

Cooperative governance: One pathway to a stable-state economy

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Abstract

Exponential increases in material and energy use globally threaten Earth System stability in many ways including through climate change. Yet societies remain committed to economic growth, reflected in the way publicly traded corporations are legally obliged to maximise shareholders' profits. In contrast, businesses governed cooperatively by members, *i.e.* democratically and transparently, may be better suited to operating in an ecologically sustainable way, enacting their members' ethical commitments. We combine a complex adaptive systems approach with community economies theory to argue that cooperatives offer a significant transformative opportunity to resocialise and repoliticise economies away from the growth imperative. Cooperative governance is consistent enough with currently dominant neoliberal governance (itself closely aligned with economic growth) to gain initial policy traction. Ultimately, we seek an overall shift to a stable-state economy – a global economy whose operation sustains rather than threatens the familiar (to humans and our civilisations) stable state of the Earth System.

Keywords

global environmental governance; complex adaptive systems; community economies framing; cooperatives; climate change; growth

We can't change ecological limits. We can't alter human nature. But we can and do create and recreate the social world. Its norms are our norms. Its visions are our visions. Its structures and institutions shape and are shaped by those norms and visions. This is where transformation is needed (Jackson 2009, p.188).

1. Introduction

This article links global environmental governance (Biermann 2007) with governance of individual economic enterprises. We argue cooperative governance of individual economic enterprises may provide one path towards challenging and eventually surmounting the ecologically destructive economic growth imperative which characterises the globalised economy (Hamilton 2003; Jackson 2009). Economic growth since the Industrial Revolution is characterised by exponential increases in material and energy flows in the global economy. According to steady-state economy theory (Daly 1982; Jackson 2009) as discussed later, continuous economic growth is incompatible with the Earth's ecological limits, including in relation to limits to availability of (i) resources such as biodiversity, and (ii) sinks for anthropogenic wastes such as greenhouse gas emissions. Yet contemporary societies are committed to continued and even accelerated economic growth (Jackson 2009; Latouche 2010), a value that is enshrined in the way that the publicly traded corporations, a dominant form of large-scale business enterprise, are legally obliged to maximise profit for their shareholders (Bakan 2004, p.36-38; Austin 2010, p.395) In contrast, businesses governed cooperatively, *i.e.* transparently and democratically by their members, may be better suited to operating in a manner that is consistent with ecological limits.

The article's emphasis is on anthropogenic climate change (IPCC 2007), one key expression of the incompatibility of continued fossil fuel-driven economic growth with maintaining familiar (to humans and our civilisations) stability of the Earth System. However, the argument developed here extends beyond anthropogenic climate change to acknowledge all incompatibilities between the global economy and the Earth System. We adopt a complex adaptive systems (CAS) approach (Waltner-Toews *et al.* 2008) in order to link governance scales, from individual cooperatively governed enterprises to the global economy overall, and beyond to the Earth System as a whole. This is important because CAS exhibit non-linear dynamics across scales. As such, the challenge of cross-scale responses and adaptation in the context of evolving knowledge about the Earth System and key climate thresholds is crucial (Folke *et al.* 2007; Walker *et al.* 2009). The potential to deploy a CAS

perspective to participatory governance has received attention elsewhere (Wagenaar 2007). Our focus is on the potential role for cooperatives at the scale of individual economic enterprises to effect change in the governance of the global economy in order to bring about a stable-state economy, *i.e.* a global economy that functions in alignment with key Earth System thresholds (Rockström *et al.* 2009). To this end we draw on community economies theory (Gibson-Graham 2006) and link it with CAS approaches to explore cooperative governance and the potential for feedbacks from cooperatives to the global economy which may contribute to bringing the global economy into alignment with the Earth System. We do so recognising continued neoliberal dominance of public policy discourses (Quiggin 2010), and suggest there is merit in proposals for transformative change being consistent enough with existing public policy discourses to attain initial policy traction.

2. Earth System governance: From limits to thresholds

In this section we: (i) conceptualise the Earth System, the global economy and individual businesses including cooperatives as social-ecological systems (SESs) (Berkes and Folke 1998) with key interactions among them; (ii) recast notions of limits to growth and steady-state economy in complexity terms, and; (iii) demonstrate a stable-state economy will likely be necessary to achieve ecological sustainability. The complex adaptive systems (CAS) approach is useful because it provides a common language for analysing social-ecological systems at multiple scales and the important interactions between them (Waltner-Toews *et al.* 2008), in particular, non-linear cross-scale dynamics (Duit and Galaz 2008).

2.a. A complex adaptive systems perspective on global environmental governance: The Earth, the global economy and cooperatively-governed businesses

Conceptualising the Earth System, the global economy and all businesses (collectively and including cooperatives as a proportion) as complex adaptive systems (CAS) facilitates an analysis which focuses on the key elements and relationships between elements that together define each system. A complex adaptive system is one in which the elements and the relationships between elements can change, evolve and adapt over time.¹ The CAS

¹ Complex adaptive systems have capacity to evolve over time and are characterised by feedbacks, thresholds and non-linear change (Scheffer *et al.* 2001). This contrasts with simple systems (*e.g.* a

approach also brings focus to key cross-scale relationships among systems (Albrecht *et al.* 1998). Figure 1 presents this perspective in graphic form. We further narrow our perspective by conceptualising the Earth System as a social-ecological system (an SES) (Berkes and Folke 1998). A social-ecological system is a CAS that comprises linked human-social and ecological elements. An interest in Earth System governance is well-served by a perspective that recognises linkages and interactions between ecological and human-social elements of the Earth System.

