GLOBAL VALUES AND ENVIRONMENTAL GOVERNANCE:

POLICIES FOR SUSTAINABLE URBAN DEVELOPMENT

WITHIN THE NEW YORK CITY-REGION.

by

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ABSTRACT OF THE DISSERTATION.

Global Values and Environmental Governance:
Policies for Sustainable Urban Development within the New York City-Region.

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Global environmental governance consists of a series of responses and manifestations of individuals, groups, and networks that attempt to influence the development processes of the dominant regime. Through the identification of values and the creation of norms, sub-state actors and non-state actors are able to define a world-wide dialogue that results in the creation and implementation of policies that seek to halt and to reverse the impacts of climate change.

While the concern over the climate crisis is global in nature, the policy responses are increasingly local. This paper analyzes how local policies reflect global norms to address an international problem. Looking to theories of collective behavior and political economy, I analyze how a cosmopolitan citizenry responds to the problem climate change. Selective indicators to measure the policies by local authorities in the New York metropolitan area reveal that political actors at different of leadership levels (local and global) and of different leadership types (governmental authorities and civil society) are responding to the mounting demands by democratic citizens to devise and to implement comprehensive policies for sustainable urban development.

'But it is some hardship to be born into the world and to find all nature's gifts previously

engrossed, and no place left for the new-comer.'

—John Stuart Mill, 1848

'Through its complex orchestration of time and space, no less than through the social

division of labor, life in the city takes on the character of a symphony: specialized

human aptitudes, specialized instruments, give rise to sonorous results which, neither in

volume nor in quality, could be achieved by any single piece.'

—Lewis Mumford, 1938

Acknowledgements.

Dedication.

For my grandmother, Antonia (b. 1912).

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List of Abbreviations.

ANT	actor-network theory
C40	C40 Cities Climate Leadership Group
CBD	central business district
CC:iNet	Climate Change Information Network
CCI	Clinton Climate Initiative
CCP	*Cities for Climate Protection*
CDI	Clinton Development Initiative
CFCs	chlorofluorocarbons
CGI	Clinton Global Initiative
CH_4	methane
CO_2	carbon dioxide
CoR	European Union Committee of the Regions
CSA	combined statistical area
CSO	civil society organization
DC	District of Columbia
EDF	Environmental Defense Fund
EU	European Union
FOE	Friends of the Earth
FSSD	Framework for Strategic Sustainable Development
GCI	global cities index
GDP	gross domestic product
GEP	global environmental politics
GG	global governance
GHGs	greenhouse gases
GNP	gross national product

IO	international organization
ICLEI	International Council for Local Environmental Initiatives—Local Governments for Sustainability
IGO	inter-governmental organization
IGR	inter-governmental relations
INGO	international non-governmental organization
IPCC	Intergovernmental Panel on Climate Change
IR	international relations
ITTO	International Tropical Timber Organization
ISSP 2000	International Social Survey Programme 2000: Environment II
IUCN	International Union for the Conservation of Nature and Natural Resources
IULA	International Union of Local Authorities
IWC	International Whaling Commission
LA	City of Los Angeles, California, United States
LA21	*Local Agenda 21*
LTG	limits to growth
MNC	multi-national corporation
MNE	multi-national enterprise
MSY	maximum sustained yield
NGO	non-governmental organization
N_2O	nitrous oxide
NRDC	Natural Resource Defense Council
NYC	City of New York City, New York, United States
NYCR	New York City-Region
OECD	Organization for Economic Co-operation and Development
OMB	United States Office of Management and Budget
ppm	parts per million
PV	photovoltaic

RC4A	Resilient Communities for America
SDGs	sustainable development goals
SDPs	sustainable development policies
SSE	steady-state economy
TAN	trans-national advocacy network
TNC	trans-national corporation
UGB	urban growth boundary
UK	United Kingdom
UN	United Nations
UNFAO	United Nations Food and Agricultural Organization
UNCED	United Nations Conference on Environment and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEMG	United Nations Environmental Management Group
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Social, and Cultural Organization
UNFCCC	*United Nations Framework Convention on Climate Change*
UNISDR	*United Nations International Strategy for Disaster Reduction*
US	United States
USA	United States of America
UTO	United Towns Organization
WCED	World Commission on Environment and Development, The
WWF	World Wildlife Fund
ZPG	zero population growth

1.   Introduction: Overview of the Problem.

In his discussion of the critical drivers of global change, Vice President Gore (2013) identifies a series of economic, political, technological, and social factors that have significantly impacted our individual lives and our common civilization. These six drivers are: an interconnected global economy; a world-wide communications grid; a shifting balance of power; a rapid unsustainable growth; a new set of scientific technologies; and a new relationship between the systems of human civilization and natural ecology. Not only do these factors reflect the drivers of global change, but they reflect the character of the global system – one which presents a unique set of circumstances unlike any other observed before in history. These drivers are not only social and cultural phenomena, but also thresholds upon whose passage we confront crucial choices: the global community faces more simultaneous and converging changes now than it ever has before in history; Gore's concern over and involvement in the development of new approaches to address the climate crises reflects the roles of policy-maker and social-activist in global environmental governance.

In its annual world development report, the World Bank (2010) discusses the complicated impacts of climate change upon individuals, groups, and governments; it cites droughts, floods, storms, and heat waves among these impacts. Further, it states that continued climate change as a result of human activity, at current rates, will have severe negative impacts on economic development, growth, and human well-being; it is not greater wealth and prosperity that cause climate change, but the regimes and policies that are

employed to achieve those ends. Both developing and developed countries are impacted

by the hazards of climate change, and their associated risks and costs; while richer states

may have more resources to cope with the negative externalities, they are not exempt

from the costs to physical, social, and human capital from the weather events that are

associated with climate change: destruction of property, damage to infrastructure,

disruption of agricultural cycles, and loss of lives.[1]

While naturally present in the atmosphere, important in warming the Earth's surface and

in keeping water in a liquid state of matter to support life, there is clear evidence that

global emissions of greenhouse gases[2] (GHGs) have increased beyond levels that have

been heretofore observed in nature; since the onset of the industrial revolution – most

notably in the second half of the twentieth century, – with the concentration of CO_2 (the

primary contributor to climate change among the GHGs) increasing by 40%. GHGs trap

infrared radiation within the Earth's atmosphere, have a significant warming influence

upon the Earth, and persist for centuries; thereby, GHGs contribute to climate change on

a long-term basis. Earth temperatures are currently 0.8^oC above pre-industrial levels (and

projected to increase an additional 2^oC to 5^oC by the end of the century, if human activity

continues at present levels), causing the increase of average air and ocean temperatures,

the increase in global sea levels, the melting of permanent ice sheets, and the shifting of

precipitation patterns (resulting in increased floods on coasts and droughts on land); these

changes to the global climate impact ecosystems, agriculture, and human settlements.

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[1] For example, rich countries were greatly affected by the 2003 heat wave in Europe, with over 70,000 deaths: 20,089 in Italy; 19,490 in France; 15,090 in Spain; 9,355 in Germany.
[2] Greenhouse gases are N_2O (nitrous oxide), CH_4 (methane), CO_2 (carbon dioxide), O_3 (ozone).

Much of the GHGs that are present in the atmosphere are a result of human activities that are associated with industrialization, development, and growth (World Bank, 2010).

Climate action policy requires a series of collective decisions by political actors from different levels and sectors to identify approaches to the challenges associated with the varying impacts of climate change on people and the environment. This is achieved when political actors define a set of values, convey those preferences to decision-makers, and ensure that policy actions are taken to reflect those priorities. The tenets of the current iteration of globalization reflect a set of assumptions that look to increased and expanded growth and development to secure a prosperous and peaceful future; however these strategies do not always consider the overall costs of 'growthmania' – namely the impacts on finite natural resources and the degradation to the quality of life. The global environmental movement has sought to reorient the discourse among policy-makers – both at the global and the local levels – to introduce these perspectives in the decision-making processes of policy makers. These concerns have been identified as priorities for states, inter-governmental organizations, and citizens; national governments are urged to impose environmental regulations, the United Nations works to develop sustainable development goals, and individuals voice their concerns by marching for climate action.

The organization of this dissertation study will proceed as follows: the next section identifies the study's research questions and hypothesis, as well as outlines the research design. Chapter 2 offers the relevant theoretical considerations: human ecology and economy are presented in the context of the post-modern era, and how sustainable

development is at once a global and a local issue; theories on liberal democracy,

collective behavior, social movements, and urban planning are discussed in the context of

the interconnected, complex processes of economic globalization. Chapter 3 presents the

the role of urbanization in the post-modern, post-industrial era – both in its significance

to support cosmopolitan globalization, and its impacts upon human and natural ecology.

Chapter 4 submits a discussion of transnational networks for sustainable urban

development, and their role toward global environmental governance. Chapter 5 contains

the case study reports of the local governmental authorities within the New York City-

Region; and Chapter 6 consists of the methodological strategy, which employs a two-

pronged analytical approach to describe global environmental value assumptions, and to

explain policy responses for sustainable development by local political units. Chapter 7

concludes the dissertation on global environmental governance, and offers suggestions

for future study.

1.1. The Research Design, Hypothesis, and Argument.

While much of the literature on globalization argues that local governments forfeit autonomy in the face of an emerging global regime, an observed phenomenon appears to contradict this proposition. Increasingly, local governmental authorities are taking policy action to address the global problem of environmental degradation, even as traditional international processes among sovereign state actors and established intergovernmental organizations are unsuccessful in developing a unified approach. In a universal regime dominated by the activities of transnational markets and international laws, local governmental authorities are developing solutions to address the policy concerns that are overlooked or ignored by the traditional processes of world politics.

The anomaly, or puzzle, therefore is thus: Why do local governmental authorities impose policies to address concerns over climate change? With limited specific legal requirements to do so and with seemingly marginal impacts, why would local political units engage in policy action to address global ecological concerns? The hypothesis is as follows: ***global city-regions comprise cosmopolitan citizens and local governmental authorities whose policy choices are informed by the processes of global affairs, including the expressed value priorities of international organizations and global citizens***.[3]

Local governmental authorities are embedded within regional conurbations, and thereby are inextricably linked to the global networks of city-regions; this network comprises

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[3] For example, Kenneth N. Waltz (1979).

economic, political, social, and cultural actors. Therefore, values are local and global at

once, reflecting the conditions and the priorities of a universal history with a

cosmopolitan intent; global citizens are urban, and democratic actors are cosmopolitan.

The concerns for a global citizenry reflect the interests of an urban cosmopolis, as the

processes of the global regime have favored the emergence of urban settlement patterns;

while the processes of globalization have in many cases blurred – if not erased – the

traditional hierarchy among political actors, so to have they blurred the exchanges among

social agents. Global citizens, while maintaining ties to and traditions of their localities

are also bound to a universal system of priorities and norms. It is in this overlapping

space where universal values emerge among a global citizenry, and where cosmopolitan

democracy reflects interests of the local and the global at once.

The following are the two research questions which will be used to guide this dissertation

study, and to test the stated hypothesis:[4]

1) Do the expressed value priorities of global actors and transnational networks

impact local governmental authorities?

2) What are the impacts of global environmental governance on local policies of

sustainable urban development?

These research questions call for a combination of explanatory and predictive strategies;

the explanatory strategy describes how a cosmopolitan citizenry voices its value

preferences for environmental justice within the context of a dominant regime of market

globalization, and the predictive strategy explains what outcomes will take place at the

level of local government in response to political action by civil society for policies of

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[4] For example, Thomas S. Kuhn (1970).

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sustainable development. Therefore, a two-pronged analytical approach is employed, using both quantitative and qualitative methods; the quantitative analysis demonstrates a global environmental ethic among a cosmopolitan citizenry, and the qualitative analysis documents the response by local governmental authorities to the demands of civil society.

The goal of this study is to provide general statements about the relationship between the processes of globalization and the policies for sustainable development. It specifically looks at the role of a global civil society in the formulation and articulation of value priorities among the intertwined processes of market globalization and global governance. By exploring shared historical, cultural, and social characteristics among metropolitan communities in the post-modern era, and the global citizens who are agents therein, I attempt to make statements to describe the socio-political conditions which spur collective decision and action to accomplish expressed goals and outcomes for environmental protection. The two-pronged approach measures the relationship between global values and local policies: statistical generalization measures value preferences among global citizens for policies to protect the natural environmental; and analytical generalization measures the role of civil society to translate common values into policy actions.[5]

The use of statistical analysis allows me to derive generalizations about collective values among global citizens within a universal system of market globalization, particularly to describe the contextual conditions under which global value prioritizations are shaped among a cosmopolitan citizenry, and the policy consequences of discourse among global

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[5] For example, see A. Przeworski and H. Teune (1970), and R.K. Yin (2003).

political actors over common values and shared ethics.[6] By measuring the preferences

and priorities of democratic citizens from across the globe, I establish a 'baseline' for a

global value that favors policies for sustainable development. The level analysis for this

research study is the local governmental authority. This study acknowledges the

emergence of a universal system of market globalization whose priorities reflect the value

assumptions of a liberal philosophy; therefore, the prevailing regime is also rooted in a

democratic sensibility that demands of government procedures for collective decision-

making. This study, therefore, explores the conditions under which local governmental

authorities respond to the mandates of a global citizenry. Political units within the global

city-region of the New York metropolitan area are used as case studies within this

research project to explore the policy activities of local governmental authorities; namely,

this study explores the perceived importance of civil society by decision-makers within

municipal governments when developing and implementing regulatory structures toward

sustainable urban development.

This study attempts to explain the relationship between the common values of a global

civil society and the public policies of a local governmental authority. The relationship

between common values and policy action in democratic societies has been studied

methodologically before; by exploring the participatory roles of democratic citizens

beyond voting, social scientists may determine under what conditions ordinary citizens

engage in political action.[7] To describe the complex system of market globalization,

which comprises cultural, social, political, and economic processes, I rely on a

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[6] For example, see J. David Singer (October 1961).
[7] For example, see Carole Pateman (1980).

simplification of elements to identify essential factors, a propelling principle, and a

central tendency among actors. I accomplish this by describing the puzzling relationship

between a global regime and a local government, between systemic processes and

common values, between a leviathan and a citizenry.[8]

Upon completion of this research study, I propose that what I will find that there are

indeed global environmental values among democratic citizens, and that these values are

translated into norms through the activities of political actors and social movements.

Further, I propose that if these values are insufficiently address by the traditional

processes of intergovernmental and international relations, democratic citizens' demands

for attention to these value priorities are addressed by local governmental authorities.

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[8] For example, see Kenneth N. Waltz (1979).

2.   Theoretical Considerations.

This research project considers the link between urban policies and international norms, namely how values impact the implementation of policies – with a specific attention paid to universal values for environmental protection and local policies for sustainable urban development. Through a multi-disciplinary approach, which looks to the budding field of global affairs for direction, I explore inter-related theories and principles in the fields of environmental economics, political economy, political science, public policy, political sociology, urban planning, and international business; in this way, I hope to further the understanding of the relationships among urban policy and globalization – both at the macro-level and the micro-level.

To attempt to explain the impacts of global norms on local policies, I rely on (1) the theoretical traditions of collective behavior and social movements (in the both fields of political sociology and political economy) to describe how global norms and universal values emerge; and on (2) urban theory and community planning to illustrate the processes of civic politics. I look to the policy decisions of local governmental units within the global city-region of the New York cosmopolis, pointing to the interconnectedness among global political actors *vis-à-vis* shared values, common interests, and global norms. Thereby, this study explores the policy impacts of universal values in a global system, with particular attention to the processes of environmental governance and sustainable urban development.

The post-modern perspective of cosmopolitanism challenges the supposition that concepts can be formalized with positive and definitive definitions, favoring instead the diversity and complexity of the concept's manifestation; in this way, cosmopolitanism can be described as neither singular, nor universal, nor Western. Descriptions of cosmopolitanism do, however, contain two common elements which are also associated with globalism: a recognition of a global belonging; and a relationship between culture and politics (Holton, 2009: 17-22). The citizenry of the post-industrial regime is a "cosmopolitan society [that] constitutes a global nexus of responsibility in which individuals, and not their organizational representatives, can participate directly in political decisions" (Beck, 2010: 67). In this way, the post-modern could refer to either an epistemology or an era, both of which explore the transformations and complexities inherent in a system of processes and representations; the first imparts an approach that explores that which is discontinuous with those before, while the second imparts the transformation of the geo-spatial manifestation of the current socio-economic period. Both of these (i.e., the epistemology and the era) consider the impacts of the policies and the processes of economic globalization on the human experience – either in the way it interacts with the geo-political space, or in the way that it perceives its position in the socio-cultural space (Gibson and Watson, 1995: 1-9). This geo-cultural experience is most pronounced within global cities, which are the foci of activity for the current global system; the socio-political activities toward the management of resources within the global city-region of New York City, as a premiere center for global activity (i.e., economic, political, social, and cultural exchange), is of import and interest within this

study – and thereby political units therein are explored in their influence by and upon transnational networks toward global environmental governance.

2.1. Globalization, Environmental Governance, and Urban Centers.

At the close of the twentieth century, there were notable changes in the processes and regime of world politics. While traditionalists continue to view states as the primary – if not the only – actors of international affairs, modernists identify the observed increase in transactions among non-state actors as significant in shaping global political outcomes. Modernists have developed a theoretical framework to interpret a multi-dimensional economic, social, and ecological interdependence, which is characterized by reciprocal effects among political, economic, and social actors. Unlike the assumptions that govern the traditionalists' approach, modernists characterize the *fin de siècle* global political regime as one that includes non-state actors and an unclear hierarchy of issues; in the preceding decades, military security had been a consistent and predominant focus of international policy. Further, transnational actors increasingly introduce various issues – often apart from those of security – to be considered by a global body politic (Keohane and Nye, 1977).   For example, the World Commission on Environment and Development[9] (WCED) (1987: 19-23) asks the international community to reconsider the traditional approaches to peace and security; it points to the growing stresses of development upon the *biosphère* and asks that the global community expand the conception of security to include environmental and ecological issues, for which there may be no military solutions at all.

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[9] In 1983, the General Assembly of the United Nations established the World Commission on Environment and Development as an independent body and charged it with three objectives: (1) to re-examine critical economic and ecological issues, and to identify policy proposals to address them; (2) to propose forms of international co-operation through which these issues may be addressed; and (3) to raise awareness among and a call to action for individuals, groups, firms, institutions, and governments.

In this post-industrial period of the late twentieth century, during which economic, political, and social exchanges occur within a post-fordian framework, is introduced a new, multidisciplinary approach to understand and to describe socio-spatial interactions among individuals, organizations, and institutions; many disciplines describe this framework as one that emerges from the manufacturing activities of the modern era and as one that is characterized by information and communication technologies. Geographers, economists, sociologists, political scientists, and urban planners generally refer to this period as the 'post-modern era' – generating sets of theories to describe the socio-political conditions therewith associated (Braudel, 1992; Bull, 1977; Bertens and Natoli, 2002; Castells, 2006a; Dear, 2002; Gibson and Watson; Holton, 2008, 2009; Moulaert and Scott, 1997; Sassen, 1998, 2001a; Scott, 2001a, 2006, 2012; Steger, 2009; Mittelman, 2000; Watson and Gibson, 1995). Theorists of the post-modern era describe a condition that is at once unique and common, experienced by individuals and shared by communities, undeniably comprehensible and invariably unpredictable; these are the characteristics of the era of globalization, which create systems and processes that are simultaneously interconnected and isolated, interdependent and competitive, universal and local.

The era of globalization is a manifestation of the first truly universal system: capitalism; the cultural expression through which the socio-political activity of peoples within a global economic system is that of a post-modernist form (Homer, 2002: 180-188). Along with theorists, prominent policy-makers and social activists – voices for a cosmopolitan citizenry (elected or otherwise) – identify a crisis in capitalism in this era of

globalization, where the three factors of production (labor, capital, natural resources) have been disrupted; the failure of the global market system to recognize the costs of pollution, as well as the benefits of public goods, leads to the assertion by many actors to create policies that restore citizens' influence to shape the global polity (Gore, 2013; Jacobs, 1969).

