Reflecting on Decoloniality and Justice in Latin American Seed System Transformations

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Over the last 20 years, Latin American ‘seed guardian networks’ have become increasingly influential in seed system transformations. This is a recent chapter in the decades old transition of seeds from deeply rooted commons to a global commodity, which constantly favours capitalist industrialism over all other ways of being. The emergence and consolidation of these networks is tied to the intensification of neoliberal reforms that undermine Indigenous, Afro-Latino, peasant, agroecological and organic agricultural practices. As part of this process, outliers connect in distributed networks to fight for the inclusion of their practices and visions, exerting pressure on hegemonic actors to transform national seed policies. This article sets out to argue that descriptions of contemporary seed systems as an overlap of antagonising ‘informal’ and ‘formal’ systems could be reviewed from a decolonial perspective. This can uncover profound differences on ways of being and knowing that raise important questions about justice. Reflecting on deliberate change of Latin American seed systems from a decolonial perspective may shed light on pathways to move towards a transmodern pluriverse. A road that requires systems change governance practitioners to engage more actively with peripheral alternatives, while critically interrogating our own role in the continuation of modernity/coloniality.

transformation; seed systems; justice; transmodern

1. Seed systems\(^1\) in transition

Since the late 19\(^{th}\) century, seeds have transitioned from being a deeply rooted commons and public good to an increasingly privatised commodity. This has been enabled by advances in plant breeding and

\(^1\) “...The totality of processes that are part of the development, maintenance, production, storage and diffusion of cultivars.” (Wattnem, 2016)
genetics (Gutiérrez Escobar & Fitting, 2016; Senini, 2018; Wattнем, 2016), as well as an encroachment of intellectual property rights (IPR) over germplasm (Luby & Goldman, 2016). After the second world war, industrialisation of agriculture was accelerated in Europe to achieve food security in a time of high uncertainty (Gevers et al., 2019). The ‘green revolution’ that soon followed, established a global design of agricultural development for ‘third world nations’ based on extensive monocultures that needed ‘improved seeds’, sophisticated machinery and large amounts of agrichemicals (Felicien et al., 2016; Vidal & Escobar, 2019). Through these programmes, ‘developing countries’ were discouraged from investing in their local agricultural systems, privileging food aid over indigenous agriculture as a solution to famine and malnutrition (Rawlinson, 2021). Industrialisation of agriculture has certainly increased yield and quality for the few crops subjected to scientific intervention (Senini, 2018). However, there has been a simultaneous decay of genetic diversity leading to increased homogeneity of crops and reduced resilience (Gevers et al., 2019; Volkening, 2018). Furthermore, the increase in production promised by the ‘green revolution’ appears to have stagnated and has led to soil degradation and other environmental issues (Felicien et al., 2016).

The last 30 years have seen an increased financialization of food via agricultural derivatives (Gevers et al., 2019) and alarming levels of concentration in the seed industry (Felicien et al., 2016; Kloppenburg, 2014; Senini, 2018). According to some accounts, ten companies control around two-thirds of global proprietary seed (Wattnem, 2016). In recent years, the global seed market went from being dominated by six companies2 (Volkening, 2018) to three: Bayer, Dow and ChemChina (Vidal & Escobar, 2019). This concentration is enabled by legislative framings of seeds as private property that privilege private breeder rights over all other system actors (Felicien et al., 2020) not only affecting small-hold farmers, but also public and small private plant breeders (Kloppenburg, 2014). As Gevers et al. (2019) point out, seed regulation responds more to a “collection of legislative packages” than to an individual source. These laws include IPR on plant material, plant breeder rights (PBR), phytosanitary and biosecurity norms, commercialisation and quality standards, and registration and certification schemes (Felicien et al., 2016; Gevers et al., 2019; Vidal & Escobar, 2019; Wattнем, 2016).