FIGURE 1 ABOUT HERE

We also conceptualise the global economy as an SES, and a subsystem of the Earth System. Elsewhere economies have been conceptualised as CAS (Arthur *et al.* 1997; Beinhocker 2006; Giampietro and Mayumi 2009). We use the narrower SES conceptualisation, to emphasise an understanding of the global economy as a CAS that additionally comprises linked human-social and ecological elements (Phelan *et al.* 2011a).

Lastly, and to support analysis of cooperative governance and the key potential feedbacks between cooperatives and the global economy, all economic entities including cooperatively governed enterprises are collectively conceptualised as an SES, and in turn as a subsystem of the global economy. Our specific interest is the existing extent of cooperative governance in economic entities, and the potential for cooperativism to contribute to a transformation to a stable-state economy. Both Lovelock's concept of 'Gaia' (Lovelock 1979) and Crutzen's 'Anthropocene' (Crutzen 2002) convey the sense of a co-evolutionary process engaging ecological and human-social systems at the global scale. That is, human societies and the 'natural' world change, interact, and change each other through time. One

bicycle) and complicated systems (*e.g.* a space shuttle) with fewer or more elements to them, but with unchanging elements and interactions between elements: as complicated as a space shuttle is, it has no capacity to evolve over time.

example of interaction between linked human-social and ecological elements of the Earth System is anthropogenic climate change. The term anthropocene has been coined to describe the current age in which humanity has become the dominant driver of Earth System change (Crutzen 2002). Earth System science² researchers have suggested a number of globally significant Earth System thresholds which may define a ‘safe operating space for humanity’, including fresh water supply, biodiversity loss and collapse of fisheries (Rockström *et al.* 2009). Crossing one or more such thresholds implies shifting the Earth System from a familiar (to humans and our civilisations) stable state to an alternative and unfamiliar state (Phelan *et al.* 2011b).

2.b. Stable-state economics: Recasting limits and the steady-state in complexity terms

In this section we recast the notions of limits to growth and steady-state economy in complexity terms (Waltner-Toews *et al.* 2008) in order to facilitate an analysis which addresses cross-scale and co-evolutionary linkages between the Earth System, the global economy as a subsystem of the Earth System, and in turn cooperatively governed economic enterprises grouped as a subsystem of the global economy. The notion of a stable-state also clearly emphasises in abstract the need for a global economy that is consistent with key Earth System thresholds, *i.e.* an economy that does not threaten the loss of familiar (to humans and our civilisations) Earth System stability (Phelan *et al.* 2011a).

The notions of limits to growth (Meadows and Club of Rome 1972) and of overshoot, (*i.e.* passing an ecological resource supply limit) were initially developed empirically in the 1970s and instigated continuing public debate about potential constraints on economic growth. Limits (to growth), which echoes Malthus’ (1997 [1798]) early theoretical work on the relationship between human population and food supply, can be understood as analogous to thresholds in a CAS approach. Crossing a key system threshold implies significant change in the state of a system (Olsson 2006), and raises questions about the possibility or otherwise of making a return journey across the threshold (Walker and Salt 2006).

Thresholds in the Earth System relate to ecosystem services (Millennium Ecosystem Assessment 2005) upon which humanity is wholly dependent, including supply of renewable

² Earth System science (e.g. Schellnhuber 1998; Steffen and Tyson 2001; Earth System Science Partnership 2010) is grounded in the physical sciences and has an emphasis on planetary scale phenomena and analysis. Earth System governance (e.g. Biermann 2007; Earth System Governance Project 2010) is a complementary approach in the social sciences.

and non-renewable resources, and the Earth System's capacity to assimilate anthropogenic wastes. The challenge in predicting climate thresholds, or even identifying thresholds, including after they have been passed has been noted in the social and physical sciences (Keller et al. 2008; Charlesworth and Okereke 2010). In complexity terms, crossing a system threshold means a change in the state of a system. With reference to anthropogenic climate change, an example would be cumulative atmospheric greenhouse gas concentrations causing a shift away from the familiar (to humans and our civilisations), stable state of the Earth System to one of potentially multiple alternate stable states, *e.g.* an ice-free planet. Inertia in the Earth System means that some climate changes such as shifts in rainfall patterns and sea level rise are effectively permanent on human timescales (Solomon et al. 2009).

Our notion of a stable-state economy aligns with Daly's theorisation of a steady-state economy. Daly's conceptualisation was of the economy as a subsystem of the biosphere³ (Victor 2008, p.vi) and can be read as consistent with more recent characterisations of economies as complex adaptive systems (Giampietro and Mayumi 2009). From a steady-state economy perspective, theoretically unlimited economic growth is incompatible with physical limits of the Earth System, which is recognised as comprising a (virtually) static stock of material which may be transformed through application of energy. In turn, all energy flows into the Earth System originate from the Sun and enter the Earth System as light and heat. Energy is used within the Earth System and is ultimately dissipated (Daly 1982).

