyone, but the focus of the fair was on the local community of the region around the CFO project. Additionally, they produced a documentary called *Dipsas Speaks* that shows the human-wildlife conflict at the project site and the bordering Cayambe-Coca National Park where the animal habitats are threatened. This documentary has been shown to people all over the world and is awarded with several prizes, among which *Best Environmental Film* at The Hague International Film Festival (Ecoflix, n.d.; personal communication).

With this framework, it becomes clear that there is a lot of diverse economic activity taking place at the CFO project. However, it is also important to note that it is not black and white like that, not either capitalist or not. There are also enough ways in which this project still engages and still must engage with the capitalist political economy. After this examination of the economic diversity of the CFO project, I will now analyse the CFO project through the lens of convivial conservation.

Connecting convivial conservation

The previously expressed expectation in the theoretical framework that food forestry is relevant for convivial conservation literature can be illustrated by this case study. Conservation and preserving the rich biodiversity in the area are imperative to the CFO project (respondent 1). But, instead of locking it up and 'protecting it from humans', the project moves away from the nature/culture dichotomy and celebrates the positive influence humans can have on nature. In this case, positive human influence comes in the form of reforestation, regeneration of the soil

by planting certain species, restoring habitats of wildlife and fighting overgrowing grasses by planting trees and plants. Additionally, as established in the previous section, this project demonstrates a move beyond capitalism – not entirely, but it engages in ways and practices that move beyond the capitalist system.

Albeit five key elements are proposed in the convivial conservation literature, only three will be discussed in relation to the research because of their relevance to the case study. These are *from protected to promoted areas*, where promotion of nature 'for, to and by humans' is aimed for; *from saving nature to celebrating human and nonhuman nature*, advocating that we need to emphasise that human and nonhuman nature are both integrated and interconnected elements of a whole; and *from privatised expert technocracy to common democratic engagement*, implying the need for a more democratic and bottom-up management of nature, negating the thought of nature as capital (Büscher & Fletcher, 2019; 2020).

Promoting and celebrating nature

The first two elements of convivial conservation Büscher and Fletcher (2019) introduce, overlap significantly. Both elements – 'from protected to promoted areas' and 'from saving nature to celebrating human and nonhuman nature' – are about a need for change in the relationships between human and nonhuman nature. This shift is characterised by the building of 'long-lasting, engaging and open-ended relationships with nonhumans and ecologies' (p. 286) and a recognition that both humans and nonhumans are part of a larger whole. As such, we move away from a relation based on exploitation or productivity in order to save and celebrate human and nonhuman nature (Büscher & Fletcher, 2020).

In the way Büscher and Fletcher (2019) envision promoted conservation areas, it is important that people are considered welcome visitors. For the CFO project, this is more difficult: while people are welcome at the project site, they need to be guided there and it is not accessible for everyone, given that you need to hike and climb up for almost two hours to reach the lodge (respondents 1 and 5). However, a lot is going on there, with, by and for people, like the production of different foods that is brought to people – e.g. ice cream in Quito, or a hummus from chachafruto that is presented at a fair with people from the community (respondents 1, 3 and 5). Therefore, I consider the project site to be a 'promoted area', where the value of nature is promoted via food forestry practices and products.

The project furthermore embodies the notion that saving nature is not solely about 'nonhuman nature'. Rather, human and nonhuman nature are both components, integrated and interconnected, of a 'whole'. Stakeholders of the project have shown me the intrinsic and

strong connection they feel with nature, caused and/or strengthened by their work for the project. As one interviewee indicated: 'It is different over there [at the project site] ... What you feel is different. That is important to me, not just money or economic value' (Interview 5, February 23rd, 2023, translated). There is this realisation that we are part of something bigger, that it is not just human beings against the rest – or saving the rest – but human beings *with* the rest, and it is therefore that we need to take care of our planet (respondents 1, 5 and 6).