There is a clear relationship between individual citizens and organized society, each dependent upon the other for prosperity, stability, and security (Kant, 1983); wherein a world community

> widely prevails among the Earth's peoples, [wherein] a transgression of rights in *one* place in the world is felt *everywhere*; consequently, the idea of cosmopolitan right is not fantastic and exaggerated, but rather an amendment to the unwritten code of national and international rights, necessary to the public rights of men in general[10] (Kant 1795: 119).

This is a phenomenon comprised of a series of cross-border economic, political, and cultural processes – which adhere to an unstated set of universal rights for all citizens of the global collective. Also part of this phenomenon is a practice through which political interests are considered in terms of the global cosmopolis: a cosmopolitan democracy, where citizenship is found through global community (Holton, 2009: 2-10). The complexity of exchanges among post-modern citizens can be explained thus, "[w]hile social relationships are obviously stretched out across space, multiple spatialities within particular places constitute what can be accomplished at any given time" (Dierwechter, 2008: 64). A "new version of socio-spatial duality" which is simultaneously global in reach and local in expression, describes this phenomenon as containing geographic units that are sub-national, metropolitan, and dense (Scott, 1998: 1).

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[10] Emphases are the author's.

Along with the socio-political changes that accompany the processes of globalization, there have also been changes of environmentalism; in particular, the structure of the global economic system has created impediments to deal with problems of ecology: the traditional role of state government to create and to enforce environmental regulations has weakened in an increasingly interconnected system, where global enterprises are seemingly beyond the reach of domestic policies. Further, these domestic policies are often superseded by an international regime that prioritizes the protection of private property and economic growth, hampering states' capacities to manage ecological insecurities; even in instances where a collective, ecological security is identified, states are often unable or unwilling to reorient strategies of economic growth toward environmental protection. Governmental and policy actions result from a societal recognition of the negative impacts of human and economic activities upon the *biosphère,* and a public's demand to address these observed impacts (Shabecoff, 2000: 21-30). This is the relationship that is explored in this research project: how can we better understand the translation of social values into policy action? This is particularly of concern when a global society encounters world-wide policy concerns, where there are limited or nonexistent international institutions to address them – as is the case with the threats to the global ecology.

The traditional political approaches to global ecological issues pose concerns and challenges; while nation-states, and the inter-governmental organizations that they create, have sovereign domain over the creation and implementation of international agreements

and treaties, they are no longer the only political actors concerned with and capable of acting to address environmental issues (Bulkeley and Betsill, 2003: 9-18). These political circumstances are understood in part by the changing socio-spatial patterns of growth and development that have accompanied industrialization, which is characterized by a centuries-long global trend of increased urbanization: at 1800, 2% of the world's population was urban; in 1900, the figure doubled to 4%; by the end of the 20th century, the global urban population grew tenfold to nearly 40% (Jamieson, 2002: 245); the processes of globalization and urbanization are associated with each other, with interconnected social, political, and economic impacts. The processes of market globalization, and the related social and political changes – which occur where the global, national, and local levels inter-relate and inter-penetrate, – support a cosmopolitanization of the global population, which need not be explicit; the processes of globalization create circumstances through which a universal human condition and outlook are formed and fashioned (Holton, 2009: 50-55). The recognition of a climate crisis as a factor that is significantly reshaping an interdependent world, and that this factor interacts with other drivers of global change – *e.g.*, the global economy and unsustainable growth – require democratic responses by decision-makers at domestic, regional, and global levels of governance (Gore, 2013: xiii-xxx).

[FIGURE 1 HERE]

The growing numbers of non-state actors within the international system (*e.g.*, international organizations (IOs), intergovernmental organizations (IGOs), multi-national

corporations (MNCs), non-governmental organizations (NGOs), transnational religious movements, transnational social institutions, transnational advocacy networks (TANs)) are assuming activities in international politics that have been traditionally associated with sovereign state actors; these activities by non-state actors have been increasingly unchallenged in their legitimacy or their authority, thereby assigning them new and growing powers in the global political economy (Hall and Biersteker, 2002). As early as 1973, at the beginning stages of the current, expanded phase of globalization, it was documented that state governments have a more limited role in stimulating economic growth (Zeckhauser, 1973: 104-108). Regardless of – or perhaps because of – the complex interconnectedness that characterizes the global system in 2012, thinkers on global political economy identify a series of actions for international policy-makers to stimulate the economy and enhance the human condition (both globally and domestically): improve and invest in global infrastructure, which would also improve congestion and sanitation in urban centers (Lin, 2012: 66); support small-scale manufacturers of innovative technologies and products which may offer a new wave of problem solving and employment opportunities at the same time (Wadhwa, 2012: 68); build 'greener' cities, which are characterized by compact communities that experiment with climate-focused policies that work toward carbon-neutral aims while supporting seedbeds for city-building businesses that will fuel the needs of the global economy (Steffen, 2012: 72-73); cut power plant pollution to reduce the production of climate changing gases (Wagner, 2013: 60-61); invest in targeted industries (such as energy savings and environmental protection; next-generation technologies; new energy sources; electric cars) which both promote environmental protection and stimulate global

economic activity (Coy, 2011: 53-57). Both at its most early and most recent stages of the universal global system, approaches call for collaborative policies for global environmental governance, which seek partnerships among government, industry, academia, and civil society; the goals of these policies seek both economic growth and ecological protection. No where would these actions be of greater import than among the geo-political units wherein global activities are most concentrated: global cities.

In this new political reality, power and control are shifting from territorialized institutions, i.e. states, to deterritorialized institutions, *e.g.* MNCs, NGOs (Storper, 1997a). As symptoms of and contributions to globalization, the number and activity of non-state actors continue to increase; these actors are political in their influence over decisions of the economy – even as economic decision-making becomes less politicized, and the processes of market globalization become more systematized (Preteceille, 1997: 219-225). In addition to deterritorialized institutions, sub-state actors are also increasing in importance in world politics (Abu-Lughod, 1999; Castells, 2006a; Sassen, 2001). In the most general sense, cities throughout history could be defined by three characteristics: having relatively high population densities; consisting of mainly non-agricultural employment sectors; and serving as important cultural, social, economic, political, and administrative centers for its surrounding environs and regions (Jamieson, 2002: 250-251). The New York City-Region – consistently ranked first among comparable political units for its influence in global affairs (A.T. Kearney, 2012; C40, 2014c) – is a noteworthy case to explore how the roles of intra-governmental, non-state, and sub-state

actors participate in political economy and global governance toward preferred outcomes over specified policy issues.

While the general characteristics of urban centers remain consistent throughout the evolution of the global system, the administrative roles and political functions of urban centers have varied over time, depending on the order of the hegemonic powers and the dominant regime: from incorporated clients to subordinate communities to autonomous city-states (Wight, 1977; Watson, 2009). Administrative institutions of these types, *i.e.* non-state or sub-state actors, have been observed throughout history to address unique social and economic concerns; in late Mediæval Europe, for example, commercial interests within independent city-states of the Italian peninsula devised organizational and technological innovations to resolve the problems of administration and exchange (Ferguson and Mansbach, 2008), resulting in a complex system of inter-governmental relations that covered a large territorial space which were administered by urban centers of knowledge and power; these mediæval systems comprised networks of city-states, merchants, traders, etc. as vehicles to secure interests, to convey priorities, and to wield power (Holton 2005). Where extant institutional structures fail to accommodate the needs or interests of a citizenry, it may seek redress *via* methods of non-institutional political action – among which include the creation of complex network information infrastructures to convey values and priorities to decision-makers of the global system (Schock, 2005: 5-23). A network of this kind is observed within the processes of globalization: global cities (and political actors therein) participate in exchanges to

facilitate activities of political economy foremost, but also of policy-making and decision-making (Sassen, 2001; Scott, 2006).

Not only are the numbers of political actors in world politics increasing, but the roles and functions of these new actors are increasingly authoritative: global standards are being set in areas of finance policy by financial institutions and in areas of human rights and the environmental policy by non-governmental institutions. By doing so, these newly emergent actors are being recognized as legitimate partners in the governance of world affairs; unseen in previous generations, new political actors emerge in the modern and post-modern eras to participate in global discourse and activities. These political dynamics which emerge from and result in alternative discourses which seek institutions and regimes to address concerns (among which include problems of socio-ecology) contributes to global governance (Hall and Biersteker, 2002: 3-9). These pluralistic dynamics comprise competing discourses within a liberal democracy, looking to political economy to explain individual and group behavior when faced with problems of resource management; decision-making processes not only assess rational utility-maximization, but they also evaluate ethical and moral considerations of a deliberate democracy (Pritchard and Sanderson, 2002: 148-169).

The rise of the political capacities of non-state actors does not leave the state government completely powerless, however. Effective exchanges between state and non-state actors increase the capacity of government to address challenges and shocks (Weiss, 1998: 43-45); states look to non-state actors as partners to facilitate the identification of policy

concerns and in the delivery of policy solutions – often sharing in the response to the policy concerns raised by advocacy groups. Within the environmental movement, for example, the number and scope of actors have grown rapidly, with organizations emerging at the global, state, regional, and local levels; as a result, the structure of the environmental movement is complex and changing, reflecting the needs of its many constituents, groups, and collectivities (Shabecoff, 2000: 34-36). These efforts reflect a political cosmopolitanism, whereby political organizations are created to address policy concerns that are not effectively resolved through the traditional modes of international affairs (Holton, 2012: 7-10). In some cases, these non-state actors become expert advisors on policy areas – counseling the states who have given them authority and legitimacy toward action. For example, the World Commission on Environment and Development (1987: 11-23) identifies the role of governments as one which should create policies that allow for development that is both economical and ecological, by supporting a legal means[11] through which the environmental rights of both present and future generations are protected; further, it stresses the importance of the scientific community, industry, and civil society in assisting states to devise programs for sustainable development, *e.g.* by directing trans-national corporations (TNCs) to invest in emergent technologies, and by promoting non-governmental organizations (NGOs) to endow a political will.

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[11] The WCED argues that these legal means should be expanded to include laws at both the national and international levels. In its report, the WCED ultimately asked the UN to create a Programme on Sustainable Development, to convene regional and international conferences to report progress, and to set benchmarks to measure progress.

The intensification of economic, political, social, and ecological transactions across

cultural, national, and political borders is a general description of the processes of

globalization. Integral to this concept is a philosophical view of the world as a single

unit. While a study of the evolution of the global system reveals that this perspective

may be possibly traced to a suzerainty of ancient Sumer or a universalism of mediæval

Christendom, it was not until the twentieth century – and even more-so its last three

decades – when technology and policy supported exchange among peoples at a truly

global level (Holton, 1998). Certainly since the 1950s, the global economy has grown –

fueled by the post-war consumer demand and the worldwide political stability – at

theretofore unseen rates; in the face of this activity, in the 1970s political economy

considered the impacts of relationships among social actors in an increasingly

interdependent world with finite resources (Brown, 1973: 153-158). These phenomena

support a universalism that is driven by the processes of 'globalization:' liberalization,

economic growth, expanding markets, increased prosperity; these processes, however, are

bound by the limited reserves of finite resources which support the extant regime's

development processes.

Universalism and Economic Globalization

The economic and political trends of the late twentieth century have led to the emergence

of a form of universalism, which is often called 'globalization.' Globalization may be

described as a series of processes which include three elements: an interconnection

across political and cultural boundaries, an inter-dependence of social processes, and a

consciousness of the world as a single unit; further, these are ongoing processes which

are subject to change and re-invention (Holton, 2005: 14-15). The world is a single economic entity, comprised of the activities in the fields of commerce, industry, science, technology, among others; these changes require new socio-political approaches to address a new global reality (Gore, 2013: 5). A series of social, political, and economic phenomena – namely economic globalization, concentration of corporate power, exponential population growth, and new communication technologies – call for a readjustment in how civil societies and their governments address policy concerns – among which include global environmental issues (Shabecoff, 2000: 10-28). A new on-going system of processes emerged in the middle of the twentieth century: information and goods move around the globe at faster rates than ever before seen; food and goods are produced in greater quantities with fewer resources; and technology allows for a better understanding of our natural systems. These developments allow us to "build a future that is more prosperous, more just, and more secure" (WCED, 1987: 1). Some alternatives to the dominant regime of economic globalization reflect these possibilities; for example, justice globalism argues that these results could be achieved with alternative value preferences and social practices – and that where they cannot be achieved under the extant regime, a re-evaluation of the value priorities of a global society must be addressed (Steger, 2009).

Until the current era, human activities – and their impacts – were compartmentalized into three categories: 'political,' wherein activities were managed by state governments; 'sectoral,' wherein activities (i.e. energy, agriculture, commerce, etc.) were managed by producers and firms; and 'broad areas,' wherein common interests (i.e. environmental,

economic, labor, social, etc.) were addressed by various political actors. In a globalized world, these compartments are dissolved; interlocking crises of the environment, economy, and society are not separate crises, but instead they comprise a singular, universal crisis. This phenomenon has coupled the global economy and the global ecology together, leading to environmental stresses which are linked to the patterns of economic growth. The interdependence of ecology and economy transpire concurrently at many political and social levels: local, regional, national, and global (WCED, 1987: 4-8). It is the increased blurring of these traditionally compartmentalized categories that is a characteristic of the post-modern era – as well as the need for increased cooperation among political to identify mutual interests and to solve common problems. Any discussion of globalization, therefore, must consider the political activities within a social system, while acknowledging the pressures of a universal economic regime (Holton, 2005); and foremost among these socio-political considerations are the activities of global cities, wherein policies and decisions at once draw from and contribute to the logic of the universal regime.

As the activities of the political actors and social agents in a universalizing system increasingly blur based on the common interests and shared outcomes, it becomes relevant to consider alternative approaches to describe the relationships between governments and citizens in the current post-modern era of market globalization. The study of globalization may be divided into three waves: hyper-globalism (which posits that transnational economic activities threaten state sovereignty); skepticism (which posits that corporations remain parochial in their activities, rather than contributing to a

truly transnational global economy); and post-skepticism (which sees globalization as a trend which can be halted, modified, or reversed). According to this conceptualization of market globalization, political actors engage in activities in accord with or in contrast to the value assumptions of the dominant universal system; in the continuum of these three waves of globalization, which center around the advancement of process of market liberalization, states (and their urban and regional sub-units) may either support the consensus and accept their diminishing roles in world politics (hyper-globalization); they may limit exchanges among transnational actors and support a disjointed, disunified system (skepticism); or they may halt, modify, or reverse the value priorities, norms, and processes that support the trends toward market globalization (post-skepticism). The social and political actors discussed in this dissertation study seek to influence the patterns of growth, and thereby adhere to the post-skepticism wave; they seek to modify the processes of the global regime, to halt or reverse the unfettered expansions of an unsustainable 'growthmania,' and to include the value priorities of ecology alongside those of economy (Holton, 2005). By voicing values and defining norms, these acts of agency reflect the efforts of a cosmopolitan citizenry to participate in the environmental governance of a global system. As political actors within the of the New York global city-region, these efforts have impacts at several levels concurrently: local, regional, national, and global.

The value assumptions that motivate actors and agents are significant in defining their interests; for example, a basic assumption of market globalism is that actors both compete and cooperate in varying order depending on their desired goals. In theoretical traditions

of market liberalism, there are common goals and ethics that drive political behavior – be they prosperity, peace, security, individual liberty, or property rights. This is particularly the case when a community must govern over common pool resources, such as those that are often not delivered by market mechanisms, i.e. security or natural resources (Doyle, 1986). At the earliest stages of the global regime, a public concern for conservation based on an ecological concept of community may be observed through the publication of a series of sketches and parables which comprise a logical rationalization termed a 'land ethic;' this philosophy outlines a response (which is a duty for the conscientious, democratic citizen)[12] to the social, cultural, political, and economic impacts[13] of growth, modernization, and urbanization: an æsthetic and an ethic which emphasizes a standard of living that includes public areas for outdoor and wilderness recreation (Leopold, 1949). In this context, Leopold defines a community as interdependent parts consisting of individual members who are faced with a dilemma: to cooperate or to compete. Further, Leopold points to economics and politics as examples of social mechanisms which have replaced competition with cooperation; he posits that the extension of these processes to the human environment is a natural sequence – both evolutionarily possible and ecologically necessary – in the integration of societal organizations and institutions.

It is these processes which is observed under market globalization and which is reflected in the liberal internationalism of the Kantian tradition; the zone of peace, i.e. a pacific federation of liberal societies, wherein connected liberal polities and economies offer a

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[12] Leopold calls these philosophical arguments his attempt to "make shift with things as they are" (1949, vii).

[13] Leopold (1949) specifically lists two changes that result from growth, characterized by the increased interconnectedness among peoples, organizations, and polities in the modern era: exhaustion of wilderness and acculturation of peoples.

worldwide sustained peace that is based on political bonds of liberal rights and interests (Doyle, 1986). Kant (1795: 120-125) points specifically peoples' compliance with a system of trade to obtain distant goods; subsequently, they engage in peaceful relations to support the benefits of trade: by establishing a spirit of trade, peoples and nations unite to secure a mutual interest and thereby overcome a natural predisposition for war. It may be observed that the global trend toward a universal system of economic exchange and free trade may be an attempt to approximate Kant's zone of peace – which has far-reaching impacts on political actors and social agents at all levels of society, be they actors who systematize consumption or conservation, regionalization or nationalization.

Economic Globalization and Political Communities

Much in the way that the national political units are impacted by a universal economic system, local political units are also impacted by a global regime – as these exchanges impact values and norms at global and the local levels at once. The global economy consists of interconnected local or regional economies across states and borders, which he describes as "giving way to a new geography in the shape of a global mosaic of regional economies imbricated within a slowly shrinking expanse of underdeveloped territory;" the socio-spatial logic of market globalism is expanded to cover nearly the entire planet and all policies therein (Scott, 2006: 119). Globalization is described as "a process that generates contradictory spaces, characterized by contestation, internal differentiation, continuous border crossings" (Sassen, 1998: xxxiv). The processes of globalization are marked by interactions between international flows of resources and territorial economies, leading to a "global context of trade, investment, and

communication and organized networks of human relations" and a global *lingua franca*

for economic activity and organization[14] (Storper, 1997: 184); these processes and

exchanges adhere to systematic logic that reflects the priorities of the dominant regime,

which subsequently impact all levels of socio-political formation at the local and global

levels simultaneously.

Exploring the roles of social networks on global society, network analysis allows us to

understand the connections between the micro-level community and the macro-level

society: large networks or institutions are comprised of interactions both among firms

across distribution communities (commercial networks) and among individuals within

civic communities (advocacy networks) (Holton, 2008). While the processes of

globalization have been clearly evidenced by economic activities, these processes are also

accompanied by social activities. While Scott (2006) and Sassen (1998) see these sets of

socio-political activities, i.e. the social and the economic, as two sides of the same coin,

Steger (2009) and Moghadam (2009) see the contestation among the inherent value

assumptions and priorities which drive these activities as two distinct 'globalisms.'

Nonetheless, both approaches are securely rooted in the Kantian tradition of a universal

system of liberal democracy which drives both peace and prosperity.

It is this 'cosmopolitan' understanding of global society that is evidenced in the

economic, political, and social activities within regional conurbations. As a result of the

social and economic forces of market globalization in the post-bi-polar system, 'region

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[14] While Storper and Sassen generally focus their analyses to the geography of economic activity, the complex processes of globalization are marked by considerable inter-connectedness among and across economic, political, social, and cultural activities.

states' are portended to rise in importance and activity because they are "natural economic zones;" the accompanying changes to the political structures of international relations reflect the prioritization of regions' linkages to the global economy (Ohmae, 1993: 78). It is not only because of their economic impacts that city-regions are important; their changing roles in global affairs could also be observed by their increased political power. While the efforts by local governmental authorities to impact the patterns of economic and population growth are observed, an interdependent metropolitan area has less capacity to succeed in this endeavor than do cities independently; "overall metropolitan levels of population and employment are set largely by economic and demographic forces at national and international levels" (Alonso, 1973: 196). Metropolitan regions modify their political constitutions to secure benefits and to minimize costs – to both compete and cooperate, *vis-à-vis* binding structures of the institutions that regulate the policy area over which they seek to exert influence.

