




Emancipatory agroecologies: social and political principles

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ABSTRACT

We examine how the policies of governments and the projects of international agencies and many NGOs strip *agroecology* of its emancipatory potential. Adhering to the conventional logic of *development*, they reinforce or create dependencies, individualize communities, convert use values into exchange values, incorporate peoples into hierarchical structures of domination, promote the belief that peoples must be saved from poverty through the intervention of a benefactor, and teach to act based on capitalist economic rationality. *Emancipatory agroecologies*, on the other hand, are radically transformative processes which we summarize in seven principles.

KEYWORDS

Agroecology; cooptation; autonomy; social movements; critique of development

1. Introduction

In a previous essay published in this journal (Giraldo and Rosset 2018) we argued that agroecology,¹ as an alternative to industrial agriculture, has become fashionable in institutional settings, and that this is an opportunity for emancipation (Burawoy and Wright 2001), but also represents a risk of cooptation by agribusiness and institutional development practices. In particular, we warned of the danger of diversion, distortion, corruption, simulation and co-optation that could be posed by the likely attempts by governments, opportunistic non-governmental organizations (NGOs), transnational corporations, foundations and international agencies to use the term agroecology to *greenwash* capitalism and replicate the logic of developmentalism (Maren 1997; Chambers 1993). We warned that the old messianic discourse of rural development, ‘to save the poor, hungry, malnourished, and underdeveloped from their own conditions,’ would remain essentially identical, only the remedy would change. Now the provision of agroecological services would be a new commodity offered by experts. This shift could create a new system of dependencies, colonize ongoing autonomous processes (Rosset and Barbosa 2021), as well as facilitate the control of territories by corporations through ‘green’ investment projects (Giraldo 2019).

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¹In this essay, we assume that the reader is familiar with agroecology. For those who require updating or expanding their knowledge on the subject, we recommend Rosset and Altieri (2017).

In recent years, we have seen agroecology begin to be incorporated into the design of public policies and NGO projects, which can be seen as a triumph for social movements,² but also as a risk, because, as we anticipated, many if not most public sector programs and projects labeled *agroecological* have been implemented under the conventional rationale of development, with subsidies and extension by experts, which runs contrary to the philosophy of most social movement agroecological processes. The adoption of agroecology by the Food and Agriculture Organization of the United Nations (FAO) is encouraging government institutions, politicians, and development NGOs to adopt the agroecological discourse as part of their agendas, often in coordination with the private sector (Giraldo and Rosset 2018). This opens up many possible abuses of agroecology, ranging from the discretionary awarding of projects or subsidies to political clientele, sometimes as a form of vote buying (Stokes et al. 2013), to *greenwashing* the image of agribusiness and the corporate agri-food system and other extractivist investments, fueling the big business of anti-poverty social projects (de Haan 2009), and the containment of political dissent (Sandoval Vázquez 2021).

In that earlier essay (Giraldo and Rosset 2018; see also Giraldo and Rosset 2016) we argued, at the risk of oversimplifying, that the new landscape of institutionalization of agroecology could be seen as a territory in dispute with two blocs: the first, made up of government institutions, international agencies and the private sector, and the second, that of social movements. Given the number and heterogeneity of policies and programs to promote agroecology that have been carried out in recent years out by progressive governments, international cooperation organizations, NGOs, private sector companies and public-private alliances, a further examination is now needed to deepen the analysis (see Peterson and Silveira 2017; de Molina et al. 2019). In this new essay, we break institutionalization into two categories, related to the political orientation of the government or promoting NGO, which we label 'neoliberal' and 'reformist agroecologies.'

By 'neoliberal agroecologies' we refer to what many call *fake* or *junk* agroecologies (Alonso-Fradejas et al. 2020; LVC 2015a), agroecologies that are based on the conventional monoculture model of industrial agriculture, moderated by the introduction of some agroecological technologies. Many are public-private projects with agribusiness capital that promote commercial processes, like contract farming, with 'agroecological' overtones, for farmers in the Global South. This 'false agroecology' category includes approaches such as *sustainable intensification*, '*net zero*' *emission agriculture*, corporate takes on *regenerative agriculture*, and *climate-smart agriculture*, among others. Among the emblematic programs of these neoliberal agroecologies are *The Sustainable Agriculture Initiative (SAI)* and *The World Business Council of Sustainable Development (WBCSD)*, led by the principal transnational agribusiness companies, *The New Vision for Agriculture (NVA)* and *The New Food and Land Use Economy Coalition (FOLU)*, both sponsored by

²Major global movements promoting agroecology include La Via Campesina (LVC), the Agroecology Movement of Latin America and the Caribbean (MAELA), the Réseau des Organisations Campesinas y de Productores de l'Afrique de l'Ouest (ROPPA), the World Forum of Fish Harvesters and Fishworkers (WFF), the World Forum of Fisher Peoples (WFFP), the World Alliance of Mobile Indigenous Peoples (WAMIP), and many others (see LVC 2015a). Beyond these are national groupings like the National Agroecology Articulation (ANA) in Brazil, which brings together peasant organizations, NGOs and academics, and national and international scientific societies like the Brazilian Agroecology Society (ABA) and the Latin American Scientific Society for Agroecology (SOCLA). In the Latin American case in particular, these academic spaces are quite aligned with, and even form part of, agroecological social movements (see for example Rosset et al. 2022).

World Economic Forum (Alonso-Fradejas et al. 2020). We can also mention CropLife International, a lobbying consortium composed of chemical and seed companies like BASF, Bayer-Monsanto, Corteva, FMC, Sumitomo and Syngenta (part of ChemChina), that now sell themselves as ‘agroecological.’³ Others include large NGOs like the Bill and Melinda Gates Foundation, the World Wildlife Fund, the Nature Conservancy, Mercy Corps, the Climate Smart Agriculture Youth Network, LEAP Africa and the Wildlife Conservation Society, among many others. All of these so-called agroecologies are entirely profit- and image-driven, and target market opportunities opened up by green capitalism.

By ‘reformist agroecologies’ we refer to those versions that have been promoted in recent times by so-called progressive governments, mainly in Latin America, and by certain NGOs. Examples of these institutionalized agroecologies are those described in Giraldo and McCune (2019), and include large public sector programs like *Sembrando Vida*⁴ (‘Planting Life’) in Mexico. The Brazilian experience under earlier Workers Party (PT) governments is particularly illustrative of both how public policies can apparently be emancipatory, yet can also create dependencies on government programs in ways that may set farmer cooperatives up for failure when inevitable changes of government occur and programs are defunded or canceled (Rosset and Altieri 2017, 114).

We use the adjective ‘reformist’ in deference to Eduard Bernstein ([1889] 1993) 1889) 1993) who, at the end of the nineteenth century, started a debate on the role of social democracy and the aims of socialism. Bernstein asserted that revolution was not necessary: it would be sufficient to carry out gradualist reforms from the State in order to advance slowly towards the aims of the workers’ movement. Today, ‘reformist agroecology’ is based on the same pragmatism: given that revolution or radical change are believed to be impossible, the way forward is to make small, gradualist changes through already existing institutional frameworks, in order to achieve the objectives of the agroecology movement, bit by bit.

The category of ‘reformist agroecologies’ serves to problematize many programs of progressive governments, NGOs and international cooperation agencies, that while not as heavily market-driven as ‘neoliberal’ agroecologies, often are still designed and implemented in a top-down fashion, and thus can stifle peasant initiative, leadership and protagonism, while generating dependency.

We believe that many advocates of agroecology who occupy important positions in institutions, or who work in international NGOs, have good intentions. However, their actions may be counterproductive. By continuing to be prisoners of the conventional way of doing things, they are being useful – consciously or unconsciously – to the cooptation of agroecology, by contributing to the design of programs and projects that have harmful characteristics, such as enforcing external dependence, undermining the organizational fabric of communities and territories, the disarticulation of grassroots

³See their website: <https://croplife.org/news/what-is-agroecology/>.

⁴In terms of budget and scope, *Sembrando Vida* is one of the largest public policies in the world in the fields of agroforestry and agroecology. Its objective is to reforest one million hectares with agroecological agroforestry systems driven by monthly direct cash transfers granted to 400,000 Mexican peasant and indigenous persons. For a description and critique of this enormous social program, see Sandoval Vázquez (2021), and our webinar, ‘Understanding *Sembrando Vida*: The governmental programme in Mexico that inspired the COP agreement on reforestation,’ 25 November 2021, available at: <https://www.youtube.com/watch?v=9STiBJYfv4> (English) and https://www.youtube.com/watch?v=_S90MeoN6fM (Spanish).

organizations, the further insertion of peoples into the market economy on unfavorable terms, and the integration of agroecology into systems of capital accumulation.

