Collaborative Governance for Global Public Goods: A Geographical paradigm

by

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Abstract

The policy agenda of the 21st century involves addressing considerable collective action problems at the global scale. Yet, debates over global public goods, led by economists, political scientists and public health researchers, have only recently begun. In this paper, we conceptualize collaborative governance as an outcome of the rescaling of public goods from local to global. Though three case studies of climate change, global public health, and poverty alleviation, we demonstrate the significance of geographical rescaling and emerging forms of collaborative governance that combine economic and social goals in various new ways. Scalar and domain flexibilities are key features of global governance solutions, including partnerships between for-profit and non-profit entities.

I. Introduction

Interest in governance has grown phenomenally since the beginning of the 21st century (Dixit, 2009). Scholars, as well as various social movements, suggest that the institutional design at the nation-state level is no longer effective, particularly in balancing social and economic objectives (see, for example, Dees, 1998; Bruyn, 2000; Porter and Kramer, 2006; Reich, 2007; Bruni and Zamagni, 2007; Mittelman, 2011; Scholte, 2011). How, in the context of existing political power, economic hierarchy and institutional path-dependence, can we begin to reconceptualize global governance – to one that is suitable for the civil societies of the early 21st century? What is viewed as public interest has been transformed over time and institutional and regime responses must be appropriate to guarantee their survival. The norms and expectations for public acceptance and social legitimation of market mechanisms have gradually transformed, and they, in turn, shape problem identification and definition, and objectives and standards for solutions. These transformations result in a fundamental shift in the logic of operation of corporations, acceptance and legitimacy of state actions, as well as the empowerment of civil society organizations in various domains. In the process, the debate over governance must also shift its course.

In this paper, we seek to contribute a framework to this broad debate over governance through the notion of a rescaled public domain from the local and the national to the global scale. Our proposal is to reconsider Ostrom's (2010) polycentric governance of economic systems by taking into account the rescaled nature of, and the increasingly collaborative organizational arrangements required to produce, and innovate for, global public goods. We argue collaborative governance is being adopted in various

arenas as a means to deliver global public goods. We present three cases – climate change, public health, and poverty alleviation - where public goods are being redefined and rescaled, and consider whether they amount to a "tipping point" of institutional reassemblage (Sassen, 2006). We engage with the multidisciplinary debate on global governance by considering a particular aspect of blurring of boundaries, specifically between for-profit (firm) and non-profit (civil society organization) entities. Much of the recent debate on forms of governance has been dominated by debates over state vs. markets, with a focus on neoliberalism (see Peck and Tickell, 2002; Peck, 2010; Harvey, 2011; Brenner and Theodore, 2005; Smith, 2005). In this paper, we take a different approach and consider how the blurring of the boundaries and the blending of logics and incentives lead to scalar and domain flexibilities in contemporary global governance. We argue that territorializing the conceptual basis of public goods contributes a new angle.

2. The 'Scalar Mismatch' and the 'Governance Gap'

Debates over global governance today revolve around the interaction between political (state) and economic (market) systems (Polanyi, 1944; Weintraub, 1997; Drache, 2001; Farnsworth and Holden, 2006; Bruni and Zamagni, 2007; Stiglitz, 2007; Maskus and Reichman, 2010). The logic of the market is dichotomously contrasted to the function of politics, with the former in an allegedly 'pure' form, stripped from socio-political and cultural relations, acted upon by the state through various "interventions". Previous efforts to bridge the dichotomy, such as those represented in the mid-20th century governance model (until the 1970s) of the mixed-economy compromise between states and markets (e.g., Bretton Woods Accord) have been criticized as the failures of the state and/or the markets. In a more recent example, Stiglitz (2007) attributes the failure of effective global economic governance to the absence of political solutions.

Societal issues, such as environmental degradation, communicable diseases, and abject poverty, that used to be primarily addressed at the sub-national or national levels, are increasingly understood as global issues necessitating global solutions. It is recognized today that "people and their governments around the world need global institutions to solve collective problems that can only be addressed on a global scale" (Slaughter, 2004: 8). However, a widespread 'democratic deficit' is observed at the international level (Stiglitz, 2007), where dominant political powers of the world, buttressed by military and economic supremacy, rule international decision making (Yunker, 2011). Moreover, the emergence of an inter-connected global economic system calls into question the usefulness of state-centric approaches to political governance (Taylor 1996; Newell 2011).

Rodrik (2011) identifies a 'scalar mismatch' between the existing political governance structure and the reality of economic globalization. To address this, collective action must be rescaled, from the nation-state to the global, so that democracy would "transcend the borders of single states and assert itself on a global level'' (Archibugi and Ianmarino, 2000: 144). However, adapting a rescaled political community to the global level would require a strong 'global citizen' consciousness, which, according to Rodrik (2011, 2013), is still confined to a small minority. For the overwhelming majority of the population, "political identities and attachments still revolve around nation states" (Rodrik, 2011; 232), and national identity still largely dictates contemporary socio-

political debates. This results in a governance gap, whereby democratic processes at the global level are yet to emerge as a solution for the 'scalar mismatch'. The scalar mismatch and the governance gap are further complicated by societal assumptions over a functional division of labor between the public and the private domains, which is not only highly contextual, but also temporal (Hirschman, 1982; Weintraub, 1997). The public domain is being redefined by an increasing recognition of intergenerational responsibilities on the one hand, and the "moral hazard of efficiency failures" (Drache, 2001: 44) on the other. Notwithstanding the existing institutional diversity across states and economies, a resolution to the 'scalar mismatch' would require a fundamental reconceptualization.