Regarding IPR, the ‘International Union for the Protection of New Varieties of Plants’ (UPOV) plays a pivotal role. This intergovernmental organisation was established by the ‘International Convention for the Protection of New Varieties of Plants’ in 1961, with revisions in 1972, 1978 and 1991. In this scheme, breeders can obtain IPR over plants in the form of plant variety rights (PVR) by fulfilling criteria of distinctiveness, uniformity, stability, and newness (DUS criteria). UPOV standardisation led to innovation in the sector but further marginalised peasant seeds (Gevers et al., 2019) and others, since it excludes many farmer bred or organic cultivars (Kloppenburg, 2014). Past versions of the UPOV convention allow some freedom to multiply and use seeds3. However, the 1991 convention grants breeders exclusive rights to protected varieties, effectively prohibiting seed exchange amongst farmers (Senini, 2018; Wattнем, 2016). UPOV now has 77 members, 17 states bound to the 1978 act, and 58 states and 2 organizations affiliated to the 1991 act4. Another important IPR tipping point came with the World Trade Organisation ‘Trade-Related Intellectual Property Rights (TRIPS) agreement’ implementing IP protection for plant varieties5 in 1994 (Senini, 2018).

These supranational agreements inform seed policy at a national level, generally promoting the standardization of seeds (García López et al., 2019). However, the multi-level nature of seed regulation

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2 Monsanto, DuPont, Syngenta, Bayer, Dow, and BASF.
3 The 1978 version allows the use of protected varieties by breeders and seed saving (the practice of keeping reproductive material to resow in future seasons) by farmers.
4 For a specific list visit: https://www.upov.int/edocs/pubdocs/en/upov_pub_437.pdf
5 A genetically modified plant can be patented because a technical process was used in its development.
leads to contradictions at the national level when responding to supranational level agreements. One dimension of this issue is the tension between national sovereignty over genetic resources and supranational pressures to conform life forms to IPR standards (Wattnem, 2016). Additionally, these legislations clash with traditional community-based seed systems (Senini, 2018) eroding their capacity to save seeds for resowing and effectively diminishing farmer sovereignty over seeds (Kloppenburg, 2014; Wattnem, 2016). This has not only affected small-hold farmers but also public sector breeders, aiding the process of concentration by large scale transnational corporations (Kloppenburg, 2014).

The intensification of pro-industry seed legislation that undermines existing non-industrial practices has led to the emergence and consolidation of seed sovereignty social movements (SSSMs) in Latin America. Over the last two decades, SSSMs have become increasingly influential in the transformation of national seed systems. This article focuses on a limited number of ‘seed guardian networks’ (SGNs), which are part of SSSMs questioning existing power structures in global food systems. The following descriptions are constructed from grey literature and interviews of participants from SGNs operating in Colombia, Ecuador, Mexico, and Venezuela. It is preliminary data of ongoing PhD research by the author funded by the Australian Government’s International Research Training Program Scholarship. SGNs include peasant, indigenous and Afro-Latino communities, ‘neo-peasants’, foreign and national NGO’s, urban academics and professionals, amongst other actors. These networks defend the rights of peoples to produce, store, improve, exchange, and trade their seeds according to indigenous, Afro-descendant, peasant, agroecological and organic agricultural narratives-practices. They can be described as decentralised, place-based, trans-local coalitions of people and organisations committed to safeguarding landrace, native and creole seeds, and their associated practices of care. Narratively, SGNs participants understand seeds as the starting point of nourishment, but also as free, living entities that embody the origin and regeneration of existence. For them, humans have a deep relationship of nurturing and care with seeds, a connection that mobilises narratives of seeds as being part of family and community. Plural nurturing practices have led to a wide diversity of agricultural seeds influenced by generations of localised knowledge(s), experiences, cultures, and traditions. SGNs understand seeds as an intergenerational commons beyond government and corporate control, sometimes going as far as framing seeds as entities with agency and rights of their own.

On a practical level, SGNs connect communities, families and individuals that have taken upon themselves to protect landrace, creole, and native seeds. Participants engage in agricultural practices inextricably tied to indigenous, Afro-Latino and peasant identities, contemporary agroecology and organic agriculture, or hybrids between them. This is generally perceived by others as radical, which often makes participants feel like outliers even amongst their neighbours. Seed guardians (SGs) are widely diverse but engage in two common practices: Seed guardianship and seed exchange. (i) Seed guardianship relates to the conservation of seeds that are viable in a specific territory. These seeds are stored in a dedicated space which can be part of a family home or a small community building. These ‘seed houses’ or ‘seed funds’ are made with locally available materials and provide shade and cool temperatures for seed preservation. Seeds may be stored in upcycled glass jars, small plastic bags or clay pots vacuum sealed with wax. All containers are labelled with seed names and some SGs keep records of seed origin and other relevant data. Seed houses do not store static collections, SG’s must constantly (re)sow seeds to regenerate them and preserve their vitality. (ii) Exchange can be done as a gift, through barter or commercialisation. SGs may gift seeds to neighbours or other communities interested in