The economic activities within the socio-spatial entity have subsequent impacts on the local and regional polity; to identify and to describe the social influences of the global economy on geo-political institutions supports the conceptualization of the roles of global civil society within the urban space. Sassen (2005) presents a framework to account for the impacts of economic globalization on geography, namely how the geography of international transactions affects urban centers. Creating a typology based on economic activities and processes, she lists four types of places; noted among these theses four types of places are 'global cities.[15]'

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[15] The remaining three types of places are: export processing zones, offshore banking centers, and high-tech districts.

The system of global cities – both the internal and external networks of which they are comprised – reflect the priorities and assumptions of the universal system of market globalization; this system comprises a balance of competitive and cooperative forces, and is characterized by processes of integration and interconnectedness. The urban sphere is one where social and economic interests, and interdependencies thereof, are most visible (Scott, 2008: 1-3). Sassen's (2001) reading of globalization reveals a world-wide integrated economic system, where urban centers both compete and collaborate; increasing liberalization of international economic policy, she finds, leads to a complex geographic network of interactions and transactions. While global cities may compete to attract economic activity, they also must coordinate efforts as participants in an increasingly integrated network; metropolitan regions are "the basic motors of the global economy" (Scott, 2001: 4-7). Globalization has multiple social and economic effects on cities: the allocation of resources and benefits within a city-region (e.g., human capital, financial assets, land, infrastructure) are impacted by the global dynamics of these complex decision-making processes (Moulaert and Scott, 1997: 3-15). Urban centers are both actors and subjects in the processes of market globalization.

Storper and Sassen discuss the processes and impacts of globalization *vis-à-vis* global economic exchanges to describe emergent political, social, and cultural patterns; however, there is academic debate over globalization – namely whether economic globalization is the only model to describe these phenomena. Steger (2009) explores globalization as economic, political, and cultural processes, identifying three concurrent

formations of globalization: market globalization (the dominant regime), justice

globalization (from the political left), and jihadist globalization (from the political right).

Moghadam (2009) adds to these a fourth formation: the feminist social movement, from

which has emerged feminist IR theory. Each of the paradigms seeks to universalize

different sets of values and norms. The ideological structure of justice globalization –

which consists of many interconnected networks of advocacy groups – is one where

global policy-making institutions are representative of the global society's plurality and

whose institutions address policy concerns that are overlooked or ignored by market

globalization. Justice globalization seeks to formally address the diversity of interests of

organizations other than those of financial institutions, which is what is perceived to

dominate under the processes of market globalization (Steger, 2009; Moghadam, 2009).

Holton (2012: 3-17) identifies cosmopolitanism as an aspect of globalization which has

been significant in the evolution the global system, and may have incorporated

combinations of the aforementioned formations at once, where inter-connectedness and

universalism among actors are either chosen or forced through the expansion of the

global system: conquest, imperialism, liberalization, democratization; however, it is a

global political community of whom social values and political preferences are addressed

by a democratic cosmopolitanism, by whom global processes are defined and supported,

and for whom institutions are created and empowered. Political cosmopolitanism

espouses the interests of global citizenry by identifying both the benefits of economic

exchange and the necessity for civic involvement – which in the post-modern era is

bound by the socio-spatial parameters of an inter-connected, urbanized community.

In an increasingly globalizing world, there emerge institutions at international and/or transnational levels, which assume roles in world politics beyond those of the states' and which espouse a form of political cosmopolitanism (Kütting, 2004: 34-39). Of course, the post-modern perspective of cosmopolitanism challenges the supposition that concepts can be formalized with positive and definitive definitions, favoring instead the plurality and complexity of the concept's manifestation; Hannerz's description of cosmopolitanism as that of having two faces—one cultural and one political—satisfies the post-modern approach, as it both distills the concept without binding it (Holton, 2009: 17-22). Similar to how the post-modernist approach toward both cosmopolitanism and globalism acknowledges the difficulty in completely describing the system that arises when agents interact within complex institutional structures in a dynamic universal system, the WCED (1987: 9-11) identifies the challenges to national and international institutions in addressing complex matters of an increasingly integrated global system, pointing to the narrow and compartmentalized concerns to which these institutions have been designed to respond. In the liberal form, inter-governmental organizations such as the United Nations (UN) and the World Trade Organization (WTO) are part of global governance; these political actors are integral in defining and implementing the policies of market globalization. Multi-national corporations (MNCs) and non-governmental organizations (NGOs) also seek to establish global codes of conduct; these actors are also considered to be part of a post-modern system of global governance. In addition to these political actors, transnational networks – operating across state borders in many different spheres of social, political, and economic activities – are also significant and increasing

components of a globalizing society; these webs comprise individuals, organizations, firms, and governments (Holton, 2008).

It is the dynamism of the processes of a universal system of market globalization that is captured by the post-modernist theories, namely the capacity for social agents and political actors to emerge in ways both significant and unforeseen that make classifying the global regime limiting. The roles of political actors in the public sphere are to serve as counterweights to both market- and state-authorities (Prugh, *et.al.*, 2000). It is in this political space where the long-term (and uncertain) consequences of present-day action upon future generations – which is oft-overlooked in the myopic cost-benefit analyses of market trade-offs – is considered; political action is necessary to articulate the concerns of future generations (Autès, 1997: 230-233). Further, in the post-modern society, exclusion by social groups from the decision-making processes of globalization – what is be called the "citizenship crisis" – may lead to extremist forms of political expression (Preteceille, 1997: 227-28). Together, these actors – along with others – comprise a system of global governance that adheres to a conceptualization of political cosmopolitanism; these agents participate in political communities that allow them to voice their value preferences within decision-making processes whose structures are regulated globally, but whose impacts are borne locally – a process that seeks balance between competition from self-interest and cooperation toward mutual-interest is not at all a smooth one.

"Governance within the global polity is by no means fluid and free-floating, though it does involve multiple actors and types of network" (Holton, 2005: 71); this description of governance includes non-state actors, which comprise inter-governmental organizations, multi-national corporations, lobbyists, non-governmental organizations, trans-national advocacy networks, and social justice activists. The opening of political systems – at the global, state, and local levels – to non-governmental stakeholders to address a range of policy concerns, even as local politics seeks to make localities competitive in the global market, is a consistent characteristic of the processes of globalization. The WCED (1987: 9) advises that global challenges are interdependent and integrated, and thereby any response must be comprehensive – relying upon a support base of democratic citizens. While states continue to secure principal positions in global affairs, we see an increasing presence of non-traditional actors represent the public interests; private, non-state actors have gained in their capacity to influence norm-making in the public domain (Sassen, 2002: 91-95). This is observed, for example, by the work that is accomplished by non-state actors who use amassed social, human, and physical capital to impact the realities of individuals and groups across the globe; for example, in its annual special issue "100 Top Global Thinkers of 2012," *Foreign Policy* (Dec 2012) ranked Bill and Hillary Clinton (no. 3) and Bill and Melinda Gates (no. 5) as duos who have significantly impacted world politics by delivering social programs, raising awareness, and changing global values – primarily through the activities of their non-governmental organizations (the Clinton Foundation and the Gates Foundation, respectively). The participation of individuals and organizations from civil society to have a major role in the proceedings of world politics, as have done the Clintons and the Gates, demonstrates the roles of non-

state actors in the activities of global governance; these agents are part of a democratic cosmopolitanism whereby they impact world politics through a large range of economic, social, and cultural exchanges – in many ways defining value priorities. This type of dialectic among agents within the system – communicating priorities and pronouncing preferences – is a primary characteristic of the socio-political system of the post-modern era.

This trend toward a less hierarchical international political system is increasingly becoming routine, often responding to both local and global concerns of social movement groups (Mayer, 2006). The changing role of advocacy networks is an indicator of the transformation of national sovereignty, and their increased political capacity is an indicator of the expansion of popular sovereignty in the realm of global policy (Keck and Sikkink, 1998). The high-tech, free-trade policy that accompanies the processes of market globalization has opened routes for global citizenries to identify shared values, to negotiate common goals, and to take collective action. The environmental movement is a coherent social and cultural movement which is defined by its "view of the world, the world's most fundamental problems, and the causes of those problems;" even as this movement may be in disarray or in conflict, it is nonetheless one of the most successful global citizens' movements – albeit highly political, its ideology is neither left nor right, capitalist nor socialist, but instead a movement of democratic citizens who seek to redefine values, institutions, technologies, economies, and polities to support a regime that protects the global ecology (Shabecoff, 2000: 30).

This worldview is particularly important when considering how to address the problems of ecology as they pertain to urbanized areas – as urbanization and globalization are intertwined in their processes; the global population is increasingly an urban one (WCED, 1987). Therefore, we would expect that the preferences for environmental protection would be greatest among urbanites, which comprise the largest portion of the global citizenry and, due to the placement of urban centers along coastal and fluvial waters, the largest settlement populations; these value preferences may be observed to translate into political preferences, wherein agents across geo-political boundaries who share similar concerns and preferences form networks to ensure rights, securities, and benefits. It is through this lens that I explore the role of political actors and social agents within the global New York City-Region – both as local and global participants of environmental governance.

Cities are the centers wherein the processes and institutions of globalization are concentrated (Holton, 2005: 61). Cities and city-systems are significant actors in the global economy, components in market globalization that lead to the re-composition of both economic and political institutions and processes (Moulaert and Scott, 1997: 3-8). In her analysis, Sassen (2001) emphasizes how production of the global economic system impacts cities, and identifies urban centers simultaneously as functions of networks and as unique places – products of both global flows and local conditions, respectively. There is distinct intricacy between society and cities, as social processes emerge to reflect spatial patterns. This characterization of cities in the post-modern era of globalization indicates a new spatial logic that is determined by the space of flows: "[a] system of

exchanges of information, capital and power that structures the basic processes of

societies, economies and states between different localities regardless of localization"

(Castells, 2006: 135-36). In discussing the relevance of urban centers to the

understanding of the processes of economic globalization, Sassen (1998: 195-214)

indicates the contributions of including cities in the analysis; with their inclusion, the

economic and regulatory role of the state is more clear; the activities of many types of

political actors (in addition to states and firms) is better understood; and the role of

physical place in the processes of globalization is further explored.

The context of these complex global issues will show that political units do not follow a

traditional top-down hierarchy for policy action to address extant concerns: global

citizens demand that their value preferences are addressed through policy action; local

governmental authorities respond to value priorities of global citizenries, even where

traditional international institutions do not; and political actors of different types create

networks to pronounce and to implement policies to assuage constituent concerns.

2.2. Economy, Society, and Globalization.

Political bodies and societies, through decisions of a united will in accord with laws, seek calm and security that is afforded to all nations; through a federation of peoples, often closely bound by trade exchanges, a cosmopolitan state may emerge through which the public security of all members is acknowledged. Kant (1784: 38) calls this aspiration a "perfect civil union of the human species," whose philosophical underpinnings may be traced throughout the writings on the historical evolution of the global system (Kant, 1784: 29-39).

The process of globalization is a complex integration of social, political, and economic factors, whose progression both does impact and is impacted by these factors; market globalization results from an interactive relationship between the economy and society, and the political institutions that support them both (Cox, 1997; Holton, 1998, 2005, 2008; Keck and Sikkink, 1998; Kütting, 2004; Sassen, 1998, 2001a; Steger, 2009). Following this, politics is generally defined as "the sense of power over the allocation of resources and the distribution of cultural goods," whereby economic and social actors (*i.e.,* individuals, groups, institutions, communities) participate in the processes by which these resources and benefits are identified, valued, and delivered (Holton, 2009: 21). Among the processes of economic globalization is the integration of the systems of industrial-production, energy-generation, and energy-transmission; a world citizenry emerges in the face of this phenomenon, merely as a result of the societal impacts of the complex, worldwide integration of these geo-social systems (Fuller, 1969a: 162-206).

"The spirit of trade cannot coexist with war, and sooner or later this spirit dominates every people ... financial power may be the most reliable in forcing nations to pursue the noble cause of peace" (Kant, 1795: 125).

Neoclassical economic theory is the foundation for the post-modern global regime,[16] which comprises that period in the post-industrial era wherein emerges a universal system based on the increased levels of economic, political, cultural, and social exchange among the peoples and states across the globe – conjuring Kant's cosmopolitanism (Wolff and Resnick, 2012: 9-16). John Stuart Mill (1909) describes human activity and industry within the physical and natural world as that which has the potential to yield great benefits to both individuals and groups – a primary philosophical tenet of political economy. Based upon the general theories of political economy by Adam Smith and David Ricardo, neoclassical economics shifted focus in the 1870s[17] away from studies of macro-economic issues toward studies of micro-economic issues – from the long-term decisions of the over-all system to the self-interested preferences of individuals and firms. The re-branded theory of neo-classical economics falls squarely within the humanist tradition: human beings are in control of all events in the economy, which derive from the interactions of individuals in society; in this way, neo-classical economics posits that the best outcomes result from exchanges among individuals in a free-market. This theory equates well-being for all with the greatest possible wealth for

[16] Regimes are defined as "social institutions that consist of agreed upon principles, norms, rules, decision-making procedures, and programs that govern the interactions of actors in specific issue areas" (Bulkeley and Betsill, 2003: 10)
[17] The 1870s arguably saw the first introduction of a global economic system, which was interrupted for most of the twentieth century by two world-wide 'hot' wars and one 'cold' war.

each. The reliance upon the preferences, interests, and exchanges among individuals as a model tends to overlook problems of finite resources and public interests – as well as problems at the macro-economic level. Further, the discipline of economics looked to the study of physics to describe the governing laws of society; the analytical tools and predictive devices of economics assume—as do those of physics—that the laws that describe political economy are immutable in relation to and apart from that which they describe (Daly and Cobb, Jr., 1994: 25-43). Keynes' discussion of a positive science of political economy serves as an outline for a methodology of positive economics, a systemized and scientific discipline of analysis and prediction (Friedman, 1953). It is the conclusions from the logic of this socio-political approach to growth and to behavior upon which the assumptions, preferences, ambiguities, and fallacies of market globalization are based.

While the system of market capitalism favors individual freedoms, the ideology of democratic capitalism is inherent with tensions over the extent to which economic and political powers should be balanced within a republic – both of interest groups' powers in relation to each other, and of their powers in the policy-making process (Gore: 2013: 105-124). While having been traditionally ensconced in the international states system, the global economic system has undergone considerable changes since the end of the Cold War; privatization, deregulation, and liberalization have dominated international policy, and are quite often associated with the processes of globalization. One notable change that results from this global process is the role and power of the state government in world politics: many argue that the state's position in global affairs is weakened,

specifically in its ability to impact economic regulation – bypassed by a global regime which favors neoliberal policies and free markets.

In this economic and political climate, geo-political units emerge and gain strength where the state loses it, ranging from the levels of the supranational (i.e. IGOs) to the sub-state (i.e. cities and regions) (Sassen, 2001b). The roles of other levels of government, namely those of local governmental authorities, are also of interest in the processes of globalization; cities are at the crossroads of the evolution of these global developments – at once nested in both state and global systems (Autès, 1997: 230-34). Communities – be they local, national, global, or otherwise – have increased as political actors and as recognized participants within the processes of globalization; distinct, community-focused forms of politics arise in response to the extant political, economic, and social realities of market globalization – particularly over value conflicts that result from the assumptions and preferences of the dominant regime of positive economics (Keating, 1991: 13-21). The current condition of the global economy exists as a result of the circumstances through which it emerges, both historical and contemporary; the life of an economy flows in a circular motion, concurrently comprising ideal states of equilibria and continuous internal adaptations (Schumpeter, 1980). Market globalization is an historical progression in patterns of growth and development, having both economic and geographic impacts in the post-industrial era:

> The economic geography of today's world is a complex palimpsest composed of location residues from previous historical rounds of economic growth, but now being dominantly restructured by processes of post-fordist industrialization, regional development, and world-wide economic integration (Scott, 1998: 68).

The progression of globalization is part of a "continuous social process that has accelerated its speed over the past thirty years or so rather than [becoming] a new form of socio-economic organization" (Kütting, 2004: 10).

Economic Globalization in the Post-Modern Era.

Some theorists of political science refer to a set of paradigms called the 'post-modern theories' to describe observed socio-political phenomena. Post-modernist theory looks to epistemological discourses and value constructions as guiding forces to interpret and understand the activities within the global system; specifically, it argues that the institutions and structures of the universal regime are at once agents that validate the established processes and catalysts that challenge them – depending on how and by whom the structures are constructed (Rourke, 2008; D'Anieri, 2010). Similarly, some theorists of urban sociology look to post-modern theory to describe socio-spatial phenomena that have emerged in the late twentieth century, and which coincide with the processes of economic globalization; this approach explores the geopolitical structures that emerge as a result of the organization of social interactions as they are defined by the global regime. This approach, post-modern urbanism, acknowledges the expanding political significance of urban centers in global affairs, measures the impacts of the logic of market globalism upon geography, and documents the socio-cultural manifestations of the twin phenomena of globalization and urbanization (Sassen, 2001; Scott and Soja, 1996; Soja, 2000; Watson and Gibson, 1995). The activities within these conurbations incorporate the processes of the existing global structures, as well as the demands of

those that have not yet been formalized; global cities, for example, are significant in supporting the activities of market globalization, but are also answerable to the expressed values, and the associated demands, of a global citizenry; within these urban spaces of neo-liberalism, new structures – or restructures, – therefore, may be created to resolve concerns that are insufficiently addressed by existing institutions (Brenner and Theodore, 2002). 'Post-modern' could refer to a set of theories, or an era, or both (Watson and Gibson, 1995); while international relations theorists refer to the post-modern as a set of theories, urban sociology theorists [and geographers] often refer to the post-modern as an historical period which is denoted by a distinct set of socio-economic relations among agents, and which occurs in the post-fordian, post-industrial period (Castells, 2006a; Sassen, 2001; Scott, 2008, 2012; Soja 2000). As much of the discussion of this research project assumes the prevailing impacts of a neo-liberal global regime on socio-political activities, and the agency of a cosmopolitan citizenry therewith associated, I will use the term 'post-modern' to describe the era within which these socio-cultural activities take place – which are increasingly blurred at the urban, regional, state, and global levels.

Policy-making of the post-modern era adheres to the ideology of the prevailing regime (Autès, 1997; Holton, 2005, 2009; Kütting, 2004; Moulaert and Scott, 1997; Sassen, 1998, 2001a; Wolff and Resnick, 2012). Concepts and values associated with market globalization emerge from the political and social *milieu* within which the economic activity occurs (Gowdy and O'Hara, 1995: 119). Market globalization adheres to the tenets of positive economics to inform interested parties about which policies are predicted to deliver the greatest benefit, based on a pro-growth framework for stability

(Friedman, 1953). The philosophical tenets of classical economics, upon which the

socio-political framework rests, look to a system of valuation to measure well-being and

utility; this process maintains the practice of commoditization, where abstract symbols

(currency, exchange rates) are applied to concrete goods (property, resources). This

commoditization approach allows for an efficient exchange of goods and services among

actors, but it also creates a misplaced concreteness in economics – whereby the rate of

exchange in the economic system is confused with the value of the commodity itself.

While this approach supports the activities of the industrial revolution and market

globalization, it also leaves a socio-political system vulnerable to uncertainty and risks

vis-à-vis the true costs of the degradation of ecological resources – as the their only value

is derived from their exchange in the marketplace (Daly and Cobb, Jr., 1994: 32-43). The

latest era of capitalism could be divided into two forms of modernity: the first form

reflects the social order of an industrial, national society; and the second form reflects the

social order of a post-industrial, post-national society. We observe in the second form of

modernity, a rise in human-manufactured uncertainties that are not bound by traditional

geo-political, temporal, and social frameworks; these uncertainties emerge from social

processes and events[18] which are representative of the neoliberal regime of the modern

era (Beck, 2010: 47-53). It is in the first era of capitalism, with the birth of industrial

society, when an environmental crisis emerges in human history (O'Connor, *et.al,* 1996:

234-235), however the traditional approaches of international relations to understand and

to resolve concerns of global ecology fail to address the complexities of scale and of

levels that have emerged in global processes; analysis that considers the interactions,

overlaps, and dialogues between the institutional and normative perspectives will assist

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[18] Beck identifies a number of these events and processes: catastrophe, individualization, globalization.

social scientists to reflect the intricacies of global environmental politics of the post-modern era (Kütting and Lipshutz, 2009b: 1-10).