Geographers have explored rescaling as a process of economic globalization and state decentralization (Swyngedouw, 2004; Cox, 2009), as well as through the question of scale rigidities and flat ontology (Marston, et al, 2005). Perhaps most pertinent is the question of how territorial boundaries and political governance interact and coalesce to produce a particular spatio-institutional form. Multiple analyses of history's longue durée suggest that the relationship between sovereignty and territory has undergone dramatic transformation. Agnew (2009), for example, disagrees with the notion that sovereignty has been inherently territorially confined before being unlocked by globalization. Rather, he argues that multiple historical forms of sovereignty transcended territoriality. Sassen (2006) employs the concept of assemblage to draw attention to "tipping points," which represent historical moments in which governance capabilities over territory, authority, and rights are disassembled from one scale and reassembled into another. Sassen acknowledges that while institutional changes are gradual, a tipping point signifies a galvanizing moment and a period of foundational shift in the prominent scale of governance. These perspectives offer an avenue to consider the possibility of an impending tipping point, in which the process of reformulation is taking place in various formal and informal institutions to cope with societal challenges that are increasingly global in nature.

3. Rescaling Public Goods to Global Public Goods

To explore how territoriality interacts with governance, the first step we propose is to re-examine the conceptual underpinnings of public goods. Public goods have been an essential conceptual vehicle in economics to explain the division of labor between the public and the private sector. The significance of territoriality for public goods, however, has not been examined in depth. Common property, a closely related concept, also hinges upon a particular set of territorial assumptions, and rescaling polycentric governance would require a careful conceptual reconfiguration.

3.1 The nature of public goods

Public goods, characterized by their non-excludable and non-rival consumption, range from concrete (infrastructural) examples (e.g., street lights) to intangible ones (e.g., law and order), and may be either constructed or naturally occurring (e.g., air). Some public goods are collective goods or assets that cannot be exchanged, and others are under-valued in the market, leading to the condition of market failure. In many cases, the

condition of natural monopoly, whereby the largest supplier has an overwhelming cost advantage over competitors, necessitates interventions by non-market (primarily state) actors (Samuelson, 1954; Polanyi, 1957; Weisbrod, 1964). Also, state interventions over public goods have traditionally been viewed as limiting the rent-seeking (or over-profiting) behavior of firms that exploit natural monopoly (Rodrik, 1997).

Although broadly accepted and widely used, the concept of public goods has been criticized from a number of fronts. First, public goods are ideal types and in reality, few pure public goods exist (Bodansky, 2012). For example, goods with positive externalities are often labeled as public goods (e.g., knowledge, cyberspace, human rights) and various governments refer to all types of social well-being as public goods (Rioux and Zubrow, 2001), although they may not be purely non-excludable and non-rival in reality. Education, for example, is often considered a public good due to its positive externalities, although it is technically a private good (excludable in many instances and partially rival). The conceptual ambiguities of public goods have long been recognized (see Arrow, 1970), and have led to rhetorical uses of public goods as contrasted to 'public bads', introducing normative ambiguities to what used to be primarily a technical concept. Air pollution, for example, has been used as an example of a public bad (see Sonnemanns, et al, 1998; Kindleberger, 1981). Furthermore, to accommodate the reality of goods that fall in a broad spectrum of pure and impure public goods, a variety of hybrid goods have been recognized, including club goods (excludable and non-rival) and common pool resources (non-excludable and rival).

Second, the neoclassical conceptualization of public goods assumes pareto-efficiency, with rational actors maximizing utility under competitive market environments. Consequently, most discussions of public goods revolve around issues over price (i.e., free-rider problem) and quantity (i.e., shortages), which often translate into a narrow question of 'who decides, who pays', and establishing decision-making over financing, allocation and provision (Sandler, 1997, 1998; Ferroni and Mody, 2002). Although the state is assumed to be the ideal provider of public goods, interventions by non-market actors in reality do not necessarily resolve market failure and achieve pareto-efficiency (Ostrom and Ostrom, 1978). While "the market was seen as the optimal institution for the production and exchange of private goods" (Ostrom, 2010: 642), private provision of public goods remains entirely plausible under public choice theory (see Bergstrom et al, 1986).

Third, behavior such as collaboration, altruism, and philanthropy among actors is also described purely in economic terms. Individuals are understood to collaborate with each other when they believe that they are better off than without doing so. Similarly, but on a different scale, states are believed to collaborate with other states only when the terms are favorable to further their positions under inter-state economic competition. While compromises can be reached between competition and collaboration, long run systemic stability is a major challenge, and experimental studies have shown that competition can lead to an erosion of collaboration (Barker, et al, 2012). As long as the economy is viewed to be governed exclusively by competition, it remains implausible to reconcile the co-presence of competition with collaboration. In reality, the boundary between competition and collaboration is likely to be drawn, contested, negotiated, compromised, abandoned, and drawn again.

Finally, the rise of hybrid entities, such as civil society organizations and social enterprises, which combine collective interests on the one hand and private interests on the other, pose additional challenges to the delivery mechanism of public goods. As we shall show in subsequent sections, these hybrid entities are increasingly instrumental in combining public and private interests and simultaneously achieving economic and social objectives. .

3.2 Territorializing Global Public Goods

To date, global public goods have been discussed primarily from the perspective of international relations and public finance (see, for example, Kaul, et al, 1999, 2003, 2012; Stiglitz, 2007; Stoll, 2008; Marcus and Reichman, 2010 Bodansky, 2012), carrying forward some ideological underpinnings and conceptual weaknesses of public goods. A good is considered globally public when its non-rival, non-excludable benefits impact "more than one group of countries and does not discriminate against any population group or generation" (Kaul, et al, 2003: 95). Yet, at best, the concept of global public goods is still in development (Stiglitz, 2007), and at worst, is viewed to suffer from a conceptual deficit (Stoll, 2008).

