Noah Toly
501 College Avenue
Wheaton College
Wheaton IL, 60187
noah.toly@wheaton.edu
T: 630-752-5730

Noah Toly is Associate Professor of Politics & International Relations and Director of Urban Studies at Wheaton College. His research interests and teaching are at the intersection of urban and global environmental politics. He is the author of several articles and book chapters on these topics and co-editor of three books, including, most recently, Cities and Global Governance (Ashgate, 2011).

Sofie Bouteligier
Department of Social Sciences
Environmental Policy Group
Hollandseweg 1
6706 KN Wageningen
The Netherlands
T: +31-317-48-20-31
sofie.bouteligier@wur.nl

Sofie Bouteligier is a researcher at the Environmental Policy Group of Wageningen University. Her research focuses on city networks for global environmental governance and the interactions between multinational private companies and cities in the search for sustainable urban futures.

Graham Smith
1207 Orwell Road
Naperville, IL 60564
T: 630-946-7373
graham.smith@my.wheaton.edu

Graham Smith is a studies economics at Wheaton College. His research and career interests include how poverty can be alleviated by expanding and improving markets.

Ben Gibson
3712 East 6th Ave.
Ben Gibson works at Montbello High School in Denver, Colorado. His research interests include urban education policy and the intersection of law and religion.
This article broadens the discussion of cities as strategic sites in which global activities are organized. It deploys methodology commonly used to study the distribution and disproportionate concentration of advanced producer and financial services firms in order to study the office distribution of global non-governmental organizations (NGOs) and global energy corporations. It then compares the distribution of those offices to that of advanced producer and financial services firms, using data from the Global and World Cities Research Network, further discovering what cities are strategic sites in all three networks, in any combination of two networks, and in only one network. Attending to the convergence and divergence of such networks opens a door to the study of network logic—the underlying dynamics of network functioning—instead of limiting the study to network structure or composition while also permitting a multi-sectoral measurement of globality.

Keywords: cities, globalization, global cities, networks
New Maps, New Questions: Global Cities Beyond the Advanced Producer and Financial Services Sector

Introduction

Scholarly concern over the role of cities as sites for global governance and the organization of global activities has increased substantially over the past 25 years. The partial denationalization of global politics has been accompanied by the increasing importance of non-state and sub-national state actors—including non-governmental organizations (NGOs), multi-national corporations, and city governments (Castells 2005). It has further resulted in the rising significance of cities as sites in and for global governance (Brenner 1998, Swyngedouw 2004). Cities serve as sites for scale-jumping—the movement of organizations and issues across scalar boundaries (Glassman 2002)—and locales for networking. Global actors, by concentrating in cities, take advantage of propinquity and the dense networks available in the urban landscape to organize their activities, and in doing so, also establish certain cities as “nodes” in their global networks (Castells 2000b, 407-459). These nodes are interconnected through (informational, material, financial and ideational) flows and receive meaning from network interactions (Amin 2002, 391).

There is an emerging literature on “world cities” and “global cities,” those urban areas more or less directly articulated to a shifting architecture of global political economy (e.g. Sassen 1991, Taylor 2004b). In response to the idea that a revolution in communication and information technologies and globalization processes would herald the demise of geography (see Graham 1998 for a review of literature embracing this
position), scholars focused on global cities pointed out the continuing role of particular locales as governance centers with increasingly global scope. Since John Friedmann (1986) articulated his “world city hypothesis,” many have attempted to measure manifestations of the phenomenon that Richard Florida (2005, 2008) attempts to capture with his suggestion that “the world is spiky”—that, in fact, globalization has had disparate effects across cities, especially concerning connectivity to other locales through global networks or strategic location in global networks. Many of these attempts have emphasized the disproportionate concentration of advanced producer and financial services firms in particular types of cities (e.g. publications of the Global and World Cities (GaWC) Research Network at Loughborough University). To be clear, most of these claims do not focus on the capacity of municipal governments to effect changes in the global landscape, but, rather, focus on the emergence of cities as strategic locales for global governance by various state and non-state actors that are effective—even if not always formal—authorities in the governance of global affairs.

The core aim of this article is to broaden the discussion of cities as strategic sites from which global activities are organized. It deploys methodology commonly used to study the distribution and disproportionate concentration of advanced producer and financial services firms in order to study the office distribution of global non-governmental organizations (NGOs) and global energy corporations. Global NGOs are cutting edge actors in global politics. Marked by flexibility and transnational presence, they are able to deploy personnel and programs in locations that prove strategic in global political developments. If we assume that their location choices reveal which locales are regarded as most important to global politics, then measuring their office location
strategies could serve as a proxy for the importance of a particular city to global affairs. Global energy corporations shape the economic and environmental landscapes—consider the 2010 BP oil spill in the Gulf of Mexico—of the world, given that they are a vital player in one of the biggest challenges our society faces: the transition to an alternative energy system. Their presence in any given city is suggestive of the extra-territorial influence of actors in that locale. It may also suggest the potential for extra-territorial influence by the municipality in question. By virtue of the policies that bear offices and operations within its jurisdiction, a municipality, like other subnational units of state governance, may have effects upon operations beyond its borders. The presence of both global NGOs and global energy corporations may also shape the influence of the municipality, providing rationale or resources for involvement in issues of transnational concern. ¹