We introduce the concept of ‘emancipatory agroecologies’ to refer those radically transformative processes that take place within collective struggle. While institutions are promoting so-called agroecology in the context of responses to climate change and international commitments to the ‘decarbonization of capitalism,’ many experiences are emerging that have managed to break with external dependence, build autonomy and successfully multiply agroecological practices, including the exchange of goods and products between people from the countryside and the city. These emancipatory agroecologies are based on radically different, non-institutional processes, and their collective construction and expansion obey different logics – ones very different from how the Green Revolution spread around the world. We argue that those who hope to mobilize emancipatory agroecologies to dispute hegemony with the corporate agri-food system must learn from the philosophies, methodologies, pedagogies and many other teachings of social movements around the world (Mier y Terán Giménez Cacho et al. 2018; Val et al. 2019; Kerr 2022). Non-autonomous and non-emancipatory agroecologies leave intact many of the serious problems and structures created by the Green Revolution and industrial agriculture, since technology is only one axis of needed change. The agroecologies of social movements have not only provided an ecological vision for agriculture, but have crucially also been integral to building social processes to solve many other problems that go well beyond the technical sphere (Rosset and Martínez-Torres 2012; Val et al. 2019; Rosset et al. 2019).

We believe that there is a lot of confusion around these questions, and that even many who have the best intentions have not yet understood the importance and full range of characteristics of the social and political dimensions of agroecology. Recent and contemporary public policy experiments in agroecology and agroforestry carried out by ‘progressive’ governments, especially in Latin America (Giraldo and McCune 2019; Niederle et al. 2022) and by many NGOs, make clear the need to ‘define the playing field’ and establish a conceptual framework for emancipatory agroecological initiatives. For this reason, just as the technical-agronomic-ecological principles of agroecology have been refined over decades,⁵ we feel an urgent need to add a set of social and political principles that might serve in the design of emancipatory organizational and political processes, and as guidelines to evaluate whether particular efforts are truly *transformative*, or if, on the contrary, they are serving to reproduce the dominant system and structures of power by stripping agroecology of its most autonomous, rebellious and revolutionary facets. While Dumont, Wartenberg, and Baret (2021), Sandhu (2021), Kapgen and Roudart (2020), Wezel et al. (2020), Anderson et al. (2019, 2020) and González de Molina et al. (2019), and González de Molina and Lopez-Garcia (2021), among others, have all elaborated one form or another of social principles for agroecology, we believe

⁵An example among many are the agroecological principles proposed by Altieri and Nicholls (2010): (1) Plant and animal diversification within the agroecosystem; (2) Recycling of nutrients and organic matter; (3) Management of organic matter and stimulation of soil biology to provide optimal conditions for crop growth; (4) Minimizing water and nutrient loss by maintaining soil cover, erosion control, and microclimate management; (5) Adopting preventive measures to control insects, pathogens and weeds, and; (6) Taking advantage of the synergies and symbiosis that emerge from plant-animal interactions.

that the present essay is the first attempt to develop social principles for *emancipatory agroecologies*.⁶

The need for agroecology to have its own social and political emancipatory principles is due, on the one hand, to the fact that the oft referred-to principles of ‘ecologically sustainable,’ ‘socially just’ and ‘economically equitable,’ derived from sustainable development and sustainable agriculture, on which much of the agroecological literature has been based in recent years, or those created by the FAO (2018) and endorsed by authors such as Wezel et al. (2020), are frankly unsatisfactory, as has long been affirmed (see, for example, Lélé 1991). They do not propose any major structural changes, nor do they offer any guidance for emancipation. These are rather vague and lukewarm formulas which can be prescribed by any conservative actor that wishes to make cosmetic adjustments in order to greenwash agribusiness, for example, and make it ‘socially friendly,’ thus fueling the worst contradictions. On the other hand, we are convinced that the main barriers to the territorialization of peasant agroecology are social, political, epistemic, structural, and economic aspects, rather than technical-productive ones (Mier y Terán Giménez Cacho et al. 2018; Rosset and Altieri 2017).

In this intentionally polemical essay, we propose seven principles⁷ in which we group the political, economic, organizational, methodological, pedagogical, and philosophical elements that we believe are fundamental for building a truly emancipatory agroecological process (Burawoy and Wright 2001). We propose this set of principles based on the collective research program of our research group on the scaling or massification of agroecology.⁸ The group has conducted extensive research using case study methodology, mainly with member organizations of La Via Campesina (LVC),⁹ and other peasant organizations.¹⁰ We have documented agroecological experiences in Cuba, El Salvador, Brazil, Nicaragua, Mexico, Colombia, Venezuela, Guatemala, Puerto Rico, Mozambique and India, with on-going research in various other countries. Case-specific conclusions have been published in separate articles, in an overview paper analyzing emblematic cases (Mier y Terán Giménez Cacho et al. 2018), and in two special issues, one in English and one in Spanish (Ferguson, Aldasoro Maya, et al. 2019; Giraldo et al.

⁶Although Anderson et al. (2020) do include healthy reference to the emancipatory potential of agroecology.

⁷In an earlier formulation of these arguments (Giraldo and Rosset, 2021), published in Spanish, we proposed 6 principles. In this much more up-to-date version, we have added the principle of autonomy.

⁸See <https://www.ecosur.mx/masificacion-agroecologia/>.

⁹Among the LVC organizations with which we have conducted research are the National Association of Small Farmers of Cuba (ANAP) (Machín Sosa et al. 2010; Rosset et al. 2011), the National Peasant Union (UNAC) of Mozambique (Val 2021), the Karnataka Rajya Raitha Sangha (KRRS) in India (Khadse et al. 2018), the Federation of Agrarian Reform Cooperatives (FECORACEN) in El Salvador (Murguía et al. 2020), the Landless Rural Workers Movement (MST) in Brazil (Fernandes et al. 2021; Borsatto and Souza-Esquerdo 2019), the Association of Rural Workers (ATC) in Nicaragua (McCune et al. 2017), and Boricuá in Puerto Rico (McCune et al. 2019). We have also documented the Campesino a Campesino processes in the framework of LVC at the international level (Val et al. 2019) and its training schools in Latin America (Rosset et al. 2019).

¹⁰In Mexico, we have done work with Grupo Vicente Guerrero (Tlaxcala) (García and Giraldo 2021), Café Ecológico de la Sierra Madre de Chiapas (CESMACH) (Guzmán et al. 2019; Santiago et al. 2021), the Asociación Rural de Interés Colectivo Independiente y Democrática (ARIC-ID) (Chiapas) (Miranda 2019), the Centro de Desarrollo Integral Campesino de la Mixteca ‘Hita Nuni’ A. C. (CEDICAM) in Oaxaca (Royero-Benavides et al. 2019), and the ecological agriculture school *U Yits Ká an* in Yucatán (Valentín et al. 2020). In Colombia, work has been carried out with the *Red de Semillas Criollas y Nativas* (García et al. 2019), the *Red de Mercados Agroecológicos del Valle* (Franco et al. Unpublished), in Venezuela with the *Cooperativa La Alianza* (Domené-Painenao et al. 2020) and in Guatemala in the Maya-Achí territory of Baja Verapaz (Einbinder and Morales 2020; Einbinder et al. 2019, 2022). We have also researched public policies on agroecology in Latin America (Giraldo and McCune 2019). Finally, we draw on the lifelong experience of the second author, who beyond being an academic has also been a longtime staff member of LVC at the international level, and in Mexico.

2021). For the present essay, we draw on the scientific findings and lessons learned through this collective research program. Although we do not go through the experiences one by one, because of lack of space, our analysis is largely based on these experiences, as well as on our hands-on experience with social movement processes.

Before enumerating the principles it is relevant to clarify that they only make sense as a whole, since each of them is closely interwoven with the others. We have divided them here, and presented them one by one, as a heuristic exercise, at the risk of some arbitrariness and overlapping of themes. We also note that we are aware that one risk of this classification is reinforcing the idea that ‘neoliberal’ and ‘reformist agroecologies’ are, after all, ‘agroecologies,’ which can be and often is questioned (LVC 2015a). Allowing the promoters of these *false agroecologies* the use of the term *agroecology* favors discursive co-optation, thus we do so here only for pedagogical reasons. It is thus worth specifying at the outset that we do not believe these are *true* agroecologies, not only because they often do not respond to ecological principles (like breaking with monoculture and purchased external inputs), but also because they do not consider political and social emancipatory components, nor do they respond to the class perspective of the peasantry, nor to an agroecological philosophy of life. Another caveat we must insert here is that there are few peasant organizations that conform to all the principles listed above. These principles can be read as aspirational, as providing a horizon for struggle, a utopian vision if you will. The agroecological revolution is a long process of social and ecological transformation, but like any revolution, it needs inspirational visions of alternative futures. For the same reason, our intent is not to disqualify people, organizations or processes because they are not ‘emancipatory,’ but rather to propose some signposts for debate, signposts that might show us the way forward.