Rescaling public goods from the sub-national to the global level requires a re-examination of the key assumptions, which are inherently territorial in nature. Traditionally, geographical access is assumed to place boundary and proximity constraints on both the provision and consumption of public goods. The rescaling of public goods to the global challenges the concept of non-excludability, as geographical distance and national regulatory boundaries inevitably shape accessibility to the site of public goods provision. It also challenges the notion that consumption of public goods is purely non-rival. Societal risks, such as financial instability, sea level rise, depletion of offshore fisheries, deep-sea mineral resources, can all be considered as globally rival. Furthermore, the concept of natural monopoly presupposes a territorial boundary. It is also noteworthy that trading public goods across national borders is not within the scope of its conceptualization. Taken together, the globalized economy, combined with the geographical rescaling of public interest, has altered the key assumptions underlining the concept of public goods. A rescaling to global public goods, therefore, is not a simple expansion of the geographical boundaries; rather, it demands a reconceptualization that presupposes an absence of boundaries (with the exception of expansion to outerspace). The rescaling from the local and national to the global is not a relative shift, but equivalent to the transition to an absolute scale where forces and risks are applicable universally at the planetary scale. This, in effect, suggests that understanding of global public goods must also be deterritorialized in its assumptions and conceptualization.

While deterritorialization is an important underlying assumption for global public goods, geographical forces are not rendered irrelevant, as geography poses various constraints to the diffusion of externalities. Markets for public goods are assumed to correspond with national boundaries (e.g., utilities), and both positive and negative externalities are also largely assumed to be contained within national borders. Both public goods and associated externalities are non-tradable, and cross-territorial transfer is not within the scope of conceptualization. However, in reality, positive externalities are not uniformly distributed/allocated over a territory, and can be subject to a significant

distance decay function from the site of provision. In contrast, the impacts of negative externalities increasingly cross national borders, and their sources have become diffuse and ubiquitous (e.g., carbon emissions, sea level rise, financial market instabilities). Thus, the deterritorialization of underlying assumptions is combined with the empirical reality of complex geographical forces that shape the diffusion of positive and negative externalities.

The conceptual origin of public goods hinges upon the nature of consumption and the possibilities of market provision. Non-exclusivity and non-rivalry in consumption cannot serve as conceptual underpinnings of global public goods. Instead, global public goods are commonly shared property with a hybrid ownership structure, or merit goods (those with significant positive externalities), which cannot be produced by either a natural monopoly (i.e., state) or the market alone. Many global public goods are not just consumed, but are increasingly produced (conceptually and/or physically), and therefore are mitigative, designed to counteract negative externalities of global and increasingly ubiquitous risks. The production of global public goods involves institutional challenges of managing variable positive and negative externalities and their territorial manifestations. Current collective action challenges can be conceptualized as attempts to rescale positive externalities as a means to achieve global public goods, while mitigating the cross-border effects of negative externalities. In the following sections, we explore how the combined effect of scalar and public-private domain flexibility shapes the conceptual basis of contemporary 'global' problems, and examine an emerging form of 21st century 'collaborative governance'.

4 From Polycentric to Collaborative Governance

The challenges in developing a conceptual framework for global governance involve dealing with the complexities of cross-scalar relations that range from industrial practices at the micro level, community actions at the local level, to macro level institution building. The rescaling of problem identification leads to a rescaling of both institutions and solutions through reconceptualization of the governance mechanisms. Ostrom (2010) envisioned a system in which a diverse array of public and private agencies functioned as independent decision makers but acted "in a coherent manner with consistent and predictable patterns of interacting behavior" (p.3). While these stakeholders may be formally independent, they take into account each other's presence and activities, in some instances through contractual agreements and in others cooperative undertakings. Ostrom called for 'configural approaches' to better understand factors that contribute to "self-organized efforts within multi-level, polycentric systems" (p.2). Ostrom's framework, using collective action proposed by Olson (1965) and others as a conceptual vehicle, is highly useful in analyzing, to use the terminologies by Schelling (1978), how micro-motives at the level of the individual translate into macro-behavior. Such a cross-scalar framework is critical in ensuring that the debates over governance do not stay exclusively in abstraction.

Polycentric governance, however, is limited by its adoption of the original assumptions of the collective action framework itself, which are based on self-maximizing stakeholders facing a prisoners' dilemma, resulting in free-rider problems being the major source of contestation. In addition, the collective action framework has

not only largely assumed natural monopoly in provision of public goods, but also prioritized problems of provision, management and delivery over issues of production and incentivizing innovation for new resource creation. Finally, territorial boundaries define and determine the limits of the resources as well as the populations who have access to those resources. Ultimately, the framework stops at acknowledging the diversity of stakeholders, while organizational effectiveness relies on the coherence between the 'rules of use' (i.e., norms and conventions) and the structure of the specific common property resource in question.

A collaborative governance framework is envisioned to address the complexities of governing global public goods. Rescaling results in irregular spaces of flexible boundaries, both geographically (scalar flexibility) and functionally (domain flexibility -- organizational division of labor among stakeholders in the public, private, and civil society spheres). With scalar flexibility, establishing institutional coherence becomes a formidable challenge, as rules and conventions no longer hinge upon a local community, but on the global, heterogeneous populations and institutional diversity. Scalar flexibility in part shapes domain flexibility, as public interest over the global impact of negative externalities redefines the boundary of public interests What is viewed as appropriate public interest is socially-constructed, which in turn demarcates the public from the private in institutional design. Global public goods are therefore outcomes of scalar and functional flexibility, which shape what is considered to be appropriate as a 'global public domain'. Global public goods are subject to time-space compression of negative externalities, where social and economic interests are increasingly being fused centripetally. As we shall describe later, corporations, states, and civil society organizations today are developing common agendas even though their primary objectives may continue to differ.