By comparing the distribution of those offices with that of advanced producer and financial services firms, using data from the GaWC Research Network, the article attempts to discover which cities act as strategic sites in these networks. Attending to the convergence and divergence of their geographies opens the door to also study the network logic—the underlying dynamics of network functioning—instead of limiting study to network structure or network composition. That is, understanding which cities concentrate actors from multiple networks and which cities concentrate actors from single networks can provide us with future opportunities to theorize in more nuanced fashion the emergence of cities as strategic sites for global governance. This will lead to a more advanced understanding of the value, roles and positions cities have in the

¹ While this article does not directly explore the connection, future research could measure the relationship between the presence of these global actors and the transnational activities of municipalities.
globalization of certain activities and practices.

For better and for worse, this approach also permits the development of new categories for globalizing cities. While more cities—and more types of cities—are articulating to the mechanisms of global governance (Gugler 2004) through sectors other than advanced producer and financial services (Taylor 2005), it must be recognized that these cities fulfill different strategic roles. Our research demonstrates that some cities appear within only one network, while others appear to be part of two networks, and still others—‘super-global cities’, for lack of a better term—appear to be strategic locales in all three networks. In other words, global actors in disparate sectors value these cities as places from which to organize their activities. These sites truly are “crossroads of diverse networks” (Presas 2004, 25) where “multiple global circuits intersect” (Sassen 2007, 20).

Furthermore, as the changing rankings of the GaWC Research Network (1998, 2000, 2004, 2008)\(^2\) (Derudder et al. 2010, Taylor et al. 2010) and our maps (introduced in the results section) show, cities in emerging economies take up a particular role in the global urban landscape, which might urge us to develop a better understanding of mechanisms that have stimulated this movement. As our maps also suggest, when investigating those locales that are strategic for multiple networks, capital cities are prominent—this finding reinforces both the notion that cities are strategic locales that concentrate governance potential and the notion that actors with effective, but informal, authority in global governance may still find the apparatus of the state to be crucial to their own performance. The goal of this article is not to simply add locales to the usual lists of global cities or to position cities that are strategic to one or two networks as “aspiring” or “wannabe” global or super-global cities. Rather—and especially in the discussion of global cities or to position cities that are strategic to one or two networks as “aspiring” or “wannabe” global or super-global cities. Rather—and especially in the discussion of

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\(^2\) For the complete lists of 2000, 2004 and 2008, see: http://www.lboro.ac.uk/gawc/gawcworlds.html.
network divergence—we are suggesting that we have to expand our horizon when discussing world/global cities, considering other ways in which the relationship between a particular city and global flows can and should be measured.

The article is structured as follows: after a brief review of relevant literature, including special emphasis upon a few critiques of the world/global cities approach, the article presents our methodology, results, and conclusions for both global NGOs and global energy corporations. In the end, the article contributes to a more robust understanding of cities as strategic sites in global networks. Such an understanding may prove important in a foundational sense as scholars, planners, policy makers, and activists move toward a more subtle, nuanced, and powerful representation of the relationship between urban locales and global governance. At the same time, articulating a richer comprehension of the commonalities and differences between cities may ground further opportunities for comparative research—either with a thicker, more contextualized description or with approaches that emphasize explanation. Some of these opportunities will be discussed in the conclusion of this article.

World Cities? Global Cities? Ordinary Cities?

The increasing concern for understanding the presence and influence of the city in the world has emerged alongside increasing interest in questions of both local and global governance. Governance, the exercise of influential, effective, and sometimes decisive authority, is distinct from government, the exercise or locus of formal or legitimate authority. Investigations into the bearing of this concept upon studies of global and local politics have resulted in the proliferation of actors and sites regarded as relevant to
political economic outcomes at multiple scales. At the local level, where municipalities enjoy formal authority, a raft of actors (e.g., private corporations, special authorities, boosterist clubs, and others) is recognized to enjoy informal, but still effective, authority. At the global level, while formal authority is absent, formal authorities—namely, states and sometimes other actors empowered by states—have constituted the most studied and highly regarded actors in the determination of global politico-economic outcomes. States act at the global level by projecting formal and more or less legitimate domestic authority enjoyed by dint of territorial sovereignty. At the same time, however, numerous other actors—many of which lack formal authority—influence the same outcomes over which states traditionally have held influence. These actors include transnational corporations and transnational activist organizations among others.

Many have recently argued that cities play a special role in the landscape of global governance (Borja and Castells 1997). Some studies point to the use of conventional foreign policy mechanisms by cities. In these cases, cities deploy capabilities once reserved for nation-states for the purpose of projecting extra-territorial influence (van der Pluijm and Melissen 2007). At the same time, cities are engaged in novel practices, including the formation of transnational municipal networks or coalitions to advance shared interests on issue specific concerns (Borja and Castells 1997, Leitner 2004). This is most clearly observed in the formation of municipal networks to address climate change (Betsill and Bulkeley 2004, Kern and Bulkeley 2009, Toly 2008). Through these networks, cities leverage their potential to diffuse best practices, policy cultures, and norms at the global level.