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6 For examples in the case of Ecuador see Gevers et al. (2019), and for Colombia see Gutiérrez Escobar & Fitting (2016), Vidal & Escobar (2019), and Silva Garzón & Gutiérrez Escobar (2020).
7 Urban residents who move to rural areas to create agroecological projects, changing their lifestyle towards a subsistence-based way of life.
growing different crops. They may also exchange seeds by bartering with other SGs or non-participant farmers that attend SGNs events. Finally, SGs sell their seeds to other interested parties which sometimes happens with the aid of SGNs databases of available seeds and their respective guardians. Contact also happens between individuals via social media or messaging apps widening the geographical scope of trade which leads SGs to mail their seeds over long distances. Seed exchange is very active but is not without risks; SGs mainly worry about contamination from industrialised or transgenic seeds, since there is no convenient way of determining the origin of a seed procured by a stranger and crossbreeding is highly likely. The other major perceived risk is the appropriation of landrace, native or creole seeds by corporate actors to use in private breeding programmes. SSSMs refer to this as ‘biopiracy’, the appropriation of ‘informal system’ seeds and the indigenous/traditional knowledge associated to them without the consent of peoples involved in seed development (Senini, 2018; Shiva, 2001; Vidal & Escobar, 2019).

SGNs meet virtually and physically to share knowledge about seeds, discuss the current state of seed systems, organise, and engage in collective action. The networks are fundamentally horizontal but are coordinated by small groups of committed participants aided by volunteers, often including urban professionals. These ‘facilitators’ organise working groups or workstreams that attend to different dimensions of their mission, including:

1. **Internal and external communication strategies.** This includes updating participant databases, organising virtual meetings, publishing virtually and physically on related topics (e.g., seed catalogues, books, reports, pamphlets, podcasts), developing consumer awareness campaigns, and managing internet presence with special emphasis on social media.

2. **Participant training.** This includes participant empowerment, gender equality training, knowledge sharing on seed production and improvement, seed house conditioning, commercialisation, public policy, legislation, agroecology, risks of transgenics, amongst others.

3. **Advocacy.** This includes the development of strategies to resist legislation that undermines non-hegemonic practices, participating in lawsuits and other legal options to transform current laws, and pushing for recognition of practices by governments (e.g., national corn day in Mexico or national peasant seed day in Venezuela).

4. **Research.** This includes the development of methodologies or programmes related to all other workstreams. Participatory seed improvement programmes and participatory guarantee systems for quality assurance are of special interest.

5. **Seed Guardian encounters.** These are periodical events where participants can get together to exchange knowledge and seeds. These events may be network specific encounters or attached to other agricultural sector or community events. Guardians may sell, exchange or barter seeds in these spaces.

SGNs simultaneously resist hegemonic narratives-practices and propose alternatives. These networks started as a response to the intensification of neoliberal policies that opened spaces for transnational corporations while curtailing possibilities for non-industrial practices. Initially, the activities of the networks were mostly directed towards resisting legislative changes and getting their voices heard. Over time, SGNs have been able to consolidate, effectively creating protected spaces for non-hegemonic seed practices. The amalgamation of Afro-Indo-peasant practices with agroecology and organic agriculture facilitated by SGNs, has led to a revitalisation of the non-hegemonic side of seed systems. This organisational process has enabled the emergence of an influential trans-local innovative space that increasingly participates in seed system transformation. This ‘informal system’ keeps up the pressure so that the sector recognises its non-hegemonic side while demanding accountability from governments to protect citizens and ultimately transcend corporate privileging. Despite being under constant threat
from both government and industry pressures, these spaces have connected otherwise isolated outliers. These networks have been able to open small cracks in hegemonic spaces despite a pervasive industrialist bias, often with the help of allies that leak documents, share insider information, or open spaces for social movement participation.

Afro-Indo-peasant agricultural practices have always been a part of Latin American food systems. In fact, over half of food in the region is produced by smallholders participating in ‘informal’ practices (Felicien et al., 2016; Wattnem, 2016). However, this side of the food system has been constantly marginalised, since it is perceived as an obstacle in the road to modernisation. In fact, food sector social movements are generally excluded from decision making in the region. Relevant governance spaces are almost exclusively composed by incumbents with an industrialist bias, be it representatives from government, academia, or industry. This has translated into a deep mistrust of the hegemonic side of the system, as non-hegemonic actors feel policies always benefit big transnational producers without thinking of impacts on other sector actors.