The collaborative governance framework reflects a shift of emphasis from consumption and management to production. Global public goods production involves mitigating cross-territorial negative externalities and enhancing productivity and cross-territorial transfers of positive externalities. Collaborative governance is characterized by coordinated efforts of multiple stakeholders to produce global public goods. Under such a framework, coordination between the private sector and consumers is imperative as they are both generators of negative externalities, as well as producers of positive externalities. States play a particularly important role in developing regulatory frameworks for effective production, innovation, and dissemination of positive externalities.

Combined, collaborative governance is conceptualized by foregrounding the public nature of innovation, which involves the dual process of state involvement in inducing innovation (Castells, 2001), and the shift from closed to open innovation in the private sector (Chesbrough, 2003). Both processes represent the scalar and domain flexibility of collaborative governance, and suggest how innovation is an integral aspect of delivering social objectives. To date, debates over innovation have seldom intersected with debates over governance (Swyngedouw, 2005), and organizational innovation has been discussed almost exclusively at the level of the firm (Godoe, 2000; Christensen and Bower, 1996; Miles, 2000).

Both corporations and NGOs have undergone dramatic transformation in their objectives and organization in the past decade. Corporations and NGOs are increasingly considered as distinct, yet equally important, stakeholders shaping global governance

(Ottaway, 2001; Millar, et al, 2004; Warhurst, 2005). The 21st century has been characterized as an era of industry self-regulation, as corporations become increasingly subject to environmental risks and political uncertainties. Combined with a growing attention to global reputation as a corporate asset, corporations often voluntarily adopt social standards and codes of ethics (Haufler, 2001). Multinational enterprises (MNEs) have global reach, combined with the unmatched capacity to make and implement decisions faster than states or international agencies, and build broader social capacity, "to fill global governance gaps and compensate for governance failures."(Ruggie, 2004: 24). Not only have corporations become more involved in social causes (Farnsworth and Holden, 2006; Utting and Marques, 2010; Moon, et al, 2011), some are being established specifically to fulfill social goals. Social enterprises typically combine private sector management practices with social objectives, although no consensus has yet to emerge regarding their definition (Chell, et al., 2010).

Also relevant is the changing role of civil society organizations (i.e., NGOs). Civil society organizations have become an insider rather than an outsider critic in global policy making, and have become well established stakeholders in the structures and mechanisms of global governance (Scholte 2004). From the narrow frame of corporate social responsibility (Hess, et al, 2002; Winston, 2002; Rondinelli and London, 2003; Doh and Guay, 2005; Vogel, 2006) or playing an advocacy role, filling the 'trust-void' (Argenti, 2004; Yaziji and Doh, 2009), conducting factory audit, and/or implementing certification programs across the corporate value chain (Gereffi, et al, 2001; Teegen, et al, 2004), NGOs have commercialized their strategies and globalized. Some even bear "an uncanny resemblance to transnational corporations" (Smillie, 1995, p.212). Coupled with expanding global foundations (e.g., Gates Foundation), these trends culminate into scalar and domain flexibilities that characterize collaborative governance.

5. Three Examples of Collaborative Governance

The three examples we elaborate on here represent emerging trends of rescaled production of global public goods through varying forms of collaborative governance, involving combinations of social and economic objectives, organizational arrangements and stakeholders. Our framework for global public goods and collaborative governance is useful in highlighting common features, and facilitating interpretations of various transformations along two main axes – scalar and domain flexibility. In so doing, solutions can be derived while paying attention to common features that underline what are currently viewed as separate and specific problems. While these cases do not yet point to definitive successes, they offer clues for potential changes – the combinations of competition and collaboration observed today may, after a historical tipping point, translate into a new mode of governance.

5.1 Environmental Governance

Various proposals have emerged for an alternative mode of global environmental governance, both in theory and practice (see, for example, Paterson, et al, 2003; Okereke et al, 2009; Lake 2010). Institutional responses to climate change have been discussed both at the micro and macro scales (Adger, 2003; Eakin, 2005; Bumpus and Liverman,

2008; Cohen and Bakker, 2014), ranging from vulnerable communities and agricultural practices, to global institution building. Ecological and institutional links are often mismatched in scale (Andonova and Mitchell, 2010), as reflected in the on-going debates over rescaling in environmental governance (Reed and Bruyneel, 2010; Cohen and McCarthy, 2014).

The carbon trading regime is one evolving case of collaborative governance characterized by scale and domain flexibilities. Reducing carbon emissions through global offsets has become a central policy objective in preventing dangerous anthropogenic interference (Liverman 2009, 285). It gained momentum with the 1988 Toronto Conference on the Changing Atmosphere, and the subsequent Kyoto Protocol's flexible mechanisms (UN Framework Convention on Climate Change, UNFCCC 1997). Article 12 of the Kyoto Protocol represents the first international environmental law that has provisions for private entities to generate an environmental commodity (Bumpus and Liverman 2008, 132). This agreement provides for a process of commodifying previously uncommodified goods, and a creation of a market of exchange. Although the European Union spearheaded this initiative in 2005, the current carbon trading regime is based on the proposal brought forward by the United States, which argued that market instruments were crucial to managing emissions (Liverman, 2008, 2009).

Both the Clean Development Mechanism (CDM) and Voluntary Carbon Offsets (VCOs) involve multiple stakeholders and transnational institutional design, in which states are not the only, or necessarily the most significant, actors (Bulkeley 2005). Climate governance today involves consumers, corporations, environmental groups and transnational institutions (Liverman 2004). Under the CDM, states and the private sector implement emission reduction projects (e.g. forestation, biofuels, energy-efficient wood stoves, and lighting) in return for certified emissions reductions credit, which can be traded as VCOs to meet their own targets. Through the CDM, emission governance was rescaled, resulting in advanced industrialized countries financing emission reduction projects in the Global South at lower costs. New industries have emerged, such that business and financial players "have become central actors in the construction and management of an elaborate and increasingly intermeshed system of climate governance" (Newell and Paterson 2009, 80). For example, carbon exchanges, virtual spaces to buy and sell carbon credits, have been established in the form of the Chicago Climate Exchange, the European Climate Exchange, Eurex, the Asian Carbon Trade Exchange, and Bluenext (Knox-Hayes 2010). Another example is carbon accounting, which influences a wide range of economic activities, including product life-cycle management and consumer behavior (Boykoff et al. 2009).