A greater part of the literature on the presence and influence of cities in the world
is concerned with cities as strategic sites for the location of other actors involved in global governance (Calder and de Freytas 2009), sites in and from which global corporations and activist organizations (Taylor 2004a) project their effective influence over global affairs. This literature has its origins in Friedmann’s article *The World City Hypothesis* (1986). Friedmann—building on his earlier work with Wolff (Friedmann and Wolff 1982)—formulates seven interrelated hypotheses that link urbanization processes to global economic forces. His work strongly relates to the concerns of world systems theory—the term, 'world cities', was coined in part for its fitness to a world systems approach to the study of global political economy—and is preoccupied with both describing the relationship between the urban and the global and articulating an understanding of the roles in which different cities find themselves. Many of the most prominent studies of world cities have focused on the role of cities as command and control centers in the global economy, locales exhibiting a disproportionate concentration of advanced producer and financial services firms that coordinate the activity of materially and geographically dispersed, but still socially concentrated, capital (Sassen 1991, Taylor 2004b). Others have augmented this approach by studying, for example, the

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3 Peter Hall’s work *The World Cities* (1966) differs from Friedmann’s and later research on world cities, since it conceptualizes world cities as national centers through which international influences find their way towards national interests (Lai 2009, 999, Orum and Chen 2003, 55)

4 Manuel Castells and Saskia Sassen distinguish themselves from this approach by using the “global city” concept rather than Friedmann’s world city concept. This is because they link the global city to our globalizing society and thus to a specific historical phase. The world city concept, to the contrary, can be applied to every important city throughout human history (Castells 2002, 554, Sassen 2000, 150, Sassen 2007, 24). In Sassen’s words (2007, 20), global cities are “subnational places in which multiple global circuits intersect and thereby position these cities in several structured cross-border geographies”. While Castells’s interest lies in networked phenomena (of which cities can be part), Sassen’s focus is more on particular cities and their role in networks (Lai 2009, 1003). Not all scholars point to the distinction between Friedmann’s work and that of Castells and Sassen (Orum and Chen 2003, 27-59, Presas, 20-25). Still, it is a significant variation, as it indicates different approaches towards globalization processes. As said, Friedmann’s work must be situated in the tradition of world systems theory, which approaches current developments as part of the lifecycle of the global capitalist economy. Castells’s and Sassen’s work stems from globalization theory, which stresses the difference in pace and scale between contemporary processes and past developments towards more internationalization.
cultural capital of cities (Krätke 2003). Still, the chief mechanism for determining the status of a given city—‘World city? Or not?’—has been the observation of office locations for advanced producer and financial services firms.

This approach to world/global cities measurement understands the techno-material aspects of globalization to be either of utmost importance or, at the very least, of measurable significance. Casting the gaze of transnational urbanism upon a small group of 50-150 cities, this literature has not only listed cities with disproportionate concentrations of advanced producer and financial services firms, but has also ranked cities according to the intensity of their connectivity—usually accomplished by discerning the connections between offices in different cities or the strategic importance of a given office-city node in a firm’s overall network (Taylor et al. 2010). In so doing, this literature has advanced an understanding not only of world/global cities, but also of city networks, the circuits in which certain cities play an important role. Such networks make up new spaces of power, which hold “the capabilities needed for the global operations” (Sassen 2007, 23). Nevertheless, it should be pointed out that privileged sites in cities--and not cities as wholes--are linked up to global networks. Central Business Districts are especially important to the connectivity of any given city (Brugmann 2007, Graham 2002, Hodson and Marvin 2010, Mol 2009, Vigar et al. 2005). Of particular relevance in this regard is the work of Stephen Graham (2002, 2004, Graham & Marvin 2001) that points out the “splintering and fracturing of urban space” (2002, 89) is of particular relevance in this regard.

Still, several significant objections to this approach have emerged from scholars concerned with appropriately understanding both the urban landscape and the role of the
city/cities in the global landscape. This approach has emphasized the condition of economic “globality”—to use Manfred Steger’s (2002, 47-54) distinction between globality, or interconnectedness; globalization, or the process leading to increasing interconnection; and globalism, or the increasing awareness of a world community as the point of reference or context for social relations—at the expense of the processes of globalization or the political, cultural, or ecological aspects of globalization. Short (2004) identified three more problem areas in world/global cities research. First, there is what he calls, “the dirty little secret of world cities research” (Short et al. 1996): a lack of good quality and international comparable data on cities. As a consequence, researchers use proxy-data, which reduces confidence in validity. Furthermore, once scholars move beyond the most global of cities, there is no consensus on rankings (Derudder 2006). Second, research has traditionally focused on a limited number of world city functions and as a result directed its focus to a small group of cities. In response to this, Short and colleagues (2000) stress the need to look at all cities as “gateways for globalization”. Third, world/global cities research searches for evidence of global connectivity—thus increasing the risk that attention is limited to those cities that seem to confirm theoretical assumptions (Jayne 2004)—while identifying a lack of connectivity is of equal importance. Short and colleagues therefore highlighted the “black holes” and “loose connections” in global networks.