3. Cooperative governance

3.a. Cooperatives as a significant economic form

This paper argues that cooperatives offer substantial opportunities to challenge the growth imperative by resocialising and repoliticising (Gibson-Graham 2006) the global economy, thus creating the socio-political space to encourage a more general shift in economies away from reliance on growth for business viability. Cooperatives are a significant economic form. There are 800 million cooperative members in over 90 countries, and cooperatives provide more than 100 million jobs worldwide (International Cooperative

³ Contemporary usage refers to the 'Earth System', comprising 'an alphabet of intricately linked planetary sub-spheres *a* (atmosphere), *b* (biosphere), *c* (cryosphere; that is, all the frozen water of Earth), and so on (Schellnhuber 1999, p.C20).

Alliance 2011b). Prevalence of cooperatives varies from country to country. For example, one in two households in Finland are cooperative members. The contribution of cooperatives to economic activity also varies from country to country: in Kenya cooperatives contribute 45% of GDP. And some sectors see greater predominance than others: cooperatives in the financial services sector serve 13% of the world's population (International Cooperative Alliance 2011b).

Both the concept and practice of cooperativism have been integral to economic activity since the beginning of the Industrial Revolution (Furlough and Strikwerda 1999). Cooperatives were formed in opposition to the social upheavals accompanying industrialisation and were crafted to co-exist and offer an opportunity of protection from the dislocation and anomie of the expanding self-regulating market (Birchall 1997). Since the Industrial Revolution, rise of capitalism and fossil fuel-driven economic growth, cooperatives have provided an alternative to a singular profit-maximisation motive for business.

The establishment of the Rochdale Principles in 1844 for the governance of cooperatives became the cornerstone for Rochdale and many other cooperatives to develop into successful and enduring community based economies (Morrison 1999). The core Rochdale Principles are enshrined in the contemporary International Cooperative Alliance's principles. These are: voluntary and open membership; democratic member control (one member one vote); member economic participation; autonomy and independence; training and information; cooperation among cooperatives and concern for the community (International Cooperative Alliance 2011a).

Cooperatives are usually categorised into three main types: producer; consumer; and worker cooperatives (Birchall 1997). Producer cooperatives (e.g. of farmers or manufacturers) are groups of producers that come together cooperatively and pool resources for greater mutual economic and social benefit. Consumer cooperatives are businesses owned by their customers and can supply a vast range of goods and services including food, finance, energy, housing and health care. Their main purpose is to provide quality products and services at low cost to members. Worker cooperatives are businesses owned and run by their employees such as clothing firms, restaurants and grocers. Surplus generated by workers' cooperatives is usually allocated on the basis of individual labour contributions rather than share ownership. Cooperative management can be organised in a collective form where all

workers participate in selection of managers and strategic decisions. More traditional hierarchical management structures are also possible (Zeuli and Cropp 2004). Ultimately the ‘one member one vote’ democratic mechanism is common to all structures.

The transparent and democratic structure of governance that is reflective of the diversity of interests of both cooperative members and the wider community is a cooperative’s key strength in allowing it to take into consideration environmental and social concerns (Cameron 2010, forthcoming). The participation rights of all members, democratic governance and ability to negotiate concerns that go beyond simple capital accumulation mean that as surplus is generated decisions must be taken on how it will be used. It is this decision-making process, which will be considered further below, that creates the opportunity to discard a commitment to economic growth.

The ICA (International Cooperative Alliance 2011a) definition of a cooperative that includes “meeting common economic, social and cultural needs and aspirations” can be extended to include ecological sustainability values, objectives and practices. As such, the cooperative entity offers societies one path towards decoupling their economies from the growth imperative.

3.b. Resocialising and repoliticising the economy

In this section we use Gibson-Graham’s (2006) community economies theory to analyse the potential for cooperative governance to contribute to a transformation of the global economy in the context of Earth System thresholds. The theory equips us with tools to better understand the governance processes of cooperatives and illustrate the opportunities for economic transformation that cooperative governance offers. Additionally, we consider Gibson-Graham’s (2006) community economies theory as consistent with recognition of the linked interdependence of human-social and ecological elements of social-ecological systems (SESS). As such, we link community economies theory with the complex adaptive systems approach introduced above to explore the potential for cross-scale feedbacks, from cooperatives to the global economy. We use Gibson-Graham’s ethical coordinates (Gibson-Graham 2006, p.88) with a particular focus on the process of negotiating the allocation and distribution of surplus.

Recognising interdependence between economy and ecology promotes the opportunity for ethical economic practice that includes attention to Earth System thresholds, a practice that is consciously aware of wider social-ecological implications of business governance. Gibson-Graham (2006) contrasts this with the capitalist 'denial' (p.84) of economic interdependence, demonstrated by the private appropriation (most often in the form of profit) of surplus generated by businesses.

The community economies approach is a project to repoliticise and resocialise the practice of economics (Gibson-Graham 2006, p.88). The approach can illuminate our shared responsibilities as producers and consumers in regard to the impact of our actions, including actions which threaten the stability of the Earth System. In order to bring to the foreground this interdependence, Gibson-Graham identifies four ethical coordinates: necessary; surplus; consumption; and commons.