2. Beyond the ‘formal’ and ‘informal’

Scholars tend to distinguish between two seed systems, that may be defined in different ways but share similar contours (See Table 1). These systems are intertwined, often overlap, and constantly adapt to each other’s pressures. However, pressures are asymmetrical since growth of transnational seed corporations depends on the erosion of ‘informal seed systems’. Additionally, there is a state-level “agro-industrial bias” product of a perceived superiority of the ‘formal system’, supported by the aforementioned seed laws that continuously curtail possibilities for ‘informal systems’ (Felicien et al., 2016, 2020; Wattnem, 2016).

| Author                  | Name                | Description                                                                 |
|-------------------------|---------------------|-----------------------------------------------------------------------------|
| (Wattnem, 2016)         | ‘Formal’            | Regulated scientific plant breeding with public and private participation.    |
|                         | ‘Informal’          | Farmer-led unregulated or loosely regulated.                                |
| (Felicien et al., 2016) | ‘Modern’            |                                                                             |
|                         | ‘Traditional’       |                                                                             |
| (García López et al., 2019) | ‘Industrial’   | “...large-scale production and supply of commercial seed varieties” subject to “…strict quality control based on standard physical and physiological criteria.” (p. 829). |
|                         | ‘Local’             | Dependent on seed saving practices and trust-based community exchanges sustained by peasant, indigenous communities and small or medium-scale farmers. |
| (Bernstein, 2014)       | ‘Global capitalist agriculture’ | Large-scale industrial farming.                                             |
|                         | ‘Peasant mode of production’ | Small-scale customary farming.                                             |

These allies can be former participants of social movements who get a job in relevant government agencies, often as a consequence of left-leaning politicians gaining power.
Despite the overlap of these two systems, there are somewhat distinct seed types in each camp. Seeds are categorised in two groups: (i) Certified or improved seeds of the ‘formal system’; and (ii) Native, creole, landrace, heirloom, or local seeds of the ‘informal system’. Improved seeds are hybridised to acquire desirable traits and must be purchased seasonally to produce the same variety (Volkening, 2018). Farmers “license” the use of these seeds as part of a “rental agreement” of sorts that prohibits saving and reuse of germplasm (Kloppenburg, 2014; Luby & Goldman, 2016). Regarding the ‘informal system’, native seeds originate from the same place where they are sown. Creole seeds may not come from the same place but have been adapted by farmers to local conditions, including adapted certified seeds (Vidal & Escobar, 2019). A landrace or peasant variety has not been subjected to formal improvement but transformed by the traditional knowledge of peoples directly involved in growing it (Gevers et al., 2019). Finally, heirloom varieties have been historically saved and maintained over long periods of time by people (Volkening, 2018). A narrative has consolidated framing industrial or transgenic seeds as unique or improved while all others are understood as basic, conventional, or simply as raw genetic material (Shiva, 2001; Silva Garzon, 2019). Furthermore, seeds in the ‘informal system’ are considered uncertifiable, since they are associated with low quality and productivity, as well as spreading disease (Vidal & Escobar, 2019). These imaginaries seem to negate that collectively produced informal seeds have been necessary throughout history for all genetic improvement programs (Felicien et al., 2016). The ‘formal system’ has always been enabled by ‘informal system’ germplasm (Wattne, 2016) often through ‘Biopiracy’, while farmers are simultaneously persecuted for ‘piracy’ by ‘formal system’ actors when they breach seed packet licenses (Kloppenburg, 2014).