A final limitation that we acknowledge is that any categorization runs the risk of rigidity and blinding us to nuances and to the gray areas between categories. We ask readers to understand that the purpose of this exercise is to highlight the contrasts between different types of agroecologies, and thus contribute to the debate on contemporary agroecology.

2. The seven principles of emancipatory agroecologies.

2.1. One: question and transform structures, instead of reproducing them (political principles)

Popular pressure has caused many multilateral institutions, governments, universities and research centers, some NGOs, corporations, and others, to finally recognize ‘agroecology.’ However, they have tried to redefine it as a narrow set of technologies that offer some tools that appear to ease the sustainability crisis of industrial food production, while the existing structures of power remain unchallenged... Agroecology is political; it requires us to challenge and transform power structures in society. (Declaration of the *International Forum for Agroecology*, Nyéléni, Mali [LVC 2015a])

Rural social movements made up of peasants, artisanal fisherfolk, nomadic pastoralists or herders, indigenous peoples and even urban farmers have insisted that agroecology must be revolutionary, in the sense that it must be capable of radically transforming both the agri-food system with its structures, as well as the adverse local realities faced by

Table 1. Political principles of the different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
<ul style="list-style-type: none"> - Defends the current <i>status quo</i>. - Based on direct production by agribusiness and/or associative strategies such as contract farming, commercial family farming, specialization for agro-export, value chains. 	<ul style="list-style-type: none"> - Replicate the status quo and incorporate agroecology into agribusiness value chains by expanding the corporate portfolio into agroecological ventures; complements its own production with contract farming and commercial organic family farming. 	<ul style="list-style-type: none"> - Characteristic of so-called progressive governments. - Do not promote structural transformations, but instead make gradualist reforms in institutions, and minor changes at the system level, under the argument of 'what is possible.' - Are sometimes a satellite of agribusiness value chains. 	<ul style="list-style-type: none"> - Challenge and seek to transform power structures. - Fight for land and the defense of territory. - Depatriarchalizing and decolonizing. - Seek a union between popular sectors and classes in the countryside and in the city.

communities (LVC 2011, 2015a, 2015b). In our opinion, this is quite often forgotten. In the recent incorporation of agroecology into the political agenda of governments and international agencies, a conformist pragmatism has dominated, appealing to gradualist reforms and small qualitative changes in the framework of institutions, under the argument of 'what is possible' (Levidow, Pimbert, and Vanloqueren 2014), as we show in Table 1.

These 'reformist agroecologies' – which we could also call 'gradualist' or 'social-democratic' – respectful of institutionality and the status quo, have given up on transforming structures and have settled for a reformism that does nothing but, at best, smooth out the sharpest edges of globalized neoliberalism, thereby perpetuating the capitalist order by helping it correct its own contradictions (Giraldo 2020). Moreover, this 'agroecological reformism' is often mixed with neoliberal logic, and is typically focused on peasants – previously subjected to policies and forces that individualize and depoliticize them (Zibechi 2010; Rosset 2019) – becoming competitive, becoming business people, green entrepreneurs, and getting integrated into high value green global value chains for agro-export (Giraldo 2019; Niederle et al. 2022). This distortion of agroecological struggles means it is urgent to remember that these strategies do not correspond to social movement versions of agroecology. The *Nyéleni Declaration of the International Forum for Agroecology* (LVC 2015a) – the first collective expression of social movements at the global level on the meaning of agroecology – was explicit in asserting that the movement struggle around the world is not for a cosmetic reform of the agri-food system, but for a grassroots peasant and indigenous agroecological revolution that profoundly challenges and transforms power structures and places control of the means of production in the hands of peoples.

Certainly, the most important means of production is land: a minimum condition for practicing agroecology. That is why defending, recovering and redistributing land (*agrarian reform and the defense of land and territory*) is the first step to initiate or resume any agroecological process. In other words, there can be no agroecological revolution without an agrarian revolution. However, reclaiming land is not enough. Peoples are increasingly exposed to a wave of land grabbing, displacement for large-scale infrastructure megaprojects, extractivist investments, concessions to national and foreign corporations, and all

other forms of territorial dispossession by capital (Rosset and Martínez-Torres 2012; Rosset 2013). Therefore the struggle for land must also include the defense of territory from disastrous alliances between private interests and the state. Today, more than ever, it is essential to say that taking back/occupying/reclaiming/defending land and territory is the precondition for any agroecological process, and that any governmental attempt to promote agroecology without addressing the larger scenario of unequal access to land, land grabbing and/or promotion of megaprojects in the territories of rural peoples, represents a clear corruption and co-optation of agroecology (Giraldo and Rosset 2018). Unfortunately, territories can be easily divided into small areas left as showcase 'peasant agroecological reserves,' with larger areas thus freed up for the extractivist projects of the private sector, which is one way that agroecology can be used to favor capitalist interests.

We believe that it is imperative to follow the lead of social movements and insist that emancipatory agroecologies are, by definition, anti-capitalist, as the *Declaration of Güira de Melena*, from the First Global Encounter of La Via Campesina Agroecology Schools and Formation Processes (LVC 2018) makes clear:

Today we face a global battle for the countryside, between the 'model of death' of the capitalist system and its arms in finance, agribusiness and industrial agriculture, mining, the business of water and seeds, etc., and our 'model of life,' based on agroecological peasant agriculture. Faced with capitalist devastation, we believe there is no possible solution that is humane and ecological under the model of death. Capitalism is a social form that is necessarily violent, based on the exploitation of human labor, on class-based oppression and racism, and on the sacking and pillaging of nature. The first and last goal of the capitalist system is the broad reproduction of capital, based on the appropriation for private profit of human labor and capacity along with the commodification of nature. La Via Campesina struggles against, and to overcome, capitalism, and sows the emancipatory seeds of experiences ... Agroecological peasant agriculture is a fundamental tool in this struggle, and in the construction of a different society.

Rural peoples, through their own organizations, are disputing land, water, seeds, marketing and distribution systems and, in general, ownership of the means of production, with capital. This is where agroecology comes in, as a growing social movement which proposes a political project of life in clear opposition to the political projects of death, through a radical political critique of monopolies, but also of heteronomous structures that can only be administered by a centralized power (Giraldo 2019). Agroecology is becoming a tool for building alliances between rural and urban popular classes and sectors to shape a different kind of social relations (LVC 2015a), together with alliances with other struggles such as people's environmentalisms, popular peasant and indigenous feminisms (Barbosa 2021), anti-racist struggles, and class antagonisms. Emancipatory agroecologies do not bet on any tech-fix 'magic bullets' that can be used just as easily by agribusiness. Nor do they seek to set themselves up as an alternative for the peaceful coexistence of the 'poor and marginalized' alongside the dominant agro-industrial system. Their political project is revolutionary, in the sense that they propose the redistribution of the means of production, from a popular, peasant, indigenous, feminist and depatriarchalizing perspective, capable of dismantling sexist and oppressive relations against women, through sophisticated relational and rhizomal movement structuring to epistemically decolonize territories (Val et al. 2019; Val and Rosset 2020), while

transforming the current globalized agrifood system into one in which agroecological peasants are responsible for feeding the planet.¹¹

2.2. *Two: cultivate autonomy, not dependency (technical principles)*

The autonomy of agroecology displaces the control of global markets and generates self-governance by communities. It means we minimize the use of purchased inputs that come from outside. (Declaration of the *International Forum for Agroecology*, Nyéléni, Mali [LVC 2015a])

Neoliberal and reformist agroecologies follow the particular understanding their promoters have of agroecology, and indeed of development. It is thus not possible to separate political orientation from technological aspects. For the neoliberal ‘false’ agroecologies the goal is to adapt some ecological principles to the conventional practices of the Green Revolution, in order to *sustain* the conventional model farther into the future. The idea is that practices such as crop rotation, cover crops, minimum tillage, organic fertilizers and bio-inputs, can be amalgamated with industrial agriculture practices such as precision agriculture, ‘zero emission’ seeds, satellite information technologies, apps and gene editing, as a sort of ‘fine tuning’ for agribusiness. These technical fixes are being promoted by huge international coalitions in alliance with the largest agri-food corporations, through figures such as contract farming and other partnerships between small, medium and large farmers, to link farms of different sizes into value chains, and thus ‘green’ capitalist agribusiness and give it a social face (Giraldo 2019). According to the dominant discourse, technological innovation, which includes agroecology (as well as GMOs), is fundamental for adaptation to climate change and to the creation of opportunities for small farmers to increase their productivity and favor a ‘more equitable distribution of value.’ Hence, they argue, the need for collaboration between large companies working on these technologies, governments, banks and small farmers (Alonso-Fradejas et al. 2020). This generates or maintains various dimensions of dependence, including dependence on purchased bioinputs, and often dependence on monoculture, on external expertise, and on outside, typically contract buyers.