NGOs are not only indispensable stakeholders in contemporary climate governance policy making, but many have also rescaled. Among the long-established, Friends of the Earth, which has origins in the American anti-nuclear movement, today leads advocacy efforts targeting the EU emission trading system. Post-millennium NGOs are often organised across national borders from conception, such as Carbon Trade Watch, founded in Amsterdam and now based in Barcelona, dedicated to support environmental and climate justice movements. Other post-millennium NGOs take a networked approach, and involve domain flexibility. The Climate Group (London, UK), for example, is among the first alliances between global business and local government, and includes 80 of the world's largest corporations and major municipal governments

such as London and New York, with the objective of developing technical environmental solutions compatible with economic growth. The Global Footprint Network aims at promoting ecological footprints as a resource accounting tool by networking with states, municipalities and businesses as a global network of partners. The Carbon Disclosure Project (CDP), founded in the UK, is explicitly pro-business and provides platforms for global corporations to publicly share their carbon emissions as a means to improve business performance. CDP aligned the world's largest banks and institutional investors, thereby successfully recruiting the majority of Fortune 500 companies to disclose carbon emission data. Most recently, CDP developed a performance index, and began recruiting small and medium sized companies up and down the supply chain to participate in environmentally-friendly practices. Some long-established NGOs are reconfiguring organizationally through cross-domain partnerships. For example, World Resources Institute (Washington, D.C.) began with a $15 million grant from the MacArthur Foundation in the 1980s with an objective of scientifically understanding environmental change. Today, WRI partners with World Business Council for Sustainable Development (WBCSD), an organization comprised of company CEOs, to develop the Greenhouse Gas Protocol, a global standard and accounting tool to assess emissions inventory for business and governments.

Although the carbon trading regime is still in its infancy, with uncertain institutional futures (Knox-Hayes, 2010; Newell and Paterson, 2009), it is notable that scalar and domain flexibilities represent key features of the emerging governance form, in spite of the presence of competing proposals that relied on direct state regulations and incentives (such as taxes) (Boykoff, et al., 2009). While Liverman (2009) characterizes this form of governance as "market environmentalism" where governance is devolved to the market, Patchell and Hayter (2013) offer a more optimistic view, emphasizing a significantly positive contribution of multinational enterprises (MNEs) in mitigating climate change through collaboration. Similarly, Boykoff et al. (2009) identify an "ecological modernist" approach, one that combines capitalist profit with green behaviour. Newell and Paterson (2009) suggest governance by the state has stagnated relative to non-state business and financial entities that have increasingly come to take center stage in the system of climate governance. For Bailey and Wilson (2009), the problem lies in the risk of the current regime being seen as one of the only, or even the single, viable solution(s) to reducing carbon emissions in the future.

The carbon trading regime is a form of collaborative governance in which the environment has been conceptualized as a rescaled, global public good. A global cap on emissions was agreed upon, and externalities were reconceptualized as tradable costs. To facilitate the operation of this new exchange, a new mechanism, carbon offsetting, was developed and new strategies for environmental commodity creation were identified. New stakeholders have emerged, which transcend territorial and organizational boundaries.

5.2 Public Health Governance

Public health is a form of public good, for which the costs and benefits are shared widely. Public health has traditionally been in the realm and responsibility of the nation-state. Prevention of infectious disease, for instance, is an important aspect of public

health, and some governments have enforced vaccination by legislation (Stern and Markel, 2005). The benefits of immunization involve considerable positive externalities, as vaccination not only protects the recipients, but also those around them (Milstein and Lambert 2002). Public health governance is being rescaled with the recognition that our livelihoods increasingly depend upon well-functioning global networks of health governance (Ali and Kiel, 2006), as hyper global mobility reterritorializes both cause (health determinants) and effect (health status) (Lee, et al, 2002). Precipitated by the increased risk of communicable diseases over recent decades, such as the outbreak of the SARS virus in 2003, the swine flu of 2009, and ebola virus of 2014, public health concerns necessitate governance structures that transcend national borders (Chen et al. 1999; Held et al. 2002 in Ali and Keil 2006).

Although immunization necessitates collaborative governance involving the public and private sectors, multiple layers of bottlenecks exist that can prevent the achievement of public health objectives. For example, effective regulations for vaccine safety must balance against market incentives for vaccine producers. Vaccine production is a delicate act, technically, economically, and socially. Vaccines are high-risk (volatile and unpredictable market), low-margin, and not easily produced (low-productivity, long-lead-time). Entry barriers and sunk-costs are high, and innovation remains highly unpredictable. Unlike medicines, which can be consumed repeatedly, and with the exception of influenza vaccines, most vaccines are used only once or twice in a person's lifetime. Production of pandemic flu vaccines involves particular challenges (e.g., perishability, the need for just-in-time production, unpredictable consumption patterns) which amplify the complexity of production in immunization. Meeting regulatory standards also presents high costs for the vaccine industry. As they are administered to otherwise healthy individuals, vaccines are subject to an even higher level of government scrutiny compared with other pharmaceutical products. States monitor the industry to ensure adverse reactions do not occur. With states erring on the side of safety for justifiable reasons, this has led to expensive upgrading as well as suspension and shut-down of vaccine manufacturing plants. Manufacturers are also concerned about the state potentially waiving patent protections. As a result, in spite of the high social value of vaccines, market mechanisms alone cannot effectively deliver vaccines to those who need them.

