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### Pathways to Sustainability: Industry, Development, Business, Agriculture, Economy, and Politics

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# **Pathways to Sustainability: Industry, Development, Business, Agriculture, Economy, and Politics**

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## **Abstract**

In this chapter we examine six compelling on-the-ground experiences, which are demonstrating pathways to sustainability, resilience and regeneration. Each case opens a pathway to sustainability in a key sphere of human activity: industry, development, business, agriculture, economy and politics. These experiences are creating new social imaginaries embodied in the practical forms of new politics and economics aimed at profound democratizations of human life, and towards a creative realignment of humans with the rest of the web of life. These social imaginaries are both *open and encompassing*. They are open in the sense that they can be filled with new possibilities and ideas, and encompassing in the sense that they recognize and build from existing systems. We suggest that the examination of lived, innovative sustainability experiences is a critical dimension for the emergence and multiplication of social imaginaries capable of responding at the scale of global crises.

**Keywords: Sustainability; Industrial Ecology; Development; Sustainable Business; Agroecology; Cooperatives; Participatory Budgeting; Social Imagination; Social Movements; Environment**

## Introduction - Emerging Imaginaries

Val Plumwood (2002) writes that our current global crisis may be characterized as a radical discontinuity between humans and nature. This discontinuity is expressed as deep cultural and institutional crises as well as pathway dependencies in economics and politics that are threatening the existence of humans and many other species within the wider Web of Life. Patel and Moore (2017) examine how the historical invention of 'Nature' as separate from 'Society' in the 17th Century made possible new powerful systems of control. Select groups of powerful men imagined themselves as society apart from nature, and then exercised mastery over the rest of the web of life, including 'natural' subjects of women, landless men and colonial peoples.

Fritjof Capra understands the myriad of global crises human societies face as intertwined with a crisis of worldview:

*As the twenty-first century unfolds, it is becoming more and more evident that the major crises of our time—energy, the environment, climate change, food security, financial security—cannot be understood in isolation. They are systemic problems, which means that they are all interconnected and interdependent. Ultimately, these problems must be seen as just different facets of one single crisis, which is largely a crisis of perception. It derives from the fact that most people in our large social institutions, subscribe to the concepts of an outdated worldview, a perception of reality inadequate for dealing with our overpopulated, globally interconnected world. (Capra 2014: xi)*

The writer Amitav Ghosh places global crises, particularly climate crisis, as above all "a crisis in culture and thus the imagination" (2018: 7). The extreme nature of these events, he argues, make these crises particularly resistant to contemporary modes of thinking and imagining. This analysis may be extended to social imaginations of how human communities may respond to these global crises.

Lorraine Code discusses Cornelius Castoriadis' theory of instituting social imaginary, or the "critical-creative activity of a society that exhibits its autonomy in its capacity to put itself into question" (in Norman 2021: 58). This capacity, Code suggests, is realized in "imaginatively initiated counterpossibilities [that] interrogate the social structure to destabilize its pretensions to naturalness and wholeness, to initiate a new making" (p. 59). This false sense of naturalness and wholeness is what Val Plumwood defines as the 'master identity' of the consolidation of modern institutions and worldviews - the framework of the radical discontinuity between humans and nature. Not only does the power of the master narrative foreclose imagination outside of itself, but following Capra, this master narrative is arguably a core cause of global crises. This moment of historic transformation is faced with the task of imagining systems of creative alignment between places, people and ecologies, moving beyond modern institutions and worldviews.

Jan Assman (2012) examines historical moments of profound transition and revolution and concludes that these events are as much about survival and tradition as about innovation and development. Drawing from this insight, we suggest that a grounded theory of transition to sustainability should attempt to reconcile both the (re)embedding in culture and place as well as opening space for new movements and perspectives. This focus is not simply a preference for local and regional experience. Rather, it is a recognition that grand-scale theories of change, although necessary and powerful, leave out and even

subordinate more localized interests, desires, and motivations - in ways that have often had clear colonial dynamics. The vantage point opened by engaging these experiences is both *open and encompassing*. It is open in the sense that it can be filled with new possibilities and ideas. It is encompassing in the sense that it recognizes that existing systems, however unbalanced in their ecological or social repercussions, also hold meaning for people and provide livelihoods.

In this chapter we examine six compelling on-the-ground experiences, which are demonstrating pathways to sustainability, resilience and regeneration. These experiences are emergent responses to global crises, and are at the leading edge of imagining and implementing systems of creative alignment between humans and the rest of the web of life. These ‘imaginatively initiated counter-possibilities’ are ‘critical-creative activities’ opening social imaginaries in key dimensions of contemporary human life, including: industry, development, business, agriculture, economy, and politics. We note Adams and Groves (2007) crucial insight that when social forces are not able to imagine the future, this empty future becomes more open for exploitation, colonization and control.

We begin with industrial ecology in Denmark with Kalundborg Symbiosis. In this eco-industrial park, the waste of one industry becomes the raw material for another industry, creating a circularity that mimics nature. We then move to the Senegalese Ecovillage Movement which is creating new forms of social and economic development. This grassroots development is rooted in the best of West African traditional village life, in combination with green technologies and coming together to heal the land. From there, we examine the B Corp Movement and emerging B Economy which seeks to shift the structures, practices and policies of corporations from shareholder to stakeholder centered models. To study possibilities for the future of agriculture, we turn our attention to the cooperatives of the Brazilian Landless Workers Movement. These cooperatives are demonstrating that large-scale, democratically-run, agroecological production can feed the world, while providing livelihoods and regenerating the Earth. And to explore pathways to an equitable economy, we analyze the Mondragon cooperative system in Basque Country, which has proved that cooperatives can generate large revenues while placing capital at the service of progressive human values. Finally, we explore the potentials of participatory budgeting for a distributed and deliberative politics, and as a pathway to urban and regional sustainability.

### **Industry - Kalundborg Symbiosis (Kalundborg, Denmark)<sup>1</sup>**

Kalundborg Symbiosis is a collaboration of 16 public and private companies including the local municipality and utility, forming what is widely considered the world’s most elaborated urban-industrial ecosystem of circular production. This experience is located in Kalundborg, Denmark. The core principle for this system is to mimic the circularity in Nature where there is no waste. The *Kalundborg Symbiosis Guide for Industrial Symbiosis Facilitators* (2021: 8) explains,

*“Natural eco-systems have developed over millions of years allowing a wide diversity of living organisms each with a defined role and function. In nature resource efficiency and diversity prevails, as all things “wasted” are reprocessed within and reabsorbed into their circular community - like when a leaf falls to*

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<sup>1</sup> This experience was written by Andreas Hernandez and Per Moller in conversation with Mette Skovbjerg. Per is the Facilitator and Symbiosis Developer of Kalundborg Symbiosis. Mette is the former Head of SymbiosisCenter Denmark (a program under the local symbiosis initiative in Kalundborg).

*the ground and re-enters the circle of life as a nutrient for other living organisms. With inspiration from nature, balance and resilience is to be reached through a circular approach to production and consumption.”*

At Kalundborg the residual from one company becomes a resource for another company, creating an ecosystem of inflows and outflows. Mette Skovbjerg, the former Head of SymbiosisCenter Denmark, explains, “In nature you don’t have waste, you only have residuals that become part of another part of the ecosystem. Instead of looking at it as waste, we look at it as a potential resource”. This is a profound shift from the logic of linear production of extraction, consumption and waste. Today there are over 25 exchanges between companies, of materials, energy and water. Companies report that this symbiotic relationship has supported lowering costs and increasing profits, while lessening their environmental impact in terms of extraction and waste. Kalundborg Symbiosis reports (2023) that yearly (as of 2019), symbiosis conserves four million cubic meters of groundwater, keeps 586,000 tons of CO<sub>2</sub> out of the atmosphere, and recycles 62,000 tons of residual materials. Additionally, 80% of CO<sub>2</sub> emissions in the Symbiosis have been reduced since 2015 and the local energy supply is now CO<sub>2</sub>-neutral. The Gothenburg Sustainability Award (2018) reports that Symbiosis creates an annual combined savings of 26 million USD with an additional annual saving of 15.1 million USD in socio-economic values. The members of the Kalundborg Symbiosis partnership employ approximately 4,500 people and works closely with local business and government. (Kalundborg Symbiosis 2023).