‘Reformist agroecologies’ do question the co-optation of agroecology by the private sector. Their starting point is the belief that the way to promote agroecology is from government agencies or organizations allied to agroecology. Yet the technical alternatives promoted tend to ignore ancestral and traditional farming practices and knowledge, and typically they try to implement externally designed agroecological practices that are alien to local realities.¹² Reformist agroecologies are often based on ‘input

¹¹Today, contrary to popular belief, industrial agriculture does not feed the world. Despite having 75% of farmed land, it provides only 30% of the world’s food. Small scale producers, fishers, animal herders and collector/gatherers, on the other hand, provide 70% of the food (ETC Group 2022), much of which is produced using traditional agroecological practices. The political objective is that peasant production, which already feeds humanity, should be transformed in its entirety towards agroecology, and that it should eventually grow to encompass the entire agri-food system.

¹²An example is the *Sembrando Vida* program in Mexico, which pushes exogenous cropping systems such as the *Milpa Intercalada con Arboles Frutales* (MIAF), which is at the same time an appropriation of the ancestral Mexican corn-bean-squash cropping system known as the *milpa*, and is a simplification and homogenization of it, which ignores local indigenous peasant knowledge. There are many reports of how government agronomists (many of them young people from urban backgrounds and recent university graduates), pressured by their superiors, force farmers to carry out practices that are irrational under local conditions, under the threat that if they do not do so they may be sanctioned and stop receiving the generous cash-transfer subsidy granted to participants by the Mexican government (Ceccam 2022).

substitution' practices (Rosset and Altieri 1997), such as biopesticides, rock dusts, efficient microorganisms, biofertilizers and a series of commercial biological inputs that, although combined with inputs produced on local farms, end up creating new dependencies. Although the discourse maintains that this is but one step toward a 'transition' to truly agroecological systems, in practice they continue to teach not the kind of complex ecological thinking that strengthens autonomy on the farm (in the sense of van der Ploeg 2008), but rather the kind of simplistic logic found in the cause-and-effect and limiting factor reasoning typical of conventional agronomy (Rosset and Altieri 1997; Mier y Terán Giménez Cacho et al. 2018). The agroecological knowledge transfer in these cases typically follows the same top-down pattern of technology transfer from outsiders seen in the Green Revolution, where agronomists dictate the practices to be implemented to meet the goals of programs and projects. Although these top-down interventions are sometimes dressed up as 'learning communities' or 'field schools,' in reality the same pattern continues to be reproduced, creating new dependencies on outside actors like state bureaucracies – which sometimes buy the production through contracts – or NGOs and other promoting organizations. Dependence on external actors, suppliers and buyers implies a power relationship, *heteronomy*, that places peasant families in a weak position (Rosset and Barbosa 2021; Val and Rosset 2022).

Emancipatory agroecologies on the other hand are guided by the logic of cultivating autonomy. We use the word broadly, ranging from relative (and in some cases absolute) autonomy from the state, to relative autonomy from unfavorable market conditions, from external knowledge, from external decision-making, etc., as developed by Rosset and Barbosa (2021). This is the case of Zero Budget Natural Farming (ZBNF) in India, which is based on building autonomy from lenders and input suppliers (Khadse et al. 2018; Rosset and Martínez-Torres 2012). The aim is not to replace the dependence on conventional agrochemicals with another dependence on commercial bioinputs, nor to rely on special credits that still lead to indebtedness. ZBNF and other emancipatory agroecologies integrate polycultures, animals and landscapes, through the ecological principles of agroecology (Altieri and Nicholls 2010) to build food sovereignty and produce food for local markets, with little or no expenditure on inputs. To this end, peasant organizations mobilize endogenous knowledge, in dialogue with scientific knowledge, whose horizon implicitly or explicitly is to free themselves from the oppression of the capitalist regime, that is, instead of strengthening heteronomy they break with it, and sow autonomy.

In Table 2, we offer a technical characterization of what each of these 'agroecologies' might look like in relation to each institutional model. As can be seen, industrial agriculture and 'neoliberal agroecologies' are not so different, as the latter is basically an *organic* industrial monoculture based on input substitution (Rosset and Altieri 1997), which leaves

On the other hand, Valentin Val (2021), in a study conducted in Mozambique, documents how there is a showcase agroecology used to 'hoodwink' NGO staff, which local people call *agroecologia para inglês ver* ('agroecology for the English to see'). A kind of 'Potemkin village' agroecology or *performance* in which communities, in a theatrical way, show outsiders how they prepare bocachi, biopreparations and natural repellents – practices they have learned in project workshops but which they do not use in their farms – and which serve as a kind of choreography to attract resources from development projects. For these communities, agroecology is associated with foreign practices that demand a lot of time and raw materials, although in reality their traditional agriculture is profoundly agroecological. Another example of how NGOs often design projects that ignore ancestral agriculture and local knowledge is found in the work of Einbinder and Morales (2020), Einbinder et al. (2019, 2022) in the Maya-Achi territory of Guatemala.

Table 2. Technical characterization of the different agricultural and agroecological systems.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
<ul style="list-style-type: none"> - Large areas. - Monoculture. - Dependent on external inputs [commercial seeds, fertilizers, pesticides], equipment [tractors, irrigation, etc.], credit, expert knowledge. - Farming under contract, value chains, commercial markets. 	<ul style="list-style-type: none"> - Large, medium or small areas, with farmers 'benefiting' from private sector projects. - Organic monocultures, dependent on very costly alternative external inputs. - Equipment [tractors, irrigation, etc.], credit, external knowledge. 	<ul style="list-style-type: none"> - 'Ecological' monoculture systems, or prefabricated 'designs' of polyculture and agroforestry systems brought in from outside. - Combination of alternative external inputs and production of bio-inputs. - External knowledge. - Contract farming on occasions. - Often production for the institutional and/or commercial market. 	<ul style="list-style-type: none"> - High level of integration of crops, animals, trees and landscapes, endogenous systems. - Zero or low external dependence. Cultivate autonomy. - Based on internal system synergisms rather than external inputs. - Based on local knowledge and dialogues of knowledge. - Production for self-sufficiency with surpluses often for local markets.

the structure of monoculture and the status quo of economic and power relations intact. On the other hand, 'reformist agroecologies' begin to break with monoculture, but are far from being truly emancipatory, since the technical knowledge and cropping or livestock system designs come from outside, through more or less conventional top-down agricultural extension.

2.3. Three: shape economies based on use value, not exchange value (economic principles)

It requires the re-shaping of markets so that they are based on the principles of solidarity economy and the ethics of responsible production and consumption. It promotes direct, fair, and short distribution chains. It implies a transparent relationship between producers and consumers and is based on the solidarity of shared risks and benefits. (Declaration of the International Forum for Agroecology, Nyéléni, Mali [LVC 2015a])

Emancipatory agroecologies attempt to weave social and economic relations different from those that dominate in the capitalist agri-food system, that is, they distance themselves from social relationships mediated exclusively by money, in which all exchanges are made on the basis of exchange value, where a few appropriate the labor of many, and in which every aspect of the world is subsumed under the commodity form. In this regard, there is a major difference between neoliberal and reformist agroecologies, as summarized in Table 3. The former use various strategies to feed commodity markets, agribusiness value chains, processors, 'green' supermarket aisles, and specialized organic markets for elites. The latter incorporate grassroots organizations or individualized peasants into the economic system through bank loans, links with commercial suppliers of bio-inputs, seeds, plants, animals and materials for productive infrastructure, and

Table 3. Economic principles of different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
<ul style="list-style-type: none"> - Exchange value. - Feeds commodity markets, agribusiness value chains, processors and supermarkets. 	<ul style="list-style-type: none"> - Exchange value. - Feeds agroecological markets for elites, through supermarkets. - International certifiers. - Dependent on investment and bank loans. - Contract farming. - The goal is to make new green businesses. 	<ul style="list-style-type: none"> - Exchange value. Special lines of credit. - Individualized economic support for farming families to implement the practices. - Subsidies or provision of bio-inputs, seeds, plants, animals, and materials for productive infrastructure. - Organic certification [or other certifications], promotes national certifiers, and sometimes participatory certification [PGS]. 	<ul style="list-style-type: none"> - Use value. - Favors production for self-consumption. - Barter, local markets, solidarity economies, and if there is certification, it is generally based on trust and/or local agreements. - There is no external actor that pays peasants to implement the practices.

private certifiers, or through cash transfers and subsidies for implementing agroecological practices. Both of these agroecologies, whether through the insertion of agroecology into the market, or through the creation of dependencies on private entities via state programs, follow a logic based on the insertion of peoples into the creation and circulation of exchange value and the accumulation of capital, thereby peddling the illusion that social reproduction is only possible via goods and services offered by the market or the state.