Robinson’s objection towards world and global cities research is even more fundamental. She doubts the virtues of denoting ‘global cities’ or devising systems for categorizing and ranking such cities, especially when the criteria to do so are based on the experiences of just a few (Robinson 2006, 92). As Robinson (2002, 2006) has noted,
there are a myriad of ways in which globalization affects various urban landscapes, some of which cannot be captured by methodologies popularized by the GaWC Research Network and others. Robinson (2006) suggests that all cities are “ordinary cities,” experiencing the process of globalization in idiosyncratic ways. Her critique is particularly effective at a time when many urbanists are abandoning talk of ‘the city,’ in favor of ‘cities,’ de-emphasizing the commonalities of a generic urban experience and emphasizing the distinctive, often unique, characteristics of urban life in particular cities. The need to avoid ethnocentricity—the idea that all cities will follow the trajectory of global cities in the West—has also been stressed (Shatkin 2007). And Hill (2004) asks more attention to cities’ “nested configurations”—their histories, institutional set-ups, ideologies and political projects, an important concern as cities—although now conceptualized as important nodes in global networks—also remain physically embedded in real places (Graham 2005, 97). In sum, critics state that a more inclusive and nuanced approach towards globalizing cities will extend our understanding of cities’ experiences and will stimulate further theorizing on how globalization takes place (Short 2004, 45).

This study is sympathetic to the critiques leveled against some of the world/global cities literature. In some ways, this sympathy should cause us to bristle at the use of the terms, “world city,” “global city,” and the like, to avoid advancing such notions, and certainly not to proliferate such distinctions. However, sensitivity to such critiques potentiates new lines of inquiry that do not abandon talk of global cities as much as they dis-place it. For example, Amen and colleagues (2006) have attempted to “relocate global cities from the center to the margins,” studying the ways in which global and urban dynamics intersect in various cities that are, as Robinson (2002, 2006) puts it, “off the
map” of much global cities research. Their work is not alone in this effort, as other researchers have undertaken to expand the number and type of global cities, rather than to abandon the term (Gugler 2004). Also, scholars have broadened the scope of world/global cities research by paying more attention to processes of political and cultural globalization and the emergence of parallel geographies (e.g. Amin 2002, Calder and de Freytas 2009, Elmhorn 2001, Ergazakis et al. 2006, Lai 2009, Murray 2006, Nicholls 2008, Presas and Mol 2006, Papadopoulos 2006, Taylor 2005). This article aligns with these recent attempts to value the world/global cities conceptual lens while at the same time widen and deepen it.

**Methodology**

Urban economic globality has been measured, and corresponding world/global cities have been identified, by mapping the office locations of advanced producer and financial service firms. The GaWC Research Network, led by Taylor, undertook one of the first attempts to define, categorize, and rank global cities. In GaWC Research Bulletin 5 (Beavorstock et al. 1999), they derive their fundamental vision from the work of Sassen (1991, 126) in considering world cities as “postindustrial production sites.” These sites of innovation in corporate services and finance have been essential to the recent restructuring of the world economy. The distinguishing feature of global cities is advanced producer services, which are highly concentrated in a limited number of leading cities with “a specific role in the current phase of the world economy” (Sassen 1991, 126). With the producer service firm as the basic unit of analysis, the GaWC Research Network ranked cities based on aggregating information on cities’ provision of each of the four services (accountancy, advertising, banking, and law). They were able to
produce the “GaWC Inventory of World Cities” based on three research stages: (1) finding the global competence of service firms in terms of their presence in cities; (2) uncovering the global service centers for a given service sector; (3) identifying world cities of different degrees of corporate service provision.

As mentioned, scholars in the world/global cities literature have begun to call into question whether this economic measurement is sufficient to determine the significance of cities in the global landscape. As Robinson (2002, 538) observes, “For many poor, ‘structurally irrelevant’ cities, the significance of flows of ideas, practices and resources beyond and into the city concerned from around the world stands in stark contrast to these claims of irrelevance.” Cities, otherwise largely ignored in studies of advanced producer and financial service firms, serve invaluable roles in these flows through other organizations. Though we believe that the methodology developed most fully by the GaWC Research Network is insufficient for a robust understanding of the presence and influence of cities in the world, we think still that the limits of the methodology, itself, have not been reached—and that it can reveal considerably more about the “spikiness” of the global urban landscape. While the explanatory power of this approach may be limited, it has not exhausted its usefulness in identifying cities that prove strategic to global governance and especially to understanding in which cities certain networks converge and in which cities those networks diverge and why. Specifically, by pursuing this line of inquiry further, we can continue not only to ask which locales matter to global governance, but whether and to what extent those locales represent a significant shift from locales traditionally considered important to state-based governance. We may begin to ask—and even to answer—the question of whether the apparatus of state-based
governance remains significant not only unto itself, but also unto the governance of
global flows that has been the topic of so much global cities research.