This idea of conventionally separate industries coming together in collaboration for competitive advantage, involving exchanges of material, energy and water, has been termed *industrial symbiosis* (IS). This emergent form of industry is modeled on mutualistic symbiosis in biology, where all organisms benefit; In the case of industry, all firms share resources and knowledge and gain benefits. This form of production also mirrors wider ecology in that the web of life is a vast system of cooperation, with competition between similar species (Meloni *et al.* 2019; Simha, Pardo-De la Hoz & Carley, 2022). The collaborating industries are not directly competing with each other, but their exchanges provide competitive advantage for their particular arenas of market competition.

The 16 companies that comprise Kalundborg Symbiosis range from Novo Nordisk (the largest producer of insulin in Europe), to Statoil (the Norwegian state oil company), to Gyroc (a French company producing wallboard). Although the exchanges at Kalundborg began organically in the 1960’s, today the Kalundborg Symbiosis Secretariat facilitates the ecosystem of exchanges, while jumpstarting processes elsewhere in Denmark, the EU and increasingly globally. One of the key insights from the Secretariat is that while symbiosis makes sense economically, environmentally and socio-economically, it is necessary to have a facilitating agent to build and support the collaborations. The current Head of Kalundborg Symbiosis, Lisbeth Randers claims “A symbiosis’s neutral facilitator drives collaboration, ensuring the partners realize their potential, allocate time, and collaborate”. And the exchanges usually become interesting when they are below market price.

### *History of Kalundborg Symbiosis*

Skovbjerg explains that this IS emerged from the ‘grassroots’, and was not part of a political agenda or strategic plan. As the Asnaes power station was being proposed in the late 1950’s, local authorities in Kalundborg worried about the effects of drawing down groundwater on which the City depended (and

continues to depend). A public-private partnership was formed in 1961 to pipe in surface water from Lake Tissot 17 km away. Soon after, companies within the industrial park began exchanging fresh water for production, cooling, heating and cleaning. In 1972, Gyroc began an exchange with Statoil, which had been burning off gas from its refining process in what was known as the 'eternal flame'. This first exchange piped the gas to Gyroc to fuel their new drying processes.

Throughout the 1970's collaborations expanded to exchanges of residual materials including nickel, ash and sugars as well as energy through residual heat. In the 1980s, the partners became physically connected through steam supply pipelines and the term "industrial symbiosis" was first used to describe the partnership - as new partnerships continued to form. Exchanges expanded in the 1990's and a 1992 *Financial Times* article (cite) brought attention to this emergent model. With an ever-increasing flow of interest and visitors, the partner companies founded the Secretariat, originally located in the Local Business Department of the Municipality, to receive visitors and explain the symbiosis processes. This new secretariat took on an increasing role of facilitating new exchanges at Kalundborg, as well as guiding the transition to renewable energies and leading development and research for the scaling up of symbiotic thinking. By the 2010's the Kalundborg Symbiosis Secretariat developed plans to work towards zero waste and expanded its research and development capacities. The Secretariat was moved to the Development Department of the City in 2011 and in 2019 it became a private non-profit entity. The Symbiosis is currently re-mapping available residual resources to ensure a constant joint overview for the partners. New technologies such as Carbon Capture Storage and Power2X have been designated future business areas for Kalundborg Symbiosis. The new vision of the Secretariat is to increase their global voice in IS and to have ten circular economy projects fully implemented in the coming years.

### *Exchanges*

In the 1990's Denmark passed legislation requiring power plants to remove sulfur from their emissions into the air. Dong Energy chose to use limestone for this desulphurization process, which resulted in the production of gypsum as a residual product. The power station contacted the Director of Gyroc inquiring if they would be interested in this high quality gypsum, as it was costly to send to landfill and not good for the environment. Meanwhile, Gyroc had been searching for new sources of gypsum as mining costs and transportation costs from Southern Europe were increasing. The two companies made an agreement to sell the gypsum at half market cost over ten years, resulting in Gyroc having secure access to high grade gypsum 200 meters down the road - cutting out mining, transportation and preprocessing costs. Gyroc furthered this direction, making agreements with other power stations across the country. This experience fed into legislation that was later passed that banned putting residual products in landfills if they can be commercialized. This exchange experience was beneficial for not only economy and environment, but also for promoting local innovation and regional development.

One of the current research projects for Kalundborg Symbiosis is examining how to create high value products while cleaning residual processed water from industry. Skovbjerg calls this Industrial Symbiosis 2.0, in that it is not just using residuals, but upcycling them to make high value products. Per Moller, Symbiosis Developer at Kalundborg Symbiosis, explains that as part of the EU funded project E4Water, it was demonstrated that pre-gasified process water from the local biogasplant at the Novo site was suitable as growth media for cultivation microalgae. This process cleans the water and creates added value as the

algae produces proteins, lipids, pigments, enzymes and antioxidants which may be sold to industry. These algae products may be used in everything from cosmetics to pharmaceuticals to food. Conventional wastewater plants will take in oxygen and output CO<sub>2</sub>, contributing to global warming. In this process of growing algae the opposite happens, with CO<sub>2</sub> fixing in the algae producing an output of oxygen.

Skovbjerg shared an unconfirmed story that in the 1960's the directors of Kalundborg companies were members of the same environmental club, and sought solutions to emerging environmental problems. However, whether true or not, this story points towards the high level of social trust for which Denmark is famed, as at the core of the development of Kalundborg Symbiosis. Michael Hallgren, Senior Vice President of Novo Nordisk and Chairperson of Kalundborg Symbiosis analyzes "Trust and openness are core elements in a successful symbiosis partnership. Coming from different sectors, setups, and industries, we look at each other's challenges and opportunities in new ways and transform this into new innovative projects." Skovbjerg also points out that symbiosis has worked best where resources are scarce. The social democratic system of Denmark was early in creating effective environmental regulations. The relative high cost of Danish production and increasing costs of resources compounded complications for companies to stay in the Country. They found symbiosis as a key ingredient to stay globally competitive.

However, now that symbiosis is a proven model at scale to deliver economically, environmentally and for regional development and innovation, companies in other parts of the world are beginning to engage. The high social trust in Denmark and the effective environmental regulation might have been preconditions for the emergence of IS in Kalundborg. However, following the effervescence of this experience, they now demonstrate how the possibility may be transferred and scaled to different geographies and cultures. Kalundborg Symbiosis is currently working across Denmark, the EU and increasingly globally to facilitate symbiotic thinking and practice. Moller understands this work as fundamentally changing mindset, to see collaboration between companies as mutually beneficial, and production and consumption as a circular process embedded in the web of life.

### **Development - Senegalese Ecovillage Network (Sahel, Senegal)<sup>2</sup>**

The Senegalese Ecovillage Network brings together hundreds of villages in a heterogeneous movement that seeks community-led development by taking the best of West African village life and combining this with green technologies and recuperation of soils and forests. This network has reframed the notion of ecovillages coming from the Global North, and in the process also reframed ideas of West African rural development.

Leaders and activists of the Senegalese Ecovillage Network report that the ecovillage model provides a framework to engage the interrelations of culture, economy, technology, and environment, to promote materially and culturally better ways of living over the long term. The ecovillage framework they say is not prescriptive, but orients innovative approaches to protracted problems. They assert that this holistic framework is highly resonant with West African traditional worldviews and provides an effective tool for development that respects traditional village culture while opening to the world and introducing

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<sup>2</sup> This case is written by Ousmane Pame and Andreas Hernandez. Ousmane is the President of Global Ecovillage Network Africa and Director of the REDES association.



technology (Illieva and Hernandez 2018). The Global Ecovillage Network (GEN) defines an ecovillage as “... an intentional, traditional or urban community that is consciously designed through locally owned participatory processes in all four dimensions of sustainability (social, culture, ecology and economy) to regenerate social and natural environments” (GEN 2021: 1). Ecovillages in Senegal have developed projects as diverse as: solar power grids, extensive permaculture gardens, biogas, and solar cookers not reliant on scarce wood fuel, reforestation, reintroduction of dry crops such as millet, and water pumps and tanks that extend growing seasons. They have also developed value-added enterprises and worked to construct new markets (Illieva and Hernandez 2018; Joubert and Dregger 2015). According to the United Nations Development Programme (UNDP) (2021), in at least one ecovillage, years of outmigration have reversed as young people return to new opportunities in villages.