Necessary refers to what is needed for basic survival. *Surplus* refers to what is produced over and above the necessary. *Consumption* is the behaviour that will determine the quantities of both the necessary and surplus. Lastly, *commons* refers to all that we have to produce the necessary and surplus, plus the commons required to reproduce a society, such as forests, water, soil, knowledge and technology. The four coordinates are all entangled, interdependent, and give both cause and effect to each other (Gibson-Graham 2006).

Gibson-Graham (2006) argues that it is the process of surplus distribution through decision-making between what is necessary for survival and what is surplus that has a 'socially potentiating effect' (p.91). The process of negotiation around how to distribute and use surplus creates community. The scenario where surplus is privately appropriated by capitalist owners or shareholders creates a weakened community: the decisions on how to use surplus lie in the hands of private interests rather than the wider community. Another scenario where the allocation and distribution of surplus is decided by all members of a community allows for diverse interests to be represented and for environmental and social concerns to be considered. A for-profit business must create an ever-increasing surplus to be returned (as profit) to its investors and shareholders to ensure continuing capital investment in the business. This is a key cross-scale link to economic growth at broader scale. In contrast, cooperatives do not need to deliver returns to investors and shareholders. Once what is necessary has been provided for – a negotiated process involving all cooperative members

addressing wages and provisions for ongoing maintenance and future replacement of equipment – the surplus can be allocated and distributed in accordance with members’ agreed values and objectives. In practice, many cooperatives follow an economic growth model of business (Zeuli and Cropp 2004). However there are an increasing number of cooperatives that use their surplus for wider social and environmental purposes to deliver benefits beyond the direct membership of the cooperative (Hermida 2006; Restakis 2010).

The cooperative governance structure and inherent democratic process realises this social potentiating effect and resocialises and repoliticises the economy by creating an opportunity to negotiate the allocation and distribution of surplus at the scale of individual businesses. Surplus is fundamental to a society reproducing or sustaining itself and allows socially desirable activities that do not in themselves immediately create surplus such as child rearing, caring for the sick and elderly and cultural endeavours. Historically cooperatives have allocated their surplus to activities that promote protection for vulnerable members of society and create social equity (Restakis 2010). Increasingly, cooperatives are using the process of negotiating the allocation and distribution of surplus to support ecological values (Morrison 1999; Zeuli and Cropp 2004). With greater public awareness of Earth System thresholds, some cooperatives are making decisions about surplus that reduce their impact on the commons by reducing levels of consumption and ultimately economic growth (Restakis 2010).

3.c. Inspiration from cooperative governance practice

The cooperative movement continues to thrive across the globe with new entities being formed in a variety of political, social and economic circumstances (Morrison 1999). The purpose of this article is to demonstrate that cooperatives offer one path to a stable-state economy through their potential to repoliticise and resocialise the economy.⁴ We identify in this section that in order to support such a transition of the global economy, cooperatives need to fulfil three criteria: (i) longevity and scale; (ii) values and practice that recognise Earth’s ecological thresholds, and; (iii) an ability to respond to systemic crisis. Lastly, in this section we discuss (iv) governance roles for the state in supporting cooperatives.

3.c.i. Longevity and scale

⁴ Cooperatives are of course not immune to business failure (Griffiths 2004). To the extent cooperatives succeed and flourish they offer a viable alternative approach to business governance.

In order to offer a realistic contribution to a transformation away from the existing growth economy, cooperatives need to be able to demonstrate they are viable over long periods of time and at multiple scales. The Mondragon Cooperative in Spain demonstrates that at a national level cooperatives can make a significant economic contribution to a nation's economy. The Mondragon Cooperative was established in 1956 and has steadily grown in size and diversity (MacLeod 1997). Its operations include industrial, retail, financial and knowledge based products. Mondragon now operates internationally, it is the seventh largest company in Spain and employs around 85,000 people (Mondragon Corporation 2011).

The Italian city of Imola also exemplifies cooperatives' potential for longevity and scale, having been described as having 'one of the world's most robust, dynamic and deeply rooted cooperative movements' (Hancock 2008). The cooperative movement in Imola began in the early 1970s. By 2011 there were 132 cooperatives active in numerous sections of the economy and collectively they contribute 60% of the city's Gross Domestic Product. Of the area's workforce, 17% is employed by cooperatives and 50% of residents are members of a cooperative. In 2006 the combined annual revenues of Imola cooperatives were €2.4 billion. Imola has one of the highest concentrations of cooperatives in the world (Hancock 2008; Restakis 2010).

Japan's long tradition of cooperatives dates back to the mid-eighteenth century (Connelly 2010). Consumer cooperatives are particularly strong with almost 17 million members in the country (Restakis 2010). In 2007 the combined turnover of all consumer cooperatives in Japan was US\$22 billion. If considered collectively, consumer cooperatives are the third largest retailer in the country (Connelly 2010). Cooperativism is particularly strong in the food sector: 10-15% of food nationally is sold through cooperatives (Connelly 2010).