A fundamental principle of emancipatory agroecologies is the circulation of use values in a community or territory. These are based on the consolidation of solidarity and cooperative economies that, rather than being motivated exclusively by profit and the laws of the market, are organized to satisfy the needs of social reproduction based on use values, according to rules and norms established by the community itself (Gutiérrez and Salazar 2015; Levidow, Sansolo, and Schiavinatto 2021). The non-capitalist economies woven by peasant, indigenous, autonomous and transformative agroecologies in community network designs, favor production for self-consumption through peasant systems based on reciprocity and solidarity – such as the exchange of labor or collective work – and tend to favor practices in which the fruits of labor are shared through arrangements such as barter, local solidarity markets, food baskets, festivals, community currencies, certification systems based on trust, and many other local agreements. Building economies based on use value does not mean that there is no exchange value. Although there are many economic arrangements typical of peasant economies in which, in effect, there is no monetary mediation, but rather agreements based on reciprocity, it is also true that there are many, many arrangements in which money is used. Of course peasants sell many products. The difference is that the goal is not just profit in and of itself, as in neoliberal agroecologies that follow the capitalist equation of $M-C-M'$ (Money-Commodity-More Money), but rather the exchange of use values in a community, whose formula is either $C-C$ or $C-M-C$, as expressed by Marx in his first volume of *Capital* (Marx 1990; see also the thought of Alexander Chayanov, as thoroughly explained by van der Ploeg 2013). Economies of this type are embedded in face-to-face social ties, where exchanges take place in close relationships and local circuits, with low energy consumption, and

where goods are not usually depersonalized, but instead maintain their own sense and meaning beyond their exchange value (Gutiérrez and Salazar 2015).

Emancipatory agroecologies stand out for the capacity to build ingenious organizational networks for the marketing and exchange of products. An example is the *Ecovida* Network in southern Brazil (Rover 2011; Mier y Terán Giménez Cacho et al. 2018), or the multiple agroecological farmers' markets of Landless Workers Movement (MST) settlements. The former engages farmer cooperatives in dialog with groups of their consumers, in which production decisions are made jointly in ways that, while not ignoring exchange value concerns, emphasize use value. The latter provide healthy food at fair exchange value in ways that also provide a lot of use value, including health value and cultural and symbolic value.

The important thing is to build social relations that are not based on alienated 'abstract labor' and the extraction of surplus value, but rather on 'concrete labor' (*manuscript 44* in Marx 1964), that is, labor carried out by people to satisfy their own needs and those of their community, for social reproduction.

The substrate of agroecological economies is the regeneration and maintenance of community milieus for the reproduction of life, by establishing cooperative social relations in which the access, control and flow of communal goods and use values is in the hands of the community itself, so that all are subject to community monitoring of agreements with fair punishment for transgressions (Esteva 2012). The success of community networks in which peoples' agroecological economies are woven lies largely in their capacity to disperse power in the community (Zibechi 2007). This prevents anyone from becoming too powerful, and makes different members take on the obligations and responsibilities necessary to reproduce non-market use values beyond exchange values.

2.4. Four: strengthen organization in terms of collective processes, not individualized projects (organizational principles)

Families, communities, collectives, organizations, and movements are the fertile soil in which agroecology flourishes. Collective self-organization and action are what make it possible to scale-up agroecology, build local food systems, and challenge corporate control of our food system. Solidarity between peoples and between rural and urban populations is a critical ingredient. (Declaration of the *International Forum for Agroecology*, Nyéléni, Mali [LVC 2015a])

Organization is the culture medium on which agroecology grows and spreads. Organizational fabric allows the circulation of learning, dialogues of knowledge and life experiences, meanings and political horizons of struggle (Martínez-Torres and Rosset 2014), and is also the only possible way to dispute the means of production with capital (Rosset and Martínez-Torres 2012; Barbosa 2017; Rosset and Altieri 2017; Rosset et al. 2019; Mier y Terán Giménez Cacho et al. 2018). A family that successfully practices agroecology but does not belong to any organizational network will hardly be able to encourage other peasant families to follow their example, will have no way to link their production with territorial markets, will not be able to effectively oppose landgrabbers and other threats against their territories, and will have little ability to pressure governments and obtain favorable public policies (Rosset and Martínez-Torres 2012). A fundamental

Table 4. Organizational principles of different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
- Agribusiness corporations, commercial farming enterprises	- The same agribusiness corporations, plus partnerships and contracts with large, medium and small-scale farmers. - Control by certifiers.	- Imposes organizational structures from external actors through government programs and projects. - In some cases, it undermines existing local and peoples organizations and fosters individuality. - Sometimes imposes cooperatives or other organizational/associative forms from the outside and from the top down.	- Overcomes the logic that experts are 'those who know' and peasants are 'those who need.' - Rhizomatic design. - Identifies potential and non-capitalist wealth in the territory. - Dialogues of knowledge and life experiences. - Promotes emulation based on collective recognition of success. - Activates collective problem-solving and processes for the transformation of reality. - Cooperatives and other endogenous forms of association.

premise of emancipatory agroecologies is to boost the density of organizational fabric through its own structures, such as community assemblies, cooperatives, associations, networks, territorial schools, social movements, agrarian unions, national and international platforms, coordinating bodies, grassroots ecclesiastical communities, rural women and youth collectives, civil associations, intentional communities, consumer networks, urban farm groups, among many other organizational forms. There is no way for agroecology to have the potential for transformation without strengthening its own organizations (Rosset et al. 2019), and resisting the imposition of outside organizational structures by external agents (Rosset and Barbosa 2021).

However, as we point out in Table 4, 'reformist agroecology' tends to impose structures designed and determined by bureaucracies and maintains the paternalistic prejudice of developmentalism that 'the one who knows' is the expert, the agronomist, and 'those who need' are the peasants (Giraldo 2019).

The key to any transformative process is for protagonism and social control to be in the hands of the peasantry, the community, and other internal agents, and not external entities such as NGOs, foundations, international organizations, universities, religious entities, political parties, and state institutions, which usually try to organize the lives of their beneficiaries through hierarchies and exchange values. It is about self-governance: peoples, through their organizations, should lead their lives and make their own political decisions based on collective deliberation, the implementation of common agreements, and the flow of use values (Rosset and Barbosa 2021). Strengthening *organicity* means keeping regulation by others at a distance and favoring the construction of decentralized networks that facilitate horizontal exchanges autonomously. Self-management of rural and urban grassroots organizations is how peoples can successfully carry out their own agendas, which increasingly include the deepening and expansion of agroecology to strengthen the wellbeing of their members and Mother Earth.

An unavoidable principle for the expansion and consolidation of any emancipatory agroecological process is that those involved must find the best way to organize themselves. It is an autonomous decision, which, although it may involve external collaborators, cannot be motivated, managed, and especially not imposed by external actors who typically bestow upon themselves the right to intervene in the lives of others in the name of agroecology. If the organization is not imagined, shaped, and managed by peoples themselves, if there is no place for women and youth to assume power, and if there is no inter-generational and inter-gender exchange, emancipatory agroecologies will hardly be able to grow. For the unorganized, the challenge is always to 'organize' and mobilize collective action intentionally and autonomously. For allies, the challenge is to stop organizing people, 'developing them,' raising their awareness, redeeming them, and instead learning to move with and support them in their own efforts, with the right to make their own mistakes, linking up with the organized to confront a common enemy (Esteva, Prakash, and Stuchul 2002).

The most paradigmatic case to demonstrate that organization is the key factor for emancipatory agroecologies is the National Association of Small Farmers (ANAP) of Cuba, which, through its member cooperatives, has achieved the most spectacular transformation of any country towards agroecology, a process which began during the crisis of the Special Period of the 1990s (Machín Sosa et al. 2010; Rosset et al. 2011), and today has incorporated more than one half of the Cuban peasantry in agroecological processes (unpublished data from ANAP).

2.5. Five: build horizontal processes, not hierarchies (methodological principles)

We develop our ways of knowing through dialogues of knowledge. Our learning processes are horizontal and peer-to-peer. (Declaration of the *International Forum for Agroecology*, Nyéléni, Mali [LVC 2015a])

If organization is the culture medium that makes it possible for emancipatory agroecologies to grow, it is the methodologies created by grassroots organizations that leaven and accelerate the process. These grassroots social methodologies differ radically from the top-down strategies used by agribusiness to expand the Green Revolution around the world, which, in our view, continue to be used by the 'neoliberal' and 'reformist' agroecologies of various governments and NGOs, as shown in Table 5.

The hierarchical, vertical logic – taught in ag schools and other technical degree programs – that prevails in many agroecology projects and programs, can be summarized as follows: peasants have 'the problems' and experts have 'the solutions' (Illich 2016). The rationale behind agricultural extension holds that knowledge is created in universities, research centers or corporations, and that extension professionals and technicians are in charge of 'transferring' the knowledge to their 'clients' or 'beneficiaries' – what Paulo Freire (1970, 1973) famously called the 'banking concept of education.' According to Freire, the assumption is that the head of the peasant is empty of knowledge – an empty bank account – and it is the duty of the agronomist fill it – make deposits of knowledge.