Network leaders claim that Northern ecovillages are often focused on creating community and ecologically viable worldviews and spiritual systems. African villages, they argue, already possess these social and cultural resources, and seek to bring in “clean modern technologies to uplift living conditions” while recuperating the environments upon which villages depend (Illieva and Hernandez 2018: 25). Ecovillages in the Global North are generally smaller initiatives “created around shared values and projects that relate to the journey towards a more sustainable society.” Ecovillages in the Global South tend to “comprise communities in which local leaders understand the threat that economic globalization poses to the health of their communities and are seeking to wrest back some measure of control over their cultural, ecological and economic resources” (Dawson 2011: 5).

### *History of the Network*

Villages in Senegal face dire environmental conditions, which are intertwined with difficult historic social conditions. In the north of the country, the Sahara is arriving where forests existed 60 years ago. Deforestation by colonial powers, villages, and companies have left impoverished landscapes. Organizations such as USAID and the Chinese Government have advocated for and subsidized chemical and water-intensive rice production to sell nationally and for export, poisoning rivers, and mining soils. This constellation of factors has impoverished villages and contributed to hunger, outmigration, and social breakdown.

The Senegalese Ecovillage Network began in the traditional fishing village of Yoff in coalition with the Ithaca Ecovillage and the third international EcoCity Conference, which was held there in 1995. Yoff was organizing to defend their livelihood and culture from land grabbing by public and private entities as Dakar expanded to encircle and subsume traditional villages. Through the internal successes of what became EcoYoff, the ecovillage framework began to spread organically to villages in ecologically diverse regions of Senegal. This framework set the foundations for innovative responses, outside of both traditional village modalities as well as mainline development pathways. Out of these initial experiences emerged the Senegal Ecovillage Network (GENSEN). Government officials, including a President, took note in the early 2000s and launched the Ministry of Ecovillages, which later became the National Agency for Ecovillages (ANEV) with the project of transitioning half of the country’s 28,000 villages into ecovillages. ANEV seeks to involve and support the villages with development assistance that villages request. This includes interventions such as implementing solar power, providing seeds, infrastructure for irrigation, and technical support.

The formal power structures of villages vary between elected mayors and hereditary chiefs. In both cases, villages have taken on the ecovillage framework usually with the leadership, or at least with the strong support of these formal village positions. Thus, government resources are leveraged directly toward ecovillage development at the village level, as villages make this a political focus. Village leadership is also then able to formally interact with federal organs, particularly with ANEV.

With these forms of institutionalization, funds from the UNDP and other international donors became available, creating a split in the Movement. GENSEN frayed and the movement split into two heterogeneous wings. One part of the Movement asserts that the community-led dimensions of ecovillage development are essential, and direct government intervention weakens community agency, creating a situation that looks like other government-led development efforts. The other part of the Movement insists that Government and international aid provides access to crucial and expensive technologies (such as solar power) and infrastructures (such as irrigation), and that villages remain agents in this relationship, participating in decisions of what interventions or resources will be provided. Locally led NGO's have formed to coordinate ecovillage activities. For example, the Network for Ecovillage Emergence and Development in the Sahel (REDES) works with five ecovillages in the North of Senegal and brokers relationships with international partners and donors. GEN created GEN Africa, which has become the overarching and unifying organization to which most ecovillages may relate. In 2014, GEN and the Government of Senegal held a Global Ecovillage Summit in Dakar. Although the goal of 14,000 villages remains distant, hundreds of villages are adopting aspects of the African ecovillage model, often in coalition with ANEV or NGOs, creating one of the most successful grassroots development efforts on the continent. The model is spreading to neighboring countries such as Mali and Democratic Republic of Congo (Illieva and Hernandez 2018; Joubert and Dregger 2015).

### *Ecovillages*

The village of Mbackombel is considered one of the more elaborated villages within the ANEV network and has transformed village life through creative use of a solar powered microgrid – particularly around issues of food insecurity. Among numerous benefits, this grid powers pumps to store water, expanding the growing season. This stored water is the basis for new climate-friendly permaculture gardens, reforestation projects, and fish ponds. Young girls have traditionally been charged with the task of fetching water, often hours away. The stored water system has freed up the time of many young girls who are now able to attend school. The villagers of Mbackombel have also concentrated on bioconstruction projects, using locally available materials for permanent structures, and on creating rainwater storage ponds. Women in the village developed solar cookers and highly efficient clay rocket stoves – decreasing dependency on fuels. The solar microgrid has also transformed education and global connections for villagers. The school has a computer room with rechargeable laptops, and adults are able to connect to the wider world through internet (Illieva and Hernandez 2018; Joubert and Dregger 2015).

The village of Guédé Chantier has focused on community power and participation, mobilizing the cultural value of *jokkere endam* (primacy of community solidarity) as the basis of innovative projects. Guédé Chantier is also the home of the multi-village REDES NGO. Women's groups in this village at the edge of the Sahara Desert have led the ongoing transition to organic agriculture focused on climate appropriate

crops. These women seek to better use and protect water in the cultivation of diverse healthy food destined first for consumption by village families (instead of cash crops for national markets or for export). Women's groups are at the same time developing value-added processing and preservation for their fruits and vegetables, which they sell in local markets. The community constructed the Center of Genetic Resources for seed saving and sharing – seeds are distributed freely to farmers who also receive training in regenerative farming. US and Senegalese students intern to support these projects. The youth-led Association of Ecoguardians engages wider communities in education initiatives, sponsors large-scale cleanups, and provides training programs for youth populations. The Ecoguardians use community theater as a key modality for social transformation addressing questions of childhood malnutrition, STD's, chemical poisons in the fields, and plastic litter (Illieva and Hernandez 2018; Joubert and Dregger 2015).

Villages in diverse geographies of Senegal continue to use the ecovillage model as a holistic tool for bringing together the best of West African village life with green technologies. REDES is also actively promoting technological and cultural exchanges between global north and south ecovillages. Engagements between the communities of Damanhur (Italy), Los Portales (Spain) and REDES are already pointing the way. Ousmane Pame, Director of GEN Africa sums up his ecovillage vision:

*The kind of development we are looking for is a development based on our traditions, our cultures and personalities. And also we would like to open up to the modern world at the same time. ("Senegalese Ecovillage Movement" 2019; 3:11)*

### *Future Directions*

Under the umbrella of REDES, strategic grassroots partnerships and exchanges are developing between youth organizations, women cooperatives, community leaders - and local governments in northern Senegal and southern Mauritania. Memorandums of understanding have reinforced cooperation between REDES, the municipalities of Dar El Barka (Mauritania) and Gamadji (Senegal). Festivals, permaculture workshops and projects, and exchange of best practices are catalyzing change in the region. The shared vision is to dissipate (post)colonial fears, and administrative, linguistic and economic legacies in order to invent a locally inspired development model which truly reflects local aspirations.

Community leaders and ecologists are determined to upscale the ecological successes of communities like Loboudou and Diara, and implement a community-led transborder ecovillage hub - consisting of 100 villages in the Senegal River Valley. With 337,000 trees produced in the past 18 months, food forests and orchards are emerging across the border. Orchards will be implemented along Senegal River and around the wells REDES is creating across the border. REDES communities and leaders believe that, through informed and vigorously sustained intercommunity synergies, the impacts of desertification in the Sahel can be reversed in a decade or so. National governments and international donors and experts alone will not turn the Green Wall into reality if community power, expertise and wisdom are ignored.

## **Business - B Corps and the B Economy (International/Global)<sup>3</sup>**

### *From Shareholder to Stakeholder Economy*

The business enterprise has been a key driver of innovation, economy, and society over the past centuries and the modern corporation has emerged as the most powerful institution on the planet (Korten, 1995). At its best, this human construct has led development in areas including science and technology, communications, industry and healthcare. And at the same time, the modern corporate form has driven the consolidation of wealth and resources to a small proportion of the global population, prioritizing profits over people and planet, and short-term gains for owners over long-term value for societies (Ibid.). These negative impacts are not merely the result of malicious intent, but rather of a flawed economic system - a system incapable of measuring positive and negative externalities of business operations, rewarding positive impacts, or effectively disincentivizing unethical practices.