Hedley Bull's (1977) description of the world political system is one that primarily takes the form of a system of state actors; however, he looks to the universalist tradition to describe the global society which emerged in the twentieth century. The world international society that Bull describes rests not only upon international cooperation, but increasingly upon common interests and shared values to govern community behavior. While the traditional [regime] theorists analyze the conditions under which coherent universal processes are developed among nation-states to accomplish cooperative approaches as they maintain the interests and reflect the values of state actors, alternative post-modern approaches "view international regimes as a means through which cognitive and normative aspects of the problem in question come to be constructed and learnt, and in turn shape the ways in which states perceive their interests" (Bulkeley and Betsill, 2003: 11). The post-modern trends[19] are economic and political shifts which have heretofore rested on tenets of neo-liberalism, and which have resulted in geographic changes that both minimize geographic barriers and increase localized production systems[20] (Scott, 1998: 13-23). The dominant culture of the post-modern era is fully integrated into the production and consumption processes of economic globalization; in the post-modern era, cultural features, social life, and an economic order have emerged in conjunction with each other (Homer, 2002: 180-188). The traditional approach toward

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[19] These trends move away from the model of fordist mass production; support high-tech, consumer-oriented, and service sectors; and rely on electronic technology to increase production efficiencies.
[20] Scott points to the minimization of political and institutional barriers to the flows of goods, services, and moneys across state boundaries, and to the emergence of regions as engines of the global economy.

regime theory and global governance (GG) reflects a unidirectional cascade of information, negotiation, compliance, and implementation, with the assumption that the nation-state is an unchallenged sovereign political unit; the alternative approach, however, acknowledges the legitimate roles of non-state actors at all scales and levels, and that exchanges among states, inter-governmental organizations, civil society, and individuals contribute to decision-making and implantation processes of a global governance (Bulkeley and Betsill, 2003: 9-31).

The advocates of the dominant neo-classical model of economic globalization argue that limits of natural resources have not heretofore halted growth, therefore there is no indication they would in the future (Daly, 1996: 33-35). Neoclassical economic theory favors negotiation among private actors to determine and avoid costs and externalities in the marketplace; the theory posits that social costs will be efficiently resolved among all interested parties who engage in the transactions (Wolff and Resnick, 2012: 259-263). While positive economics seeks to create a system of objective generalizations to predict changes and consequences based on 'what is,' normative economics deals with ethical positions and what 'ought to be.' For example, the economic theory of discounting is used to assess the benefits of the consumption of natural capital; if the analysis determines that a natural good is worth valuable now than it will be later, positive economists argue that that the benefits of resource depletion outweigh the costs and that the utility derived justifies the consumption – even if it may be impossible to thoroughly and accurately determine the value to future generations (Clark, 1995).

While value priorities may lead individuals and/or interest groups to disagree over the predicted outcomes of a policy initiative, it is only through the scientific analysis of data that a community of decision-makers will identify the policy decision with the greatest benefits to society (Friedman, 1953: 3-43). Along with bureaucratic rationalism, market globalism relies upon organized and systemized data to determine common interests; among the processes of globalization, however, participatory adaptive management draws from a cosmopolitanism derived from shared norms and values (Pritchard and Sanderson, 2002: 147-169). In addressing the best allocation of resources and benefits, the dominant regime turns to the free-market solutions and cost-benefit analyses to assess values, preferences, and priorities; however, these are not the only tools to which a global society may turn to assist in its decision-making. Further, the political philosophy of a liberal democracy demands the participation of a cosmopolitan citizenry in determining both the common interest – be they economic, social, or cultural, – and the associated policy actions through which those interests may be realized. While competing interests may seek to influence the political process to secure their preferred outcomes, the democratic process would require an unbiased assessment and valuation of common pool resources – as well as the impacts of their consumption, degradation, and depletion – to ensure the greatest good for current and future generations. Under the current regime, these are accomplished by both market and democratic forces, by both political economy and global governance.

Market Globalization and Socio-Economic Development.

Industrialization is marked by a demand for and dependence on energy from fossil fuel

energy – whose consumption has significant implications in the capacity to support a

complex system of production with a finite stock of stored energy on the Earth (Daly and

Cobb, Jr., 1994: 8-16). These patterns of socio-economic activity have lasting impacts on

common resources and lead to common concerns (WCED, 1987: 58-60). Late neo-

classical economic theory[21] of globalization limits the range of human activity to those

that occur through and within markets, only accounting for transactions external to the

market in cursory ways; the costs of negative impacts – pollution, overproduction,

resource depletion, – and the social impacts that result from private exchanges among

actors within the market are not accounted for (Wolff and Resnick, 2012: 251-309). The

patterns of activities of the world system and the global economy are informed by the

institutions and the regimes that support them (Holton, 2005: 61).   Responding to the

market forces of the fordist era, urban industrialization creates a variety of both positive

externalities and negative externalities, respectively socio-economic improvements and

socio-environmental problems, among others (Diewechter, 2008: 15-26). Not only are

global activities informed by the institutions that support them, but also by the geo-spatial

patterns that frame them; in the post-modern era, both institutions and patterns reflect the

processes of market globalization. The engine of the global economy rests on the

activities of urban centers (Sassen, 2002). The privileged position of liberal economic

policies in the global regime has led to the growth of conurbations and the emergence of

the global network of city-regions – and their subsequent socio-economic and geo-

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[21] Wolff and Resnick call the new understandings of the global system of the late 20th and early 21st
centuries 'late neo-classical economic theory.'

political impacts (Scott, 2008: 1-18). These manifestations – both physical and procedural – point us toward regional conurbations to understand the activities of individuals, groups, and organizations in the global system. As it is ranked first among global cities, New York City – and more specifically, municipal governments within its geo-politically fragmented conurbation, – is explored as both distinct and catholic in its activities toward global environmental governance.

While most classical economists observe Malthus' pessimistic view that unchecked population growth would impose severe constraints on available resources[22], neo-classical economists of the post-World War II era were much more optimistic – albeit that by the late-1960s, the physical limits of the planet re-emerged as a political, economic, and social concern (Bardi, 2011: 5-13). Even as the world's population growth appears to be slowing down and stabilizing, where the fertility rate is at or below the replacement rate of 2.1 (i.e. the population stabilizes because the average number of off-spring reaches levels that 'replace' their progenitors), the Earth's population is forecast to reach 9 billion by 2050 – contributing to production of waste and to the demands upon the world's natural resources (Parker, 2010). Patterns of market activity and population growth are inextricably linked when considering benefits and well-being; further, under the processes of market globalization as the world population increasingly becomes an urban population these phenomena – and the policy and governance actions

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[22] Malthus' draconian solution was to strip the poor of governmental support in order to assist them in avoiding there inevitable fate of prolonged suffering – scorned by many economists and philosophers as cruel and antithesis to the goals of democratic system of government (which receives its power from the consent of the people and is designed to serve its citizens). While his political assertions are far from the intent of a global policy, his discussion of limits to growth is significant.

that impact them – are of dire importance. The socio-spatial formations that accompany

growth and expansion impact patterns of resource consumption, and associated costs,

exigencies, and crises; the economic and political activities that support the integration of

markets – and the consumption of common pool resources and allocation of benefits

associated therewith – are of considerable interest to a cosmopolitan citizenry.

To measure growth and well-being, proponents of market globalism look to calculations

of gross domestic product (GDP), which is roughly correlated with levels of employment

and income (and thereby a population's well-being); however, GDP calculations measure

productive capacities and outputs, which also exclude the costs of resource-depletion,

pollution-byproducts, over-production, and over-consumption.[23] Physical limits are a

universal concern, potentially supporting or curtailing growth within the complex global

system of economy and ecology (O'Connor, *et.al,* 1996: 224-227). It is within this

complex reality that policy-makers turn to the scientific predictions of positive

economics, the theoretical foundation for market globalization, to rationally assess a set

of circumstances of interest and to predict the best course of action for the greatest

benefit; this analysis rests on the available information and the accepted assumptions

(Friedman, 1953; 3-43). Political actors in a cosmopolitan society are integral in

determining the appropriate data and assumptions for the predictive analysis; for example

under the regime of market globalization which favors economic growth, corporate

interests are able to assemble political support for the preferred policy outcomes, rather

than for policy outcomes that are in the universal interest (Gore, 2013: 142-145).

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[23] Some of these negative externalities, however, may be considered positive outcomes for growth.

Cosmopolitan, or world, justice promotes a global common good for a global society, or *civitas maxima,* which can only be derived through a political process. Among others, natural resources belong to the category of collective good, since the impacts from degradation or over-consumption have lasting effects on the well-being and utility of current and future generations; this requires that the regime, and its institutions, incorporate an ordered political, economic and social approach to address the common interest (Bull, 1977: 74-94). A shift away from the growth economy of the hegemonic neoliberal ideology is required to achieve a global program of sustainable development (Daly, 1996: 31).

Governance in the Global Era.

The processes of the post-industrial, global economic order has emerged as a series of interdependent services which coordinate activities and support outcomes; these inter-dependent, specialized services include telecommunications, infrastructure, industrial and financial services, and policy harmonization. In the post-modern era is observed an alternative to the state system, which represents a transition from a society exclusively of states to that of many political actors of different scale and position; even as there may be an ideological homogeneity (where market globalism prevails), international organizations (i.e. MNCs, IGOs, NGOs) disregard state boundaries in their operations, and will nonetheless seek to establish political links with global, state, and sub-state actors (Bull, 1977: 225-305). In her discussion of globalization, Sassen (2002: 92-108) identifies denationalization as a key feature to describe the changes in the politico-

economic system; she uses the term 'denationalization' to describe the policy effects of globalization on the state: the state is often called to implement policies that are designed by global institutions, perhaps leaving the state less power to direct the regime but nonetheless more responsible to implement it. This phenomenon, Sassen reminds us, applies not only to the agendas of corporations, but also to those of trans-national advocacy groups. Trans-national advocacy networks act on a global scale, but comprise individuals and groups with common values and shared priorities; these global actors work to resolve political issues and to promote social change (Schock, 2005: 19). In the same way that the market globalization describes a process whereby economic actors produce collaborative networks to solve shared problems, justice globalization describes a process whereby social agents similarly construct advocacy networks.

With the support of information and communication technology, the number and scope of non-state actors have increased since the 1980s; this has supported the increased role of social movement networks in world politics. The form and strategies of these networks are not uniform, however, depending on how the environmental problem, solutions, and outcomes are articulated; the varying environmental networks, therefore, reflect the value assumptions and priorities of their memberships (Keck and Sikkink, 1998). Regardless of their strategies, by reorienting the sole domain of decision-making away from state actors, these networks represent the political capacity of cosmopolitan actors to contribute to the processes of global governance; the members of these networks accomplish this political role through the mobilization and exchange of information, ideas, and values (Bulkeley and Betsill, 2003: 13-18). While the reach of these networks

may be global, the operations tend to be local – often concentrated in cities. Under these

global economic conditions, cities thrive in expansion and slump in crisis; urban centers,

however, feature new technologies which reduce the space between entities and bring

closer together distant communities – creating a global unit that has more resilient polity

and economy at the local level, and intensifying the number and positions of global cities

(Scott, 2008: 2-13).

 Many of these networks are oriented specifically toward the political roles of local and

municipal actors in the processes of global environmental governance. In the European

Union, for example, this is manifest in the Covenant of Mayors, which was launched in

2008 subsequent the adoption of the EU Climate and Energy Package and which consists

of local governmental authorities from across Europe who seek to take an active, political

role in implementing sustainable energy policies; there are currently 5179 signatories[24] in

states from Albania to Ukraine, ranging in size from small villages to major conurbations.

The Covenant signatories commit to implement sustainable energy action plans within

their municipalities, and it identifies itself as a "mainstream European movement

involving local and regional authorities in the fight against climate change" (Covenant of

Mayors, 2013). Similarly in the United States, Resilient Communities for America

(RC4A) is a network of one hundred sixty-two (162) mayors and county leaders[25] which

identifies itself as a "new movement of resilient cities and counties that are taking smart

steps to prepare for climate change and energy challenges, and turning adversity into

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[24] As of 27 March 2014.
[25] As of 25 March 2014

economic opportunity" (RC4A, 2013). The processes of globalization supports the

creation of networks, initially among financial actors and then later among advocacy

groups (among others), to exchange ideas, information, and services. The

aforementioned advocacy networks of local governmental authorities in Europe and

North America address the environmental concerns of political actors at both the local

and the global levels; by seeking alternative policy approaches to the resource

management procedures of the dominant regime, the these networks contribute to the

governance of the human ecology – which reflect the value preferences of a cosmopolitan

citizenry. This intonates a form of governance that serves at both the local and the global

levels at once, in geopolitical and socio-spatial matters.

To describe urban spaces as a elements of the geo-sphere and the socio-sphere –

particularly the geo-spatial activities of political and economic agents in a complex

system of functions and processes: – "great cities are the organic components of the

world industrialization" (Fuller, 1969a: 181). The prioritization of processes which

accompanies market globalization – namely those processes by legitimate authorities and

institutions – impart a global geo-political logic that is internalized at the local level;

hierarchy and agency of urban growth management are organized along market-based

rationalities, and alternative forms of spatial governance (over policies of ecology,

economy, etc.) require discourse at various scales and among interested parties

(Diewechter, 2008: 3-9). Scott's (1998: 27-46) synthesis of the geographic logic of the

modern world[26] rests on two factors: the erosion of economic and political barriers between states, and the emergence of a network of regional economies. The links between economy and geography become apparent when we consider how political actors, such as states and multi-national corporations, choose to allocate their resources. Spatial investment policies by governments have reflected the macro-economic logic of the neo-liberal regime: facilities and infrastructures have been concentrated in major urban centers (WCED, 1987: 244-247). And the social realities reflect the spatial patterns of the global political economy; the geo-political manifestations of market globalization result in institutions to deliver on the expressed priorities of the dominant regime which is evidenced by the emergence of sub-state actors as economic and social entities to support global processes. The phenomenon of 'sub-politics,' as described by Beck (2010: 45-58), is a social response to the interdependent processes and overlapping policies of globalization; sub-political actors are a type of social movement collectivity who bypass traditional state-based political institutions in response to perceived policy risks and in an attempt to have implement civic goals. These sub-political activities comprise new forms of geo-political and socio-economic processes in global affairs, whose results Scott (2008: 89-107) describes as part of a 'new cultural economy' – where increased synergies result from the interlinking of urban and production systems. It is in this space of the new cultural economy of sub-politics where the activities of civil society, advocacy networks, and local governmental authorities overlap to contribute to global governance of the type discussed here: where the priorities of global citizens and

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[26] Scott labels these dynamics as those of 'the new global economy,' which reflect the processes of market globalization.

preferences of transnational advocacy networks are interpreted by local governmental authorities and are implemented as policy action.

Value priorities and policy actions extend beyond the activities of political economy, and include the environmental governance among others. For example, Holton (1992: 49-51) presents an approach to economy and society that is multi-dimensional – expanding the study of social and political processes beyond those of economic functions. By looking at the major three theoretical traditions that discuss the relationship between society and economy (economic liberalism, political economy, and economic sociology); he discusses their prevailing features as they relate to global affairs, including their key concepts, and he points to the explanatory power (and limitations) of each of the three frameworks: economic liberalism is limited to market freedoms, and political economy is limited to power relations. He posits that economic sociology offers a "multi-dimensional synthesis of markets, power, and culture." Of the three theoretical traditions, only economic sociology focuses on the economic, political, and cultural forces at once – which, when applied to the phenomena of globalization, provides a more complete understanding of the manifestations of the dominant regime. Further, the inclusion of the socio-cultural alongside the economic and the political is an accord with the post-modernist analytical approach. This is summarized in Table 1.

[TABLE 1 HERE]

Globalization and Political Action.

However, even when there is apparent overlap in the activities and charges of

institutional structures, there may be discordance in efforts to harmonize policy action.

In the face of the processes of market globalization, Scott (1998: 63-73) describes a dense

and complex intra-regional network of activity, whose transactions and dynamisms are

changing the governance of economic, political, and social institutions – if not changing

their institutional order altogether. While institutional political action comprises action

within existent socio-structural channels, noninstitutional political action comprises

action outside those channels.

> When people want perceived grievances to be redressed, but cannot do so through
> institutionalized political action, they may turn to noninstitutional political action
> … [which] is not prescribed by any existing rules or regulations, and its outcome
> is a function of contentious interaction between opposing forces (Schock, 2005:
> 15).

Organization theory explains the emergence of networks to accomplish goals, where

political and economic institutions cannot; he identifies networks as distinct

organizational elements which supplement social activities that are not served by the

short-term activities of markets, or the inflexible structures of formal institutions. Among

the most significant of these institutional gaps is the separation between the institutional

actors who are responsible for protecting the environment and the institutional actors who

are responsible for managing the economy; in the increasingly globalizing world, the

economic and ecological systems are interlocked – even as the political ministries that

oversee the market and environment are institutionally separated (Holton, 2008: 32-48).

Environmental institutions are charged with overseeing ecological policy, and finance

institutions are charged with overseeing economic policy – and rarely do the two types of

institutions work together to manage a policy of sustainable development (WCED, 1987: 9-11). It is within this political vacuum wherein the expressed value preferences of a global citizenry may be overlooked, and wherein the activities of non-traditional agents – both at the global and local levels – may take action toward global environmental governance. By assembling political actors who seek to accomplish expressed common goals among its membership, networks in and of themselves become political actors who make demands of existing institutions; if the established hierarchies are unable to coordinate and to address the concerns of a global citizenry, networks of cosmopolitan citizens and common interests seek political redress – either at the local level or the system level. This takes form, I argue, in specific political action at the local level toward policies for sustainable urban development.

Transitions in Society.

Changes of any type in response to system-level alterations in nature and society may be gradual or abrupt; massive transition shifts of the ecological or social systems can be described as 'critical transitions,' which occur in complex systems that are faced with perturbations of their standard processes. Critical transitions occur in natural and social systems, comprising climate change and value shifts respectively. These critical transitions may either cause disorder in an established regime, or they may represent solutions in adverse conditions; by understanding the processes of critical transitions, decision-makers may be better equipped to manage change in a complex, interconnected global system (Scheffer, 2009). By combining theoretical approaches from the

disciplines of ecology, economy, and sociology, Scheffer, *et.al,* (2002: 195-235) work

toward an understanding of the complex interdependencies among global ecological and

socio-economic systems; in describing common forces in both natural and human

systems, they describe the role of complex dynamism in overcoming problems at the

system(s) level. Among these dynamic responses include social networks that identify

and address problems of collective action in response to catalyzing agents, *e.g.* culture,

norms, values, events, etc.; these social network structures take different forms,

depending on the level of hierarchy and the role of social capital. This approach to social

and natural transitions is not unlike the Chicago School's assessment of human ecology:

what is observed in nature may be used to explain social phenomena, and the ecological

and social systems are neither separate nor independent from each other; although the

critical transitions approach does not pre-suppose the complete dominance of the social

over the ecological system, as is intonated in the studies of the theorists of the Chicago

School.

In analyzing global networks of the post-modern era and in response to new challenges,

Holton (2008: 49-52) refers to the tradition of social network analysis to help inform an

understanding of emergent trends, while identifying certain limitations: social network

analysis focuses on the characteristics of linkages that form a population, whose network

boundaries are sometimes difficult to define in an increasingly interconnected and

complex system of global interactions; network analysis relies on quantifying meanings

and values to social, cultural, and historical events, which are sometimes contested and

controversial. As actors within the global system are constrained by the hegemonic

regime, civic and governmental sector agents seek to 'mirror' the structures of the market system; both hierarchies and networks behave in a manner that is consistent with the socio-spatial structures of the markets (Thompson, 2003: 6-52). While under the tenets of the globalization, the preferences and priorities of liberal markets are internalized by the decision-making processes of its institutions, these formations of complex networks of political actors lend themselves to the activities of the agents of social and environmental justice. Since the political philosophy of the dominant regime is that of liberal democracy, the processes and technologies of market globalization are also the tools of a cosmopolitan citizenry – thereby supporting both stability and change within the global system.

Toward a Universal Culture.