Once this 'truth' is internalized and reproduced over and over in university programs and in the professional practice of most institutions, there is no longer any doubt that

Table 5. Methodological principles of different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
<ul style="list-style-type: none"> - Hierarchical and pyramidal structures. - Transmission of information and products to clients. 	<ul style="list-style-type: none"> - Hierarchical and pyramidal structures. - The protagonists of the generation of technology and transfer process are extensionists, researchers and other technicians. 	<ul style="list-style-type: none"> - Replicates hierarchical structures and the logic that the expert is the one who must go and teach the ignorant peasant. - Identifies gaps addressed by a program or project. - The peasant is seen as needing the help of the technician and the program or project. 	<ul style="list-style-type: none"> - Horizontal and rhizomal structures - Dialogues of knowledge and life experiences. - Promote emulation based on collective recognition of success. - Activate collective problem-solving and collective processes for the transformation of reality.

what peasants need is exactly what professionals have to offer them.¹³ The practices, discourses and rituals on which the design of rural development policies, programs and projects are based, embody the conviction that it is professionals who have the authority, like medical doctors, to diagnose a need and prescribe a remedy to correct an identified shortfall (Chambers 1993; Illich 2016). Of course, not without involving the patients in their own healing (Rahnema 1992). The difference today is that in non-emancipatory agroecologies the prescription is no longer that of a monoculture dependent on chemical inputs, machinery and credit; now the prescription is either that of 'ecological' monocultures dependent on bio-inputs, or polyculture designs brought in from outside experts. There is great danger in teaching people the art of needing programs and projects, of teaching people to depend on the advice of a technician who tells others what to do. These interventions can disable peasant initiative, protagonism, knowledge and practices (Rosset et al. 2011).

Peoples' methodologies, such as 'Campesino a Campesino,' Peasant to Peasant, or Farmer to Farmer, break the logic that experts are 'those who know' and peasants 'those who need' (Machín Sosa et al. 2010; Rosset et al. 2011; Val and Rosset 2020; Kerr 2022). These methodologies operate completely differently. They do not start by identifying deficiencies and problems, but first and foremost potentials and non-capitalist 'wealth' in the territory (MST-CE 2019; Val and Rosset 2020; Fernandes et al. 2021). The starting point is that not all peoples' knowledge has been replaced by the practices of conventional agronomy, but rather that there are stubborn, persistent knowledges, wisdoms and practices that continue to exist in any given territory. The task is for a peoples' organization itself to identify and make an inventory of dispersed and fragmented epistemic wealth – a piece of knowledge here, another there – and to put them in dialogue through exchanges and meetings (Martínez-Torres and Rosset 2014). The procedure is simple: a peasant who already successfully uses an agroecological practice that resolves problems common to other peasants, receives visits from other peasants

¹³This is not to say that expert knowledge and Western-style science are not useful for farmers. In fact, methodologies such as *Campesino a Campesino* dialog with scientists and with so-called scientific knowledge. What we are questioning is the top-down logic with which rural development programs and projects are typically designed.

who have the problems but not the solutions, so that, through their own experience, they can promote the emulation of their agroecological experience by their peers (Fernandes et al. 2021). It is a strategy that seeks collective recognition of success and stimulates the desire to live in an agroecological way through direct corroboration and one's own senses – in Cuba it is said, 'when the peasant sees, s/he believes' (Machín Sosa et al. 2010). Everything works by contagion and the desire to emulate good experiences. And in recovering and sharing knowledge, a kind of *epistemological decolonization* takes place (Fernandes et al. 2021).

This is why demonstration plots are not generally very useful for promoting agroecology. They may be technically well designed, but they are divorced from local realities, or at least from local protagonism or leadership. In transformative agroecology, it is not technologies that are put in dialogue – as is often misunderstood – but ways of living and of being (da Silva 2014). The dialogue that takes place in the plot of land of those who want to share their experience is a dialogue of life experiences, which includes practices and techniques, but also senses, meanings, stories and affectivities (Val and Rosset 2020). Therefore, instead of transferring decontextualized technologies, transformative social methodologies begin by revaluing agricultural knowledge, traditional diets, traditional health care and vernacular forms of construction through local culture and spirituality. These are then put in dialogue so that collective problem-solving and processes of transformation reality can be activated, as has been demonstrated in numerous successful campesino to campesino cases in Cuba (Machín Sosa et al. 2010), Central America (Holt-Giménez 2006), Brazil (Fernandes et al. 2021), Mozambique (Val 2021), India (Khadse et al. 2018), and in other La Via Campesina processes around the world (Rosset and Martínez-Torres 2012; Val et al. 2019).

One of the greatest lessons learned from emancipatory methodologies is that s/he who promotes a practice should not be paid¹⁴; the process should work without cost, through the pleasure of sharing and collective reflection. Peasants don't believe in the practice of another peasant if they believe that other person is just doing it because they are paid to do so. When cash transfers are doled out to encourage agroecological practices, people tend to do them for the 'love of the cash,' rather than for the 'love of agroecology,' a common refrain among indigenous peoples' organizations in Mexico (personal observation). When the money runs out, the practices are abandoned, because no intrinsic motivation exists.

Rather the purpose is to intentionally build long-term horizontal processes – and not short-cycle projects dependent on external funding – (Rosset et al. 2011), so that, through the communal design of rhizomal structures – not hierarchies – the web of human relationships can be revived, the capacity to create or rediscover concrete solutions to common problems can be recovered, dormant creativity can be awakened, and the power to act and create autonomy can be stimulated (Val 2021).

2.6. Six: build capacity to struggle and transform, not to conform (pedagogical principles)

As we face urgent contemporary challenges we are sowing agroecological peasant agriculture on all continents, in direct relationships from Peasant to Peasant in our territories.

¹⁴In Central America and Mexico, the *Campesino a Campesino* (Peasant to Peasant) movement lost strength when NGOs started paying promoters, as they neglected their plots, lost credibility with their neighbors and began to acquire the vices of professional extensionists, telling other peasants what to do.

With deep love for our way of life, we have created dozens and dozens of peasant schools and agroecology training processes in all continents, based on both formal and informal education. These schools and processes, which always combine technical and political training in horizontal processes, based on dialogues of knowledge and exchanges of experiences, are a force in our territories, providing our communities with the tools needed for the collective transformation of our realities. (*Declaration of Güira de Melena [LVC 2018]*)

Peasant agroecology schools and training processes are part of the intentional construction of horizontal processes. For the organizations assembled in La Via Campesina, the goal is to forge an agroecological peasantry capable of carrying out the transformations described above. In fact, the success of a long-term process depends on generational renewal through the development of highly politicized youth cadres and future leaders capable of transforming power relations, promoting structural changes, mobilizing struggle, building agroecological processes, and defending, decolonizing and depatriarchalizing the territory (Barbosa 2015, 2017; Barbosa and Rosset 2017a, 2017b; Rosset et al. 2019; McCune et al. 2017). The objective is to promote organic leadership and intellectuality through training spaces that combine technical-agroecological training with political-ideological education, so that the organizations have suitable facilitators to support the horizontal methodologies for collectively transforming reality (McCune et al. 2016). To be emancipatory, agroecology requires the construction of creative spaces for convivial training under communal control, in order to overcome the paralyzing official education in which one is taught to feel ashamed of being a peasant and which reproduces the coloniality of the bourgeois system of individualization and competition, and in which one is taught to be a 'know-it-all' who will teach peasants to be peasants. Unfortunately, as noted in Table 6, 'reformist agroecology' retains many of the characteristics of banking education and conventional extension.

Emancipatory education processes that nurture political struggle are proving very important in, for example, autonomous peasant agroecology schools and in *Peasant to Peasant* learning relationships, but need to transcend to encompass all levels of formal education (Ferguson, Morales, et al. 2019; Barbosa 2017), so that the logic of the dominant

Table 6. Pedagogical and epistemic principles of different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
- Knowledge created by corporations, universities and allied research centers which is then implemented by technicians trained in ag schools and other technical degree programs.	- Knowledge created by corporations, universities and allied research centers. - Transfer of 'clean technologies,' technicians trained in ag schools.	- Expert knowledge of technicians graduated from ag schools, and sometimes from agroecology programs. - Programs and projects in which technicians 'transfer' knowledge through an agroecological extension system, with demonstration farms and plots ['showcases'] and 'peasant schools' where technicians teach and orchestrate exchanges among peasants.	- Have their own internal processes for recovering, generating and sharing indigenous, localized knowledge. - Peasant protagonism. - Occur in horizontally organized spaces. - Peasant to Peasant. - Agroecological peasant schools developed by peoples' organizations themselves.

education system, which functions in a manner analogous to the established order, can be eliminated. In order to build an autonomous, transforming, emancipatory, and revolutionary peasant agroecology, it is essential to overcome the rationale that still exists in agroecology programs according to which professionals are responsible for ‘transferring’ knowledge through an agroecological extension system, with demonstration farms and plots, as well as ‘peasant schools’ where agronomists are the ones who teach and orchestrate exchanges among peasants.