Criticism of the modern corporate form and the financialization of the global economy is steadily increasing. At the root of this criticism is the call to move away from shareholder primacy – the idea that the duty of the corporate director is to make decisions which promote shareholder wealth maximization (Loewenstein & Geyer, 2021). Through academic and public discourse on these themes, *stakeholder* economy has emerged as a new model. This model asserts that a corporation’s fiduciary duties should be based on generating value for all stakeholders including employees, customers, community, the environment, and shareholders, among others..

In recent years the stakeholder economy has seen significant innovation. The slew of terminology found in the literature is one indication (Corporate Social Responsibility, Sustainability, Socially Responsible Business, Social Enterprise, ESG, Impact Business, Impact Investing, Triple bottom line, Conscious capitalism, etc). Another measure is found in the plethora of sustainability reporting frameworks that have emerged to meet this increasing demand. We focus here on the B Corp Movement and the emergent B Economy, as this framework is effectively implementing stakeholder economy, building a culture of impact improvement, and utilizing business as a 'force for good'.

***Certified B Corps:*** At the forefront of this effort are nearly 6,500 certified B Corps in 89 countries across 161 industries (B Lab, 2023). These are for-profit businesses that have embedded stakeholder capitalism and the triple bottom line philosophy into the DNA of their companies. Certified B Corps use a diversity of methods to work towards transformative goals, including: employee ownership; workforce development; using supply chains or micro-enterprises to alleviate poverty; being ‘designed to give’ by providing a portion of profits to support social and environmental causes, and; using their business to specifically address acute needs such as improving health and wellbeing, serving those in need, conservation, or development of clean, renewable energy.

From small, one-person ventures to multinationals like Danone, Certified B Corporations have made a commitment to use their business for ‘good’, by measuring, reporting on, and proving their social and environmental impact and contribution every three years. To qualify, businesses must get a minimum score of 80/200 points on the B Impact Assessment (see below), verify their responses with B Lab (see below), and pay a sliding certification fee. Certified B Corps are also required to showcase their

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<sup>3</sup> This case is written by Alice Main with Andreas Hernandez. Alice is a graduate student at the University of New Mexico, and co-facilitates the University’s Business for Good Clinic.

performance metrics on B Lab's website and make a legal commitment to be accountable to all stakeholders, not just shareholders, and achieve benefit corporation status (see below) if available in their jurisdiction.

B Corps are involved in diverse areas of industry and services. Some are producers of consumer goods and services, such as : Prainha Beer, a brewery in Brazil; Abahizi, an employee-owned company which produces fashion accessories in Rwanda; and SuckkhaCitta, a producer of textiles in Indonesia. B Corps also include companies producing utilities and industrial goods and managing logistics, such as: Hepburn Energy a community-owned wind farm in Australia; Novamount, a producer of bioplastics in Italy; Clean Cut Energy Corp, a data processor and host in Canada; and Coconut Silo, which manages freight logistics in South Korea. In recent years, a growing number of established corporations are becoming certified, including Danone North America, subsidiary of the multinational French company Danone with yearly revenues of \$6 billion, Natura, a cosmetics company based in Brazil with revenues of \$3 billion, and Laureate Education - the first B Corp to go public on the US stock market.

One of the most well-known Certified B Corporations is Patagonia. Not only does Patagonia have one of the highest scores on the B Impact Assessment, it has also been a pioneer in the sustainable business space. They were first certified in 2011 and have since received over 18 accolades in the best for the world category by B Lab (B Lab, 2023). On the most fundamental level, they have worked to develop high-quality products while doing minimal damage to the global environment. This first occurred with a major re-design of their original climbing pins, but later manifested in the company developing an organic cotton supply chain, leading the industry in a variety of other clothing technology developments, becoming fair trade certified, and establishing a used gear branch to extend the lifetime of their products, called Patagonia Wornwear (Patagonia, 2023). More recently, the owners of Patagonia shocked the industry by signing over their business to their non-profit arm – effectively, dedicating all future company profits to address environmental concerns (Gelles, 2022). Patagonia has remained a certified B Corp because the B Impact Assessment provides them with the most comprehensive view of their entire company, helping them stay in alignment with their goals and identify areas of improvement amongst a variety of stakeholders (Marcario, in Honeyman, R. & Tiffany, J. 2019).

**B Lab:** The main vision of this movement is led by B Lab, a global non-profit that developed and maintains the Certified B Corporation standards and shares policies, tools, and programs which help to shift the global economy towards a stakeholder model (B Lab, 2023). Founded in 2016 by Jay Gilbert, Andrew Kassoy, and Bart Houlahan, B Lab's mission is to realize their vision of an inclusive, equitable and regenerative world (B Lab, 2023). One of the main ways B Lab achieves this is by developing the B Impact Assessment (see below), certifying, and engaging their community of Certified B Corporations, and advocating for and developing government regulations that accelerate the transition to stakeholder economy on a global and national level.

Split into B Lab Global and regional B Lab organizations, this world-wide network works in collaboration to inspire continual improvement amongst the Certified B Corporation community (B Lab, 2023). On the global level, they engage with policymakers, work towards the integration of other sustainability reporting frameworks, and encourage impact improvement by awarding "Best for the World" honors to businesses that are best exemplifying how to maximize positive impacts through business.

On the national level, the regional B Labs put on events such as the B Champions Retreat, advocate for policy change by promoting legislation such as the Better Business Act, and manage networks such as B Local Chapters, the Black, Indigenous, & People of Color Network, and B Fashion, a network of Certified B Corps that promote regenerative and sustainable fashion. For many certified B Corporations, these programs and networks have provided value, facilitating business with other Certified B Corps, sharing industry best practices, helping drive customers to their doors, and ultimately accelerating their impact business practices.

***The B Impact Assessment (BIA):*** The BIA is the gateway to becoming a Certified B Corporation. Designed and operated by B Lab, the BIA is a comprehensive educational tool and reporting framework that helps businesses improve their environmental and social impact. Free to everyone, this assessment has been utilized by organizations around the planet to benchmark their business and learn ways to improve its positive impact, regardless of the level of sustainability reporting experience (B Lab, 2023). Customizable by company size and industry, the current version of the BIA focuses on five core areas including customers, workers, community, environment, and governance to help users benchmark and improve their positive impact.

The core benefit of the BIA is that its customized point-based questions both educate users on what methods are possible to improve their impact, while also providing resources and examples to implement these suggestions. Furthermore, the point-based structure provides sustainability managers a way to quantify their improvement and guide impact practices to fit those actions that B Lab deems as high impact practices. Ultimately, this tool has engaged hundreds of thousands of users, helping them and their businesses positively impact their community, workers, customers, environment, and governance structures, regardless of their intent to become certified.

***Emergence of the B Economy:*** The utility and accessibility of the BIA, the exponential growth of Certified B Corporations, and the increasing interest from workers, customers, and policymakers has led to the emergence of what some call the B Economy: a vast ecosystem of people and organizations who are contributing to the transformation of the global economy. Beyond B Lab, Certified B Corporations, and the BIA, the B Economy also includes:

- ***BIA Users:*** The hundreds of thousands of businesses that have used the B Impact Assessment to improve their operations and contribute to a massive data set, poised to inform the movement for years to come.
- ***Conscientious Customers:*** The growing number of consumers who spend money at Certified B Corporations and other multi-stakeholder businesses send a signal to the entire economy that businesses like these are worthy of their dollar.
- ***Conscientious Employees:*** The growing number of workers who choose to work in the B Economy and champion impact improvement in their firm. They drive organizational development and demonstrate that having better business is a competitive advantage for attracting top talent.
- ***Traditional and Impact-Oriented Investors:*** The growing number of investors that use the B Impact Assessment, Public Benefit Corporation status, or other sustainability reporting

frameworks as part of their investment decisions help showcase the business case for adopting responsible business practices and focusing on future value generation.

- **Government Agencies:** The growing number of governmental bodies that pass legislation to incentivize responsible businesses, such as passing public benefit corporations' legislation or adopting purchasing policies that provide preference to local, minority owned, and responsible businesses (see footnote).

- **B Academics:** The independent coalition of university-based researchers that seek to contribute to the B Economy by providing independent research and teaching efforts, such as B Impact Teams (B Academics, 2019). For example academic bodies ranging North Carolina State, The Wharton Business School, the University of New Mexico and Strathmore University in Kenya are offering labs where students, under the supervision of professionals, help guide companies towards certification.

- **Public Benefit Corporations:** The growing number of Public Benefit corporations, for-profit businesses that are legally required to take into consideration other stakeholders, who demonstrate how to make business decisions that pursue profits and purpose.