In the case of India, Shiva (2001) sees two paradigms of biodiversity at play: One, a destructive genetic extractivism that disregards the needs of poor farmers; the other, recognition of life’s interdependence in its role supporting farmer’s livelihoods. In the case of Colombia, Vidal & Escobar (2019) see conflicts between two forms of understanding seeds: One where seeds become the capital of agribitech industry and knowledge associated with their cultivation and preservation is privatized; and another where seed, territory and knowledge are woven to conceive and use seeds as a common good (Vidal & Escobar, 2019, p. 41). Effectively, Colombian SSSMs reject the notion of seeds as commodity or property, rather understanding them as “…living beings intimately related to humans and... [belonging] to specific agricultural systems.” (Gutiérrez Escobar & Fitting, 2016, p. 718). This article sets out to explore these contrasting systems as inextricably tied to the colonial process kickstarted in 1492. The often-opposing narratives and practices in the global seed sector emerge from profound differences in worldviews or what is our reality (ontology) and how we know or understand what is (epistemology). Analysing Latin American seed sector transformations evidences the tensions between the modern and non-modern, diverging concepts of progress or what it means to live a good life. Furthermore, it raises questions about power, justice and what constitutes valid knowledge. It begs to move beyond ‘formal’ and ‘informal’ categories by exploring the profound differences of the ‘Global South(s)’ and the deep-seated assumptions naturalised by coloniality, the

...complex and multidimensional legacy of divisive, exploitative, stratifying and hierarchical forms of power (e.g., Eurocentric/Western-centric hegemony), forms of knowledge (e.g., technoscientific instrumental rationality), forms of (inter)subjectivity (e.g., possessive individualism), forms of human interrelations (e.g., racism, classism, heteropatriarchalism, etc.), and forms of human dominion over land and mastery of “nature” (e.g., anthropocentric property/dominion/sovereignty) that have become entrenched and

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9 Coloniality was conceptualised by Anibal Quijano and is used interchangeably with ‘coloniality of power’ and the ‘colonial matrix of power’.
continue to be reproduced throughout the world as an ongoing consequence of colonization. (Figueroa Helland & Lindgren, 2015, p. 432).

3. The Modernity/Coloniality continuum

For Latin-American decolonial option scholars, modernity is a “...set of self-serving narratives.” (Mignolo & Walsh, 2020, p. 110). This story has told us that humans are superior to nature, that endless accumulation is possible through its subjugation, and that material growth equals progress (Figueroa Helland & Lindgren, 2015). This overarching myth of a standard of civilisation originated in Europe some 500 years ago when Iberic peoples invaded the land now called America. This event inaugurates modernity as the first known fully global world-system, which (despite constant attempts to conceal it) was colonial from the start (Quijano, 2014). The concept ‘modernity/coloniality’ emerges from the realisation of modernity and coloniality as indivisible. There is simply no modernity without colonialism and the continuation of the systems of power, management and control it constituted (Figueroa Helland & Lindgren, 2015; Mignolo & Walsh, 2020).

15th century colonialism ordered the world from a conception of European superiority, stablishing first and foremost a racist and patriarchal heterarchical system. For Quijano (2014), there are two foundational memes to the story of Euro-centred Modernity:

1. Human civilisation has a linear trajectory from the natural/primitive to Europe, making all non-Europeans pre-European and thus inferior.

2. The differences between Europe and non-Europe are of (racial) nature and not the result of a history of power.

Modernity/Coloniality and all its institutions were produced by the interaction with, domination and exploitation of non-Europeans (Grosfoguel, 2011). This was achieved through extraction of non-European cultural discoveries useful for the core, repression of knowledge production, and forcing the colonised to partially learn the dominant culture in order to reproduce domination (Quijano, 2014). This process led to a duality-based ‘otherisation’ that framed multiple peoples as an absolute deviant ‘Other’. Throughout history, multiple attempts have been made to ‘save’ these inferiors: Be it by being forced to convert to Christianity, correcting their backwardness via a civilising mission, aligning with the developmentalist project, or being further homogenised by the globalisation of neoliberalism (Esteva, 2010; Grosfoguel, 2008, 2011; Mignolo, 2015).

No matter the strategy used, this has always been a project of Europeanisation (Quijano, 2014). Western Europe was understood as the protagonist and sole producer of modernity until the 20th century, when the U.S.A. positioned itself as the endpoint of linear history (Mignolo & Walsh, 2020). Whichever country is seen as the beacon of modernity, the Western cultural expansion was never solely “...economic and political but fundamentally epistemic” (Mignolo & Walsh, 2020, p. 137). It positioned “...all other cultures as primitive, pre-modern, traditional, and underdeveloped.” (Dussel, 2012, p. 39), as living in an infantile stage of history. This civilising project may be described as the “...layered intersection of anthropocentric, androcentric, heterosexist, rationalist, Euro/Western-centric, modern/colonial, racialized, industrialist/developmentalist, capitalist, and ableist systems of power.” (Figueroa Helland & Lindgren, 2015, p.438). Western knowledge created these systems by concealing its