The distinction between values and cultures is thus: "[v]alues are subject to political manipulation and may be moulded by institutional structures, while cultures, far from being timeless exogenous entities, may be constructed through socialization and the 'invention of tradition'" (Keating, 1991: 3); in this way, value priorities are cast and shaped by the institutional structures that have emerged from a globalizing and cosmopolitan culture. While our knowledge, politics, and values are to be understood in (and limited by) the context of the prevailing regime or processes, it is by identifying and defining limitations that any shortcomings of the prevailing regime may be overcome (Racevskis, 2002: 136-140). Just as the processes of market globalization blur traditional geo-political boundaries and institutions, so too do the parallel processes of urbanization;

our understanding of urban space "aligns with earlier analysis of post-structural accounts of urban planning that highlight the theoretical role played by multiple, contending spatial rationalities and territorial tensions" (Dierwechter, 2008: 65); global citizens – urban or otherwise – are increasingly seeking new meanings and new understanding to resolve universal and local problems.

The convergence of these economic, political, and social phenomena is manifest in many ways; this study explores the socio-spatial formulations that appear in the context of a regime of market globalization. In response to the post-industrial, neo-liberal regime which increasingly observes the decoupling of decision-making from government, sub-politics advances as a course of direct, selective intervention from below which bypasses established institutions; sub-politics allows for trans-border alliances to satisfy civic goals, and thereby changes the boundaries of the political landscape (Beck, 2010: 48-68). Similarly, Scott (2001b: 1) identifies the emergence of dense nodes of distinct sub-national formations that result from the processes of market globalization; these settlements "are foci of significant new experiments in local political mobilization and reorganization." These groups are political and economic actors, who respond to the changing forces of economic globalization and who assume an increasing role in world politics – particularly in an effort to participate in determining the course of global development patterns; these social settlement formations can be defined as 'global city-regions.' Scott later (2008:131) describes city-regions as entities who "club together to form spatial coalitions in search of effective bases from which to deal with both the threats and opportunities of globalization;" they are regional entities who redefine social,

political, and economic conditions and scalar institutional arrangements. Looking to

Holton's (1992) discussion of economic sociology, city-regions (and their inhabitants)

are significant political actors in global affairs because of their economic and cultural

importance in the activities in the processes of the universal regime; city-regions are the

centers of economic and cultural activity, and their socio-political impacts are far-

reaching. As would any political actor, global city-regions – and the actors of whom they

are comprised – engage in activities to secure their interests and benefits – among which

include in the creation of and participation in networks to accomplish shared and

common goals: currency exchange, market transactions, foreign investment,

international production. But the purview of the networks of global city-regions is not

limited to the direct activities of the global market; indeed, its concerns include the

position of its activities in global political economy, the security of its infrastructures, the

preservation of natural resources, the delivery of services to its constituents, and other

inter-related activities – many of which are interfaces among of the political, economic,

and social activities.

Global cities, and their environs, are notable actors in global affairs, participants in three

predominant structures of global decision-making: markets, hierarchies, and networks;

the activities of global markets are fundamental to the processes of globalization, and so

too are those of global networks – which follow the global trends of organizations and

development. Global actor networks provide a natural counterweight to markets and

hierarchies, particularly as vehicles by which social agents who do not have access to the

more structured global institutions may participate in the processes of global governance.

In an analysis of networks, actor-network theory (ANT) describes their impacts as coordination devices alongside the market and hierarchy; markets, hierarchies, and networks are three socio-economic orders, which together contribute to governance over organizational relationships and decision-making processes. Combinations of elements are forged into decision-making processes wherein identities and relations of actors shift among the material to addresses socio-economic and geo-political preferences, reflecting prioritizations. While all three structural formations (*i.e.* hierarchies, markets, and networks) are relevant in global affairs, certainly the assumptions under the tenets of market globalism prioritize the processes of the market – and the hierarchies and networks that support them (Thompson, 2003: 53-85). This does not preclude, however, the emergence of networks which seek to express alternative value preferences to those of the dominant regime – or which to reevaluate the value assumptions of the hegemonic regime. Justice globalism, for example, uses networks to communicate value preferences that are not expressed by the current iteration of market globalism and to promote political action that reflects those priorities.

The response by authorities[27] to these expressed alternatives by non-traditional or non-state actors may include disregard, reform, conciliation, or repression: disregard is indifference toward the issue; reform is change in policies and/or in institutional arrangements; conciliation is co-optation of the social movement; and repression is restriction of civil liberties; the nature of the response by the structural authorities, or the

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[27] In this case, 'authorities' may include any political actor (state or non-state) whose preference and assumptions are consistent with the dominant regime of market globalism, and who has the political authority to engage with the advocacy networks.

hierarchical institutions, may determine the success of the network's collective action to overcome the status-quo of the hegemonic ideology – as well as the advance or retreat of the network's collectivity (Schock, 2005: 30-33). In a cosmopolitan society, it would be expected that democratic authorities would not repress a social movement altogether, however any of the other three responses are possible – depending on the capacity of the social movement network to accurately reflect the values of the greater population and to successfully gain the support of the citizenry. Certainly, the goal of the social movement would be reform the processes of the dominant regime. In the context of this research study, the environmental justice movement seeks to modify the value assumptions of the dominant regime and thereby reform global processes; these alternatives include the preservation of natural goods and the conservation of common pool resources, as well as a reconsideration of the prioritization of the pro-growth global economic model *vis-à-vis* the finite and degradable natural resources, which are requisite for continued quality of life and sustained existence. In concrete terms and for the purposes of this study, evidence of this form of environmental governance may be observed through policy action toward sustainable urban development at the local level.

Globalization and Urbanization.

The World Commission on Environment and Development (WCED) states plainly, "[t]he world's economic system is increasingly an urban one, with overlapping networks of communications, production, and trade," continuing to posit that the global system offers great capacity for the world's nations to prosper – however this capacity is dependent on

the cities' (as well as their hinterlands') positions within this complex system (1987: 235). The world cities literature looks to explain the role of urban centers in the interdependent global network of financial and service flows; economic and social conditions in cities are characterized by the organization of the financial marketplace. The global urban hierarchy is correlated to the structure of the financial sector; urban dynamics are a reflection of the flows of information, capital, and commerce associated with the global financial regime (Shachar, 1997: 21-27). Scott (2008: 7-8) identifies the city as "an inert aggregate of economic activities … [and] a field of emergent effects, and thereby a complex collectivity whose whole is greater than the sum of its parts ... that constitute[s] a sort of commons that is owned by none … [wherein] there is an intrinsically positive social role for agencies of policy implementation and planning in the city with a mandate to seek out solutions to the problems posed by the commons in all its complexity." Their destinies are outcomes of a series of urban-specific determinations – all of which are based in the collective decision-making process over the costs, benefits, problems, and solutions within the urban and global commons; the global metro-regions are unique and indispensible foci for economic, political, and social activity within global affairs.

Not all neo-liberal economists perceive the role of government in global governance as solely that of promoting a regime of freer trade; some argue that different policy circumstances may require different institutional solutions: solutions which look to the institutions of the market are superior in certain cases, while institutions of government are superior in other cases, and institutions of civil society still in other cases –

increasingly requiring a mix of solutions which involves all of these institutions (Wolff and Resnick, 2012: 262-266). In discussing the social mechanisms of the market globalization, Scott (1998) concedes that economic trends have preceded political, nonetheless he points to the blurring of political activities between state and society – increasing the significance of the role of collective governance structures[28] as an alternative approach to maintain institutional stability. The political roles of civil society, social movements, and advocacy networks reflect the activities of non-governmental and transnational organizations to influence decision-making and policy-making of governmental authorities – either at local, national, or global levels.

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[28] Scott refers to these collective governance structures as alternative non-governmental or quasi-governmental forms of social management, and alternative approaches to practical governance; he argues that they emerge from civil society, norms, conventions, and public-private partnerships.

2.3. Civil Society, Social Movements, and Global Norms.

In the most general sense, the social movements literature looks at how collective action – the proceedings of coordinated individuals and groups – among a civil society may accomplish expressed goals. I look to both the disciplines of political sociology and political economy to understand and to explain the behaviors and motivations of groups as they work toward an articulated end; in this analysis, the expressed aim of the collective action is the implementation of sustainable development policies which reflect the norms and values of – and to ensure the greatest freedoms and benefits for – the community. While there are many processes associated with globalization – be they economic, political, social, cultural – those of democracy and the associated discourse over the rights and benefits of global citizens is of particular interest for global environmental governance; the globalization of democracy is a study of access to the democratic process by cosmopolitan citizens, and therefore assumes that ensuring participation in the decision-making processes of global governance is, indeed, a global value (Holston, 2001: 325-327). According to this approach, therefore, neither hierarchies nor markets should disturb the democratic participation of a cosmopolitan citizenry in the affairs of world politics – instead, the participation of a universal civil society in global governance should be unfettered and supported.

Kant (1784) identifies the participation of a universal civil society as the greatest challenge for humanity; the achievement of a universal civil society which coexists with individuals' civil liberties presents a great many difficulties – namely in the concerns of

collective institutions *vis-à-vis* individual rights (rather than the impeding challenge as that of overcoming the rights of highly organized special or private interest groups, such as firms). This ideal society is described as

> one that combines the greatest freedom, and thus a thoroughgoing [unsocial sociability] among its members, with a precise determination and protection of the boundaries of this freedom, so that it can coexist with the freedom of others ... where one will find the highest degree of freedom under external laws combined with irresistible power, i.e., a perfectly rightful civil constitution (Kant, 1784: 33).

Therefore, Kant argues, humans are compelled to create laws which limit unrestricted freedom to secure both liberty and social order, whose benefits are found in the refuge of a universal civil society. As the universal regime of the post-modern era, economic liberalization introduces a global discourse of democratic rights; these political liberties are no longer confined to the boundaries of nations or states, but instead are associated with the processes of globalization. Social agents and political actors rely on many different vehicles to voice their priorities in the processes of economic globalization, be they through activities within markets, hierarchies, or networks; not only do actors compete to voice their value preferences, but access to the participation process itself is a value assumption for members of a cosmopolitan citizenry. Democracy – through its association with democratic liberalism – has become a global value (Holston, 2001: 326). I take this philosophical position further, attempting to identify and to quantify a global environmental value as well (using the statistical generalization in Section 6.1).

Collective Behavior in Global Society.

One of the ways in which cosmopolitan citizens may accomplish desired outcomes – particularly when encountering actors with a greater capacity to influence the decision-

making processes than do individuals singly – is through coordinated action. In the tradition of sociology, the field of collective behavior helps us understand social change by considering the actions of collectives or collectivities; collectives are unlike groups: while groups simply consist of a number of individuals (and thereby could be analyzed as individual behavior adhering to established rules), collectivities have complex systems to coordinate members and to accomplish objectives, which often occur outside of the established societal procedures. Collective behavior is a process which bypasses or transcends established institutional structures, which translates ideas into action, and which results in a collective act – rather than an individual act as part of a group (Turner and Killian, 1987: 3-7). In certain instances, this collective behavior is taken in response to existing processes, or in an effort to contribute to the decision-making processes which may not reflect the collectivities' values. Noninstitutional political action, i.e. political action outside of or beyond the processes of the traditional institutional system, is legitimized when a collectivity's shared value priorities are not addressed by existent decision-making structures (Schock, 2005: 13-33). For example, when institutional failures of market globalization result in undesired and unintended social and environmental outcomes, a community contests the management of common-pool resources; collective action that is grounded in social values and norms legitimizes co-management[29] of common institutions, such as hierarchies or markets (McCay and Jentoft, 2010: 203-213).

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[29] McCay and Jentoft (2010) define co-management as "the explicit sharing of management authority between local groups and the state."

Collectivities may be social or spatial; in the post-modern era, the complexities of interdependent political units, as well as the significant roles of urban centers in the activities of market globalization, create very unique circumstances by which cosmopolitan citizens within city-regions participate in the activities of world politics – be they intentional or otherwise. Collectivities may comprise communities that are issue-based or geographic; the city in the post-industrial era is a collectivity which constitutes a commons which is not owned, but nonetheless provides benefits and costs that are absorbed by various interests – both global and local; the creation and distribution of these benefits and costs (*e.g.*, social, economic, and/or political), result in a decision-making process to address any contest over the identification, use, and allocation of resources within the urban commons (Scott, 2008: 6-18). While simply participating passively in the processes of the complex and interconnected institutions[30] of the global city, cosmopolitan citizens are members of a collectivities who buttress the universal system – and thereby produce costs and benefits that are distributed to or absorbed by the whole (or factions thereof); further, members of the collectivity may also participate actively by voicing preferences which are under-represented or over-looked by the dominant system.

Political economists similarly attempt to explain collective action, utilizing the rational behavior model as a systematic analysis of costs and benefits – comparing the individuals' expenses to the groups' rewards. Individuals are incentivized to join and to support groups in order to receive and to enjoy benefits, wherein individuals are

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[30] Examples of institutions include hierarchies/bureaucracies, markets, networks.

motivated to cooperate and to become members of collectivities by rational self-interest (Hardin, 1993: 62-65). Individuals are incentivized to form groups, whose incentives include the ability to access or to influence the policy-making process (Olson, 1982: 36-51). The failure of certain social institutions, e.g. markets or governments, to sufficiently identify value preferences leaves individuals and groups to act to secure their interests, wherein institutions do not (Schelling, 1978: 31). Collective order and action, in combination with competition and markets, ensures social stability, performance efficiencies, and economic growth; it is within the legitimate domain of socio-political practice that the collectivity will have the greatest success (Scott, 1998: 101-120). This discussion of political economy in public policy explains the power relations among political actors, which in global affairs include non-state actors such as non-governmental organizations and transnational advocacy networks.

Collective action emerges from collective choice, which consists of two parts: the decision-making process that results from a group's willingness and capacity to identify common interests; and a political systems' acceptance of the collective decision as legitimate (Keating, 1991: 1-12). In the complex global system, the communities that contribute to the process of collective action share varying (and often overlapping) characteristics; these characteristics are dependent on how the collectivities' interests are manifest: sectoral, scalar, institutional, geographic – as do the interests in the preservation of finite common pool resources. Success in collective choice is accomplished through the creation of place-based institutions that involve both collective decision-making and formal infrastructures (Scott, 1998). The WCED (1987: 46-47)

responds to the paradox between common interest and self-interest by proposing the creation of policies in the areas of education, institutional development, and law enforcement to identify and to secure common interests; it argues, however, that these enforcement mechanisms would only be successful if the collective choice processes reflect the will of the community – be it local, regional, national, or global.

While Scott (1998: 152-157) acknowledges that regional institutions may either be regressive or progressive in their policy-making, he notes that shifts at all geographic levels in the negotiation over social outcomes is a space within which democratic citizenries may influence the process of valuation of priorities. Further, when a collective interest seems "unusually and vitally threatened," citizens will take political action (Pateman, 1980: 65). Addressing this concern, the WCED (1987) points to the trends to minimize collective choice in the marketplace, thereby relegating to local governmental institutions the responsibility to articulate and to enforce a collective interest. In describing the relationship between urban expansion and collective action, Scott (2008: 23-36) describes the collectivity as a political actor who responds to economic and social crises[31] in metropolitan regions, and whose response is an internal adjustment to the dynamics of growth. Planning for communities is a recursive discourse among varying political levels and differing value priorities, a geo-political process that manages changes and movements among actors and groups; "[p]lanning for growth is therefore both space making and place-contingent" (Dierwechter, 2008: 43). Scott (1998: 154)

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[31] Scott (2008: 33) defines these crises as technical breakdowns: "diseconomies of urbanization that in the absence of at least partial remedial action would rapidly impose barriers to further urban expansion;" he lists these breakdowns as such: "congestion, pollution, public health crises, land-use conflicts, neighborhood decay, etc."

reasons that "[sub-national] regions invariably do represent identifiable if limited communities of interest, and as such they are an authentic arena of political identity and organization," and thereby local governmental actors and their constituencies make decisions that are both inter-regional and intra-regional. If excluded or marginalized from institutional structures, social movements and civil organizations seek to participate in decision-making processes to address social, political, and economic problems of the cosmopolis (Scott, 2001: 4-7). It is at the level of community – where there are varying intersections of the spatial, the social, and the cultural – where collectivities of cosmopolitan citizenries seek to form a platform from which to influence decision-making; it is in the local action that a global concern may be addressed.

Community and Globalization.

The role of political bodies is to establish relations among interested parties to deliver security and rights; at the universal level – particularly when nations are so closely linked by trade – a body politic may serve as arbiter for disputes or crises, which may be accomplished through the creation of a cosmopolitan state that protects the public's freedoms and reflects the united will (Kant, 1784: 34-36). Under the hegemonic regime of increasingly-deregulated cross-border transactions, Sassen (2002: 94) points to the role of the state government to negotiate the rights of foreign economic actors *vis-à-vis* domestic laws by securing the "rights" of global economic actors in a cosmopolitan system – paving the way for NGOs, TANs, and other global political actors to do the same. But this process does not only fall under the jurisdiction of state governments. Scott (1998: 22) describes the localized production systems of market globalization as

those which "are starting to look more and more like loose confederations of regional

economies." There are benefits of collective propinquity in response to external

processes of liberal expansionism; region-level political units – in federal and unitary

political systems alike – assume political responsibilities for coordination and

representation (Scott, 2008: 133-145).

In response to the economic trends of market globalization, region-level units seek to

consider and to address forms of governance and regulation – which are not the sole

domain of governmental institutions, but also include other geo-political actors and socio-

spatial agents, *e.g.* international organizations, firms, non-governmental organizations,

civil society, etc. (Scott, 1998: 101-120). Scott, *et.al,* (2001) identify this social and

economic coordination as a form of governance, and describe it as the

> many processes [that] … involve not just agencies of government but also non-
> governmental organizations, civil associations, private-public partnerships, and so
> on. [Governance] can apply equally well to coordination of the complex
> economic and social environment of the global city-region as a whole as it can to
> collective action in regard to specific segments of urban life (such as particular
> sectors of production or individual neighborhoods). One important domain of
> governance can be identified in relation to possible and actual responses of city-
> regions to the new global competition (2001: 21).

Further, Scott (2008) points to a socio-spatial system of urban nodes, whose global

network supports myriad multi-level transactions, as contributing to the institutional

formation of global society in the post-modern era. These nodes reflect the network of

global cities, *i.e.* centers of economic, political, and social activities, that contribute to

global society and whose decision-makings constitute forms of global governance; the

complex networks of global affairs that characterize the post-modern era relies upon the

activities of global cities to support the processes of market globalization – as do the

actors and agents within these nodes to exchange cultural and political values, wherein
policy-making and regulation contribute to governance over sectors beyond political
economy.

The political and territorial transformations that result from economic globalization –
namely the emergence of local public actors in global affairs – support and reinforce local
public action as a vehicle to address global policy concerns; further, these changes
promote new relationships between local government and civil society as groups and
individuals seek to contribute to the articulation of the economic and political logic of a
global order *vis-à-vis* democratic procedures. In addition to allowing for administrative
procedures for actors, geo-political or otherwise, to compete in the global system,
governance

> involves a set of complex institutional reactions to the broader problems of
> economic and social adjustment in the emerging global-local system … the
> governance of city-regions is part of the larger problem of contemporary global
> coordination. There is no single geographic scale at which political regulation of
> the world economy or of its component parts can be secured. The critical issue
> here is coordination across geographic scales, between the policies pursued at
> supranational, national, and regional levels, involving both formal and informal
> coordination, and the possibilities of popular input into their formation and
> implementation at all levels (Scott, *et.al,* 2001: 21-22).

The creation of public policy reflects a collective will centered on shared meanings,
through which public goods and social cohesion emerges. It allows the community to
enact the rules that define acceptable behavior, through which social exchanges among
individuals and networks facilitate the design of meanings and codes (Autès, 1997: 230-
235). Bull (1977: 278) describes a 'world community' as having "a sense of the common
interests and values of all mankind;" this is distinct from a 'world political system,'
which is "characterised merely by global interdependence and global awareness." Bull's

description of a world community resonates with the concept of cosmopolitan citizenry; this global community of citizens has a set of shared value preferences, be they stated or unstated. In the current phase of global affairs, while the world political system of market globalization values the exchange of ideas and goods, there are yet prevailing values of the world community which have not been thoroughly adopted by the world political system – among them, ecological protection and intergenerational equity.