3.c.ii. Values and practice that recognise Earth System thresholds

Traditionally cooperatives have been established in support of social goals (Restakis 2010). A transformation to a stable-state economy will require the widespread adoption of ecological values. The Japanese Seikatsu Consumers Cooperative Union (Seikatsu) is one inspirational example. Seikatsu was started in 1965 by a group of women concerned about the quality of food they were buying and the impact commercial farming processes on the environment (Hermida 2006). Seikatsu established direct relationships with producers to

guarantee quality of food products (Hermida 2006). As the cooperative grew it developed agreements with supplier farmers to use organic farming methods that avoided use of artificial fertilisers and pesticides whilst ensuring the farmers were paid enough to maintain healthy products and working conditions. Seikatsu today is an association of 30 consumer cooperatives with 300,000 members across 19 provinces. The key values that motivated Seikatsu to organise initially remain intrinsic to the organisation 46 years later (Hermida 2006).

Gibson-Graham (2006) argue that it is when the distribution of surplus is negotiated democratically that opportunities for ethical decisions around consumption and commons are created. With echoes of Gibson-Graham's (2006) four coordinates, Seikatsu considers consumption as a behaviour of daily life that must draw on deeper values which promote respect for the environment and other people (Hermida 2006). To this end, Seikatsu has nurtured a close and deep relationship between consumers and producers that allows for stabilised patterns of consumption, *i.e.* practices consistent with a stable-state economy. Firstly, consumers indicate in advance the level of consumption they will commit to. Producers consequently have a secure market to sell to (Restakis 2010), removing the need to respond to threats of competition and the wastage that accompanies it. With the match between consumption and production there is no over-production, unsold products or need to advertise to persuade consumers to buy their products (Hermida 2006). Secondly, the members of the consumer cooperatives are committed to reducing wasteful consumption. In belonging to a Seikatsu cooperative they support only has one choice of a product in each category and know the production and sale of the product is consistent with Seikatsu's values (Hermida 2006). At the core of Seikatsu's purpose and practice is the aim to transform mainstream consumption behaviour by creating citizens who have concern and respect for both other people and the environment (Connelly 2010). It is the governance within and between the consumer and producer cooperatives that creates opportunities for ethical economic decision-making which acknowledge ecological sustainability values.

The consequence of this strong producer-consumer relationship is that production levels are set for sufficiency (Princen 2005) rather than on maximising demand for profit. By linking producers with consumers, cooperatives are creating new ways to protect the commons through deciding what is necessary and how to limit excess production. Furthermore, decisions on how to use surplus have meant investing in local food

infrastructure such as warehousing, cold storage and small scale processing opportunities. Seikatsu's perspective is that local rather than efficient food production is more aligned with the Earth's ecological thresholds. Providing the infrastructure has allowed for a concentration of local food production by encouraging producers who would normally cater for markets further afield to have the means to supply their local market. This has facilitated the development of more extensive producer and consumer cooperative relationships (Hermida 2006).

3.c.iii. Capacity to respond to systemic crisis

At the end of 2001 the Argentinean government defaulted on US\$132 billion in foreign debt payments sparking a domestic economic crisis in that country (Whitson 2007). One of the major consequences of the crisis was factory closures throughout the country (Whitson 2007). In the face of widespread unemployment, workers began taking over closed factories and transforming them into worker cooperatives. By 2010 there were 300 newly-formed worker cooperative factories (Restakis 2010). The Zanon ceramic tile factory in the west of Argentina is considered the pinnacle of success in worker cooperatives (Ranis 2010). Zanon sees its role entailing not only acting as a workers' cooperative protecting local employment, but also in responding to the systemic crisis and providing leadership for the social transformation of the country. Zanon has created and deployed surplus to establish community centres, health clinics and cultural, recreational and artistic outreach programs (Ranis 2010). Zanon has used the surplus it generates to create forms of social protection against the economic crisis. This example demonstrates the potential of the cooperative model to respond to a systemic crisis – in this case an economic crisis. Threatened loss of familiar Earth System stability is a social-ecological crisis, and there are parallels between systemic economic and ecological crises (Tienhaara 2010).

3.c.iv. Role for states in supporting cooperative governance

Cooperativism is a form of bottom-up governance. Yet states can play a role in enabling cooperative governance to flourish. For example, in 2002 Argentina reformed its bankruptcy law to allow a majority of workers in a bankrupt factory to continue production and trade (Ranis 2010). In 2004 Argentinean municipalities passed legislation that made permanent the workers' right to maintain control over newly formed cooperatives of bankrupt factories (Ranis 2010).

Provisions in Italian law also support cooperative governance of economic enterprises. Of all the surplus produced by a cooperative, 80% is required by law to be placed in an indivisible reserve (Restakis 2010). This indivisible reserve cannot be paid out to the members as individual returns. Instead the indivisible reserve must be reinvested in the cooperative or used for the benefit of the wider community. In 2007 indivisible reserves generated by Italian cooperatives totalled €45 million (Hancock 2008). Furthermore, cooperatives' indivisible reserves are not taxed, allowing for a greater amount of the surplus to be used for the benefit of cooperatives and their communities. In accordance with cooperative principles, the use of these reserves is required to follow a democratic decision making process that includes all cooperative members. This is the 'social potentiating effect' (Gibson-Graham 2006) and the creation of community through cooperative members negotiating how to use their surplus. Italian cooperatives' considerable surpluses have allowed cooperatives to diversify, create employment in their areas, offer high wages and a good standard of living for members. As examples from Italy and Argentina demonstrate, in times of economic stability and instability, state responses to cooperative governance can support cooperatives to be financially secure and continue into the future as community assets which provide secure employment and public benefits (Restakis 2010).