This approach allows us to hold in tension the approaches of Robinson and the
GaWC Research Network, as well as approaches that valorize emergent actors in global
governance and those that persist in valorizing the state. The mapping of multiple
networks using the same or similar methodologies promises to open up the measurement
of various aspects of urban globality beyond the economic. Long-term prospects for a
more robust understanding of the relationship between global and urban dynamics
demand that this methodology be coupled with others. In the meantime, its continued
deployment may allow for “smart displacement” of our investigations, systematically
broadening the horizons of global cities research by identifying more cities that are
globalizing in ways that make them strategic sites for the location of several sectors or
types of actors in global governance.

As this particular article suggests, studying global NGOs’ and global energy
corporations’ geographies contributes to the understanding of global cities’ role and
functioning. Global NGOs represent the cutting edge of global politics (Castells 2008).
These organizations increased in numbers and strengthened their positions in the past
decades (Anheier et al. 2004, Union of International Organizations 2006). The NGO
world is now characterized by highly complex local-global links and networks—the
result of the increased internationalization and importance of international networks
amongst NGOs and the involvement of local and national groups in global practices (Arts
2004, 502). NGOs’ office networks constitute the material basis (space of places) through
which the links (space of flows) are organized and enable the connection of groups that
are acting in like fashion worldwide in order to build a common identity (Alger 1997, Castells 2004, 185, Lipschutz 2005, 246, Smith 2002). Just like firms, NGOs have location strategies intended to achieve organizational objectives (Prakash and Gugerty 2010). Their office location strategies may reveal what locations are strategic in global political developments. Global energy corporations shape the economic and environmental landscapes of the world. The energy industry must cope with growing oil scarcity, problems of securing supply, environmental degradation and growing needs in developing and emerging economies (Dorian et al. 2006). Global energy corporations’ location strategies partially reflect such challenges (Perrot and Filippov 2010). These companies are traditionally not incorporated in the GaWC rankings, which encompass firms that are involved in accountancy, advertising, banking/finance/insurance, legal services and management consultancy. This article thus brings in another type of private actor that is thought to be of relevance for debates on current societal developments and globalization processes. Mapping these sectors answers some questions, raises others, and allows us to understand whether the apparatus of the state remains critical to the global objectives of actors in these sectors.

To proceed in data collection for global NGOs and global energy corporations, an understanding was required of what data exists concerning these sectors already. First, with regard to global NGOs, a previous study done by Peter Taylor (2004a) on the role of NGOs in the global cities network allowed us to determine which NGOs could be considered ‘global’. For Taylor (2004a), just like advanced producer and financial service firms, NGOs needed to have offices on at least three continents, to be categorized as such. Taylor did not focus solely upon the prevalence of these NGOs, but used what he
calls the interlocking network model. He verified the *activity value* of NGOs in various cities by determining what type of offices the organizations have in each city. He then studied the cities’ relative connectivity by examining the density of links to other cities. Second, no data set existed for global energy corporations since there are no previous studies done on the role of global cities as strategic sites for the networks of energy corporations. As Peter Taylor (2004a, 269) noted in his study of global NGOs, “…the answer to this problems is to not rely on official statistics.” Thus, in order to form a data set for global energy corporations we took the methodological framework applied by Taylor in his research of advanced producer and financial service firms and used it to categorize which corporations could be regarded as ‘global’. It is important to note that, in this article, we do not consider the activity values of particular offices or the relative connectivity of cities in these networks. In order to overlay and compare maps generated by understanding these networks, which is the purpose of this article, we chose first to compare whole networks.

For the global NGOs, we eventually arrived at a final list of 76 global NGOs for mapping and statistical testing. We added 30 NGOs to the 74 NGOs from Taylor’s original list, applying Taylor’s selection criteria. The websites of these 104 NGOs were scrutinized for information on the location of their offices and we determined whether they functioned as a single entity under a corporate office or as a dispersed collaboration of independent entities. We also communicated with organizations by email and telephone to confirm this information. We eliminated 21 NGOs from Taylor’s original list and seven from the additional list due to either not having offices on at least three continents, not functioning as a single entity, or not having sufficient information
For the global energy corporations, we arrived at a final list of 33 energy corporations for mapping and statistical testing. The energy corporations were derived from a list of the top 100 energy companies in the world put out by the advising firm PFC Energy. Two other rankings that have been considered were Plunkett Research and Platts Top 250. Plunkett Research provides a comprehensive list of international energy corporations including oil, natural gas, energy, petroleum, electricity, utilities, and others. While the list is comprehensive, it may have proven to be too expansive and difficult to draw a select number of corporations from it. The list gives no rankings for the companies, making it difficult to determine which energy corporations ought to be selected for an effective multinational study. Platts Top 250 rankings are based upon a combination of assets, revenues, profits, and return on capital invested for companies with over $2 billion in assets. The industries in the rankings include coal and consumable fuels, diversified utility, electric utility, exploration and production, gas utility, independent power producers, integrated gas and oil refining and marketing, and storage and transfer. Though it provides a comprehensive set of industries, it did not fully match the criteria for what we considered to be global energy corporations. PFC\(^5\) determines its annual rankings based upon the total market capital of the corporations annually. It includes energy sectors such as exploration and production, refining and marketing, integrated natural gas, oil, and coal, oil field services, and energy equipment. By drawing