The B Corp Movement and emerging B Economy are not without challenges. The B Lab and community of Certified B Corps are aware of issues around accessibility and privilege, the integration of other sustainability reporting frameworks, and the fragmentation of Certified B Corporation user groups. Many suggest that the process to become a Certified B Corporation is too costly and intensive for small businesses and startups, not allowing for equitable access into this community and all the benefits it provides. Additionally, there is tension around the B Impact Assessment and how it measures and influences impact improvement decisions. Some believe the points-based system is beneficial because it helps to differentiate businesses who are doing many great things from those who meet the minimum criteria, whereas others argue that businesses who only score highly in one or two areas (such as customers and workers) are diluting the branding of what it means to be a Certified B Corp.

Lastly, the *Financial Times* (Raval, 2023) reports on the emerging tension within the Movement, stemming from increasing certification of large, established corporations. However, many in the Movement are dedicated to the constant improvement of the B Impact Assessment. Perhaps the most substantial response at present is undertaking an extensive review of the B Impact Assessment. Set to release in 2024, the seventh version of the BIA is anticipated to undergo significant re-structuring to address some of these issues and move towards integration of other sustainability reporting frameworks.

### *Re-imagining Business as a Force for Good*

The B Corp Movement understands business as having a key role in addressing the most acute challenges of the 21st Century, in concert with NGO's and governments. The dominance of a shareholder model of business which rose alongside global capitalism has limited social imagination about the potential meanings and practices of business enterprises. Societies have the opportunity now to radically re-imagine the foundations of the global economy by shifting towards a stakeholder model of business. The B Economy is a leading force and ground of experimentation in this refashioning. With the resources, adaptability, and innovation of its organizational form, the B Economy may be among the best tools to address the economic transformations required in the present global moment of social and ecological crises.

## **Agriculture - Agroecological Cooperatives in the Brazilian Landless Movement (Rio Grande do Sul, Brazil) <sup>4</sup>**

From its roots in Southern Brazil, the *Movimento dos Trabalhadores Rurais Sem Terra* (Landless Rural Workers Movement, or MST) gradually grew into the largest nationally-based social movement in Brazilian history and is widely recognized as the most organized, dynamic, and influential mass movement in Latin America today (Karriem 2009, Kay 2001, Robles 2001, Branford and Rocha 2002). Despite being the country with the fifth largest extension of land, the colonial legacy of Brazil left deep marks with extreme class and race based inequality, concentrated *latifundio* land ownership and an economy focused on export, particularly of raw materials. Through organizing landless families to occupy unproductive agricultural land, the MST has pressured Brazilian governments into enacting the Constitution and redistributing more than seven million hectares of unproductive agricultural land on which one-and-a-half million members are now growing food for their regions (Karriem 2009).

The MST has developed some of the largest scale agroecological systems on the planet. Families associated with MST cooperatives have used agroecological techniques as a way of caring for the Earth - which many of these farmers consider as Mother Earth. They seek an ancestral reconnection with ways of being in the world, understanding humans as an integral part of the web of life. MST farmers use agroecology to delink from agribusiness and forms of production focused on profit-oriented commodities. In the agroecological proposal of the MST, the objective is to produce healthy food at a lower cost through respecting the natural cycles of agroecosystems. These farmers are attempting to inhabit the Earth in a sustainable way, where all beings, human and non-human, are able to manifest the potential of life. Agroecology may be understood as a way of agricultural cultivation rooted in the biological processes of nature, where principles and concepts of ecology are applied in the management and design of sustainable agroecosystems (Gliessman 2000). The MST has extended this, and come to understand that agroecology is a process that happens through social practice - that agroecology is the *struggle in motion*.

An example of MST agroecology in practice is the *Grupo Gestor de Arroz* (Rice Management Group), in Southern Brazil, which has created several interlinked cooperatives bringing together 501 families, across 16 municipalities, cultivating rice using diverse agroecological methods. The *Grupo Gestor* coordinates actions ranging from production of rice cultivated over 5,600 hectares in different regions of the state of Rio Grande do Sul, to the storage, processing and sale of approximately 500,000 bags of rice per year. The *Grupo Gestor*, which seeks participatory and democratic management, interlinks settled families which together have become the largest producers of organic rice in Latin America. The *Grupo Gestor* supplies food to families, schools, street markets, hospitals and other government institutions throughout the Country, in addition to global export. This experience building a democratic and horizontal food system on a large scale - the result of the struggle of poor workers - has demonstrated that agroecological principles are an effective possibility for a fair and dignified life, promoting health for producers and consumers.

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<sup>4</sup> This case is written by Dayana Cristina Mezzonato Machado and Andreas Hernandez. Dayana is an agronomist who works with land reform settlements and is a member of the *Filhos do Sepe* Land Reform Settlement. She is a doctoral candidate at the Federal University of Rio Grande do Sul. Andreas directed the film *Soil, Struggle and Justice: Agroecology in the Brazilian Landless Movement*.



### *Expansion of Agroecology*

When the first settlements emerged in the 1980s, agroecology was not among the MST's priorities. Initially, the focus was in the mass organization for the struggle for land. Over time the necessity for *struggle on the land* became more important, as settlements sought to implement basic citizenship rights such as education and housing, along with economic necessities such as access to credit and markets and the capacities to create value added products. After mixed attempts to cultivate new land reform settlements using chemical inputs for large-scale production, various grassroots groups in the settlements, especially women, began to realize the effects and risks these methods had on health and the environment. Gradually groups in settlements undertook processes of transition to more sustainable methods. Through successful experiences at the settlement level and later at the regional level, such as the *Grupo Gestor*, agroecology emerged as one of the most viable new paths and was adopted as a pillar of the Movement in 2000. The opening of agroecology, which proposes the holistic engagement of constellations of social and ecological relationships, provided a potent tool for innovation and expansion.

Most farmers and settlements made the transition to agroecology largely because they were unable to produce on highly degraded lands, which were redistributed by state and federal governments. Added to this were the health complications resulting from the use of pesticides (mainly among children and field workers), the high cost of purchasing chemical inputs, as well as the high cost of borrowing money from public and private banks. These dynamics pushed MST farmers to search for alternatives. Through trial and error, the settled families began to practice a set of techniques that sought to combine the use of materials available on site with the potential that each agroecosystem had to offer. This included techniques were composting, biofertilizers, rotation of animals and crops, soil cover, green fertilizer, direct planting, and homeopathy, among others. These agroecological techniques recovered degraded soils while at the same time delinking cultivation with expensive and harmful chemical inputs.

As a recovery of ancestral ways of cultivating the land combined with ecologically based technological innovations, agroecology is a daily challenge in the lives of farming families. Low levels of investment in agroecological production and scientific research bring constant challenges to the Movement. Realizing this, the MST also acts to build partnerships with public universities, institutes, professionals, and other organic producers, helping make the experience of agroecology into a wider popular struggle challenging existing patterns of private property rooted in Brazil's colonial history. The Movement understood that reflection and deepening practices of agroecology was a priority for poor peasants in Brazil. To these ends the MST created training programs and schools of agroecology, in partnership with educational and state institutions, in the areas of administration, accounting, management and production, machine operation, and other core capacities. Further, the creation of new markets required building partnerships with municipal and state governments, as well as other social movements, while seeking increasing technical support.

### *Agroecology as a Political Tool*

Support from civil society has been crucial to the development of the MST as a national movement with international presence. The movement historically engaged wider society through the theme of agrarian reform. Increasingly, the movement engages wider society through conversation on healthy, organic food.

Agroecology has become a key tool for articulation with diverse publics, and a basis for organization and ongoing struggle.

The MST has challenged the assumption that large-scale, chemical-intensive industrial agriculture is the only, or most efficient, way to feed the world, and that the peasant is outdated. MST farmers and agroecological cooperatives challenge the modern idea of growing food for money (and export) and then using the money to buy food. Through their practice, they demonstrate that the peasant is an excellent administrator of the land, as that the peasant may construct organizations such as agroecological cooperatives like the *Grupo Gestor*. Providing high-quality and low-cost food for their regions, MST farmers create a space for the production of their livelihoods, a space replete with meaning that recuperates connections with Mother Earth. Agroecology for the MST, in addition to being techniques that intensify biological activities of the soil, is a political mode of action in the world. The MST has been resignified the meaning of agriculture as political tool for peasants to remain in and steward the countryside. Hannah Wittman (2009) theorized the MST project as agrarian citizenship, in which “political participation, local food production and environmental management redefine the ongoing constitution of the relationship between land, state and rural society”.