The history of the US vaccine industry suggests a lack of collaborate governance. In the recent past, major pharmaceutical firms exited the vaccine market as it is among the least profitable of their operations, exacerbating the shortage of manufacturers (Foulkes, 2004). Indemnification for manufacturers became a major issue in the 1970s and 1980s. After a 1974 paper was published claiming pertussis vaccine caused brain damage, litigation became a major threat to the viability of the industry, causing three quarters of the vaccine manufacturers to exit the market (Offit 2005). Licensed manufacturers of key vaccines declined from 26 in 1967 to 12 in 2002. In the first decade of the 2000s, almost all vaccines were produced by just 5 firms, and 5 of the 8 major vaccines today are produced by a single supplier[1]. Four manufacturers produced influenza vaccines in 1999, but government orders for plant shut-downs and voluntary

[1] The top 5 producers in 2012 are Sanofi, Merck, GlaxoSmithKline, Pfizer, and Novartis, comprising over 90% share of the U.S. vaccine market (Evaluatepharma, 2013).

exits resulted in only one firm having such manufacturing capacity in 2009 (US, HHS, 2013).

The weakened vaccine industry poses considerable risks to global public health in the event of global pandemics, which demand quick-responses across borders and coordination among industry, nation-states, and international organizations.[2] The flu pandemic scare in 2009-10 was indicative of the complexity of challenges in global health governance. In the spring of 2009, the World Health Organization (WHO) issued a call for rapid production of vaccines for H1N1 influenza, which had already claimed the lives of 13,000 people. When the pandemic did not materialize as anticipated, states were forced to proceed with cancelations of their vaccine purchases and pay hefty (undisclosed) fees to the manufacturers. The WHO came under scrutiny as to whether the pharmaceutical industry, through its representations in its board of directors, unduly influenced the WHO's decision to announce a pandemic (RNCOS, 2009).

Various collaborative frameworks have been experimented with as solutions to finance and support vaccine and drug development. In the United States, new state-industry partnerships have been established to lure firms back into vaccine production. The U.S. Department of Health & Human Services is financing various laboratories in coordination with the vaccine industry, with the goal of producing a quarter of the US's demand in the event of a pandemic. The US Food and Drug Administration is also supporting innovation, by finally approving the first cell-based influenza vaccine in 2012 (although five years after EU approval), and production has begun under a new governance scheme. Cell-based vaccines, produced using cultured cells instead of conventional fertilized chicken eggs, represent a revolutionary change in the production of influenza vaccines as they eliminate production capacity constraints based on chicken egg availability.

Elsewhere, collaborative governance has been most widely seen with the attention to neglected diseases. Global public health issues are most controversially reflected in the vast chasm that exists between the Global North and South, in terms of pricing, affordability, as well as knowledge, ownership and location of vaccine and drug production. Populations in the Global South are subject to the greater likelihood of infectious and parasitic diseases, yet availability of preventive measures is skewed to the Global North. For the 2009/2010 global flu pandemic scare, 90.1% of the doses were manufactured in the Northern Hemisphere, and there were only two flu vaccine producers located in Africa and the Middle East combined, out of 37 producers around the world (WHO, 2011). Pandemic flu vaccines tend to become available first in the Global North where the vast majority of the vaccine industry is headquartered. The Global North bias also exists for medication; the focus of drug discovery and development is also biased away from diseases prevalent in low-income countries where markets are small and profitability is in question (see Trouiller, et al, 2002; Chataway, et al, 2007).

In addition to traditional global public-private partnerships led by the United Nations and funded by states through Overseas Development Assistance, philanthropic

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[2] Only in the past few years, with greater recognition of the potential of vaccines to combat global pandemics, cancer and HIV/AIDS, industry analysts have begun to discuss positive medium-term profitable prospects for the vaccine industry (Evaluatepharma, 2013).

organizations increasingly act as important funders of these projects. Clinton Foundation and the Bill and Melinda Gates Foundation, for example, combine advocacy with schemes to induce innovation and support start-ups. The Gates Foundation in particular has been instrumental in creating collaborative financing schemes and innovating on 'product development partnerships' to support research and development of vaccines for diseases that are considered 'neglected' by market forces, such as malaria, and which are prevalent in the Global South. One of the Gates Foundation's most recent initiatives is a 'vaccine discovery partnership' with GlaxoSmithKline and Sanofi, announced in late 2013, which provides financial incentives for vaccine manufacturers to conduct early-phase vaccine research and accelerate the development of affordable vaccines in the Global South.

In sum, global health governance involves the challenges of developing a time-responsive, cross-border collaborative governance mechanism to mitigate against global threats (e.g., pandemics) and innovate and disseminate solutions across borders rapidly. Global health governance is an attempt to prevent negative externalities from spreading across borders and to develop positive externalities as mitigating measures. However, reaching global consensus on what are appropriate levels of regulation over public health is a challenge in itself, given dramatic variations in public health issues across territories. It is also a daunting challenge for the private sector to function as an effective stakeholder, innovator, producer, and ultimately a key contributor to global public health governance. Further research is needed, involving a possible area of fruitful convergence between health geography and economic geography over production of, and innovation in, global public health.

5.3 Poverty alleviation

Poverty alleviation has long been viewed as a "distant goal rather than a highly compelling world movement that has the power and influence to reshape the agenda of global governance" (Drache, 2001, p.2). Because poverty interacts with environmental and public health issues in multiple, intergenerational forms (Sachs, 2005), poverty alleviation has become a prerequisite for improving global well-being. Some even claim the rise of global empathy, aided by the Internet and social networking (Rifkin, 2010), which may have played a role in rescaling conscience and developing greater global awareness for poverty in the Global South.