The emancipatory processes created by social movements are vastly different, as they make the pedagogical experience an instrument of struggle by forming collective subjects ‘in themselves and for themselves’ (Barbosa 2017), and by using the school as a pedagogical mediator to articulate territories and drive and accelerate agroecological transformation processes (McCune 2017; McCune et al. 2016, 2017). Its students carry out painstaking grassroots organizing projects in each of their communities, building a multi-territorial learning structure which includes places beyond the school. The secret is to shape a highly territorialized, polycultural thinking of the mind (*sensu* Shiva 1993) that creates attachment to place and deep affection for the land, and offers opportunities to remain in the territory with dignity, and pragmatic orientation for *buen vivir* or ‘living well,’ as shown by the many peasant schools and universities of La Via Campesina, including the IALAs, or Latin American Institutes of Agroecology (Rosset et al. 2019).

2.7. Seven: act based on culture and spirituality, not on productivism (philosophical principles)

The core of our worldviews is the necessary equilibrium between nature, the cosmos, and human beings. We recognize that as humans we are but a part of nature and the cosmos. We share a spiritual connection with our lands and with the web of life. We love our lands and our peoples, and without that, we cannot defend our agroecology, fight for our rights, or feed the world. We reject the commodification of all forms of life. (Declaration of the International Forum for Agroecology, Nyéléni, Mali [LVC 2015a])

Emancipatory agroecologies are not based on productivism. This statement is perhaps the most difficult to understand for those who promote more superficial agroecologies, which are permeated by the same economic rationale of maximizing productivity on which the agronomic thinking of industrial agriculture was built, and which continues to guide those who try to impose and deliver agroecology from institutions¹⁵ (see Table 7). Transformative agroecology is a way of being, living, feeling, understanding life, acting, and living that far exceeds the economic understanding that dominates institutions (da Silva 2014). Although, on the one hand, it is a mode of production for the social reproduction of family and community, on the other hand, it is much more: there is something deeper, more enigmatic, more elusive that builds a deep relationship with the land, which must be understood from an esthetic, spiritual,

¹⁵Of course, this is not to deny the importance of productivity. In fact, agroecological science over at least the last 40 years has consistently shown that total production from agroecology is typically higher than from conventional monoculture (see data in Ch. 2. of Rosset and Altieri 2017). Beyond productivism, however, social movements understand agroecology as a way of life, and not as a technicality to be measured exclusively or even mainly by the criteria of neoclassical economic rationality.

poetic, and sensitive dimension, a mode or way of life (Giraldo and Toro 2020). Agroecology has arrived to update the relational ontology of ancestral *Agri-Cultures* (Val 2021; Barbosa 2020), but also to give meaning to more recent agroecologies, such as those practiced by neo-rural and urban farmers, as well as that of peasants who have rediscovered ecological knowledge and practices as a reaction to the disastrous consequences of the industrial agriculture model. This deep meaning is what emerges when people join social movements and collectives in which their lives take on a different significance.

Grassroots organizations usually understand this and make agroecology into a political and heartfelt act through their rituals, *místicas* and cultural practices (Martínez-Torres and Rosset 2010), which differ according to the cultural characteristics of each people or collective, but which share the ability to create an emotional and spiritual atmosphere that forges identities. This is a permanent reminder of the meaning of the struggle and organizes people into much closer ties than would be the case if the relationship were woven for exclusively productive motivations. The meanings, codes and values that circulate among peers are immaterial aspects shared in processes such as *Peasant to Peasant* (Val and Rosset 2020). Of course, in every exchange there will be an agroecological practice that engages in dialogue (Rosset and Martínez-Torres 2012; Martínez-Torres and Rosset 2014), but there will also be more: a sensitive communication that motivates and mobilizes, that incorporates the body as a whole, that revives the senses, that creates changes in the way of understanding things (Val et al. 2019;). This is what makes peasant agroecology a dialogue between forms of life instead of a simple technological alternative. What is communicated transcends the dialogue between people and includes the farm plot, the territory, and even interpenetration with the living soil.

Perhaps not enough emphasis has been placed on the fact that one of the greatest despoilments of industrial agriculture was the loss of the ability to act with the body, to trust the senses, to dialogue with nature and open up collectively to its mysteries, to find, through bonds of friendship, concrete solutions to common problems, making use of orality and direct experience as the most effective means of learning and living together (Giraldo and Toro 2020). But we must also say that this is exactly what emancipatory agroecology restores, and therein lies its mobilizing power: it makes people live an agriculture with deep roots, not motivated by subsidies, nor by elite market fashions, nor by short-term policies, nor economicism, but because this sort of agroecology is a life project with an enormous capacity to transform hearts, to regenerate community ties, to reinsert the culture into the ecological order of the inhabited place.

3. Final reflections: social principles of emancipatory agroecologies vs. institutional reductionism

Agroecology is a way of life and the language of nature that we learn as her children. It is not a mere set of technologies or production practices. It cannot be implemented the same way in all territories. Instead it is based on principles that, while they may be similar across the diversity of our territories, can be and are practiced in many different ways, with each sector contributing with the hues of their local reality and culture, while always respecting Mother Earth and our common, shared values. (Declaration of the *International Forum for Agroecology*, Nyéléni, Mali [LVC 2015a])

Table 7. Philosophical principles of different agricultures and agroecologies.

Industrial agriculture	Neoliberal agroecologies	Reformist agroecologies	Emancipatory agroecologies
<ul style="list-style-type: none"> - Profit-oriented. - Attempts to expand markets, financial speculation. - Seeks to keep wages low in cities and control countries via food dependence. 	<ul style="list-style-type: none"> - Take advantage of the environmental crisis created by the agro-industrial system to do new business and try to maintain or reestablish the conditions for ongoing capitalist production. 	<ul style="list-style-type: none"> - Make gradualist changes to the system, through a superficial and productivist agroecology, which is overly dependent on external support and/or financing and public policy programs that can change or disappear from one government to the next. 	<ul style="list-style-type: none"> - Autonomous, deep, ontological/spiritual agroecology. - Way of life, of being, and of existing in the world. - Create autonomy at all levels. - Are historical and tied to specific territories.

Those who promote non-emancipatory agroecologies not only fail to address most of the serious problems generated in peoples' territories by capitalism and the industrial agriculture model, but also run the risk of perpetuating them by failing to understand these principles. Although the promotion of a technical alternative different from monoculture and its chemical inputs is better than the technological model of the Green Revolution promoted during the last half century, the other mostly harmful practices of rural development programs and projects remain intact. The problem is that if we do not abandon the way of doing things of the colonial machinery of development (Escobar 2011), we end up converting use values into exchange values, we run the risk of individualizing and commodifying relations in rural communities through projects and direct cash transfer programs (Rosset 2019), we end up incorporating peoples into hierarchical structures of domination and control, and we continue the colonization project of teaching the belief that peoples can be only saved from an undignified condition called poverty through the intervention of an external benefactor, as well as teaching them to think and act based on the meanings provided by economic rationality (Giraldo 2019). With the institutionalization of agroecology in the agendas of governments or social welfare agencies, the *technological means* change, but what remains intact is delegation of authority and real decision-making to technocrats and social entrepreneurs, the authority to decide who needs what, as well as the ways in which the system of externally created needs will be satisfied (Illich 2016).

Let us think of a hypothetical case that reflects this logic. It starts with a political candidate promising a program imagined by him – typically a man – and his team, in which he decides what the population needs and chooses the means to satisfy it. Once he wins the elections, the ruler orders the technocrats of some government ministry to design an agroecological program. Officials follow the instructions and develop a policy instrument based on current regulations and the budget they are allocated. However, since they do not know how to do anything else, they draw up a 'model of intervention' that includes the provision of external biological inputs, the (re)organization of the communities by the state, the implementation of 'training' programs through peasant schools – with agronomists as teachers and farmers as pupils – and the support of extensionists who will visit the farms one by one and tell the peasant farmers what to do and how to do it. They

publish bids to purchase production materials, animals and seedlings that will be delivered to the ‘target’ group. They design a recruitment strategy with a generous subsidy via a direct monetary transfer to debit cards from a commercial bank, that each peasant will receive, with which they will pay the beneficiaries to plant exogenously designed agroecological systems. They centrally design the ‘agroecological’ one-size-fits-all planting designs in which the same polyculture or agroforestry system is implemented everywhere, regardless of whether the species are adapted or not to the various local biomes. The public policy instrument would be incomplete without conducting entry and exit surveys to draft ‘impact’ reports, with the percentage of the planting goal met each month and year. The technicians get reprimanded if ‘their’ peasant families don’t meet the goals, and they threaten the families if they fall behind or fail to exactly follow their instructions. Government auditors visit the villages to check if the supposed hectares have really been planted with the correct designs. Cash payments are withheld if failure to comply is detected. Of course, and to top it all off, they transform agroecological families into political clientele.