\(^5\) PFC Energy was originally founded in 1984 and now keeps offices in major world cities including Beijing, Houston, Kuala Lumpur, Lausanne, Manama, Paris, and Washington, D.C. Focused on international trends in the energy industry and the potential for sustainable development, PFC provides long-term consultation to its clients. For more information, see: [http://www.pfcenergy.com/](http://www.pfcenergy.com/).
from this list of the 100 corporations with the highest market capital we were essentially assured of including all energy companies that could potentially qualify as global energy corporations. To be classified as a “global energy corporation,” an energy company needed to have regional offices located on at least three continents (Taylor 2004a). By similarly scrutinizing the websites of the 100 companies, we found in which cities individual companies had located significant offices (once again communicating with organizations by email and telephone to confirm the information). From the original list of 100, we found 33 of the corporations had offices on at least three continents, while the rest either were limited to one or two continents or there was insufficient information to positively determine global locations.

With these lists of 76 global NGOs and 33 global energy corporations compiled, we then created two separate matrixes of city locations to determine the frequency of office locations. Within these matrixes, we marked the presence of an office in a city by putting a “1” in their intersecting cell. We then were able to add up the total number of offices present in each city.

Results

This section first reports the results for global NGO cities and global energy cities. Then, by overlaying maps of these networks with each other and with GaWC maps, the paper explores the convergence and divergence from the geography of advanced producer and financial services firms, as identified by Taylor and colleagues. Needless to say, global networks are in a constant state of flux since they are flexible, adapt to changing circumstances, have volatile boundaries and can exclude nodes that are no
Because of network volatility, any attempt to map such networks can only visualize “snapshots” (Grant and Nijman 2002) of ever changing realities. Because this methodology is inherently limited by the ever-changing nature of global cities and actors within them, interpretation must be accompanied by a realization that cities will continue to globalize in distinct ways.

**Global NGO Cities**

Among the selected 76 global NGOs we found 1633 offices across 489 different cities. We set a minimum threshold for “global NGO cities,” only qualifying those cities that contained offices of at least six different NGOs. In setting this minimum threshold, we wanted to avoid mapping cities with incidental NGO presence. Having at least six different NGOs that choose a particular place to establish an office shows that that place has particular relevance for NGO networks. Obviously, the minimum threshold is arbitrary and the more NGOs have chosen to be based in a particular city the stronger the claim becomes. We found that out of the 489 total cities included on the original list, we could categorize only 84 as “global NGO cities” (see Map 1). These 84 cities are home to 868 of the total NGO offices originally discovered, representing 54.9% of all such offices. Thus, although almost 500 cities contained an office of at least one global NGO (an NGO with offices on at least three continents), 405 of the cities only had a minimal presence of the NGO sector, with offices of only one to five global NGOs located in the city. Our analysis of global NGO networks across global cities stems from these 84 cities where the presence of global NGOs is most intense, ranging from six to 33 offices.
These 84 cities are mainly contained in Africa (29), followed by Asia (18), Europe (17), Latin America (13), North America (5) and the Middle East (2). Africa has more global NGO cities than North America and Europe together, demonstrating what Taylor describes as a bias towards the poorer parts of the world. With regard to abundance, activity values, and network connectivity, Taylor (2004a) found that cities in the Global South had the highest density of global NGOs. Latin America, however, by containing significantly less global NGO cities, suggests there is nuance to Taylor’s claim, which needs to be further explored and qualified. The disparity between the developing of economies of Africa and Latin America could lead to further inquiry regarding the location strategies of these NGOs. It might be explained by the fact that many NGOs locate where the need is highest, which is translated in new geographies that
focus less on Latin America and more on poor regions in Africa and South Asia (Bebbington 2004, 739). The high presence of global NGOs in Asian cities confirms the more general finding that several (Southeast) Asian cities’ importance has increased, since they host ever more global actors and are at the intersection of global flows. The geography of global NGOs diverges from the geography of advanced producer service firms that are primarily located in more global cities of the North. Many cities high on Taylor’s NGO network connectivity rankings are over 100 places higher than in the global service firms ranking. In part he attributes this to the correlation between NGOs and countries’ capitals; thus, the prevalence of capitals in the Global South would lend itself to a greater amount of potential NGO locations. If Taylor’s insight is accurate, it suggests that measuring NGO presence is, in fact, measuring a different aspect of “globality,” the political rather than the economic. Our results point to cities of the Global South as global in this political sense, one that perhaps reflects the disproportionate presence of what Steger (2005, 145) describes as the “global justice movement”. We will discuss this at greater length, below.

**Global Energy Cities**

From the selected 33 global energy corporations we found 566 offices across 210 different cities. We set the same minimum threshold used for identifying “global NGO cities,” only qualifying those cities that contained offices of at least six different global energy corporations as “global energy cities.” In setting this minimum threshold, only 25 out of the 210 cities included on the original list could be categorized as “global energy cities” (see Map 2). Thus, 185 cities had only a minimal presence of the energy sector.
These cities contained 311 of the total offices identified. The 25 cities where the presence of global energy corporations is highest (ranging from six to eighteen offices) contained 255 of the total energy corporation offices originally discovered, representing 45% of the total. Our analysis, and the related mapping exercise, of global energy corporation networks stems from these 25 cities.