This feeling of interconnectedness is further made visible by the choices made by the stakeholders, the choices that celebrate and promote human and nonhuman connections and that verify that the Western construction of 'human nature' – the competitive, rational and self-interested *homo economicus* – is in fact perverse and false (personal communication). For instance, while there are many ways to maximise productivity of the CFO project in both the short and long run, by planting cash crops or species that already have a lucrative market, Craig has decided to put nature first and economic gain and productivity last in line. He chooses species that are native to the area to not alter the ecosystem and selects the ones that help regenerate the soil. Another example is that Aliados strives to create an ecological corridor between the national parks and the CFO project forms the outset of this, a learning opportunity and a potential way of convincing others in the community to transition part of their land. Such an ecological corridor will increase the (feeling of) interconnectedness between human beings and the 'nonhuman' nature as the boundaries between the two become more and more blurry (respondent 2).

Democratic engagement and embedded value

While the project is officially private property owned by Craig, a bottom-up approach and democratic engagement are important characteristics of the project. The collaboration with Aliados demonstrates that. Via Aliados, the project is connected to the community in the region around the project site and potentially to other similar projects and communities. This creates opportunities for democratic engagement and horizontal exchange of ideas and knowledge, locally, and restrains top-down or technocratic influence. Additionally, integrating broader social, cultural and environmental contexts is needed for conservation, for decoupling the 'capital' from nature. As one of my interviewees, who has quite some work experience in the Ecuadorian conservation context and now works for both Aliados and the CFO project, explains:

> Doing conservation has to do with solving the problems of the local people, because if the economic problems are not solved or the local people are not supported, they will continue cutting down. And no matter what is done, how the forests are protected, nothing will

> suffice, because they are going to cut down the trees as a synonym of poverty; destruction is synonymous with poverty. […] It does not have to be, but that is what happens now (interview 6, March 3rd, 2023, translated).

Value, according to the convivial conservation literature, should be determined locally and embedded in the here and now, not appreciated by (future) economic worth. Decisions about nature and conservation should be grounded and taken in terms of that value and 'non-capitalist needs, wants and actions' (Büscher & Fletcher, 2020, p. 174). The food forestry practices of the CFO project embody this by indeed focusing on the non-capitalist 'needs, wants and actions' of nature, as interpreted by the stakeholders. All decisions made, from the trees planted and the way produce is harvested to findings ways to diversify revenue in order to reinvest in the project, are made to serve nature and increase the embedded value of the landscape.

One of their primary aims is to restore the animal habitats that have been destructed by deforestation and cattle grazing (respondents 1 and 6). They are replanting the trees, the plants that originally grew there and as such create shelters, food, and a living space for the animals. In this process of restauration they let nature speak for itself. It is like one of my respondents said: 'you have to be able to observe yourself as well as observe nature and observe interactions. "Where am I doing good and where am I doing harm here", and then nature shows you that' (interview 4, February 17th, 2023). A more concrete example of the project here is that the employees noticed that the Andean bear really likes motilón, a wild berry that naturally grows on the project site, because they found a lot of seeds of the motilón eaten by bears (respondent 5). Observations like this one, shape the CFO project, which plants to include, which tree species to plant and where, and so on (respondent 1). Additionally, in the process of reforestation, there has been a lot of natural emerging growth of plants. The project leaves these plants grow naturally without interference. Later, they consider the edible potential of these plants (respondent 1). This way, they attempt to listen to what nature wants and needs and base their actions upon it.

As this section demonstrates, the CFO project site is a place that celebrates the intersection of human and nonhuman nature. As such, it a place that includes a move beyond the nature/culture dichotomy. One can observe this interconnectedness of human and nature in the considerations that shape the project and the way nature is valued as well as an integration between the broader social, cultural and environmental context. Which in turn contributes to the process of decoupling 'capital' from nature.

Discussion

Overall, the Cloud Forest Organics project has proven to be a very interesting project, with the core imperative to contribute to conservation in one of the richest and most biodiverse spaces in the world, while at the same time seeking to work within and beyond capitalism. However, it is challenging for the project to exist in this capitalist system while not being considered 'a good business prospect'. Though the work they do for nature and conservation at the project site is incredible, Craig rightly asked: 'how important is that and who is it important to?' (interview 1, January 17th, 2023).