4. Cooperativism and neoliberalism: From partial short-term alignment to longer-term transformation

This section discusses the prospects for cooperatives to contribute to a reorientation of the global economy away from the growth imperative. Specifically, this section takes the analysis further by arguing that the cooperatives are consistent enough with the process values of the neoliberal governance patterns of contemporary Western economies that they may flourish even in the context of neoliberal ideology's current dominance of environmental governance arrangements (Newell and Paterson 2010, p.18-20). However, over time cooperative governance also offers the opportunity to undermine the current dominance of neoliberal governance patterns. Therefore, to the extent neoliberalism serves as a 'handmaiden' to economic growth (Hamilton 2003, p.21), cooperatives may provide additional impetus to shift to a stable-state economy. We argue cooperative governance, discussed primarily in a Western context, should not be viewed as quaint or exotic, but rather

as a beacon to one practical policy response in support of governance of the global economy that is more consistent with ecological realities.

How well do cooperatives sit with currently dominant patterns of governance?, Harvey (2005), Newell and Patterson (2010) and Quiggin (2010) have detailed a widespread shift in the governance patterns of Western economies since the late 1970s. This pattern shows a general shift towards forms of governance that placed greater reliance upon the capitalist market for the provision and allocation of both private and public goods. This pattern of governance has its roots in the Western economies, however, it was successfully exported to various developing countries, in part through the operation of the multilateral financial institutions such as the International Monetary Fund and World Bank (Harvey 2005). This shift in governance has been described by many terms such as market-liberalism (Dryzek 2006, Quiggin 2011), neoliberalism (Harvey 2005; Newell and Paterson 2010), and economic rationalism (Lyster *et al.* 2009)⁵. Lyster *et al.* (2009, p.26), drawing on Barnett (1998, p.121), describe this shift in governance:

Economic rationalist theory, which underpins the move towards the 'market', is based on neoclassical economics which claims that economic resources are better allocated through unfettered market forces than by government intervention. Coupled with this economic philosophy is a political philosophy that questions the nature and proper role of the state, favouring a minimal or residual state... Liberalism promotes 'rationality, individuality, equality, liberty from interference from others or the State unless justified, the availability of legal rights, and the protection of the private sphere'.

Neoliberal governance continues to exert very significant influence over policy discourse, particularly in the English speaking world (Quiggin 2010). In such a context policy ideas that depart radically from core neoliberal values will likely have limited chance of obtaining policy traction (Dryzek 2006, p.9).⁶ The practical usefulness of exploring alternative models of business enterprises is thus, unfortunately in our view, still partially determined by the extent to which they fit the neoliberal governance paradigm (Newell and Paterson 2010). Interestingly, we find that the cooperative form of business enterprise has a number of key consistencies with the values of neoliberal governance, *i.e.* institutional structures that are voluntary, bottom-up, pluralist and favouring non-state actors.

⁵ The term neoliberal is adopted in this paper.

Prima facie, the cooperative appears to offer sufficient ‘fit’ with existing neoliberal governance to at least offer the possibility of obtaining traction in the current neoliberal constrained policy space. However, there are key distinctions between cooperativist and neoliberal values and we discuss one here. The cooperative business enterprise has capacity to explicitly trade off private profit maximisation in favour of collective or public purposes such as maintaining Earth System stability. The examples of cooperative governance discussed above are real-life instances where cooperatives are making such trade-offs. This pursuit of collective or public purpose is inconsistent with and undermines the primacy of the autonomous, individualised, self-directing agent that lies at the heart of neoliberal thought. Individual citizens stepping outside their own private interests and joining together in projects for collective or public purposes weakens the strength of the individualist assumptions of the neoliberal worldview. Whilst the initial process of individually and voluntarily entering and participating in a cooperative is quite consistent with neoliberal values, the ends or purposes of cooperatives weaken the hold of neoliberal social assumptions. As such, cooperatives may offer the potential for directly transforming economies. Further, cooperativism itself can, through demonstration, encourage wider participation in cooperatives.

How might individual cooperatives assist in meeting long-term threats to the stability of the Earth System caused by the economic growth paradigm? Current versions of neoliberal governance are closely coupled with the growth paradigm of the capitalist economic system. The non-intervention⁷ of the state and/or state action to bring not-for-profit sections of the economy within privatised, market-based, for-profit social relations has largely been consistent with the continued externalisation of social and environmental costs. Similarly, the neoliberal abdication of long term planning by the state has also impacted negatively on the security of public goods, such as maintaining a healthy environment. Under neoliberal governance, the individual and the short-term trumps concern for the public and the long-term (Harvey 2005, pp.172-175). Neoliberal governance therefore is a poor choice for responding to long-term collective action problems such as maintaining Earth System stability characterised by complex and extended chains of causation. This is particularly so when the individualised decision making of neoliberal governance is dictated by short term concerns for private profit maximisation.

⁷ From an inclusive, complex adaptive systems perspective, a choice of so-called non-intervention is as much a course of action as any other course of action.