These 25 cities are mainly contained in Asia (7), followed by Europe (6), Africa (5), Latin America (4), North America (2) and the Middle East (1). Asia hosts more of these global energy corporations than any other continent, suggesting a large supply of energy to be harnessed among many cities. However, three cities that rank in the top five in terms of the number of offices they host are located in the Americas. Houston confirms its position as the “world’s energy capital” (Taylor and Lang 2005, 1) and its success in surviving economic transformations (Katz 2009). The weight of the energy sector in
Brazil (Rio de Janeiro) (Vine 2005) and Calgary (Teplova 2006) is reflected too. Such a distribution of these energy corporation locales presses one to evaluate the connection between the proximity to energy resources and location strategy. What relationship does the prevalence of offices in a city have to do with access to the raw materials of energy resources? Many, if not all, ‘global energy cities’ have a unique proximity to sources of raw energy. Though the energy and economic sectors are related to one another, the five uniquely ‘global energy cities’ indicate the importance of geography (Aberdeen, Algiers, Stavanger, Tehran, and Tripoli) prove energy is not simply dependent upon the economic sector. Such cities serve as a reminder that the globalizing presence in cities is often deeply embedded in the idiosyncrasies of peculiar cities and in a persistent materiality. While cities regularly regarded as ’global’, such as New York, do not appear on the energy list, other cities, not traditionally considered ‘global’, make the list and represent a different globalizing presence among urban locales.

**Network Convergence and Divergence**

Comparing map 1 and 2, some similarities and differences already emerge. Both maps reflect the importance of (Southeast) Asian cities. At the same time, cities in Central America and Sub-Saharan Africa are of greater significance on the global NGOs map. In order to further explore patterns of convergence and divergence between these city networks and the city network identified by the GaWC Research Network, we brought together the 84 identified global NGO cities, the 25 identified global energy cities and the latest GaWC ranking of alpha, beta and gamma cities (Taylor et al. 2010), which contains 129 cities that concentrate advanced producer services (see Map 3).
45 cities appear in more than one network: ten cities in all three networks, nine in the GaWC and global energy corporations networks, 25 in the GaWC and global NGOs networks and one (Luanda in Africa) in the global energy corporations and global NGOs networks. In total, 183 different cities are on the map, of which 138 are part of only one network, thus indicating diverging geographies. The cities that are part of all three networks are located in Asia (Bangkok, Beijing, Jakarta and Kuala Lumpur), Europe (London, Madrid and Moscow), Latin America (Bogota and Buenos Aires) and Africa (Cairo). Surprisingly, not one US or Canadian city is part of this category. This seems to confirm that U.S. cities are generally less connected than European or Asia Pacific cities (Taylor and Lang 2005, 1), though it may also suggest that a sufficiently high level of infrastructural and organizational capacity exists in a sufficiently large and diverse set of cities so that multiple networks need not to organize from the same cities. However, it is
still surprising that not one of the usually mentioned U.S. ‘leaders’ (New York City, Chicago, Los Angeles, Washington D.C., Miami) comes forth as a city that is part of all three networks. The nine cities that are part of both the GaWC and the global energy corporation networks are dispersed over all continents: Asia and the Pacific (Ho Chi Minh City and Perth), North America (Calgary and Houston), Latin America (Caracas and Rio de Janeiro), Europe (Paris), the Middle East (Dubai) and Africa (Lagos). Of the 25 cities that are part of both the GaWC and global NGO networks, nine are situated in Europe (including Kiev), six in Asia and the Pacific, four in South America, North America, the Middle East and Africa each have two cities that are part of these networks.

Map 3 thus shows that cities other than those that rank at the top in the global economy are significant when studying more diverse global actors. It further confirms the more general finding that (Southeast) Asian cities are increasing in importance and aspire and obtain integration in global networks (Bunnell et al. 2008, Evers and Korff 2000). It also shows that Africa is not completely off the map, but that it is mainly its usual suspects (Cairo, Johannesburg, Lagos, Luanda and Nairobi) (Amen et al. 2006, Gugler 2004, Jenkins et al. 2002, Taylor 2005) that come out as significant for several networks.

**New Maps, New Questions**

These results raise important questions whose answers lie beyond the scope of this paper. Addressing them will require both further refinement and critical evaluation of world/global cities research as it has been conducted so far. These questions are thus indicative of changes occurring in global cities and in our evolving understanding of such cities.
First, the finding that cities other than those that rank top in the global economy are of importance instigates thinking outside of existing rankings and consideration of other sources of meaning and power. The idea that cities concentrate knowledge, infrastructure and services does not suffice for explaining the geographies we have identified in this paper. It seems that global NGOs and global energy corporations concentrate in cities that provide access—access to donors, access to lawmakers, access to resources. For example, cities could be seen as places that are enablers of entrance to emerging markets, access to donors and political actors or key communication hubs. The increasing will of diverse actors to have permanent presence in several Asian cities, shows how global actors adapt their office networks to changing world orders and markets. An investigation of underlying dynamics of performance might be of help here. Networks are thought to be organized in such a way that each node brings added value to the network (Castells 2000a, 15). For instance, NGO location is driven by multiple factors that must be balanced against one another to profit the organization as whole. Indicators of poverty or other measures of community wellbeing would be expected to be the main determinants of the location decisions of NGOs. However, NGOs are both pragmatic and charitable: they might locate in poor areas, but not primarily in poor areas, because “the risk of a failure is so high in certain poor areas that it might jeopardize the flow of funding from donors” (Fruttero and Gauri 2005, 761).