Community refers to the sense of a shared interest among members of a group, the space for social, political, and economic activity, and the physical space within which these occur; community engenders a place that is perceived to be either physical, social, or both – it connotes the socio-spatial and geo-political aspects of individual and group activity within institutional structures. In this way, communities are comprised of citizens who are stakeholders in a common physical space, *i.e.* 'place*,*' – be that common space a neighborhood, a region, a nation, or a globe; therefore, place itself may be considered unlike goods in the marketplace, but as a public good to be governed by all citizen actors and interest groups who will be rendered better- or worse-off by any place-based decision (Keating, 1991: 13-66). The economic activities of market globalization are adding climate-changing gases to the atmosphere, threatening to forever change the attributes of the common 'place;' to move toward a goal to address ecological concerns requires agreement among complex political and social structures, particularly in defining value priorities and overcoming value conflicts. It is through social discourse and through a political process that these values are debated and defined among interested actors and communities (Prugh, *et.al,* 2000: 1-14).

This understanding of community is evidenced in the increased political roles of international conservation organizations since the onset of the industrial era, and most notably in the post-modern era. While the environmental conservation movement can be traced back to the nineteenth century (Stalley, 1972; Shabecoff, 2000), the origins of environmental advocacy networks dates to the mid-twentieth century; created in 1948, the International Union for the Conservation of Nature and Natural Resources (IUCN) was founded with a membership of eighteen nation-states and 107 NGOs.[32] In addition to an organizational framework of a council, secretariat, and commissions, the IUCN network consists of national and regional committees, whose members are part of a 'collective and global voice' on issues of conservation and sustainability; the hybrid organization serves as a clearinghouse for international conservation projects (Keck and Sikkink, 2003: 121-164). In the second half of the 1980s, support for environmental and ecological advocacy organizations grew notably; existing organizations increased in size substantially, and new organizations were created to concentrate on theretofore unaddressed concerns; the Environmental Defense Fund (EDF), the Natural Resource Defense Council (NRDC), Friends of the Earth (FOE), Greenpeace, International Whaling Commission (IWC), International Tropical Timber Organization (ITTO), and World Wildlife Fund (WWF), among others, are INGOs and hybrid organizations that assume positions of environmental advocacy on behalf of global citizens – often coordinating as part of an advocacy network to accomplish shared political and social goals (Keck and Sikkink, 2003: 121-163). The activities of these communities in the

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[32] In 2013, the organizations and institutions that are members of the IUCN network counts as follows: 92 states; 124 government agencies; 107 INGOs; 899 NGOs; and 42 affiliates – purporting to be the world's largest environmental network (www.iucn.org).

affairs of world politics reflect a form of environmental global governance, whereby individual, groups, and networks participate in global decision-making processes.

One way to understand and describe networks in global affairs is to categorize their structures and to identify their memberships. Morphology of network variation uses five dimensions[33] to describe the relationship structure among units (individuals, groups, organizations, agencies, governmental authorities, states) within a community network. Cohesion, for example, is the dimension that refers to the level of connectedness and linkages among the members of the network, where the most cohesive network is characterized by completely symmetrical and reciprocal linkages among all of its members. Equivalence, on the other hand, describes the extent to which members are linked by similarity, thereby forming alliances, coalitions, and cliques – which may exclude members who are dissimilar (Holton, 2008: 49-64). Therefore, cohesion and equivalence are two characteristics of global networks that help us understand their structure, based on community members' shared values and priorities – both with respect to the policy concern and how to address it.

Norms, Values, and Collective Behavior.

Sociologists traditionally describe collective behavior as one that seeks to bypass established institutions of the prevailing regime; economists traditionally describe collective action as one that seeks to be recognized by and to participate in established institutions. Turner and Killian (1987: 7-8) address these disparate understandings of

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[33] The five dimensions are cohesion, equivalence, prominence, range, and brokerage; each dimension describes a variation of network structure and a formation pattern of linkages among network members.

similar phenomena of the two disciplines by proposing an alternative approach: "collective behavior takes place under the governance of emergent norms." Emergent norms are in the realm of defining and/or re-defining good and bad, right and wrong, acceptable and unacceptable; these norms are overcast with ambiguities and value assumptions. Further, activities in support of emergent norms, which may or may not be championed by the dominant or traditional institutions, occur in a space of extra-institutional behavior[34]; it is this context wherein emergent norms challenge the existing regime and whereby political agents seek to have new dialogues to address participations in or changes to extant processes.

Rousseau (1755: 114) describes the body politic as

> a moral being which possesses a will; and this general will, which always tends toward the conservation and well-being of the whole and of each part … [f]or then the great city of the world becomes the political body whose law of nature is always the general will, and whose states and diverse peoples are merely private individuals.

Kant (1795: 128) identifies a moral politician as an actor who "interprets the principles of political prudence that they can be coherent with morality." These emergent norms are shaped by actors, agents, and collectivities. Even as the driving motivation of economic growth of the neo-liberal regime dominates policy, were its implementation to be politically imprudent *vis-à-vis* other social morals or values – e.g., freedom, security, conservation – there may surface a social movement to reflect the emergent norm and to modify the prevailing institutions of the extant regime (Zeckhauser, 1973: 114-116). This explains why in a democracy such as the United States, elected officials at the local and federal levels perceive that political action on climate change is a moral imperative

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[34] This is similar to what Schock (2005) calls 'noninstitutional action.'

(Wheeler, 2008: 484). Collective agency occurs as new political spaces materialize subsequent processes of globalization – most assuredly if those processes give valuation to benefits, rights, or securities (Scott, 1998: 137-152); thereby in this research project, I observe collective action and political demands by communities of individuals and networks of groups – actors of a complex political global landscape – which reflect the interests and values for environmental protection and ecological preservation.

The collective behavior literature analyzes events that lead to and result from action; it also considers the motivations for action. In their model for collective behavior, Turner and Killian (1987: 10-15, 158-84) explain how emergent norms, extraordinary events, and feasibility together create the conditions of extra-institutionalism and collectivity, which in turn leads to collective behavior. They expound upon this model by defining a public as a diffuse collectivity interested in or divided under a particular issue; they define a public opinion as the message that is communicated by the public to decision-makers, with respect to a particular economic, political, or social issue. While a general public is described as a mere audience or mass, a *public* is defined as "persons who interact, who are engaged in discourse, and who register a collective opinion;" this refinement parallels the distinction between group and collectivity. Rousseau (1762: 155) makes a distinction between the will of all and the general thus: "[t]he latter considers only the general interest, whereas the former considers private interest and is merely the sum of private wills." Kant (1795) also makes this distinction, classifying these as "the *distributive* unity of the wills of *all*" (i.e., the will of all *individual* men) and

the "*collective* unity of combined wills" (i.e., the will of *all together*);[35] Kant continues

by describing the efforts to reconcile these phenomena of political will: "[t]he solution to

so difficult a task requires that civil society become whole" (1795: 127-128). In his

discourse on political economy, Rousseau (1755: 114) similarly describes the general will

as that which "is the sources of the laws, is for all the members of the state, in their

relations to one another and to the state, the rule of what is just and what is unjust;" he

argues that the general will can only be corrupted by the seduction of private interests

over the public good. The public domain is the sphere of action in which the common

interest is prioritized over individual self-interest as the preferred behavior; the public

domain offers a space for collective choice and community-oriented priorities (Keating,

1991: 13-35). It is in the space of discourse over issues and conclusions where opinions

emerge, values shape, and norms form; the range of operations available to actors is

bound by a complex network of norms, expectations, and pressures, which reflect the

political, economic, and social processes of the overarching system (Scott, 2008: 32-40).

A series of types of global networks that convey the priorities of a democratic public may

be classified, based on their coherence and utility; among these types are advocacy

networks, information networks, knowledge networks, professional networks, and policy

networks (Holton, 2008: 80-105); the global collectivities of environmental communities

assume the varying roles of these types of networks depending on their interests, goals, or

outcomes. It is through the process of creating knowledge about environmental problems

(as is done through knowledge networks, for example), which includes questioning the

prevailing practices and identifying policy alternatives, which contributes to

environmental governance (Brand, 2010). These behaviors at different times may be

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[35]All emphases are the author's.

used to describe the activities of the global environmental movement community, which reflect the characteristics of one or all of these networks, depending on the organizational position, the policy concern, the political climate, etc.

The inherited neo-liberal understanding of the value of land rests in its productive capacity, wherein the value of wild and undeveloped lands lay in it capacity to be modified and consumed (Krutilla and Fisher, 1985: 3-15); the environmental movement challenges the value priorities of the extant global regime. As questions over social and economic value priorities arise in the consciousness of a democratic citizenry, the environmental movement makes public pronouncements of concern over environmental degradation. In the mid-nineteenth century, for example, naturalists Ralph Waldo Emerson (1836) and Henry David Thoreau (1854) opined the negative impacts of modernization on human interaction with nature, and are both associated with a world-wide conservation movement of their time. Rachel Carson (1962) may also be identified as an individual who made a significant contribution to the environmental movement. Having had written a set of best-selling publications on the topics of rivers and oceans and an opus work on the deleterious effects of pesticides and insecticides on the ecosystem,[36] Carson presented these policy issues to an unaware public and testified to the U.S. Senate on the matter, – thereby garnering the title 'mother of environmentalism' (Kaufman, 2012: 7-36). In the mid-twentieth century, Carson (1962) recognized that the ideology of the emerging market globalism, which she identifies as "an era dominated by

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[36]Beginning in 1941, Carson wrote three books in a series about the oceans and rivers, titled *Under the Sea-Wind, The Sea around Us,* and *The Edge of the Sea* (published in the years 1941, 1951, and 1955, respectively)*;* the great success of the second led to republication of the first and a serialization with the third. Her milestone work, *Silent Spring*, was published in 1962.

industry, in which the right to make a dollar at whatever cost is seldom unchallenged"
(1962: 13), may lead to activities that result in deleterious impacts upon the environment;
further, she points to the need for a regime that is responsive to a public who protest these
behaviors and to a citizenry who demand a participatory role in deciding acceptable
environmental risks. A prolific luminary, R. Buckminster Fuller (1969a, 1969b)
reconsiders many of the assumptions and preferences of policy-making, among which
include the impacts of biases and interests in decision-making processes. At the end of
the twentieth century, Bill McKibben (1999) pleads with a public to reconsider how it
relates to nature, and to strike a new path to overcome the negative externalities of
modernization. The concerns and consciousness of a public may be voiced by
individuals who assume the roles of political philosophers and social advocates –
deriving from and contributing growing concerns of a civil society – namely in
identifying acceptable risks to society *vis-à-vis* the extant political and economic
processes.

The modern era is marked by the expansion of an industrial society, wherein the
inconsistencies of the impacts to and control over the natural system by human activity
could not have been fully understood; the modern era is further marked by socio-political
activity which is driven by economic principles of growth. In the post-modern era,
science informs to what extent ecological capital is finite, to what extent the *biosphère* is
fragile, to what extent pollutants are absorbed, etc. (O'Connor, *et.al,* 1996: 224-235). It
is the quality of these risks that characterize modernity and post-modernity; society is
faced with uncertainties which extend beyond political boundaries and which are human-

manufactured, including pending ecological crises.[37] This inclination to accept risk is

rooted in the modern era, and continues into the post-modern; while extant institutions

and processes of market globalization have adapted to – if not fostered and promoted –

increased risk-taking, there are also communities who have value preferences that employ

alternative approaches to the risks of unfettered growth, particularly when the existing

norms prioritize the expansion of market activity at the expense of the depletion or

overconsumption of finite, irreplaceable resources. The processes of globalization create

a world risk society of individuals and communities who accept the impacts of greater

uncertainties; this circumstance elicits a cosmopolitan movement which constructs

transnational coalitions to raise the level of environmental policy, to identify the limites

to acceptable risks, and to address global ecological threats (Beck, 2010: 47-67).

Ecological economics signifies a multi-disciplinary approach to global trends; to be an

effective tool for decision-making and policy-analysis, ecological economics requires that

three elements be integrated: a shared vision of a sustainable society; an analytical

methodology to raise and to answer questions about this shared vision; and institutions to

consider and to implement this shared vision (Costanza, *et.al,* 1996b: 1-4). Holling, *et.al*,

(2002a: 3-22) describe the need for integrative analytical approaches for transformations

in systems,[38] which seek to describe how changes in systems' processes result in adaptive

responses; they argue that the theory of adaptive change must be cross-scale,

interdisciplinary, and dynamic so that it may address changes among the three interactive

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[37] In terms of social policy, Beck describes the ecological crisis as that which involves a systematic violation of basic rights.
[38] Holling, Gunderson, and Ludwig's integrative theory of adaptive change recognizes a large range of changes at once: economic, ecological, social, and evolutionary.

global systems: economic, ecological, and institutional – an approach that could consider

both slow and rapid changes of both natural and human systems at once. Integrative

analytical approaches seek to integrate the dynamics of socio-spatial change and the

systems of global processes; the theory of adaptive change draws on theories of (new)

ecology, economics, and organization and describes the processes of a complex, inter-

connected global system of exchanges, and it measures the impacts therein by

individuals, groups, and institutions. Acknowledging that human and ecological systems

are not identical, Holling, *et.al,* (2002b: 63-102) point out that human systems are

equipped with a capacity to identify and to respond to change, whereas biological

systems do not possess these characteristics of foresight and intentionality.   And it is the

decision-making process with respect to the use of natural resources – namely how the

systems of the socio-sphere and of the eco-sphere[39] interface – with which political actors

are interested. The tenets of globalization treat the natural environment not as a stand-

alone good, but rather as passive material whose benefit is determined by human

production – for which policy prioritization reflects the value assumptions of market

globalism (Daly and Cobb, Jr., 1994: 97-117). Social agents for environmental justice,

for example, promote an alternative or an adjustment to the extant processes of exchange;

they purport that common-pool natural resources cannot be solely perceived as inputs in a

production system, but instead as finite and exhaustible resources that must be valued as

goods whose degradation will forever alter the social condition of current and future

generations.

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[39] The ecosphere (which contains the *biosphère*, the atmosphere, the hydrosphere, the pedosphere (the layer of soils), and the lithosphere (the Earth's core and mantle)) is defined as "that part of the Earth which directly or indirectly maintains its structure and flow using the exergy from the sun/space battery." The *biosphère* is supported by the other spheres. Together, these spheres are the foundation for the sociosphere (human society) (Holmberg, *et.al,* 1996: 21).

It is a social condition – rather than a specific event – which may require a human response as the focus for a collective concern and the resulting collective opinion; it is within this context that a public understands a critical social issue with which it is collectively confronted, and thereby one that requires a collective response. The ongoing weather events and catastrophic phenomena that have been associated with climate change has called the 'new reality' with which policy-makers and decision-makers must deal; this is the social condition that conjures a response by an global collective, which has been manifest most recently in the Peoples' Climate March in New York City – a gathering of nearly 400,000 concerned global citizens on the issues of environmental conservation, justice, and security.

Social movements are differentiated from other forms of collective behavior by three characteristics: communication and decision-making that is solidaristic, rather than individualistic; networks that are diffuse, rather than compact; and action that is sustained, rather than transitory. It is within the realization of the social movement that the emergent norm is precipitated; values are implemented and diffused as the social movement seeks to have the emergent norm become accepted as a revision of ethicality, to have the value become accepted as a priority of decision-making (Turner and Killian, 1987: 241-43). It is this process that reflects Rousseau (1762) description of the civil state of moral liberty, whose code of laws are based on the mores and values of a general public – at once slow to form, but in the end an 'immovable keystone' (and which helps us to understand the standing and lasting impacts of the value priorities of economic

liberalization on global processes. Kant (1983) describes progressive enlightenment as the transformation of the capacity for moral discrimination into clear principles; a moral whole emerges from deviations from existing practices and redefines agreements among the members of society to create a new, moral whole. This process to overcome a tendency for inaction leads to human development and to law-governed order. This is the 'ethical doctrine a cosmopolitan legacy,' based on various institutional frameworks throughout the evolution of the global system, which urges cosmopolitan citizens to honor global commitments to over local loyalties, to give precedence to moral universalism over moral particularism (Holton, 2009: 2-12); among these include the universal interest in the common good of the shared ecology.

The socio-spatial re-orientation of global citizens' priorities is a notable phenomenon; due to the processes of globalization, we are at once participants in communities at the local, regional, national, multi-national, and global levels (Scott, 2008: 125-128). These communities which operate at multiple levels, and within which social agents have many identities, support the creation of collectivities that reflect emergent value preferences; shared values among democratic citizens, in turn, contribute to the growth of cosmopolitanism over a common issue or a collective concern – in the case of this study, over the protection of shared ecological resources. This collective behavior of moral obligation and social action toward decision-making over shared natural resources supports a form of global environmental governance. When considering addressing the 'commons' problem of environmental deterioration, there are alternatives to the privatization of common resources (which is supported by the tenets and values of market

globalism). Examples of such alternatives include: at the global level, regimes by sovereign states could established to promote cooperation and discourage violations; at the local level, regulations by stable communities could be implemented to enforce sets of rules that pursue the collective interest (Ridley and Low, 1996: 205-7). By reorienting the costs and the benefits to incentivize actions that support the cosmopolitan collective's goals, international norms and local policies may effectively avert the tragedy of the ecological commons, as is seeks to overcome the bounded rationality of land economic and to reorient value priorities toward collective interests.

The significance of land values and valuations, and other elements of land economics, rest on a universal value assumption in the expressed worth of land, either in particular or in general; a consideration in the neo-classical tradition of the significance of value placed on land can be expressed thus:

> [land value] expresses the worth of the land to prospective or actual buyers and sellers, it expresses the money investment in the land, it indicates the security back of a mortgage on the property, it is *the capitalized earning power of the land,*[40] and it is the basis of taxation (Ely and Morehouse, 1924: 236)

In his treatment of property in land, Mill (1909) distinguishes between a productive power as that which is derived from industry from that power which is derived wholly from nature; in the case where benefits – or 'gifts of nature,' as he calls them – are derived entirely from natural sources, it would be an injustice to let the interests of private individuals outweigh those of the commons and that this method of appropriation (in the stead of market-oriented private property) is a good for all of mankind. Daly

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[40] Emphases are the authors'.

(1996) calls for a central organizing principle of society to replace those of market globalization, describing it as

> a fundamental ethic that will guide our actions in a way more in harmony with both basic religious insight and the scientifically verifiable limits of the natural world. This ethic is suggested by the terms "sustainability," "sufficiency," "equity," "efficiency." Growth has become unsustainable (1996: 219).

Leopold (1949: 201) turns to two distinctive, but he argues related, fields which simultaneously describe the same phenomenon of ethics; he defines a land ethic philosophically as "the differentiation between social and anti-social conduct," and ecologically "as a limitation on freedom of action in the struggle for existence." By bringing the philosophical and ecological concepts of the land ethic together, he considers ethics generally as the mode of guidance for the individual to address common situations. He argues that this understanding of collective decision-making could be applied specifically to ecological value conflicts; he describes communities as 'cooperative mechanisms' with an ethical content, which reflect interactions thus comprised of the three components of land, individuals, and society: between individuals, between individuals and society, and between individuals and the land. When faced with complex resource problems, structured collaborative practice within communities empower its membership with decision-making advantages; discourse over issues of resources, processes, leadership – among others – give the policy-making process legitimacy (Huxham and Vangen, 2005). In the case of the research study here, a community for environmental social justice may be united by shared outcomes for policies that secure a common interest, be they local, national, or global; in the post-modern era, collective behavior is at once universal, regional, and local: the collective

decision-making to overcome ecological value conflicts may occur at one level, whereas collective action may occur at another – with combined benefits at some or all levels.