In contrast, cooperative governance offers the flexibility to internalise social and environmental costs of business activity at the expense of higher rates of financial return. This creates a socio-political space for business activity that meets sufficiency needs of the producers, consumers and/or workers, but without the necessity to chase growth in market share, business size and rates of financial return. Cooperatives thus open a socio-political space to regain collective control over economies by practically asserting control, one community and business at a time. Doing so opens up possibilities for citizens to resocialise and repoliticise their economies (Gibson-Graham 2006), beyond the dominant economic discourse of growth-based profit maximisation that is strongly facilitated by neoliberal governance.

How might the cooperative form of business governance contribute to social-ecological system governance at larger scale? Climate change mitigation provides one example. Currently, the key global environmental treaties on climate change⁸ regulate international cooperation on this issue. At this global scale, the UNFCCC explicitly calls for a trading off of economic growth for the public good of avoiding dangerous climate change. Article 2 of the UNFCCC states that the treaty objective is to stabilise atmospheric concentration of greenhouse gases at a safe level whilst enabling development to proceed in a sustainable manner. The fact that Article 2 subordinates (*i.e.* 'sustainable' rather than unfettered) economic growth to the convention goal of 'avoiding dangerous climate change' explicitly acknowledges a trade-off between growth and the public good of a safe climate.

However, in moving from global to national and lower governance scales there appears to be some significant incongruity. The prevalence and power of the for-profit corporate business has expanded in recent decades with the growth of transnational and national corporate activity (Bakan 2004). The individualised private interest rationale of the for-profit corporation is closely coupled with the externalisation of social and environmental costs and the expansionary pursuit of larger markets and greater market share. The dominant model for transnational and large national business enterprise is thus significantly at odds with the call for trading off growth for the public good of a safe climate. We therefore argue that there is a significant mismatch between the attempted global scale management of the climate crisis through the UNFCCC (*i.e.* trading off growth for public goods) and the

⁸ The United Nations Framework Convention on Climate Change (UNFCCC 1992), The Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol 1997).

dominant business institutional structure at lower scales (*i.e.* the for-profit corporation) that has very limited ability to deliver such trade-offs.

As discussed above, the cooperative business enterprise might be explicitly established with a view to trading off expansionary growth based strategies for wider social-ecological concerns. We therefore argue the cooperative business enterprise has the potential to offer important cross-scale feedbacks between global-scale Earth System governance through international treaties and lower scale business enterprise. This offers potential for transformation to a global stable-state economy, *i.e.* an economy aligned with key Earth System thresholds.

5. Conclusion

As the expansionary dynamic of exponential economic growth continues, achieving viable governance of problems such as climate change and biodiversity loss is more profound a challenge than ever. The material and energy throughput of our economy continues to expand. A growth-based economy is one where participants have little inclination or capacity to see beyond the next business and/or electoral cycle. Yet challenging the dynamic of continued exponential economic growth in a time of neoliberal dominance of public policy remains an almost heretical pursuit. We argue that effective and equitable long-term governance of our social-ecological systems to ensure human flourishing will of necessity require halting and then reversing the expansionary dynamic of economic growth as currently articulated.

The current dominant model of business enterprise is the for-profit publically traded corporation that is legally obliged to pursue the interests of its shareholders, usually defined as maximising financial return on investment. This leads to the publicly traded corporation pursuing higher rates of financial return through expanding market share and externalising social and ecological costs upon society so as to maximise the surplus available to shareholders. The publically traded corporation essentially becomes a club of individual self-interest of management and shareholders directed at expansion of market share and profit maximisation through externalising costs. This de-politicises the economic sphere and

conceals the ethical choices made by producers, consumers and workers as they go about their day-to-day activities.

We argue the cooperative form of business enterprise offers an alternative institutional form that better supports decisions to reduce the material and energy throughput of the global economy, and hence increases capacity to govern the global economy within the constraints of key Earth System thresholds. The flexibility of goals and democratic decision-making processes allow for bottom-up control of businesses whereby ethical choices may be made to trade-off profit maximisation. Hence economic surplus generated through cooperatively-governed business activity may be deployed in favour of members' agreed sustainability values. The examples discussed above offer signposts to this trade-off at various scales and in various contexts. Cooperative governance of economic enterprises therefore offers societies one important opportunity: that of regaining transparent and democratic governance of economic activity. Doing so provides one way of decoupling economies from the growth imperative, consistent with the objective of maintaining familiar Earth System stability.