A network’s geography should enhance a network’s performance. A study of flow exchanges, the assignment of particular tasks to offices in particular cities and the difficulties of maintaining a network should provide the necessary insights with regard to this. The high presence of cities of the Global South, especially in the global NGOs
network, raises questions about distinct roles. Does a simple division between cities that are important for network management (Global North) and cities that are significant for campaigning and field work (Global South) (Taylor 2005, 1599) exist, or is the functional division more complicated than that? Though Africa and Asia may contain the majority of cities with at least six offices among NGOs, undoubtedly the functions of these offices is different than offices within the same organizations in Europe and North America. What difference does the functional role of individual offices make in examining and exploring our face-value results? And does any sort of equivalent distinction exist for energy corporations or the advanced producer services of the GaWC studies?

The second finding—that there are significant divergences among different sectors in both the Global North and the Global South—again confirms that the Global South as a homogenous entity does not exist (Eckl and Weber 2007) and suggests the need for greater understanding of the different reasons that are behind cities’ inclusion in global networks. A more in-depth study of location strategies might bring answers here. The difference in the global NGOs network between Africa and Latin America necessarily points to a deeper and more systemic difference between the two continents. The dearth of international NGOs in Latin America as opposed to other Global South locales raises questions regarding what the difference could be: different functions of local NGO offices, continental self-sufficiency, or some other option? The particular position of Southeast Asian cities also highlights the diversity within the Global South and demands more in-depth research on the underlying stimuli. Furthermore, it forces researchers to question the idea of linear evolution towards global city status. Southeast Asian cities experience a distinct development pattern (both in scope and pace) from Western cities,
thus their future directions might also be different.

A third finding we cannot ignore is that those ten cities in which all three networks overlap are capital cities. For the global NGOs network it was expected that capital cities would be significant, since NGOs are attracted to “loci of political power” more than to places of economic importance (Taylor 2004a, 272). A city like Washington D.C. has been identified as global political city (Anheier et al. 2004, 303, Calder and de Freytas 2009, 94, Union of International Associations 2006, 103-105). Such a city is a “relational incubator”, since it enables complex exchanges between a variety of actors with a diversity of resources who may operate at different levels, but find each other in a particular place (Nicholls 2008, 842). But the importance of some capitals for all three networks inevitably forces scholars of global cities to grapple with the relationship between international governance and the role of the nation-state. Have global governance, politics, and economics been divorced from the nation-state as much as many have supposed, or does this reflect that a deeply embedded relationship still exists, that the formal authority of the nation-state serves as the locus for effective, even if informal, global governance? And does this indicate that capital and primary cities have not been replaced by global cities in terms of significance for globalization processes? Studying these issues also asks attention for regional differences: are there regions where the importance of capital cities has maintained, whereas other regions face a more diverse proliferation of their cities? In Latin America, for example, primate cities—cities where urbanization and economic and political processes are concentrated disproportionally in relation to other cities in the same country (on the instigation of the national government)—are still of significant importance for globalization processes, although they
have declined in favor of rapidly growing secondary centers (Portes and Roberts 2005, Rodriguez and Martinez 2008). For those inclined to see this as evidence of the nation-state’s persistent primacy, it is important to note that most scholars warn against expecting the replacement of one order with another, and instead expect or observe the partial destabilization of one assemblage and ascendance of another (see, for example, Sassen 2006). It might be more appropriate to interpret this finding as evidence that, in many countries, capital cities are the only cities—or one of only a small number—with sufficiently developed and sophisticated infrastructure to support the globalization of the city through the relocation of various global actors. Conversely, greater numbers or greater diversity of global cities in any given country may simply demonstrate the extent to which highly developed and sophisticated infrastructure is available in a wide variety of locales.

Finally, the limited convergence of the three networks leads to multiple directions that global cities research could follow. On the one hand, this finding confirms that there are only a few cities that are well-connected in several networks and that global actors are disproportionately concentrated in particular places. As such, it justifies a focus on the top of the urban hierarchy and disproves the criticism towards this focus. On the other hand, however, if there is only a couple of “superglobal” cities, it might be more interesting to redirect attention from this small group to the larger group of globalizing cities and thus study cities as “gateways” (Short et al. 2000) for globalization processes. Our research classifies global cities in such a way as suggests differences in kind, and not only in degree, between global cities. Do these differences affect the ways in which municipalities respond to political economic and governance opportunities? Is it
“globality,” as such, that shapes the role of urban agglomerations and municipalities in the governance of global affairs? Or is it a specific shape of globality?
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