In capitalist terms, this project is not really important, it can be considered irrelevant even. However, this study attempts to look beyond capitalism to uncover the embedded value of the CFO project in the here and now, and its value for potentially shaping economic futures. In this chapter, I will firstly discuss the key findings of this study and elaborate on how they fit into the theory, structured by the research questions I introduced at the beginning of this report. I will then move on to the implications of this research for the broader theoretical framework and its limitations. Finally, I will mention recommendations for potential future research on this subject.

Economic diversity in the CFO project

In order to answer the main research question of this study, I divided the question into two sub-questions that deal with the main theoretical concepts of this research. The first sub-question examines the economic diversity of the CFO project and asks: *What diverse economic practices take place in the CFO project?*

Since the original framework for economic diversity, as proposed by Gibson-Graham, consisted solely of economic relations, a lot of the seemingly diverse economic practices do not fit within these frames. It is for that reason that Koretskaya and Feola (2020) proposed to add other categories to the framework: ontological elements, relation with the state, and knowledge. In the category consisting of economic relations, I found that in order for this entity to exist in the current capitalist political economy, there are practices needed that can be labelled 'capitalist', like officially being registered as a business entity or use of wage labour. Looking beyond that demonstrated that there was indeed economic diversification. Economic diversity was evident in that even though they were a business, their main objective was not profit maximisation, as well as in the reciprocal relationship with Aliados, and the non-market ways in which this project is financed.

Regarding the ontological components, there is a strong diversification from capitalist aspects. These are, broadly speaking: adopting timelines that align with seasonal and natural cycles,

embeddedness of the project in the ecological context and human/nonhuman relationships, illustrating a different kind of 'human nature' than one centred around competition and rationality, and working collaboratively with nature instead of trying to dominate it. The overarching explanation for most of the elements is the nature of the project, as this project does not seek to alter the ecosystem or parts of it for the sole purpose of maximising productivity.

Likewise, knowledge production at the project does not necessarily aim to maximise profit or productivity. At the CFO project, important is to understand food forestry practices and the natural ecosystems at a deeper level and aims to use the insights that result for recommendations about sustainable transformations or valuable research that further studies sustainable transitions and practices. The knowledge that is collected is both co-produced with the community and with nature, and does not have strict ownership but is open to be shared with actors who want to learn from it.

The relationship with the state is primarily based on engagement with the rules and regulations provided by the state and local authority, albeit not completely capitalist in nature. Within legislation the project seeks to diversify by interfering with the state-owned national park for reforestation purposes and by building a personal connection within the local government so as to bring about 'good will'. Additionally, political legitimation does not come from their contribution to 'the economy' but from their ecological services and their contribution to ecological conservation in the area.

What has become apparent after studying the bigger picture of the CFO project, is that one cannot state that this entity – and I expect that to be the case for more entities – is completely beyond capitalism. There is for example still a need to make profit, wage labour and engagement with capitalist market transactions. But the question that pops up here asks: is that desirable? As Koretskaya & Feola (2020) illustrate, following the literature of diverse economies, entities do not have to entirely 'move beyond capitalism' in order to reveal the 'spaces of possibility' in economic dynamics and as such in order to be valuable for future sustainability transformations. Indeed, moving beyond the capitalocentric thinking does not mean excluding capitalism as a whole. Following the diverse economies approach, it means that capitalism becomes one option out of many.

Another observation is the recognition for environmental services that results from applying the extended diverse economies framework proposed by Koretskaya and Feola (2020). Whereas the original framework is highly focused on economic activities, even though these may exist outside of the capitalist order, and as such overlooks the environmental services, the extended framework includes conservation practices and other nature centred services.

Looking at the findings of this case study, comparing the findings regarding the economic relations (the original framework) with the ones that constitute the extended framework, it can be said that the latter produces a much more complete picture of the ways in which an entity engages in diverse (economic) practices – including environmental services.