We take an example of social innovation in India, where, in spite of some phenomenal growth, much of the population remains deeply impoverished. Contrasted against the top-down manner in which the state, inter-governmental organizations (IGOs) as well as global foundations have all been active in contributing to development assistance, we observe a more bottom-up approach in the emerging collaborative governance, involving MNEs, NGOs, and social enterprises. Evidence from over 100 interviews conducted in 2012-14 suggests that alliances between MNEs and NGOs are emerging as a means to conduct R&D for low-income populations. This activity is distinctive from conventional corporate social responsibility (CSR) initiatives. While both R&D alliances and CSR initiatives are characterized by NGO involvement in corporate activities, conventional CSR initiatives are operated in the spirit of philanthropy and volunteering and fall under the responsibility of corporate public

relations, and therefore are essentially charity activities for the purpose of corporate image building, branding, and labor relations. In contrast, R&D alliances seek a deeper and systematic entanglement between corporate objectives and social goals and take place in innovation and product development and design centers. R&D alliances are a means to deepen engagements with markets in the Global South, as they increasingly serve as strategic R&D locations for MNEs. It is in this particular context that NGOs have emerged as critical partners, arbitraging market specific intelligence and facilitating community access and distribution.

These R&D alliances are developing notable social innovations. For example, two MNEs worked with a local NGO to develop a novel online learning delivery method. The MNEs had formerly dealt with the NGO through CSR projects, providing a computer lab and training.[3] Together they approached and ultimately convinced the state government to offer, on an experimental basis, learning modules for rural government schools where teachers with English-language instructional capability are in short supply. The R&D alliance resulted in a system of online delivery of lectures, to be broadcasted in several schools simultaneously, while the NGO is responsible for content development, and hiring and training of teachers. Given the significant number of rural government schools in the state, the MNE is well positioned to secure a much larger sized government contract once the project expands to other areas.

Another example of innovation is in the area of health. The MNE in question sought to develop an incubator for newborn babies to be deployed in rural clinics in the Global South, with the goal of meeting price points and effectively impacting infant mortality rates.[4] At a global convention in the United States, the MNE had a chance encounter with an NGO active in training health workers in other parts of Asia, and together they developed an alliance in which the MNE acts as a supplier while the NGO provides training of nurses, midwives and doctors in the initial three years of implementation. Representatives of the MNE interviewed claim that today, both internal and external metrics have shifted from one that exclusively focuses on economic motivations to one that seeks a far greater synergy between the economic and social objectives.[5] The same observations were echoed by other interviewees; particularly in the area of medical devices, health outcomes are the ultimate test of product effectiveness.

Although clear distinctions exist between R&D alliances and CSR initiatives, a measured blurring of the two activities was also observed. Some MNEs emphatically keep R&D and CSR activities separate and independent, claiming the importance of their business objectives not galvanizing charitable activities. However, others are exploring synergies between R&D and CSR, and seeking ways to fuse knowledge that used to reside in different sections of a corporation. In some instances, an NGO serves as a catalyst for cross-departmental communications, activating existing intra-firm knowledge. In other instances, CSR activities have proven to be useful as an informal tacit knowledge acquisition channel for their R&D sections and a learning opportunity to acquire on-the-ground 'field' experiences of emerging market conditions. As both MNE and NGO

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[3]Interviews with MNEs and NGOs, Bangalore, June 18, 2012; June 20, 2012; July 2, 2012; June 17, 2014; July 3, 2014.

[4] Interviews with MNE and NGO, Bangalore, June 14, 2012; June 22, 2012; June 25, 2013.

[5]Interview, Bangalore, June 28, 2012.

interviewees noted that in contemporary India, "there is a huge gap between what is common sense among the urban middle-class and the poor living in the village", and "even if our workers are Indians, they come from middle-class backgrounds and they really don't know much about the poor or lives in rural areas."

In addition to MNEs and NGOs, new stakeholders are emerging in the form of social entrepreneurs. Social entrepreneurs perform a catalytic role in public goods provision by creating markets for products and services which are characterized by either people's inability (poverty) or unwillingness (free-rider) to pay (Summerrock, 2010). In the Global North, social enterprises are largely an outcome of the devolution of the state, and grew particularly since the global financial crisis of 2008. In India, social enterprises emerged after some NGOs, having been tarnished by high profile corruption scandals, sought to convert their status by providing for-profit services, and improve efficiency and financial accountability. According to one interviewee, "our objectives, our service, our clientele, they all stay the same (before and after conversion). But as a social enterprise, our corporation partners take us more seriously."[6]

Social enterprises are already hybrid entities that aim at social value creation with market-based strategies. An additional layer of hybridity is introduced when social enterprises establish a non-profit branch (e.g., a micro-credit corporation establishing an NGO arm to help women and children in urban slums; or a solar energy firm setting up a foundation to collaborate with a university and disseminate products for the poor), or when NGOs establish a for-profit branch (e.g., a health-promotion organization establishing a corporation as an intellectual property owner of a medical device; or an NGO establishing a for-profit consulting branch to advise corporations on their CSR activities). In some cases, these hyper-hybrid entities can diversify their revenues by accessing both venture capital financing and foundation grants. While they are in part outcomes of regulatory constraints that bound the for-profit and non-profit branches of our economy separately, the emergence of social enterprises is a clear indication that on the ground, complementarity supersedes the dichotomous antagonism between for- and non-profit spheres that is often represented in academic literatures.