But it is the treatment of moral philosophy in the Kantian tradition, where "ethics, the 'science' of the morally necessary, takes precedence over politics, the 'art' of the empirically possible;" any cosmopolitan society would have these value assumptions reflected in its legal institutions to secure the sanctions of peace (Beck, 1957: xi). Communities, and the interfaces among their components, are embodied in social, political, and economic institutions; a conservation movement comprised of members of a community is an emergent affirmation of values over the human environment, wherein the obligations *vis-à-vis* the privileges of the land-relation are evaluated, assessed, and assigned. This process of (re)appraisal leads to a change in the philosophy of values – to an emergent land ethic, – and thereby social approbation and disapproval for actions and behaviors by a public. Working within a hegemonic system that adheres to the theories of neoclassical economics, environmental collectivities struggle to include the costs and outcomes of a pro-growth regime on a social agenda; they seek to have included social costs, as well as private benefits, in the calculus of overall 'well-being' that drives the policies of globalization (Wolff and Resnick, 2012: 259-263).

The environmental social movement argues that the ecological impacts from the processes of globalization are a type of pending market failure to be averted; constructing meaning from pronouncements derived from technical formulae (natural sciences) and from value priorities (cultural sciences), cosmopolitan citizens determine values, goals,

and actions (Beck, 2010: 49-70). Daly (1996: 35-37) identifies four ethical propositions[41] for the undesirability of the unchecked growth that is espoused by the dominant global regime: (1) geological capital is limited, and thereby current consumption imposes a cost on future generations; (2) geo-spatial expansion leads to the extinction or reduction of animals and their habitats; (3) growth offers marginal benefits on increased aggregate welfare; and (4) uncontrolled growth supports phenomena such as moral hazard and unchecked greed. Nonetheless the dominant regime of unsustainable growth will continue – until there is a shared, alternative vision to support decision-making and policy-implementing procedures for a holistic approach to the inter-dependent global systems of economy, ecology, and society (Costanza, *et.al,* 1996b: 4-11).

In the modern era, the world observed an early phase of global interconnectedness; Geddes – a naturalist who influenced the field of city planning – argued for a reassement of society's values (Stalley, 1972: 18). This is reflected in the demands by social movements toward environmental policy. While the focus of the conservation movement of the nineteenth and early-twentieth centuries was to protect the pristine nature of the land and wildlife primarily for æsthetics and outdoor recreation, the focus of environmental movement of the late-twentieth century was the effects of pollution and toxins on human health; while the early conservationists comprised social organizations of hunters and fishers who sought to preserve wildlife for hunting and fishing, the later environmentalists comprised social movements of activists and who sought to defend

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[41] Daly identifies these propositions for an alternative to the dominant growth paradigm as "ethicosocial limits."

citizens from environmental degradation that resulted from industrialization (Shabecoff, 2000: 1-11). The concern over the protection of natural resources emerged with the start of the modern era, but at its close the value assumptions of participants in environmental governance had changed – both toward the changing processes of socio-economic system, as well as over the concerns of the cosmopolitan citizenry.

Civil Society as a Global Actor

Sassen (2002: 104) indicates that the introduction of a global actor – firm, market, or activist – into transnational processes (which she calls a zone of politico-economic interaction) results in changes to institutional forms – by either producing new ones or by altering old ones; among these actors include social agents who seek to voice their value priorities over common resources. A global civil society is the proto-democratic alternative to the processes of economic globalization; while market globalization is characterized by undemocratic decision-making 'from above,' global civil society is marked by an empowerment 'from below' – seeking to employ global networks of deliberative democracy to influence policy-making and political decisions (Holton, 2008: 178-179). In response to the adoption of the tenets, processes, and structures of market globalization, social groups (*e.g.,* merchant associations, community-based organizations) have become disenfranchised from the political process as local governmental authorities prioritize economic benefits over social; however, it is an oversimplification to assert that these groups' exclusion from the global processes indicates the end of collectivities: in a system of dynamic processes, new categories of groups emerge to address changing political and economic concerns (Preteceille, 1997: 222-223). The expansion of civil

society in the era of economic globalization may be seen as a response of political

solidarity, as well as a response to the retreat of formal governance mechanisms – both of

which indicate responses to the political processes of economic globalization by socio-

cultural collectivities (Scott, 2008: 16-18).

In response to the processes of economic globalization, there have materialized a number

of social movement collectivities; among these social movements is the broad global

justice movement, within which is the environmental justice movement. In the 1960s, the

environmental movement emerged alongside other anti-war, civil rights, and feminist

social movement groups of that period; the environmental movement collectivities used

litigation, lobbying, and public information campaigns to change or to create

environmental laws. With the onset of the pro-market policies and the coordinated

political response by the corporate community, the 1980s was marked by a regime of

growth – which paved the way for the processes of the post-Cold War market

globalization (Shabecoff, 2000: 6-28). Individuals' responses to economic, social,

political, and cultural changes have taken shape as a result of market globalization, and

these responses are part of a transnational collective action (Moghadam, 2009). Scott

(2001b: 4) identifies the significance of geography and territory in the efforts of groups'

formulate collective action and identity; territorial units which share a functional

interdependence, but which lack a political or administrative cohesion, seek to build a

"regional political competence" by assembling geo-politically fragmented units to

address common challenges that result from the forces of market globalization.

Therefore, political action by collectivities reflect both the issue for which the

collectivities' values are voiced, as well as the geo-political institutions within which the collectivities are able to seek agency; the global city serves as the vehicle through which norms and values are absorbed and emitted – and, in this study, the institutions within which to voice assumptions that are not reflected in the extant regime of market globalization and to consequently implement policy action of the collectivities' expressed goals.

Social Networks and Political Action

As would any component of the post-industrial decision-making system of worldwide social and economic consequence, urbanization reflects the logic of market globalization; "[c]ontemporary urban growth management is geographically, politically, and historically constituted [and] … the city-region [is] the preferred space and scale of territorial governance" – even as it seeks to identify and implement alternative policy approaches in the face of the prevailing regime (Dierwechter, 2008: 15). The generic process of globalization may be described in two ways: (1) the reduction of space between peoples; and (2) the increased contacts among people that results from reduced costs of communication and transportation; this process of 'neoliberal globalization,' referring to the economic policies for freer markets which are therein embodied, refers to the extra-institutional efforts by political actors to redirect and to shape the structure of the global framework (Evans, 2005: 655-663) – which is uniquely observed at the geo-political level of the urban landscape. Market globalization has increased the dependence of urban governments on the global market economy, while simultaneously urban governments

are faced with internal pressures over the delivery of services to a diverse constituency; in the post-modern era of market globalization, "cities are becoming internally more pluralistic while at the same time the policy options of governing regimes are curtailed by the needs of competition" (Keating, 1991: 10).

Regional collectivities[42] deal with governance issues toward economic goals, as well as address policy issues to accomplish social and cultural goals; identifying and resolving collective problems – collective choice – reflects the constitution of the institutions of the regional collective (Scott, 1998: 152-157). Urban planning is also collective action, relying on a broad community of political institutions and civic organizations from whom to solicit information and advice. The structure, order, and domain of these negotiations may reflect assumptions over a complex series of interconnected impacts; preferences over functional benefits; and/or priorities over socio-spatial outcomes – evaluating at once concerns that are local, global, environmental, economic, social, political, design, utility, etc. (Levy, 2003: 82-88). In this way, global concerns are brought to local levels, wherein problems are identified and solutions proposed.

Mittelman and Chin (2000: 166-73) re-evaluate explanations for extra-institutional behavior and thereby reconceptualize resistance to globalization in relation to emergent norms; they demonstrate that through individual and aggregate actions, the global justice movement may resist the commodification process; may overcome problems of collective

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[42] Scott (1998, 2001a, 2006, 2008) defines regional political units as sub-national, not as supra-national, entities.

action to unite across borders and cultures; and may create new identities and narratives to promote social change through daily actions of non-acquiescence. This approach to understanding and explaining political behavior in response to the processes of globalization looks to the emergence of new forms of governance, and how these emergent political regimes accomplish expressed goals – namely by countering or promoting prevailing sets of institutions, actors, and norms (Holton, 2005: 71-78). This could be observed historically in 1992 at the Rio Summit, where the involvement of non-state actors set the stage for the involvement of NGOs and social movements in the policy-making and decision-making activities of world politics (Kütting, 2004: 16). And later, hybrid organizations – comprised of both governmental (although not necessarily states) and non-governmental actors – have devised and promoted environmental policies within and beyond their social and professional networks, not only of non-state actors but also of social movement and advocacy networks (Wheeler, 2008).

Social networks are a distinct organizational form, to be included when considering markets and hierarchies. While they are neither bound by the inflexibility of hierarchy nor the opportunism of markets, networks comprise both the structure of hierarchies and the dynamism of markets; networks are flexible organizational forms whose members are united by a common trust (Holton, 2008). Thompson (2003: 4-52) conceptualizes networks as those which should be considered alongside two other structural orders: markets and hierarchies; together, these three socio-economic organizations form a set of coordinated devices whose organizational arrangements and decision-making processes comprise forms of governance – both global and local at once. In the post-modern era,

networks contribute to the activities of liberal democracies: either to bring attention to policy concerns, or to serve political actors in their myriad proceedings. It is through the creation of continued relationships and ongoing organizations to ensure that the goals and values of the social movement are incorporated into the processes of policy-making that reflect a democratic cosmopolitanism in the Kantian tradition (Holton, 2009: 6-9).

Innovations in technology and communication are tools for global democratic citizens in a post-modern world, which may provide open forums – 'public squares' of the new millennium – where fact-based public discourses may take place over global problems, challenges, solutions, and strategies; digital communication tools offer a vehicle for democratic governance (Gore, 2013: 368-371). These approaches and these tools support a global democratic cosmopolitanism, or 'cosmopolitics,' which is defined as

> a connection of cosmopolitanism with visions of the good society (of which world government is one), with the policies designed to enlarge and enhance citizenship (such as global human rights) and ways of generating increased social participation and social cohesion (such as global civil society) (Holton, 2012: 8).

Bulkeley and Betsill (2003: 13-19) point to the rise of networks of actors and institutions which operate within and across geo-political boundaries – in some cases alongside traditional actors, in other cases in place of traditional actors – as evidence of the emergence of a form of global governance in the Kantian tradition.

Wapner (2002: 32-67) discusses the environmental justice movement and its role as cultural agent to promote change. By influencing the perspectives of individuals, environmental organizations hope to ultimately change the behaviors of different actors: citizens, firms, states. Because environmental degradation is framed as one that is a transnational concern, it is argued that trans-boundary policies must be implemented by

political and economic institutions; to prevail in this goal, however, individuals, political actors, and collectivities must overcome the institutions of the entrenched state-system and the processes of the extant global regime – whereby state and non-state actors re-assess the relationship between state sovereignty and popular sovereignty. Non-traditional, non-state actors are already significant in contributing to global governance in many issue areas, among them environmental policy; for example, scientific communities influence decision-makers by conducting research and reporting results, civil society influences decision-makers by voicing a public sentiment and a value priority. In the complex, interdependent global system of the post-modern era, therefore, interactions among political actors coalesce to contribute to the processes of decision-making and policy-making to form processes of global environmental governance. The success of these processes are evidenced by the implementation of regulation and policy – as well as the creation of new institutions and structures – which are created in response to the values of the collectivity (Bulkeley and Betsill, 2003: 9-31).

As cultural agents, environmental non-governmental organizations (NGOs) are able to increase both their social and political capital, and to influence political norms: (1) by influencing social mores; (2) by making democratic citizens aware of the environmental circumstances; (3) by changing opinions of and values toward their positions; and (4) by encouraging these agents to act. Because democratic citizens are part of political structures, changing values would result in changing norms; these changes in norms would lead to collective behavior within existing institutional frameworks, and to changes in the governmental, economic, and cultural practices by various private and

public institutions. This demonstrates that by changing the ideational framework, agents

for environmental justice use collective action to change institutional frameworks as well

(Wapner, 2002). Framing environmental issues, for example, as an issue of democracy is

how the environmental movement of the 1970s was able to make citizens aware of the

impacts of the environmental offenses of industry upon the ecology – and thereby

stimulate communities to demand action from governments and firms, to change or to

create legislation, (Shabecoff, 2000: 6-7). Similarly, issues of climate change and

sustainable development is framed as a concern over intergenerational equity.

An understanding of geography is at the same time cultural and political; imagined

communities, for example, are global entities that "identify the contrasts between

different conceptions of global order;" these collectivities may be united not by common

space but by common interests and values (Holton, 2005: 107). Ancient, biblical

principles support policies of sustainable development and scripture points to the

importance of social equity and land ethic;[43] a land ethic is as old as time, based on a

covenant between the people and the land, from whose fertility all of bounty is received –

and that these values and norms have application in the policies of the post-modern world

(Daly, 1996:205-209); in this way, shared resources and common goods – whose

benefits are of value to the entire community – require valuation apart from the logic of

market globalization. For example, Mill (1909: 233) points the limitations of private

property in cases where market-based private property proves disadvantageous and

unsuitable, stating that "when private property in land is not expedient, it is unjust;"

thereby moral obligations and rights accompany the determination of the appropriation

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[43] Daly (1996) calls this value 'the Biblical economic principle.'

and use of land in nature, which are to be reconciled by either moral or legal institutions. Leopold (1949: 202-209) argues that the ecological conscience of a community is dominated by the neo-liberal regime of economic self-interest, much the way that social ethics dominated the dominated one-hundred-fifty years ago; citizens of a land-community affirm the right for the continued existence of resources in their natural state, and are thereby seeking to re-evaluate the value assumptions of the dominant global regime *vis-à-vis* value preferences of the community. The concept of nature itself is being re-considered and re-evaluated based on global conditions which reflect the processes of a post-industrial neo-liberal regime; these processes fuse nature and society in a way that does not reflect the shared norms and values of the ecological movement – and thereby leaves open a space for a cosmopolitan society to voice its position (Beck, 2010: 47-75). 'Nature,' as do other goods of the global commons, requires unique consideration that is neither sufficiently addressed by the logic of market globalization, nor governed by its associated institutions and structures.

Rousseau (1755: 116-128) identifies a series of responsibilities of government administration, all of which are concerned with securing the well-being of its citizenry; a substitution of private interest for the public interest is one of many political actions for which political grievances among a public may arise. Particular decision-makers within state institutions pursue objectives that reflect the interests of political actors; defining common values often rests on value assumptions and priorities. However, it is when concrete ends and measurable impacts are defined with specific criteria that a common good may be realized through governmental policies (Bull, 1977: 51-73). It is in the

political sphere – not the economic – where the concerns for inter-generational equity are articulated for an entire community; the short-term horizon of the market not only often fails to consider long-term impacts of economically-driven actions, but it also often fails to consider the impacts of today's market trade-offs on future generations (Autès, 1997: 231-233). Scott (2006: 112) describes the goal of development policy as that which is designed "less to concentrate unidimensionally on the creation of well-lubricated markets than it is to forge concrete competitive advantages based in the shared order of the economic commons;" the costs of ecological degradation which hinder the well-being of an entire community, present and future, can be averted with policy instruments that at once increase economic competitiveness and environmental security. Political action to support policies for environmental protection of this sort is often bi-partisan – shattering the misconceptions that the concerns over environmental degradation rest solely with the left-wing, or that those who support free markets cannot support environmental protection (Wheeler, 2008). Using the phraseology of market globalism, the World Commission on Environment and Development (1987: 8) claims that environmental resource accounts are overdrawn and near-bankrupt, stating that "[nations] may show profits on the balance sheets of our generation, but our children will inherit the losses. We borrow environmental capital from future generations with no intention or prospect of repaying." A fundamental goal of environmental justice globalism is to ensure that policies are implemented to protect the ecology from over-consumption; this value priority is framed as a concern for the well-being of current and future generations – that an inter-generational equity is the moral and ethical obligation of present-day cosmopolitan and global citizens.

Growth, Governance, and Sustainable Development

In attempting to strike a balance between growth and preservation, the global environmental justice movement seeks to define sustainable development as an emerging political idea – similar to liberty and to justice (Dresener, 2009: 69-82). In a very general sense the term is ambiguous; and in democratic societies these concepts are contestable – as the terms 'sustainable' and 'development' (both singly and combined) are quite contextual. These meanings may become more clear as an environmental language becomes part of the general vernacular; the goals of sustainable development, as defined by the seminal report by the Brundtland Commission—to foster an intergenerational equity—initiates a dialog whereby social needs, environmental limits, and value principles are simultaneously identified. By defining sustainable development as a term that has social, political, and economic denotation, the global environmental movement furthers its cause and brings clarity to the concept by presenting a set of shared values and norms. However, with this fusion of these elements, the concept of sustainable development is torn between concerns for the economy and the environment – namely how ecological policies should be devised *vis-à-vis* economic growth.

Growth is defined as "the total value to the individuals in a society of all the goods and services they consume, including not only the commodities traded on the market, but also those like congestion, health leisure, and pollution which are not [traded on the market]," and thereby growth (of total economic product) is economic improvement. Policies (of growth or otherwise) should be evaluated based on their effects on the well-being of

society and its individuals; in further analyzing the considerations by modern welfare

economists, the welfare of different groups (poor and wealthy, future and present) and to

the distribution of benefits and of costs to current and future generations as significant

factors when considering the impacts of growth policies – this is particularly true when

considering environmental degradation and environmental preservation (Zeckhauser,

1973:103). In interconnected systems of nature and society, there exist many stable

states which respond to external and internal conditions, ecological and social; the

mechanisms that signal shifts toward alternative stable states within the complex systems

may be either natural factors, societal factors, or both (Scheffer, 2009: 11-104). This

general concern over the need to both preserve and to enhance the quality of

environmental resources has been acknowledged by legitimate international

organizations, although limited in their jurisdictional authority; for example, the WCED

(1987: 1) recommends that economic growth be based on sets of policies "that sustain

and expand the environmental resource base" – which advises for the expansion not of

economic exchange or market activities, but of environmental resources and natural

capital.

[FIGURE 2 HERE]

The field of environmental economics relies heavily on the tenets of micro-economics,[44]

and is often unable to sufficiently address the subjects of environment, natural resources,

pollution, and depletion at the global and macro levels; a new vision to describe the

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[44] Micro-economics focuses on exchanges of goods, willingness-to-pay, and cost-benefit analyses, rather than systemic impacts of resource consumption.

economics of sustainable development describes the macro-economy as "an open subsystem of the finite natural ecosystem (environment), and not as an isolated circular flow of abstract exchange value, unconstrained by mass balance, entropy and finitude" (Daly, 1996: 48) (see Figure 2). The representation of the economy as an open subsystem of the ecosystem reflects two conceptualizations of the interaction between economy and ecosystem: the 'empty world' sees the economy as a small segment of the ecosystem, whose interactions rely on near-infinite levels of natural capital, and whose byproducts are easily absorbed; the 'full world' sees the economy as a large segment of the ecosystem, with finite resources and limited capacity to absorb waste. While at the start of the industrial era, it was perceived that the natural world was infinitesimally larger than the man-made world, it is no longer the case; the socio-sphere now dominates the ecosphere, demanding a new approach to global political economy.

Callan and Thomas (2007: 150-161), in their discussion of environmental economics, describe the valuation of environmental costs; by measuring the social costs of a policy initiative (or the absence of a policy initiative), they contend that the costs to society for resources used—including clean air and water—could be quantified, and a measure of compensation could be identified to maintain a desired resource level. These measurements allow for an assessment of the costs of political action, help in the decision-making of environmental and social policy, and make clearer the desired potential collective benefit when facing contested values. This valuation process includes the complex undertaking of measuring changes in social welfare, as costs are based solely on explicit expenditures; however, these measurements tend to understate the true social

costs of natural and environmental resources. To overcome contested priorities among political actors in a pluralist society, the valuation of natural capital must incorporate the priorities of a cosmopolitan citizenry and consider social costs of consumption (or the lack thereof) of shared resources; further, the valuation process must accurately and rationally account for the positive and negative impacts of the use of the natural capital. An approach to address negative externalities was presented in the early twentieth century by economist Arthur Cecil Pigou,[45] who distinguishes between 'private' and 'social' costs of commodities; the private costs of a commodity are captured in the overall price of the good, while the social costs are not taken into account. Firms only consider private costs, and do not account for the social cost external to the market exchange; these risks are not considered in the market-driven activities of economic globalization. When making policies that rely on the tenets of economic globalization, decision-makers only consider some of the many benefits and costs; when the benefits outweigh the costs, a policy is justified – however certain negative externalities are unmeasured, unaccounted, or unknown (Wolff and Resnick, 2012: 259-266). Gunderson and Holling (2002) developed a model to measure both internal and external dynamics when interconnected ecological and socio-economic systems encounter risky, unwanted, or catastrophic properties, such as desertification, erosion, etc. While using data and analysis to identify 'acceptable risks' (*i.e.,* risk assessment) to inform policy-making decisions is commonplace in our global society, when relying exclusively on the market mechanisms of micro-economic theory costs may be imposed upon future generations –

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[45] Pigou included a term to measure the social cost of a market exchange, thereby including a potential externality (negative or positive) in the price calculation of a good (called a Pigovian tax), which would thereby impact levels of consumption and production – ensuring that a good which produces a high level of negative externalities (*e.g.*, pollution) would be consumed less.

individuals and groups who are not presently represented in the decision-making process

(Zeckhauser, 1973: 112-116). Ultimately, ecological economics is effective when it is an

interdisciplinary approach and analyzes or measures the complex, interdependent

relationships among the economic, ecological, and social in terms of the concepts of

many disciplines; ecological economics is neither ecology applied to economics, nor

economics applied to ecology – but instead a trans-disciplinary systems approach, which

considers the entire global socio-ecological system and thereby contributes a holistic

systems approach to decision-making (Costanza, *et.al,* 1996b: 2-11). In this way, the

logic of market globalism may be combined with the valuations of a justice globalism to

ensure the best outcome for the governance over shared resources and common goods.