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10 A heterarchy refers to a system where elements are unranked or can be ranked in different ways.
11 The basic units of stories, memes are the foundations of belief systems and perspectives within any given system that establish the relationships and behaviours within the system (Riedy, 2020; Waddock, 2015).
bodily and geographical epistemic location, assuming a “...universalistic, neutral, objective point of view” (Grosfoguel, 2011, p. 4). This has resulted in multiple asymmetrical core-periphery arrangements that have marginalised all those outside of these overlapping systems of power (Figueroa Helland & Lindgren, 2015; Mignolo, 2015). These peripheral ‘Others’ are the ‘Global South(s)’, a concept which signals onto-epistemic difference\(^\text{12}\) rather than geographical.

These systems of power did not stop with the end of colonial rule (Grosfoguel, 2008; Mignolo & Walsh, 2020) and are still perpetuated not only by the core but by the westernised elites of postcolonial countries (Figueroa Helland & Lindgren, 2015). This is tied to the reinvigoration of Modernity/coloniality as Development, the discourse which defines most of humanity as ‘underdeveloped’. It emerged after World War II as Western Europe and its colonial administrations were in crisis. It was at this moment that the U.S.A. positioned itself and other industrialised nations at the apex (Misoczky, 2011; Sachs, 2010). Post-development (PD) scholars describe the ideology of development as a way to keep postcolonial countries from joining the communist system and affiliate to the capitalist logic of market privileging and perpetual accumulation; thus maintaining the international division of labour borne by modernity/coloniality (Ziai, 2017). The discourse of development, now understood as a scientific form of knowledge (Grosfoguel, 2011) has become so diluted and naturalised as a force of social change that appears to be unquestionable (Ziai, 2017). This technocratic and managerialist intervention in the lives of the planet’s majority, perpetuates the hierarchisation of knowledge(s) produced by coloniality (Misoczky, 2011; Ziai, 2017). It sustains the idea of deviance from an universal Eurocentric norm (Ziai, 2017) and the globalisation of Westernization (Sachs, 2010). As such, the Development model is also a “…mental, cultural and historical construct that has colonized the...world” (Beling et al., 2018, p. 305).

The ‘colonial matrix of power’ (the invisible side of modernity) can be framed as the origin of the multiple global crises we presently face (Figueroa Helland & Lindgren, 2015). The ecological impacts, inequality and cultural homogenisation produced by the ‘developed’ way of life proposed by this model of civilization cannot be ignored (Sachs, 2010; Ziai, 2017). Postmodernity has been unable to transcend coloniality since it continues the universalising mission of Western being, by ignoring the metanarratives of the non-modern\(^\text{13}\) (Mignolo & Walsh, 2020). Additionally, interculturality as horizontal dialogue may be impossible in postmodernity since relations of difference are still asymmetrical and ‘otherness’ is only allowed access, or is integrated to the frame of reference (Añazco, 2019). However, there are other options; as Dussel (2012) points out, the “enlightened hegemony” of modernity/coloniality has only lasted for little more than two centuries. This timeframe has been insufficient to eliminate or fundamentally transform all ‘othered’ cultures which have survived in the peripheries. The resurgence of the ‘non-modern’ exemplified by seed guardian networks, raises questions regarding intercultural dialogue and epistemic justice. These two key elements are critical for transformations towards fair and sustainable seed systems.

4. Towards Fairer Latin American Seed Systems

Latin American seed systems are complex, they touch upon many dimensions (political, economic, socio-technical, cultural...etc.), involve multiple actors with diverging worldviews and futural visions, and emerge from interactions at multiple levels and geographic scales. The complexity of seed systems calls

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\(^{12}\) Differences in ways of being and knowing.

\(^{13}\) Non-modern denotes the “…coexistence of temporalities and modes of living and thinking that are neither premodern nor postmodern.” (Mignolo & Walsh, 2020, p. 117).
for: (i) a structural focus on justice, and (ii) tapping into multiple intersecting conceptualisations of justice. Structures are dynamic “...forms of organization that produce social positions and roles, channelling action, and...circumscribing the possibilities that are open to, accessible by, or closed for people.” (Gilson & Kenehan, 2021, p. 10). Structural injustices emerge when these processes increase the power and opportunities for a group while limiting opportunities to exercise capacities for other large groups (Kortetmäki, 2021; McGregor, 2021). These injustices unfold from the convergence of actions by multiple actors pursuing their goals in line with specific social-structural processes; meaning that no particular actor can be blamed for them (Gilson & Kenehan, 2021).