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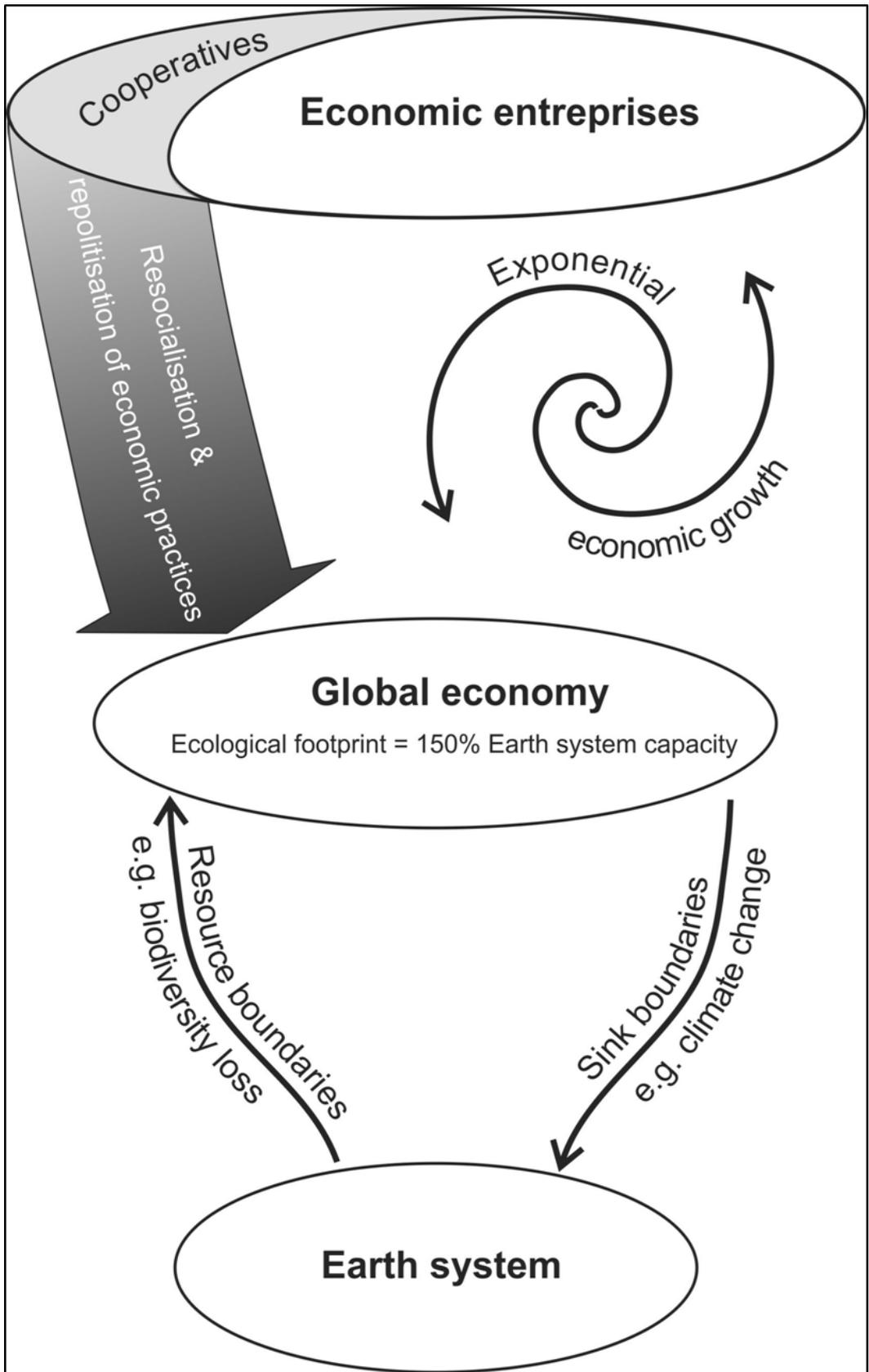


Figure 1: Economic enterprises including cooperatives, the global economy and the Earth System, and key existing and potential feedbacks among them: a ‘snapshot’ from 2010

Figure one shows, for the purposes of this analysis, three complex adaptive systems and key cross-scale relationships among them. Economic enterprises are represented in the system at the top of the figure. Cooperatively governed enterprises are noted as a proportion of all economic enterprises (*i.e.* corporations, partnerships, sole traders, associations, etc). The extent of cooperativism globally as a form of economic governance is unknown but may be significant. In 2010 cooperatively governed enterprises operate in 90 countries and engage ~800 million people (International Cooperative Alliance 2011b), *i.e.* >10% of a total global population of ~6.8 billion in 2010 (Population Reference Bureau 2010), in worker, producer and consumer roles. Businesses enterprises are represented as a subsystem within the global economy, in turn a subsystem of the Earth System.

The global economy represents all anthropogenic activity in the Earth System, multiple impacts of which have grown exponentially since industrialisation, *i.e.* circa 1750 (Speth 2008, pp.xx-xxi). The ecological footprint for the global economy for 2010 is estimated at 150% (*i.e.* well in excess) of the Earth System's estimated capacity (WWF 2010).

Existing detrimental amplifying feedbacks (arrows spiralling outwards) between individual economic enterprises and the global economy mutually reinforce economic growth at both scales. In contrast, cooperatives may contribute to a shift in the global economy away from the growth imperative through playing a role in resocialising and repoliticising the global economy (downward arrow between cooperative members and the global economy) (Gibson-Graham 2006).

The Earth System is foundational to all its social-ecological subsystems (*i.e.* the global economy and individual economic enterprises) and incorporates the physical and chemical environment, the biosphere and also all human activities. Globally significant thresholds in the Earth System which define a 'safe operating space for humanity' as Rockström *et al.* (2009) include climate change and biodiversity loss amongst others.

The relationship between the global economy and the Earth System overall (upward and downward arrow respectively between the global economy and the Earth System) is thus currently one of overexploitation of Earth System resources (*i.e.* biodiversity loss) and sink capacity (*i.e.* climate change).

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