The Movement has been working with state governments to transform the industrial bias in the support for agriculture. For example, in the state of Rio Grande do Sul, subsidies were implemented to support organic and agroecological agriculture, including organic fertilization, technical support, and infrastructure such as irrigation, and the construction of local markets. The Movement has also participated in the making of state and federal educational policies, building public technical schools with specialties in areas such as agroecology and cooperative management, as mentioned above. The organization of the MST allows for the voice of the Movement in global forums. The MST was a founding member of the Via Campesina global network, the world's largest social movement. La Via Campesina transformed the global debate on food and agriculture by introducing the concept of food sovereignty. For the Via Campesina, food sovereignty asserts peoples' rights to define and control food systems ecologically adapted to their way of life, rather than the demands of international commodity markets.

### **Economy - Mondragon Cooperatives (Basque Country, Spain) <sup>5</sup>**

The Mondragon cooperative group of Basque country, Spain, is among largest and most successful cooperative enterprises in the world (Kasmir 2016). This organization is made up of nearly 300 institutions (Flecha and Ngai 2014) and listed more than €11 billion in yearly revenue for 2021 (Romeo 2022) while maintaining a hybrid labor model consisting of owner-members as well as waged laborers (Bretos and Errasti 2018). Mondragon is built on Catholic social thought which considers human dignity and well-being the objective of productive enterprises (Herrera 2004). In this philosophy, capital is built and profit created to serve social values. Specifically, the cooperative asks members to reinvest profits to fund growth and social security programs, and historically responds to crises by prioritizing job security over maintenance of profits (Kasmir 2016, Herrera 2004).

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<sup>5</sup> This case is written by Pablo Arias-Benavides who is a graduate student at the University of New Mexico and is researching and working with cooperatives.

By 2014 the cooperative was “composed of 289 institutions, of which 110 are cooperatives, 147 are subsidiary companies, and the rest are foundations, benefit societies, umbrella organizations, and international services” (Flecha and Ngai 2014, 669). In 2021, Mondragon “employ[ed] around eighty thousand people, and 76% of those who work in manufacturing co-ops are owners” (Romeo 2022). Mondragon cooperatives engage in a vast array of human enterprises. Cooperatives produce appliances and other domestic and industrial goods as well as innovative research and development. The organization includes a university alongside factories, one of Spain’s largest grocery chains, Eroski, and financial institutions such as its Caja Laboral.

This case study will describe the history of the Mondragon cooperative group and its roots in Catholic social thought. Then it will examine the group’s response to the 2008 financial crisis and the COVID 19 pandemic as examples of these principles in action. Finally, the tension between internationalized wage labor and cooperative values which has emerged as a contemporary issue for the group will be recognized; this case suggests that this tension is a moment to apply new *ways to consider*, pursuing innovation while taking into account history and tradition.

### *History*

The company which laid the foundation for the Mondragon cooperative group, Ulgor, was founded in 1956 by a group of engineers who had attended a vocational school founded by catholic priest Jose Maria Arizmendiarieta in 1943 (Herrera 2004, 56; Romeo 2022). In 1957, a Mondragon school first received official recognition from the Spanish government. In 1958, the Ministry of Labor under the Fascist Franco Government excluded employees of cooperatives from receiving social security benefits, which led Arizmendiarieta to establish the *Caja Laboral Popular* or Popular Labor Fund. This institution would manage capital deposits from cooperative member organizations to access credit and extend funds in the form of investments, insurance including unemployment benefits, and pensions. By 1971, the *Caja* was managing the funds for 100,000 accounts, and in 1973 sales of associated cooperatives came to €72 million.

Throughout the 1970s and 1980s, despite difficult economic conditions throughout the world, the Mondragon cooperatives performed well, often showing strong year-to-year growth in profits and employment. Beginning at the end of the 1980s and continuing to the present, the cooperative group adopted “intense internationalization strateg[ies]” in response to the pressure of globalized competition (Bretos and Errasti 2018, 37). By the year 2000, “Mondragon had 54,000 workers, assets under administration with *Caja Laboral* totaled €7 billion [and] total sales came to €7 billion” (Mondragon).

### *Catholic Social Thought*

Mondragon embodies principles of Catholic social thought through its organizational structures, practices, and policies: the dignity of persons and their work, social justice, economic justice, and solidarity. Arizmendiarieta centered the dignity of persons and their work as a fundamental principle of social life. The priest wrote that “the primary factor in everything is the human being ... [work] gives a person the

highest honor of being a cooperator with God in the transformation and fertilization of nature ... [it is] proof of the trust God gives humans by making them fellow collaborators” (Herrera 2004; 56).

Economic justice is related to social justice because it creates the ability for each member to participate in the economic life of the collective. Mondragon practices economic justice through voluntary non-discrimination, maintaining a no lay-off policy, and limiting pay ratios between the lowest and highest paid member to an average of 5:1, with the highest ratio at 9:1 (Herrera 2004; 61-64).

Solidarity may be understood as the practice of recognizing the human dignity of each individual and their work and seeking social and economic justice for all people. For Arizmendiarieta, solidarity meant “accepting others, not only as they are, but also as they could be.” This statement calls for tolerance as well as belief in and the desire to realize the potential of all people to improve (Ibid.).

Catholic social thought was foundational to the Mondragon experience’s origins. These specific cultural values also speak to wider humanist values of solidarity, cooperation, and dignity. Mondragon’s implementation of these values through organizational forms and policy can be instructive to other values-based organizations, whether religious or secular.

#### *2008 Financial Crisis and the COVID 19 Pandemic*

Mondragon has faced two major challenges in the past 20 years. This section will describe the cooperative’s response to the 2008 financial crisis and the COVID 19 pandemic which began in 2020.

In 2008, the global financial crisis created one of the first significant challenges to Mondragon’s continual employment growth, which up to 2007 had performed better than Spain overall (Kasmir 2016; 54). From 2008 to 2013, one of Mondragon’s principal subsidiaries, Fagor, struggled under a debt burden of over €1 billion, leading to the larger body’s decision to cut off funding (Herrera 2004; 65). Of 5,600 employees total, 1,900 were members of the cooperative. Of the members, 600 were able to transfer to other co-ops, while the rest claimed their retirement pensions, or received unemployment benefits until they were able to claim early retirement (Kasmir 2016, Goodman 2020). While joblessness rose above 26% in Spain, unemployment among cooperative members was largely averted; Mondragon leaders argued that “the fact that Fagor collapsed while its employees were protected affirmed the value of the cooperative model” (Kasmir 2016, 54-55).

In 2020, as the pandemic began, Mondragon factories operated at capacities as low as 25%. Rather than pursuing layoffs, the cooperatives responded with pay cuts but also guaranteed pay by deferring hours owed. Workers were trusted to stay home if they suspected a COVID infection, even if they were unable to leave their homes to be tested (Goodman 2020). By the end of 2020, Mondragon was again profitable and workers recouped their lost hours (Romeo 2022). At a moment characterized by insecurity and fear, the Mondragon group was able to reassure workers with guarantees of continued employment. The group performed a vital social service by securing workers’ livelihoods and allowing them to stay home when necessary; this was made possible by its unique organization and values.

#### *Internationalization*

About 10,000 Mondragon employees live outside of Spain (Romeo 2022). Internationally, most Mondragon subsidiaries are managed with limited reference to cooperative principles (Goodman 2020). This has been recognized as a contradiction between the organization's principles and operations (Flecha and Ngai 2014, 669; Kasmir 2016; 55-6). In response to this contradiction, the cooperative should consider new legal and organizational structures while encompassing its formation as a worker's organization which practices Catholic social thought.

Mondragon faces difficulties in exporting the cooperative model because of legal, institutional, and economic pressures which overlap in complex ways (Bretos and Errasti 2018; 37-40). Whatever the cause, internationalization has produced difference and inequality within the organization (Kasmir 2016). Some workers enjoy democratic control of their enterprises, while others do not.