Food systems are intersected at multiple levels by diverse issues of justice: The availability and access to healthy and culturally appropriate food, participation in decision-making, and the connection between food and other social justice issues (Food Justice) (Gilson & Kenehan, 2021). The differential impacts of industry on marginalised communities and their exclusion from decision-making (Environmental Justice) (McGregor, 2021). And the unequal distribution of impacts from climate change and related policies (Climate Justice) (Kortetmäki, 2021). Rawlinson (2021) has drawn attention to our situatedness within transgenerational relations and its ethical implications. In line with this, intergenerational justice should be taken into account to allow a flourishing existence for future generations (Robaey and Timmermann, 2021). Gilson & Kenehan (2021) emphasise the need for ecological justice, which is concerned with broader relationships between humans and non-humans focusing on power and equity; or in the context of this article, to transform relationship patterns established by coloniality. In all previous instances participation is of great importance; participative justice deals with the right to participate in decision-making (McGregor, 2021) and may be the first step to amend disparities in food systems (Loo, 2021). This form of justice should balance the need to recognise autonomy and difference while treating all participants similarly (Loo, 2021). Throughout history, marginalised peoples have been excluded from policy-making processes and have often been subjected to the harm of misrecognition by being homogenised as ‘universal persons’ (McGregor, 2021). This is why autonomy and recognition of difference are so important, without them, pressures over marginalised communities may become invisible and perpetuate dominance under the guise of impartiality (Loo, 2021). At the intersection of all these dimensions of justice, a more comprehensive understanding of food justice emerges as the:

...adequate supply of and access to decent food but also community autonomy and self-determination and thus community control over their own food resources and practices...food is not merely instrumental in sustaining biological life and health but rather is integral to social and cultural life. As a matter of systems, food is linked not only to ecological systems...but to sociocultural ones, to people’s history and identities. (Gilson & Kenehan, 2021, p. 13).

Taking into consideration these conceptualisations of justice, it could be argued that ‘informal’ seed systems are being treated unfairly. Harms include but are not limited to: (i) Misrecognition of ‘informal system’ actors as backward Others, (ii) unwillingness of governments to involve them in policymaking, (iii) pressures to modernise via pro-industry legislation that erodes their narratives-practices, and (iv) the intergenerational environmental impacts of the industrial model, as well as the curtailment of futural possibilities for young farmers product of industrialisation. Transitioning towards fairer seed systems in Latin America and the world necessarily requires correcting these harms. System actors must not lose sight of the “…wide variety of social constructs and forms of oppression [that] work together to create food and environmental injustices.” (Szende, 2021, p. 83). This article has argued that these injustices stem from the structures of coloniality and the permanent tensions between (post)modern and non-modern worldviews. As McGregor (2021) points out, these harms occur in social structures and

14 Read as Modern/Colonial.
institutional contexts that include epistemic injustices and epistemologies of ignorance. Coloniality was made possible by an epistemic strategy of concealment of the subject of enunciation, which resulted in a hierarchy of superior and inferior knowledge. All knowledges are located in the core-periphery arrangements of modernity/coloniality where the West’s superiority encourages a deafness to non-western epistemologies (Grosfoguel, 2008). This is evidenced in the conceived superiority of science and technological intervention over local knowledges regarding food systems (Rawlinson, 2021), which often translates into epistemic impositions over the ‘informal system’ instead of encouraging horizontal collaborations.