What I miss from the theory is where the added value for the environment fits in. With this, I mean the value that is produced through actions taking place at in this case the CFO project site, that contribute to preservation and restoration of nature – e.g. saving species from extinction, reforestation and recuperation without the objective to maximise profit or productivity, rebuilding animal habitats – or are ultimately valuable for us as human beings, but without direct, immediate outcomes. For instance, preserving the cloud forest has a significant effect on the water circulation in that area, and subsequently on the water availability in Quito, as the project site is located close to the main water reserves of Quito. Other examples are the landslides that reforestation prevents, or the more general notion that continuous deforestation will have disastrous effects on our planet, so performing reforestation will always have a positive effect on future generations. It could be interesting to dive deeper in the nature valuation literature and potentially Lacanian thinking to be able to contribute on a more fundamental level to the framework.

Another addition to the framework could be addressing human needs and desires and their interaction with capitalism and beyond capitalism. A sense of purpose and pride for what they do and experience in their work, was sensible throughout the interviews, conversations and experiences I had. Interviewees emphasised how proud they were to be part of something like this and how happy they were to actually make a contribution to our world and our nature (respondents 1, 3, 4, 5, and 6). One of the interviewees expressed this sense of purpose beautifully:

> The added value is tremendous. For me, really, the main value is outside of monetary terms. It's for personal sort of development, your own connection to nature, the satisfaction that you're kind of playing a part within nature just like every other animal and every other plant […] It's really gratifying, it's personal gratification and it's spiritual gratification as well, that you see that you're forming part of life itself (interview 4, February 17th, 2023).

While Koretskaya and Feola (2020) did mention this sense of purpose and categorised it under relation with the state, political legitimation, I feel that that does not do justice to this element. It overlooks human needs and desires that can diverse, made up of capitalist and non-capitalist elements. It would be interesting to look into the literature on ideology critique and capitalist versus post-capitalist desires to include these human needs and desires in the framework of Koretskaya and Feola.

Convivial conservation at the CFO project

The second sub-question included the lens of convivial conservation in this research, as it asked: *Are there any convivial conservation strategies implemented in the CFO project and if so, how?*. From the theory, it already became clear that, from the five elements Büscher and Fletcher (2019) propose, three are relevant for this research. The relevance of these elements is derived from the connection they emphasise between human and nonhumans, as well as their focus on embedded value.

The first and second elements, 'from protected to promoted areas' and 'from saving nature to celebrating human and nonhuman nature', seem to be overlapping in that they express a need for change in the relationships between human and nonhuman nature. For the first element, they explain 'promoted' areas as 'encouraging places where people are considered welcome visitors', contrasting 'protected areas', where nature is protected from people. Since there are likely more areas in the world, like the CFO project site, areas that can be characterised as promoted, but are difficult to access by visitors, I argue that this element should also be interpreted as a place that promotes nature *for* people, even though they cannot physically access it. In this sense, promotion happens through products that are produced by or come from the area, like the Cloud Forest products that they make, or through showing the area in a different way via for example social media or videos that capture the beauty of it. In addition, I would be cautious about inviting everyone in convivial conservation areas, as both flora and fauna may be disturbed or negatively impacted by a visiting crowd.

The second element highlights the interconnection and integration between human and nonhuman nature, and advocates to see both components as part of a bigger whole. I think that this is a really important argument they make. By calling that we need to 'save nature', we imply that nature should be saved from us, humans. In this, we lose the connection between human and nonhuman nature and as such motivation to 'save nature', or to change our behaviour, comes from external motivation and rationality. Indeed, it is the internal motivation and the realisation that we are part of something bigger that will show us *why* we need to change our behaviour, and the urgency of it. In the context of this research, it will show cattle rangers in the community why they should stop deforestation and reforest the areas instead, helping to create habitats for the animals, to make the ecological corridor happen and so on. As such, it shows them how to collaborate with nature instead of against it.