To paraphrase a statement from the Mexican Zapatista movement,

The logic is this: you have your agroecology, and now I [the politician] support it with a payment program, you come to depend on this program, and then, when the next election comes around, you have to support my ‘good’ government, vote for us, and bring out the vote for us, because if another party comes in they are going to cancel the program that pays you for your agroecology. *Thus you become the pawns of the political parties.*¹⁶

This is the logic that has often prevailed in recent attempts at government institutionalization of agroecology, but which is essentially identical to that used by many NGOs, foundations, and international organizations. Although in many cases the professionals who design these policies have good intentions, we already know the disabling effects of this surprising lack of political imagination: they make communities dependent on institutionalized means that impute needs and prescribe solutions; they disable the autonomous creation of life fulfillment; they increase the control of external institutions that end up managing the time and actions of communities: they deprive peoples of the collective imagination they need to define their own means and ends; they teach peoples to desire professional services and make them vulnerable to expert knowledge; and they stifle political dissent once certain handouts are offered, while the system is reproduced (Illich 2006; 2016; Rosset and Barbosa 2021).

A pathology that is part of institutional inertias, particularly those of NGOs, is what we call ‘*projectitis*,’ that is, the belief that nothing can be done without entering into a project cycle, in which a call from a donor is met with a grant proposal, money is received, and professional staff are hired whose job it is to operate and supervise the implementation of an institutional intervention (Rosset et al. 2011). During the project, the planned activities are carried out, but usually – and the exceptions are unfortunately rare – at the end of the project cycle, when the money runs out and the technicians stop their visits, the

¹⁶The original quote says:

La lógica sería ésta: tienes una autonomía, ahora la reconozco en una ley y entonces tu autonomía empieza a depender de esa ley y ya no sigue sosteniendo sus formas, y luego, cuando va a haber un cambio de gobierno, entonces tienes que apoyar al gobierno ‘bueno’, y votar por él, promover el voto por él, porque si entra otro gobierno van a quitar la ley que te protege. Entonces nos convertimos en los peones de los partidos políticos ... (Subcomandante Insurgente Moisés and Subcomandante Insurgente Galeano 2018)

situation reverts to the previous state: infrastructure is abandoned and deteriorates, the animals that were gifted end up in the soup, and people end up as they started, or even worse, because they have been motivated to continue to seek benefit through similar projects. Meanwhile the NGO grantees, through their all-important management reports, show their donors their immense achievements and the need to continue their innovative projects. It is unbelievable that resources are wasted like this, and that simulations such as these are still commonplace in rural development interventions in the countries of the global South (Chambers 1993; Maren 1997).

Fortunately, social movements, peasant organizations and popular collectives that promote agroecology have been building sophisticated and innovative tools that transgress these toxic practices. For decades they have developed creative ways to weave long term, self-directed processes in which they fight the globalized agri-food empire without the mediation of institutions. Their tactics are simple: they build a peasant rhizomal network through self-organization and horizontal methodologies based on dialogues of knowledge and life experiences (Val et al. 2019). Through their own collective agreements and communal arrangements they reorganize their territories, reconquer communal spaces, regenerate their personal and collective agency, and enable autonomous paths for transforming their realities (Esteva 2014; Rosset and Barbosa 2021; Rosset et al. 2011). Through principles such as those listed above, organizations make use of their grassroots methodologies and social pedagogies to recover their power to act collectively without depending on centralized and bureaucratized apparatuses, showing how obsolete those institutional modes of intervention can be.

It is likely that institutions design such bad projects because it is the best they can do with the belief systems that sustain them, the pyramidal structures in which they operate, their administrative centralism, and the multiplicity of regulations on which they depend. However, when there is a different correlation of forces, organizations cease to grant authority to bureaucrats or a group of leaders to manage their lives, while creating another type of relationship with dominant institutions, subordinating the institutions to their collective needs, putting them at the service of their own agenda and on their own terms. Of course, these are long processes, but the goal of revolutionary agroecological struggles is always the same: that the communities, collectives and organizations collectively manage their own production, distribution and consumption mechanisms and their own conditions of existence.

If we wanted to define in one word what this is all about, the word would be *autonomy* (Rosset and Barbosa 2021). Not just food autonomy (or food sovereignty), but also autonomy to exchange, to heal, to clothe, to build, to learn, to transform, to self-govern. It is about people recovering the collective power to decide on their own life and territory, the ability to act collectively in unique places based on ecological and cultural characteristics so that, little by little, the capitalist market apparatus and the state become un- or less necessary (Esteva 2013). What we call autonomy, or sovereignty – more common in agroecology jargon – means re-appropriating the definition and satisfaction of what is considered sufficient to live, while deactivating the disabling effects of the logic of development. This does not imply isolation; on the contrary, autonomy demands linking, articulation, assembly: weaving positive synergies between community autonomy and external allies. This relationship is quite different from the redemption of the poor through the interventionist aid of modern institutions. It means instead to collaborate

for autonomy, so that, through the conjunction of diverse powers, agroecological peasants awaken their deepest abilities of social invention, the recovery of local knowledge and the collective creation of new knowledge, thereby releasing the arrested powers without which they cannot take charge of their most immediate problems, and to create emancipatory processes of struggle together with the city's popular sectors (Val et al. 2019).

A common question is whether it is possible for the State to design programs or policies capable of empowering emancipatory social processes. Instead of interventions generating dependency, demobilization, and the eclipse of the autonomy of the peoples, could they strengthen and energize existing emancipatory efforts and open the possibility for the emergence of new ones? The answer ought to be positive. Many possible state policies could support emancipatory processes, at least in theory. The most obvious would be an agroecological agrarian reform, accompanied by state investment to build a dense network of roads, to facilitate the reciprocal exchange of goods and services between rural communities, and between rural and urban communities. In addition, the construction of infrastructure for local, embedded, nested or territorial farmers' markets (van der Ploeg, Schneider, and Jingzhong 2012; CSM 2016), as well as investment in community rainwater harvesting systems and rural cisterns to sustain agroecological production which, especially in dry areas, would be very important (Gonzalez de Molina et al. 2019). It would be ideal to have resources made available to grassroots organizations for the construction and operation of their own autonomous agroecological training schools and intercultural peasant universities, and to have support for *Peasant to Peasant* processes, so that the dissemination of agroecological practices, instead of being based on technical assistance and classical extension, favors the mobilization of internal solutions to common problems, with broad participation of peoples' organizations. It would also be desirable to create many more public education programs in agroecology, from preschool to university level, as well as to release substantial public funds for research in agroecology and on, for example, decentralized and territorialized alternative energy sources that nurture agroecological agrarian reform processes, and that offer alternatives to build energy autonomy in the communities. And in the city, urban agriculture processes and integral projects of urban and peri-urban habitat with ecological, community and productive neighborhoods should be supported, so as to create new urbanities that are not based on the destruction of peripheral territories. Yet any program carried out by the State runs the risk of cooptation, clientelism and corporatism. This is a dilemma that can only be addressed by well-organized movements with a high degree of political consciousness.

Whatever the support provided by the State or partner organizations for the construction of emancipatory agroecologies, what must be understood is that the greatest lesson of agroecological processes such as *Peasant to Peasant* and social movement schools is the social power that can be mobilized for change when intentional strategies are created to increase peoples' greatest asset: *the wealth of relationships*. Through this community, non-capitalist wealth, it is possible to create a relational structure that stimulates mass participation and collective creativity, in which everyone is both an receiver and a creator of local knowledge. In these communal designs, knowledge is not concentrated in one place, as occurs with so-called expert knowledge and its hierarchical designs,

but rather each link, including science, contributes new knowledge to the collective pool. The key lies in knowing how to build a swarm of intelligences distributed in a network, sharing flexible agroecological practices that can be imaginatively adapted to the conditions of each place. The revival of autonomy in these communal designs works because community networks can activate relational wealth and build meaning in a networked architecture on which new knowledge can be created through decentralized experimentation, and make it flow through orality and direct experience (Giraldo 2019).

This is the complexity created by social movements that we consider urgent for committed people to understand, so that they stop designing, or being complicit in, ever more irresponsible projects and programs. We must learn that agroecology, through peoples' innovation, has not only contributed ecological practices, but also creative social processes from which we must draw inspiration if we wish to build transformative, emancipatory, and revolutionary mobilizations and collective transformations.

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