Perhaps the most noteworthy aspect of social enterprises in contemporary India is transnationalization. Founders include migrants from the Global North involving, yet not exclusively, second- and third-generation non-resident Indians, who relocate to India to seek business opportunities specifically in such areas as social development and health. Their interests are in addressing challenges inherent in the Global South by capitalizing on transnational access to technical knowledge, social networks, and financing. One example involves a social enterprise developing a cloud-based data management platform service for NGOs to encourage data transparency and better accounting practices in order to qualify for international funding sources[7]. Other examples include an American setting up a service that matches urban middle-class clients with domestic help such as maids and drivers, using a combination of web platform and cell-phone access; an American developing an alternative and affordable diagnostic tool for diabetes; and two Indian doctors in the United States developing an affordable and user-friendly mobile telemedicine system for rural India. These transnational social enterprises develop new

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[6]Interview, Bangalore, June 4, 2012

[7]Interview of a social enterprise, Bangalore, July 24, 2012.

products and services that cater to the Indian market with broad applicability in other parts of the Global South.

The blurring of the boundaries between for- and non-profit entities has now spilled over to a new height with the emergence of NGOs as partners in innovation, the blending of R&D and CSR initiatives and the rise of transnational social entrepreneurs. Particularly in the context of the Global South, these emerging collaborative governance forms suggest emerging forms of, and opportunities in, combining economic and social objectives.

6. Discussion and Conclusion

The three cases described in the previous section represent various experimental attempts at collaborative governance aimed at mitigating globalized negative externalities by innovating, producing, and disseminating positive externalities globally. In all cases, experiments are ongoing through various redrawings of the scalar and domain boundaries that previously existed. As summarized in Table 1 below, each case involves the rescaling of positive and negative externalities, requiring a different combination of collective action problems. Collaborative governance for the environment has involved developing cross-stakeholder networks across municipalities, and innovation was observed in the form of emission reduction technologies, new protocols and accounting methods. For public health, the state and global foundations are reformulating incentive structures for greater participation by the private sector. In immunization, states play a particularly complex role as they function not only as regulators and quality control managers, but also as the largest purchasers of vaccines.

Table 1: Three Examples of Collaborative Governance

	Environment	**Public Health**	**Poverty Alleviation**
Problem identification (rescaled negative externalities)	Global climate change, sea level rise, ocean acidification, air pollution, forest degradation, resource depletion	Global pandemics; global economic and public health impacts of communicable diseases	Localized poverty contributing to economic and social instability, and implications for global environment and public health
Mitigation (producing rescaled positive externalities)	New markets; protocols, platforms, accounting methods	Cell-based vaccines, pandemic vaccines, developing cancer, HIV/AIDS vaccines	Social innovation; products/services designed specifically for markets in the Global South
Scalar Flexibility	Global networking, transnational NGOs	Global foundations creating new markets (e.g., neglected diseases)	Transnational social enterprises
Domain Flexibility	Multi-stakeholder networks involving	New public-private partnerships in vaccine	Multi-stakeholder R&D alliances

	cities, NGOs, firms; rescaled and networked NGOs	research and development	
New role of the state	Rescaled to the global; networks of local states	Creating incentives for private sector participation	Mitigating against 'state failure' (under-provision of public goods) through collaborative governance

Unlike the environmental and public health realms, collaborative governance for poverty alleviation is still in its initial stages. It is distinguished by its bottom-up nature, at the moment involving a collection of unorganized attempts by individuals and entrepreneurs to inject greater social priorities into economic activities, and increase the number of business solutions that are oriented toward improving the conditions of the poor. While MNEs and social entrepreneurs collaborate with NGOs to address poverty in India, ironically, the state remains largely ineffective in serving its traditional role of providing necessary public goods.

In this paper, we argued that the current conceptualization of global public goods as rescaling of non-excludability and non-rivalry of consumption is deficient as a conceptual vehicle to devise global governance today. This paradigm is based on an assumption, that the public and the private sector are playing opposing and mutually exclusive functions in the economy, which is at best artificial and, at worst, increasingly divorced from the reality of the global economy. The process of territorial rescaling of the public domain invariably necessitates organizational flexibility, as observed in various blurring and mixing of boundaries between the public, private, and civil society organizations. Increasingly deterritorialized negative externalities are often dealt with by improvised solutions on a case-by-case basis, either by reterritorializing negative externalities to suit the existing governance structure, or developing partnerships or hybrid organizations to produce positive externalities as mitigation. In effect, collaborative governance is an effective use of the 'scalar mismatch' without reterritorializing the political governance structure, and domain flexibility to address the governance gap. What we are observing may well be a transition, a temporary fix, and/or a precipitating trend that signals the arrival of a distinctive governance form that will become a dominant framework in the 21st century.

All three examples involve a rescaled public domain, although the geographical consequences of these examples are yet to be fully determined. It is plausible that certain segments with institutional affinity could constitute the core decision makers of the collaborative governance framework, only to perpetuate the current 'democratic deficit' in global governance. It is also plausible that any benefits accruing from collaborative governance may be skewed to certain regions over others, or the geographical sources of problems and solutions may continue to come from disparate regions (i.e., global North financing the South). Collaborative governance, however, challenges the status quo of all stakeholders; states, firms, and civil society organizations, as they are constantly

prompted to examine, re-examine, and alter their roles and functions in respective collaborations. We believe that a possibility of a new form of governance may well be emerging, although in an uncoordinated manner in various segments and fringes of the globe, with incremental transformation. Historical evidence suggests, however, that a new assemblage progresses much in the same manner, until a tipping point is reached.

Speculations aside, this is a crucially important on-going process that demands a greater engagement by geographers. A geographical paradigm can contribute a critical angle for a number of the key assumptions underlining the economic principles that have lost validity as a result of rescaling. Economic geographers, in particular, have actively engaged in debates on the globalization of production, resilience of local context, and the varieties of institutions that constitute global capitalism. Production is no longer simply bounded by rationality, domains, nor scaled territoriality. A potential exists that this expertise can be extended to engage more directly with debates over global governance in terms of its nature, scope, and design.

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