While for the final element, from privatised expert technocracy to common democratic engagement, I agree with their call for the reassessment of nature '-as-commons' or '-in-context', and their emphasis on democratic engagement and a bottom-up approach, I think that some extent of 'expert knowledge', or knowledge with respect to science and technology

is essential to help recuperate and regenerate nature. Sometimes, as a result of years of research, gathering knowledge and experience, experts knowledge can advise in certain practices and processes. There is for instance existing expert knowledge on how to shape a food forest in a way that serves regeneration, what species are regenerative of nature and what species might harm certain environments. In the rich, but vulnerable biosphere of the Amazonian cloud forest, it is important to be careful with what species one introduces (respondent 6). It is for that reason that Craig wants to work only with native tree and plant species. Yet, he needed scientific knowledge to discover what species are native to the area and which have the potential to regenerate the soil (respondent 1).

Having said that, I also think that indigenous or local knowledge, especially when operationalising 'value', is critical for conservation. As such, I believe that (scientific) data gathered on how to recuperate nature after ages of destruction and deforestation, should always be guided by local and indigenous knowledge and democratic engagement – but scientific data should also be included.

Food forestry could potentially be a way to execute or practice convivial conservation. The move beyond the nature/culture dichotomy is strongly present in food forestry practices. indeed, food forestry practices show that human influence can be actually beneficial for nature and conservation, when executed appropriately. It provides a chance for nature to restore and regenerate, to bounce back from eras of destruction (respondent 1, personal communication).

Considering that convivial conservation is a new approach within the conservation debate, some elements are fairly abstract and as such open for interpretation in different ways. However, their attempt to deal with the underlying political and institutional issues that impact conservation practices, is one that I feel is crucial for the future of conservation, and as such the future of the human and nonhuman nature.

Theoretical integration

The diverse economies framework and the convivial conservation approach strengthen each other in their aims to move beyond capitalism and for convivial conservation beyond the nature/culture dichotomy. Both theories explicitly seek to move beyond capitalism and as such revealing alternative livelihood strategies that can potentially be used in sustainable economic transformation and promotion of convivial conservation. However, as the findings also suggest, we can ask ourselves whether entirely moving beyond capitalism is what we need to aspire in order to bring about sustainable transformation? Is it not enough to show that there

are opportunities and possibilities beyond capitalism that challenge the hegemonic character of capitalism and instead makes capitalist practices as only a few options out of many others?

The CFO project shows that while this entity engages in multiple practices that indicate diversity and move beyond capitalism, it cannot be claimed that this project has completely moved outside of the capitalist system. There are practices/ways in which they need to engage in capitalist practices in order to engage with the societal context, e.g. by following state legislation about food safety and paying the employees that work full time on the project. The critical stance of convivial conservation regarding the capitalist political economy can potentially limit the lens through which they look at alternative livelihood practices, as it may overlook the spaces of possibility that are not 'entirely capitalist'. The diverse economies framework can as such contribute to convivial conservation literature by uncovering these spaces and revealing new ways to sustainable transformation and conservation.

In examining the diverse economic practices at CFO project through the framework proposed by Koretskaya and Feola (2020), it became evident that – like Koretskaya and Feola themselves also write – this framework is still unfinished. What was missed in the framework was where and how the added value for the environment fits in. That is to say, how the value produced through actions executed for or within an entity that benefits nature, and society indirectly, is included in the framework. By adding the socio-ecological elements to the original framework, Koretskaya and Feola already take a step in the right direction, but this can be further expanded by included this added value for nature. Convivial conservation extensively discusses the socio-ecological aspects of conservation approaches, including this element of value. It could therefore deepen the socio-ecological elements that are identified by the framework proposed by Koretskaya and Feola, and contribute in the inclusion of value.