This inequality expresses a contradiction between the internal cooperative logic of Mondragon and the capitalist logic required to operate in global markets. Managers see the lack of a "cooperative culture" in other countries as a barrier to the cooperativization of international holdings (Flecha and Ngai 2014, 672); however, scholars have noted that Mondragon has not implemented cooperative principles in its Brazilian subsidiaries, where there is a strong cultural and institutional affinity with cooperatives (Bretos and Errasti 2018, 39). Brazilian groups like the Landless Workers Movement (MST), also discussed in this chapter, could serve as models for Mondragon to reference in adapting to a new legal, political and financial environment.

### *Mondragon as Global Reference*

Mondragon's response to the crises of 2008 and 2020 show two of the cooperative's principles – sovereignty of employment over capital, and capital as an instrument – at work. Mondragon was able to deploy capital to protect employment through its social security system in the form of pensions, unemployment benefits, deferred hours and guaranteed employment. Workers voted together to accept a pay cut in an act of pay solidarity. The shared funding and decision-making structures of Mondragon made these actions possible.

The contradictions of Mondragon's internationalization call its members to a *way of considering* which is *open* and *encompassing*. Mondragon can collaborate with national governments to create new legal and financial forms to accommodate the organization as both investor and cooperative body. This requires openness to new and adaptive forms. It will allow Mondragon to encompass its history, values, moral and intellectual traditions. In a moment of global reconfigurations of markets, politics, and societies, Mondragon can increasingly serve as a global reference and instrumental force for worker's agency and dignity.

Mondragon's scale places cooperative organizational structures in the mainstream of economics and policy. It has proved that cooperatives can generate large revenues while placing capital at the service of progressive values rooted in catholic social thought. This basis in catholic thought is specific to the cultural history of Basque Country and Mondragon's roots in the early to mid-20<sup>th</sup> century. However, these specific referents also continue to speak to universal concerns for human dignity and its realization

through democratic, equitable, and cooperative forms of organization and production. While it faces challenges in internationalizing, Mondragon's responses to this new and evolving situation will be instructive for other groups seeking to strike a balance between cooperation and varying political and financial circumstances.

### **Politics - Participatory Budgeting (International/Global) <sup>6</sup>**

Increasing citizen participation in decision-making has been identified by scholars and practitioners as a key process in transition to sustainability (see for example Bass, Dalal-Clayton & Pretty 1995; Capra 1996; Sandilands 1999; Escobar 2000; Shiva 2005; Klein 2014). Environmental justice theories posit that the development of more participatory forms of governance work towards just distribution of environmental 'goods' and 'bads' (Agyeman 2005). Contemporary political decision making is often conditioned by entrenched, concentrated economic and political powers and mobilized through adversarial processes. In contrast, participatory decision making seeks to move towards distributed and deliberative decision-making.

An innovative budgeting method adopted in cities around the world, Participatory Budgeting (PB), offers a vision and practice of distributed decision making within complex social, political, economic and ecological systems. This is a democratic and deliberative decision-making process which empowers citizens to directly decide how a portion of the public budget is spent. PB is increasingly seen as a social tool for urban and regional sustainability (Friant 2017). It is also increasingly studied as an effective method to achieve many of the United Nations Sustainable Development Goals (SDGs) (Friant 2017; Cabannes 2018; Bernaciak and Bernaciak 2019; Gillman 2016; Vinogradova 2021).

#### *History of Participatory Budgeting*

This process was developed and consolidated in Porto Alegre, Brazil where up to 100% of the yearly municipal investment budget has been decided through participatory process since 1989 (Friant 2017). PB has since been implemented in over 3000 cities, regions and institutions worldwide and on every continent, although initiatives are largely concentrated in Latin America and Europe (New York City Council 2023). PB is generally associated with city budgets, however, it has also been implemented by states, counties, schools, universities, housing authorities and coalitions of community groups. PB processes vary in scale from small towns to major metropolises such as Pune (India), Rome (Italy), Matam (Senegal), NYC (USA), Chengdu (China), and Sao Paulo (Brazil).

The processes may manage a drop in the bucket of the overall budget (such as in NYC), or the entire municipal investment budget (Porto Alegre). The World Bank and the United Nations have identified PB as an important tool for inclusive and accountable urban governance, based on its ability to promote transparency, inclusion and equity (Goldfrank 2012). Baez and Hernandez (2012; 317) write that PB can

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<sup>6</sup> This case is written by Andreas Hernandez who was a founding Steering Committee Member of Participatory Budgeting New York City.

“become a very different political project depending on the city, its history and its wider relationships with politics and capitalism”.

In the Global South, PB projects have focused on basic services such as roads, sewage, water supply, and street lighting (Hagelskamp *et al.* 2020). Research in Brazil has linked PB to significant public service improvements and community well-being (Goncalves 2014). In NYC, which is arguably among the most grassroots organized PBs globally (Baez and Hernandez 2012), participation among socioeconomically marginalized populations was high, resulting in budget priorities favoring school, street and traffic improvements and public housing (Hagelskamp *et al.* 2020). Lappe (2019) describes how PB-driven development formed the basis of making food a right in the 5 million person City of Belo Horizonte, Brazil. Innovative policies emerged from PB processes in Belo Horizonte, connecting local farmers with citizens through street markets, public institutions, public purchases, popular restaurants and other mechanisms.

### *How Participatory Budgeting Works*

Municipal PB systems generally involve four core steps:

*First, the guidelines of the upcoming budget cycle are set and decisions are made about how the process will operate. Dynamics are established such as timelines, appropriate incentives, participation guidelines, and core values of the system.*

*Second, neighborhood assemblies are held, where residents or other defined stakeholder groups under the budget’s jurisdiction meet, learn about PB, and then draw up specific projects based on community needs.*

*Third, assembly participants who are especially interested in staying engaged with the process throughout the cycle become budget delegates, through a vote in some cases or on a volunteer basis. These delegates are charged with turning ideas that were imagined at the assemblies into feasible projects, and establishing their costs – often with the support of experts.*

*Fourth, projects are presented to another round of neighborhood assemblies at a final vote where the participants decide which projects will be funded according to those that garner the most votes within the allotted budget.*

One of the key strengths of the PB has been its success in developing deliberative democracy, where individuals are open to changing their perspectives as a result of direct conversation and reflection. The face-to-face deliberation of communities, rather than mere voting, becomes the primary legitimacy for decisions. Baiocchi and Ganuza (2014) have concluded that the more successful and transformational PB’s had two important dimensions to their institutional design. They identify the *communicative* dimension which is related to open, transparent and egalitarian communication. And they identify the *empowerment* dimension which is how the communicative inputs are linked to state structures that support participants defining their own participation. Less successful experiences do not support the independence of participation and do not effectively translate this into actual projects.

## *Participatory Budgeting and the Sustainable Development Goals*

Here we will examine the potentials of PB as tool for urban and regional sustainability through the lens of the UN 2030 Agenda for Sustainable Development. At the core of this Agenda are the 17 Sustainable Development Goals (SDGs), which between them have 169 Targets. These goals “recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.” (United Nations 2023). This section will suggest ways in which PB has been able to and may imaginatively continue to address issues of sustainable development and environmental justice.

Effective PB processes most clearly support SDG target 16.7, which is to ‘*Ensure responsive, inclusive, participatory and representative decision-making at all levels*’. PB remains among the most effective tools for participatory governance in terms of depth of participation and impact from the process (Gilman 2016). Cabannes demonstrates that PB shifts funding priorities in ways that support many of the other SDG’s (2018). He identifies PB as particularly effective in addressing Goal 5, ‘*Achieve gender equality and empower all women and girls*’; Goal 10, ‘*To reduce inequality within and among countries*’; and Goal 11 ‘*Make cities inclusive, safe, resilient and sustainable*’. Arguably, diverse PB experiences around the globe have addressed targets of each of the 17 SDGs in a multitude of ways, from Goal 4 *Quality Education* to Goal 16 *Peace, Justice and Strong Institutions*.

Analysis of the Porto Alegre experience, widely considered to be the most elaborated and successful PB experience, provides a grounded view of the potentials of this process for urban and regional sustainability. This analysis focuses on the Porto Alegre PB from 1989 until 2004, until the process was largely hollowed out with the end of 16 years of Workers Party administrations. The *de facto* end of PB in Porto Alegre by the late 2000’s points to the importance of the process being integrated as a city program rather than the flagship project of a particular political party.