Correcting the harms caused by epistemic asymmetries implies transcending coloniality, at the same time, moving towards epistemic justice is an integral part of decolonising. Decoloniality is a contextual, relational, practice-based lived praxis that mobilises power “...within the colonial matrix to undermine the mechanism that keeps it in place requiring obeisance” (Mignolo & Walsh, 2020, p. 114). This includes the critical and material deconstruction of structures to allow for alternatives (Figueroa Helland & Lindgren, 2015), while making visible positionalities that unsettle the hegemony of Western rationality (Mignolo & Walsh, 2020). Decoloniality is contextual but really occurs in the non-geographical borders of the power differential of modernity/coloniality by engaging in critical ‘border thinking’ (Mignolo, 2015). This is not equal to ‘identity politics’ or an anti-modern fundamentalism, but rather, an epistemic response to Eurocentric modernity to redefine and transcend “the emancipatory rhetoric of modernity” from the peripheries configured by colonial difference (Grosfoguel, 2011). As such, it does not aim to replace one universal truth with another, but to encourage complementary reciprocity between diversity towards a pluriverse of knowledges and practices (Escobar, 2018; Figueroa Helland & Lindgren, 2015). Putting diversity in equitable but still conflictive relations necessarily requires interculturality, a “…permanent and active process of negotiation and interrelation in which difference does not disappear” (Mignolo & Walsh, 2020, p. 59).

5. Conclusion

In most ‘developing countries’ and specifically in Latin America, more than half of food and seeds are produced by small scale peasant farmers. However, this non-modern regime is seldomly considered in the sector’s decision-making processes. ‘Informal system’ actors are often concealed, and their practices-narratives ridiculed as an enduring primitivist obstacle on the road towards modernisation. Over the last 20 years, seed guardian networks (SGNs) have become increasingly influential at a national and regional level. While the process of seed system transition and their role in it requires more research, this case shows the importance of trans-local networks of outliers, and their alternative non-modern practices and visions. Participants of SGNs may not frame their struggles for epistemic justice as decolonial, but they certainly are; they engage in a decolonial epistemic reconstitution by resisting & re-existing, while building towards an otherwise (Mignolo & Walsh, 2020).

Despite their increasing influence in national seed systems, these ‘informal systems’ are under constant pressure by the core of modernity/coloniality via multiple strategies (e.g., multi-level seed legislative packages that nearly outlaw ancestral seed practices). Hopefully, Latin American seed systems will move from a concealment of the non-modern to a mosaic epistemology (where separate knowledge systems coexist with their own claims to validity), and towards a solidarity-based epistemology, where mutual education and critique between knowledges is emphasised while prioritising those least advantaged.

15 The most representative case is unfolding in Venezuela where the 2018 seed law recognised the two systems and equated indigenous knowledge to scientific knowledge in an effort to promote horizontal dialogues (Ley de Semillas 2018).
Efforts by SGNs may soon transform the underlying systems of power of modernity/coloniality as expressed in seed systems. The organisational processes of these networks and their interactions with coloniality’s core, signal the possibility of a critical dialogue with otherness. This is the moment of Transmodernity, where non-modern and (post)modern worldviews co-exist and engage in dialogue, agonism and antagonism to bring forth futures. Transmodernity is a futural project that pursues a culture that assumes the best of modernity to produce a pluriversal utopia through authentic intercultural dialogue without presupposing symmetry between difference (Dussel, 2012). It is a “radical universal decolonial anti-systemic diversality” (Grosfoguel, 2011, p. 31), a project of liberation that goes beyond Eurocentric and Third World fundamentalisms by respecting diversity in the struggles against modernity/coloniality (Grosfoguel, 2011).

The transmodern utopia raises difficult questions regarding justice. These issues always result in winners and losers, making it nearly impossible to identify a single just outcome attending to all interests in a given system (Loo, 2021). Moving towards a just and sustainable future for all necessarily entails transcending modernity/coloniality so that more relational ways of being can thrive. Practitioners and scholars of transformation have a responsibility to reflect on the continuation of coloniality, Western unilinear time and Eurocentric totalising claims. Transformation governance would benefit greatly from more active engagements with emergent research areas like: decolonial theories; studies on alternatives to development; deep transitions/civilisatory transitions; and conviviality, relationality and pluriverse (Rivera Cusicanqui et al., 2016, p. 11). Whichever transformation process, system, or theory of change is being observed or deployed; participants should ask: (i) How is the ‘colonial matrix of power’ manifesting here? (ii) Are there non-modern actors, communities, or networks in the peripheries of the system? (iii) What are the narratives, practices and futural visions present in the system (emphasis on concealed ones)? (iv) Are there epistemic injustices occurring in the system? If so, where? and (v) How can we facilitate creative dialogue/agonism between diversity beyond existing power structures? Transmodern transition pathways are emerging all around us, offering exciting possibilities to bring forth plural just and sustainable futures. Engaging with these spaces in practice and research.

6. References

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