Limitations

In this research, there were some limitations to be observed that may have affected the study. First, one crucial part of uncovering the diverse economic practices and convivial conservation elements was understanding the complete picture of the case study. This was attempted through interviews and participant observation, but the number of respondents was small. Almost half of the people I reached out to either did not respond at all, or stopped responding when I tried to set up a meeting or interview. It is therefore that the picture is slightly limited in terms of information I received from respondents. Additionally, since it is not possible to reach the project site without a guide, and Craig was only in the country once during the two months I spend there, I could only visit the project site once. Luckily, there were other ways in which I could engage in participant observation.

As evident in my findings, there are some gaps in the theoretical framework proposed by Koretskaya and Feola for identifying diverse economic practices. It was suggested that the theory missed elements indicating practices that added value for the environment as well as elements addressing needs and desires of humans involved in the entities. While some of my findings suggest the existence of these gaps, meaning that these were in fact analysed to a certain extent, some potentially interesting practices taking place may have been overlooked because of these gaps.

Finally, the owner of CFO project being American with a light skin colour and currently living in El Salvador presents some issues with the convivial conservation theory. This is because one important feature of convivial conservation is that it is inspired by decolonial, youth and indigenous movements. The project could thus be criticised as an act land grabbing by a 'outsider', and a way exercise (neo-)colonial power. As such, this creates friction with the convivial conservation approach. However, by engaging in the local community in respectful ways and taking the locals into account when strategizing and planning the project, he seeks to counteract neo-colonial tensions that may exist.

Recommendations

This research was conducted when the project was roughly four years old. Since it takes the primary food producing trees between 7 and 15 years to mature, and they are still executing reforestation plans, the project will be subject to a lot of change in the coming years. I can imagine that it would be interesting to return to the project in a couple of years and see how it is shaped then and what has changed since this study. I would especially be curious to see the engagement of the project in diverse economic practices and if this move 'beyond' is still apparent when the food producing features of the project are at its highest potential.

Additionally, I would recommend to further explore how convivial conservation, or potentially other literature can contribute to the diverse economies framework to include value produced for nature and human needs and desires.

Concluding remarks

This study looked at the economic diversity and convivial conservation elements that can be identified in the case study of the Cloud Forest Organics food forestry project in Baeza, Ecuador. By zooming in on the regional context and the project itself, I attempted to paint an elaborate picture of the project through thick description. The project was found with the aim to restore a part of the Andean Amazon cloud forest after deforestation by cattle rangers by planting (and letting grow) native tree and plant species, while simultaneously focusing on productive species and thus creating a kind of food forest. In collaboration with other parties, they use parts of the forest to experiment and gain insights that can be translated into sustainable rural development practices for the region.

In order to show value beyond capitalist economies, I followed Gibson-Graham in reading for economic difference and used the diverse economies framework they introduced, complemented with the components that Koretskaya and Feola have later added, to explore economic diversity in this particular project. In this study, I found that while the project is involved in practices that can be considered capitalist, it also engages in economic diversity. Following this, I have argued that moving beyond capitalism does not mean excluding capitalism, or capitalist practices, as a whole, since engaging in economic diversity already reveals potential spaces of possibility in economic dynamics, making capitalism one option out of many. In addition, the study has illustrated that even though the extension of the original framework for diverse economies by Koretskaya and Feola to include socio-ecological elements provides a more comprehensive picture of the diverse economic practices of an entity, there are still some elements missing that should be included in future versions of the framework: value produced for nature and human needs and desires.

The second part of this research dealt with convivial conservation and has demonstrated that the case study, and food forestry in general, provides ways to move conservation approaches beyond the nature/culture dichotomy by celebrating the positive influence that humans can have on nature and vice versa. This creates an interconnectedness between human and nonhuman nature and as such will improve conservation practices. The case study has also demonstrated the importance of integrating social, cultural and environmental contexts in the determining the embedded value of nature, a value that is decoupled from ‘capital’.

Returning to the main question of this research:

How do the people of the CFO project in Baeza, Ecuador, sustain the food forest and does this demonstrate economic diversity and/or convivial conservation strategies? If so, how?