PB-driven development, where up to 100% of the budget was decided through this process, made Porto Alegre a widely accepted model for good governance and inclusivity by global organizations (Goldfrank 2012). Studies demonstrated that the majority of investments were focused in the most marginalized neighborhoods, suggesting the inclusivity and redistributive potentials of PB (Avritzer 2010; Marquetti, Schonerwald da Silva & Campbell 2012). While progress remained to be achieved in many areas, Porto Alegre was still able to develop in a more environmentally responsible way than most cities in the global south, and it is considered an example of sustainable urbanism in Brazil (Menegat 2002).

One of the critical PB achievements in Porto Alegre was the vast expansion of access to water and sanitation, particularly to more isolated slums (Wagle & Shah 2003). Friant (2017) examines how most of the targets for SDG Goal 6 ‘*Ensure availability and sustainable management of water and sanitation for all*’, including strengthening the participation of local communities, were addressed. PB made advancements in the areas addressed in SDG Goal 3, ‘*Ensure healthy lives and promote well-being for all at all ages*’. according to Friant, PB was particularly effective in meeting targets 3.2, which addresses ending preventable deaths among children under 5, and 3.9 which is the substantial reduction of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. This was led



by the significant expansion of access to healthcare, and improving the social and environmental conditions necessary for health (Wagle & Shah 2003).

PB driven initiatives in public transportation speak to SDG Goal 11 (11.2 *By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons*). PB successes in expanding public housing and regularizing *favelas*, addressed Target 11.1 of *'ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums'*. The expansion and increased investment in schools and technical training addressed many of the targets of Goal 4 *'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'*. A closer look at the Porto Alegre experience reveals other movements towards the areas of the SDG's. The transparency in spending addressed targets 16.5 (corruption) and 16.6 (transparency). And although access to culture is not in the SDG's, PB driven initiatives for the access and decentralization of culture can be seen as an important component to sustainable development.

The World Bank (World Bank 2002; 6) describes how PB influenced long-term planning in Porto Alegre.

*"Local solidarity and concern for the environment have resulted in some bold decisions in Porto Alegre. In one instance, despite the influence and employment assurance of a large motor vehicle company, the City turned down a proposal for a new automotive plant, believing that the required subsidies could be better used for other City requirements. Similarly, a proposal for a five-star hotel at a decommissioned site was turned down, and it was decided to use the well-situated site to develop a public park, a convention hall, and a public symbol of the city."*

Donella H. Meadows (2002; 3), one of the early luminaries in systems theory wrote, "We can't impose our will on a system. We can listen to what the system tells us, and discover how its properties and our values can work together to bring forth something much better than could ever be produced by our will alone." Participatory Budgeting is demonstrating a form of distributed and deliberative decision-making within the complex systems of the 21st Century.

### **Analysis of Sustainability Experiences**

Each of these experiences encompasses existing systems and traditions while also opening, innovating and developing new approaches. Rather than destroying and replacing current conditions, these movements incorporate and regenerate in ways that mirror ecological responses to disturbance.

#### *Kalundborg Symbiosis*

Kalundborg symbiosis is transforming the ideas and practices of industry that emerged in the last several hundred years - Industry based in resource extraction, consumption and waste. Global ecological crisis shows us the limitations of this way of doing industry. At Kalundborg symbiosis industrial systems are being developed with the understanding the humans are part of the web of life. The experience of

Kalundborg symbiosis draws from knowledge of ecosystems creating a circular economy of materials, energy and water, that runs increasingly on the power of the sun.

### *Senegalese Ecovillage Movement*

West Africa bore the weight of the expansion of modernity. European colonization exploited cheap and slave labor while extracting resources for the expansion of economies far away. This relationship continues in many ways today with Europe, the US and China. The Senegalese Ecovillage Movement is creating new forms of social and economic development rooted in Earth-base spiritualities, green technologies and working together to heal the land.

### *B-Corps and the B Economy*

The dominance of the post- US Civil War corporate form which rose alongside global capitalism has limited social imagination about the potential meanings and practices of business enterprises. This model prioritizes profits over people and planet, and short-term gains for owners over long-term value for societies. The emerging B-Economy is based on generating value for all stakeholders, including employees, customers, community, the environment, and shareholders, among others.

### *Agroecological Cooperatives in the Brazilian Landless Movement*

Industrial agriculture is built on the domination of nature, using petrochemical fertilizers and pesticides to grow food while compromising long term soil, water and wider ecological health. In Brazil, since the colonial era, agricultural development has been directed at large plantations and ranches growing cash crops for export. This continues through today. Agroecology focuses on relationships between crops, humans, soils, insects and wider ecosystems. These cooperatives are demonstrating the possibility of an alternative model of flourishing rural life, which provides thriving livelihoods for small farmers, produces more food per acre than neighboring conventional farmers, all while rehabilitating the earth.

### *Mondragon Cooperatives*

Today, the global economy is constructed to mobilize investment for maximum shareholder profit for through top-down corporations. Mondragon's scale places cooperative organizational structures in the mainstream of economics and policy. It has proved that cooperatives can generate large revenues while placing capital at the service of progressive human values.

### *Participatory Budgeting*

Contemporary political decision making is often conditioned by entrenched, concentrated economic and political powers and mobilized through adversarial processes. PB, offers a vision and practice of distributed and deliberative decision making within complex social, political, economic and ecological systems. PB is increasingly seen as a pathway for urban and regional sustainability

### *And Many More...*

There are many other sustainability experiences that could have been included in this Chapter. Rights of Nature legislation From New Zealand to Ecuador is embedding law into natural systems through recognizing the rights of ecosystems. Alternative economic indicators such as the Social Progress Index or Gross National Happiness provide more holistic measurements of social, economic and environmental realities. The Coalition of Sustainable Communities Movement networks municipalities, counties and other public organs to fill a power vacuum between the city and state and effectively campaign for and create environmental policy at the state level. Solar Cooperatives are demonstrating the possibility of decentralized community controlled green energy. Germany has some of the most elaborated projects of this last example, but thousands of cooperatives are forming worldwide

## **Conclusions**

The crisis of imagination is not purely a negative phenomenon. It is also a situation full of agency, where communities can develop and practice new forms of social and economic life that are better able to navigate the deep cultural and institutional crises of the contemporary world. These six experiences invoke the three pillars of sustainability, creating alliances and integrations between ecological, social and economic models and moving towards a new, more stable level of ecological embeddedness. Each experience points towards pathways to sustainability in a key area of human activity. In relationship, these experiences begin to sketch out possibilities for societies to creatively align with the living earth.

We argue that transitioning to sustainability requires learning from, scaling up, and supporting experiences like we have considered here. However, by examining these projects, we do not propose their widespread adoption without adaptation. Rather, they may be studied, adapted or hybridized for new social and geographical situations. We propose the significance of multiplying perspectives, pathways, and practices. Resilience and durability are characteristics of diverse systems in social structure as much as in agriculture. What may be needed after modernity's push towards innovation and globalization is a breather where memory, local knowledge, tradition, and embeddedness may also be considered. This may, in turn, produce new movements and imaginaries.

Through examining experiences rather than developing models, we acknowledge the importance of developing solutions which are place-specific and culturally congruent rather than systematic and idealistic. In this context of global transformation towards more sustainable, ecologically integrated systems, we recognize the need to produce present, local benefits while staying attentive to the long-term goals of historical (political), and philosophical (subjective) transformation. This approach understands both short-term tactical and long-term strategic goals as worthy of consideration. By resisting the impulse to generalize models and create a singular narrative of progress, this chapter acknowledges that future societies cannot be built through theories which inhabit an idealized model of the world. We urge scholars, activists, engineers, technologists, corporate and public planners to avoid the impulse to derive practice solely from theory, and instead focus on supporting, expanding, and learning from vibrant, on-the-ground experiences which have the potential to transform current and produce new social imaginaries.

In this chapter we examined six compelling on-the-ground experiences, which are demonstrating pathways to sustainability, resilience and regeneration. These experiences are creating new social imaginaries embodied in the practical forms of new politics and economics aimed at profound democratizations of human life, and towards a creative realignment of humans with the living Earth. These social imaginaries are *open* in the sense that they can be filled with new possibilities and ideas. And they are *encompassing* in that they recognize and build from existing systems which hold meanings for communities and provide livelihoods. We suggest that the examination of lived, innovative sustainability experiences is a critical dimension for the emergence and multiplication of social imaginaries capable of responding at the scale of global crises.

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