The CFO project is sustained through a diverse array of economic practices, both capitalist and post-capitalist, and through value creation that is embedded not in capital but in the social, cultural and environmental context of the project. The interconnectedness between the human and the nonhuman is celebrated through conservation practices that include humans instead of protecting nature from human presence and the diverse economic practices reveal how projects like this open up spaces of possibility in economic dynamics, and as such move beyond the hegemonic capitalist system. Hopefully, current and future agri-food systems look at projects like Cloud Forest Organics, at the economic diversity and convivial conservation practices taking in place, and find ways to sustainable transformation and as such, contribute to repairing our food system.

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Appendix 1: Interview guide

Pt 1: me and my research context

Welcome…

So, I'll tell you first little bit about me and my research, and then then I have some questions prepared for this interview. I'm studying the Cloud Forest Organics food forest project in Baeza and I'm looking at the diverse economic practices of the cloud forest and potential for convivial conservation, that are the two elements of my research. It's for my master thesis in international development studies in Wageningen in the Netherlands. My name is Dewi, I am 25 years old, Dutch, and this is my first time in Latin America. It has been an experience but I love it. I think that's information about me, if you have any questions about me ask them, they're always welcome.

First of all, is it okay if I record this?

Considering data management and anonymity, everything that I use for my thesis will be anonymous. I'm the only one that knows the personal information of the interviewees, and my supervisors have access to it if needed. All the data is stored in my personal drive that has a password. And for the interview itself, please just see me as someone without any prior knowledge. I would like to know everything that there is, just to get the complete picture. And that's actually why I'm in Ecuador, traveling around, because I want to understand the context as well and get to know the country. If there are ever any questions that you don't want to answer, let me know and then we just skip it, that's all right. And if you don't know the answer, that is also fine.

Pt 2: Role and motivations

This part is all for understanding the interviewee's role in relation to the Cloud Forest Organics food forests.

1) How would you describe your role in the Cloud Forest Organics project?
    a. Try to describe in a way that someone who does not know anything about the project understands
2) How would you describe the project to someone who does not know anything about food forestry?
3) Could you describe a typical day in/trip to the food forest?
4) How did you come across the project?
    a. Did you know Craig beforehand?
    b. When? What part of the project (from the start or later)

5) In your own words: what have you done for the project?
    a. Positive, negative, or neutral
6) Why did you decide to be part of the project?
    a. motivations
    b. What does it yield for you personally?
    c. Does it (the project) pay you to do the work you do for it?
    d. Is it a livable income?
    e. Is it a 'normal' wage?
    f. Volunteering?
7) Do you have work/activities next to working for the project?
8) (Los Aliados)
    a. What is it exactly?
    b. What does Los Aliados do for the project?
    c. What does the project yield/provide for los Aliados?
    d. What is your role within los Aliados?
    e. How did that link you to the project?

Pt 3. Context of the Cloud Forest Organics food forest

This part is about getting to know the food forest: what do they produce, how is it sustainable or not, other activities that take place.

9) What does the food forest produce?
    a. In terms of fruit? Vegetables? Legumes? Other produce?
    b. Is this produce actually for sales?
    c. What other uses are there?
    d. Do people actually use these products?
    e. Services?
        i. Food production
        ii. Social cultural
        iii. Environmental
10) What is done with the produce of the food forest?
    a. Sold?
    b. Giving away for free?
    c. To eat when you are there?
11) What other activities take place in the food forest?
    a. Visits?
    b. Educational?
12) What activities take place outside the food forest but that are related to the project?
    a. Production with the produce?
13) What is done to generate money for the food forest?
    a. Where does the money come from?
    b. Linking it to the earlier mentioned activities… do they yield money? Or what else do they yield? (knowledge, volunteers, spreading the name of the brand or the practices)
14) How does the food forest create added value?
    a. Interaction with other people
    b. Exchange knowledge
    c. Services

    d. labour
15) About the activities that do not generate money specifically… why do you think they are valuable?
    a. For the existence of the food forest?
    b. For society/the world?
16) Would you argue that this food forest is viable as a business?
    a. Why?
    b. If not, why not? And what do you think is needed to make livable earnings out of it?
17) (Los Aliados)
    a. What kind of support is there from los Aliados for the food forest?
        i. Financial, knowledge, labour
    b. How are activities that take place in the food forest related to los Aliados?

Pt 4. Convivial conservation and food forestry

In this part, I would like to hear more about the interviewee's opinion on food forestry in general (as a solution and as a practice) and concepts related to convivial conservation.

18) In your own terms, how would you call this way of producing food?
19) Do you think that this is a good way of producing food? Of agriculture? Why or why not?
    a. Looking at the future of our food system?
20) How do you feel about the combination of agriculture and caring for nature, nature conservation?
    a. Is this something that has a future?
    b. Potentially: what is needed to make for this?
21) How would you describe industrial agriculture?
    a. How do you feel about it? Positive, negative?
22) What is the influence of capitalism on our food system?
    a. How to deal with it?
    b. What are alternatives?
        i. degrowth
23) What is the influence of capitalism on conservation practices?
    a. Do you think that capital accumulation is needed in order to preserve/safe nature?
24) Do you think that there should be a distinction between the human world and the natural world?
    a. Protect nature from humans?
    b. Or can humans have a positive influence on nature as well?
25) What is needed to stop deforestation and other destructive behaviour towards nature?
26) Do you think that this project is a good way of preserving nature? Why or why not?

Pt. 5 closing

1) Is there something else you want to tell me about the food forest project?
    a. That we did not touch upon?
2) Is there anything that we discussed today should be extra highlighted?

Appendix 2: Codebook

Context		*This is about the context of the project on different levels.*
	Global	*The global context in which the project exists.*
	Ecuadorian	*The national context in which the project exists - including information about Aliados.*
	Regional	*This is about the region in Ecuador where the project is part of: the area between the national parks (Antisana, Cayambe-Coca, Sumaco Napo-Galeras).*
	Project	*This has to do witht the project itself, all characteristics, people and other aspects about the project that don't fit in the other categories.*

Outcomes/Output		*This group is about the different outcomes and output that result from the project, sometimes indirectly*
	Community	*Outcomes that affect the people around the project (the community in the region)*
	Environmental	*Outcomes that affect the environment and the flora and fauna at and around the project site*
	Collaborations and connections	*Collaborations and connections that are formed through or because of the project*
	Products and produce	*Produce that comes from the project site, produce that comes from collaborations with the community and products/experiments that are created with produce from the food forest, or from the community that are labelled 'Cloud Forest products'*
	Knowledge building	*Gathered knowledge resulting from the efforts made at the project or in the community*
	Desired outcomes	*Outcomes that are desired (in the future) as a result from efforts made at the project or in the community*
	Potential	*Outcomes that are expected to happen in the future or can potentially happen*

Activities		*Activities that take place in and around the project, or have to do with the project*
	Aliados	*Activities carried out by Aliados*
	At the project site	*Activities carried out at the project site (maintenance etc.)*
	For the project	*Activities carried out outside of the project site but for the project (generating funds etc.)*
	Strategising/Considerations	*Mentions of strategising or thought-experiments that relate to how the project is executed.*

Challenges		*Challenges that people face that are related to the project*
	Global issues	*Larger, global challenges*
	Project	*Project-specific challenges*
	Aliados	*Challenges Aliados faces more specifically*
	Regional issues	*Challenges that people from the region face*

Theory/Beliefs		*Mentions of concepts and strategies specific, that relates to this research - also beliefs and examples*
	Agroforestry	*Mentions of agroforestry as strategy or theory*
	Food Forestry	*Mentions of food forestry as strategy or theory*
	Conservation	*Also: convivial conservation*
	Feeding the world	*Mentions of ways the world is fed or should be fed in the future; the (potential) future of our food systems*
	personal values	*Mentions of participants' personal values and beliefs*
	personal beliefs	*Included here are expectations and hopes for the future (e.g. of the project)*

Other	*Records that are potentially interesting for the research but do not fit with the established codes.*