2.4.   Environmental Justice and Land Use Planning.

Globalization is a process that adheres to the hegemonic regime, and thereby part of a continuous social process that reflects the principles of classical economic organizations; however,

> a theoretical readjustment is necessary that acknowledges a connection between the primacy of the production structure and a dependency on a finite ecosystem for this production structure to be sustained (Kütting, 2004: 11).

The articulation between the economic and political logics reflect the political philosophy of a society; further, the current hegemonic position of the liberal perspective in the processes of globalization leads to a redirection of the dynamics of political economy: "politics is working on a new order, a new direction, a new articulation … they are merely reorganized into a multiplicity of local powers" (Autès, 1997: 232). Scott (1998: 47) states that

> localized processes of growth and development have actually been accentuated by globalization, and this is nowhere more apparent than in the case of those dense concentrations of capital and human labor now multiplying throughout the world in the guise of large metropolitan areas.

Scott (1998: 47-73) continues to explain that regional productive capabilities give metropolitan areas considerable competitive advantages in the system of market globalization, and thereby support increased, unabated growth therein – particularly in urban regions where there is a concentration of the essential functions (financial, political, cultural, etc.) of the modern global economy. City-regions, and the multiplicity of local powers within them, are an important part of the processes and activities of globalization.

Both geographic and social elements exist in these overlapping and interconnected systems; comprised of institutions, groups, and individuals, these systems are organized politically, economically, and culturally – governing simultaneously jurisdictions of the global and local levels (Pritchard, Jr. and Sanderson, 2002: 147-165). As a part of the world-wide social, economic, and political order, the organization of cities – both at the local and universal level – reflect the wider interests and relations; global city-regions simultaneously characterize the particular and the whole, at once exemplify the narrow and the broad. Modern city-regions are geo-political units where many social and economic activities and events occur within close physical proximity to each other (Scott, 2008: 4-13). Actors and agents compete to influence the social, economic, political, and geographical outcomes at once, resulting in land-use patterns that reflect local and global interests; Scott (2008: 6) refers to this complex phenomenon as the "urban land nexus." Because of the complex phenomenon of the urban land nexus, political actors at the local level have significant capacities to impact and to direct global policy – particularly policies over activities that concern the global ecological commons (Bulkeley and Betsill, 2003).

The unique socio-political role of urban areas in the processes of globalization warrants particular attention, namely in the ways that the political and economic systems are derived from and contribute to the socio-spatial processes of globalization. The framework of market globalization is supported by a network of urban centers – global cities – which serve as foci for the activities of the universal regime. It is in these centers

where shared identities emerge, and where the needs of citizenries and communities –

global, regional, or local – may be evidenced.

Economy and Geography

The institutional response to liberalization and urbanization is observed, and explained

thus: "while urban planning is certainly *produced* by capitalist society, it is by the same

token *contained* by capitalist society[46]" (Scott, 1980: 171). It is through the lens of land

economics in the neo-classical tradition, where benefits for the individual and the

collective alike in the preservation of amenities are identified,[47] which are the main

factors in the stabilization of urban land values; zoning, and other implements of policy-

making, are the chief political tools in stabilizing the utility of urban land (Ely and

Morehouse, 1924: 71-97). And since the processes of globalization are concentrated in

urban centers (Holton, 2005: 61), the position of urban governmental authorities as

significant actors at not only the local level, but also the global, is conducive for the

emergence of both cultural and political cosmopolitanism – by uniting at once cultural

and political-normative elements in the valuation of urban land utilization (Holton, 2009:

45-47). The WCED (1987: 235-255) describes the world economic system as one that

has become increasingly urban in the years since 1950; the growth of cities is both a

result of and contribution to the growth of the global economy. While political units

within city-regions may respond to economic forces to compete in the processes of

market globalization, the actors within these fragmented geo-political units may also

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[46] Emphases are the author's.
[47] Ely and Morehouse use the following criteria to clarify what is meant by amenity: "beautiful scenery, a pleasant neighborhood, congenial neighbors, and all other inducements which add to the pleasure and comforts of living."

forge collective identities to address problems of common-pool resources; since it is within the social realm that the spatial impacts of a market globalization are understood, it is through a citizen-driven political action to control, contain, transform, and redirect the ecological impacts and the geo-political processes of market globalization (Dierwechter, 2008: 44-61). Scott (2008: 16) identifies the surfacing of a new cosmopolitanism among urban citizenries to address the resultant political, economic, and social conditions: "an everyday cosmopolitanism that freely accepts an eclectic mix of urban identities and cultures as a perfectly normal aspect of modern life." We may turn to Scott (2008: 129) for an enlarged definition of citizenship to describe the changing geo-political reference points for global citizens; this understanding of citizenship could be described as "one that is in harmony with the unfolding new world system, would presumably ascribe fundamental political entitlements and obligations to individuals on the basis of their changing involvements and allegiances in given urban and/or regional communities." This is a reorientation of identity of the individuals; not only do citizens identify with the states within which they live, and the cities nested within, but also with the a global culture – often identifying concurrently with the local and the universal.

A shared culture among a global citizenry allows for a shared set of values; along with these shared values comes the perceived notion of the need for a shared approach to a common problem, be it economic, political, or social. The impacts of urban centers on both human economy and human ecology prove to be a great challenge which impacts all of the world's peoples, in both developing and developed states, and the attempt to identify solutions to these problems emerge at many levels and types of polities –

including the local. Half of the world's population currently lives in cities, and by 2050

seventy percent of the global population will be urban; it is urban areas where

populations and economic assets are concentrated (World Bank, 2010: 91). While

urbanization and globalization are positively correlated (Brenner and Theodore, 2002;

Sassen, 2001a, 2005; Scott, 2006, 2008, 2012), the terms of the socio-spatial flows

among the cosmopolitan units within the global system are "new experiments" of social,

political, and economic identities, formations, and organization. These concentration of

activity are being transformed by the processes of market globalization, whereby they are

emerging as regional economic and political actors in world politics; Scott (2001b) refers

to these regional social formations as 'global city-regions,' whose observable activities

> usually entail some sort of effort to construct interterritorial bases of collective
> action and identity especially in circumstances where adjacent territorial units
> possess some degree of functional interdependence, but have hitherto been
> administratively or politically separate. The basic objective in these cases is
> almost always to build regional political competence, and to bring together
> fragmented territorial units, formally or informally, in pursuit of mutual aid and
> advantage in the face of the mounting challenges that globalization is now
> bringing to the fore at the local level (Scott, 2001b: 4).

Therefore, while the study of global cities entails exploring the relationships between the

metropolis and the global system, the study of global city-regions entails exploring the

relationships among the geo-political units within the regional social formation (Hall,

2001; Keating, 2001; Sassen, 2001b; Scott, *et.al,* 2001).

It is in this context that environmental governance and policies for sustainable

development consider the impacts of urban centers on both ecology and economy – as a

political actor that contributes both benefits and detriments to the well-being of the global

community. Metropolitan areas have become and are continuing to be the predominant

development pattern for human settlement; even as these urban areas contribute

significantly to economic development and global growth, they are predominantly

located in coastal areas and at the confluence of rivers – geographic areas that are

particularly hazard-prone in the face of new weather patterns associated with climate

change (World Bank, 2010: 91). City-regions are at once the centers for economic

growth and environmental degradation in the post-modern global system; by turning to

new political actors at the local and global levels, a new policy paradigm that supports

flexible, place-based solutions to these problems may support an integrated approach to

sustainable urban development (Panayotou, 2001). In attempting to identify potential

solutions to these circumstances, the processes of global environmental governance

(which in this study includes the collaboration of political and social actors who

recognize a shared ecological concern and solutions and who identify efforts to achieve

desired shared outcomes) look to the policies and practices of sustainable urban

development. ICLEI—Local Governments for Sustainability is an international network

of local governmental authorities which has created a system to quantify the global

problem of urbanization upon the climate, and an approach to resolve it (Bulkeley and

Betsill, 2003).

In his early work on human ecology,[48] Geddes introduced concepts such as conurbation,

megalopolis, and world-city to initiate the use of precise language to describe human

settlement patterns and the quality of the urban environment (Stalley, 1972: ix-xiv); most

important in the contribution of the development of these human settlement patterns in

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[48] While I cite the 1968 American publication of Geddes' work, *The Evolution of Cities* was first published in Great Britain in 1915.

the post-industrial era[49] were the impacts of an international system of free enterprise and

of mobile industry upon the logical pattern of land use: contributing to the

decentralization of industry and to the centralization of management at once, and thereby

the growth of the commercial metropolis as administrative capital (Hall, 1966). In urban

space, more so than anywhere else within the global system, economic processes result in

a complex conceptualization of land and land-use; these decisions are a result of

integrated interactions and institutional mechanisms among interested agents – private

and public,[50] alike – to prioritize socio-spatial outcomes (Scott, 1980: 1-23). Even still,

urban centers are both economic and ecological entities; while urban economies may be

theorized as dependent sub-systems of the global ecology, sustainable urban development

(SUD) occurs when the interconnected activities of the economic and ecological systems

use and maintain natural resources at balanced rates (Dierwechter, 2008: 61-68).

Wirth (2006: 34) defines the city by identifying the elements of urbanism that are unique

in their impacts on the ways that human beings live and associate with each other; he

concedes that the fundamental characteristics of this definition of city are generalized: "a

relatively large, dense, and permanent settlement of socially heterogeneous individuals."

Wirth's sociological approach to the city explores the activity and behavior of social

groups, and his theory of urbanism establishes a systematic set of analytical tools to study

and to measure the characteristics of cities – thus allowing us to account for similarities

among and differences between cities. Wirth applied three interrelated perspectives of

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[49] Hall refers to the later period of the industrial era, or the early post-modern era, as the 'neotechnic era' which relied upon the new inventions and technologies of the late 19th century (such as the electric circuit, the telephone, the radio, the oil well, etc.) for economic growth and expansion.
[50] Not only were the offices of the banking and financial institutions headquartered in the commercial metropolis, but so too were those of railways, public utilities, inter-governmental organizations, etc.

the impacts of urbanity on human activity to develop his empirical method: (1) geo-physical and ecological structure of cities; (2) social structures, institutions, and relationships among individuals within cities; and (3) the attitudes and ideas that impact collective behavior among city-dwellers. Fundamental to this approach is the study of the ecology, social organization, and collective behavior of urbanites.

Social Policies in Global Cities

The exploration of how social policies in global cities emerge informs us of the relation between political sociology and political economy, namely how socio-political decisions are made within a global system whose value assumptions are predicated on an economic logic. By viewing the ecology and society as one interactive entity, whereby the management of social and natural conditions may have notable impacts on the overall global system, including the institutions and individuals of which it is comprised, a more holistic approach toward land-use and social policies, by which prescriptions for and predictions of outcomes, may be devised (Scheffer, 2009: 13-111). In the management of natural environments, the prevailing regime's expressed process of valuation and prioritization encounters crises of decision-making over resources for whose values may be difficult to measure and for whose depletion may be irreversible. In his discussion of the civic epistemologies of indicators of sustainable development, Miller (2005) identifies five classifications[51] through which communities establish concrete terms for understanding and addressing concerns over sustainable development; while the

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[51] Miller's (2005) five civic epistemologies of indicators of sustainable development (and spatial frame) are: Green Gross Domestic Product (nation); Local Indicator of Sustainable Development (community); Metropatterns (metro region); Non-Governmental Organizations (globe); and Inter-Governmental Organizations (globe).

epistemologies range in scale from global to national to regional to local, they all seek to define the problem and outline solutions. Reflecting the sometime contradictory trends in the organization global system, *i.e.* integration and decentralization, these civic epistemological approaches are at once global and local in nature, often balancing universal and case-specific approaches for geo-political communities to address ecological problems (Miller, 2005); further, as is characteristic of the processes of globalization, there would be levels of overlap and interconnectedness among these five approaches.

Urban planning is an activity that involves public regulation that prioritizes physical and social functions within a designate geo-political space; because it manages common-pool resources, urban growth management is a decision-making mechanism that devises collective plans (Dierwechter, 2008: 43-68). Collective choice assists in the management of finite natural resources, which include forests, water systems, and the climate system; these natural capital stocks are common-pool resources (Heal, 2010: 1-9). Scott (2008: 32-36) tasks public policy and urban planning with the resolution of problems of collective action, the delivery of services, and coordination of activities – among which include decision-making of benefits and over resources (natural or otherwise); these institutional services are all qualified by the processes of market globalization. Among the concepts associated with the management of natural resources within interactive social and natural systems, maximum sustained yield (MSY) denotes the idea of sustainable development which seeks to strike this balance between growth and conservation; decision-makers seek to accomplish this by overcoming resource conflicts,

by defining value preferences, and by avoiding potential uncertainties (Carpenter, *et.al*, 2002: 173-193). To support sustainable urban development, local governmental authorities should devise and implement overarching policies which coordinate among the following policy sectors: land-use planning, transportation, and energy management. Through a coordinated approach, municipal governments and democratic citizens may identify the goals, policies, and practices to halt and reverse negative externalities upon the ecology, and thereby safeguard well-being and living standards for present and future generations (Bulkeley and Betsill, 2003: 171-185).

Looking to theories of economic growth, theorists use the concept of steady state (where growth of population and capital converge) to understand the relationship between development and well-being (Ray, 1998). The dynamics of economic globalization lead to dispute over the *status quo* of the policies of local governmental authorities: there is contestation over the balance among groups of citizens, over fiscal and financial outcomes; this socio-economic restructuring results from a perceived inter-city competition for scarce resources among urban centers (Moulaert and Scott, 1997: 8-14). According to Polanyi, economists traditionally study the economy as if it were differentiated from society, rather than embedded in it; they have "bracket[ed] out" society and history from conceptualizations of economy and that they measure market exchanges as separate from culture and polity (Holton, 1992: 17-18). But the policies of global city-regions are bound by the resources, demands, and processes of the universal system. Prugh, *et.al,* (2000: 15-37) point to three functions of the complex global ecosystem that are essential to sustain the *biosphère*: (1) the provision of resources; (2)

the performance of ecological services; and (3) the absorption of waste. These activities

of the global ecosystem are essential to the human economy, which grows within the

bounds and limits of the finite global ecosystem; beyond which the amount of natural

capital dwindles at the expense of manufactured capital, and after which further

economic growth would actually decrease the well-being of current and future

generations[52]. Standard, neo-liberal economics fails to accurately reflect the process of

conversion of raw materials into pollution by-products, and thereby ignores the true

exchange between the economy and the environment (Daly, 1996: 33-38). The observed

expansion of activities of the global economy impacts the global ecology in ways

heretofore unseen and unmeasured; as market globalization has increased economic

interdependence, so too has it led to ecological interdependence (WCED, 1987: 4-8).

Technology and Ethics in Environmental Planning

Daly (1973b) identifies the human economy as a subset of the steady-state ecosystem;

further, in Daly's system moral values must be specified to attain a harmony to support

the steady state and to achieve balance by maintaining levels of constancy in population

and stocks. Daly defines growth as

> an increase in the physical scale of the matter/energy throughput that sustains the
> economic activities of production and consumption of commodities ... [and] a
> quantitative increase in the physical scale of throughput, ... [where] throughput
> begins with depletion and ends with pollution (1996: 31).

Daly posits ecological sustainability will not be guaranteed by market forces; the market

measures and quantifies the scarcity of supply of goods or resources, in relation either to

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[52] This analysis is based on the capacity to renew or restock depleted resources; it when the consumption
rate of natural capital (which includes stocks of forests, fisheries, ambient air, and fresh water) is greater
than the regeneration rate (Prugh, *et.al*, 2000).

other goods or to the ecosystem; thereby, markets do not serve as indicators of

sustainability. He describes a steady-state economy (SSE) as one where

> the aggregate throughput is constant, though its allocation among competing uses is free to vary in response to the market ... [and] the constant level of throughput must be ecologically sustainable for a lung future for a population living at a standard or per capita resource use that is sufficient for a good life (Daly, 1996: 31-32).

Balance between economic and ecologic systems requires a multi-disciplinary strategy

that offers a series of long-term steps to deliver a common vision of a sustainable society;

these socio-ecological principles are successful if they consider both economic

efficiencies and ecological limits within the complex socio-sphere (Holmberg, *et.al,*

1996: 21-45). In order to accomplish the goal of sustainable development, a

comprehensive wealth measure must be devise which accounts for assets beyond the

traditional scope and which includes natural resources and environmental damage in its

method of asset valuations (Arrow, *et.al,* 2010: 92-113).

The policies of the dominant global regime (i.e. policies that always prioritize growth)

can be labeled as 'growthmania,' and are an unsustainable approach in a system with

limited and exhaustible resources (Daly, 1973b). Two problems emerge in a regime that

does not monitor the patterns of growth to ensure that they are sustainable: the natural

infrastructure upon which the socio-sphere systems depend may be destroyed, and the

natural resources that support the eco-sphere may be depleted; both may have significant

impacts on human welfare. To be sustainable, an economy must increase its total value

of capital stock, which includes built capital, human capital, natural capital, and the stock

of environmental assets (Heal, 2010b: 1-9). 'Growthmania' is the reason for the over-

consumption of food, water, meat, and commodities – where the consumption of these

resources exceeds the rate of population growth. This growth model impacts both the systems of ecology and of the supply of finite resources. If continued at this rate, finite and degradable resources may be irreparably depleted and may be permanently degraded, such that current and future generations will be considerably worse off (Gore, 2013: 143-145).

The Earth's critical resources (fresh water, raw materials and energy fuels, oceanic protein supply, waste absorptive capacity), which support an interconnected and interdependent international economic activity; from the 1970s, "the expansion of economic activity is beginning to press against the limits of the Earth's resources, locally and globally"—perhaps leading to an ecosystem that can no longer absorb the waste by-products of the human economy (Brown, 1973: 158). Social or natural systems may shift from one point of stability to another, which is a characteristic of the complex, interconnected global systems of natural ecology and human economy; interacting systems are characterized by their shifts, which may be reinforced or undermined by external factors, and which may result from social or natural causes (or both). Scheffer (2009: 5-50) labels these shifts as critical transitions, where systems respond to internal and external dynamics to settle into points of equilibria that correspond to societal and natural carrying capacities.

The policies of growthmania, i.e. the dominant regime, look to solve the problems of pollution and depletion by turning to wealth and technology, by purchasing and executing clean-up efforts (Callan and Thomas, 2007). The policies of the hegemonic regime –

even those of an international environmental policy – look to technology, and technical

solutions, to address environmental problems (Brand, 2010). But Geddes purports that

the social role of technology is to serve people, not *vice-versa*; further, he looks to

democratic citizens to contribute to the resolution of concerns of overproduction and

decay, purporting informed participants in society will prove to be altruistic when

resolving social problems (Stalley, 1972: 16-17). While the need for technology is

important to address environmental concerns and crises, so too is the role of expanded

political participation of citizens in policy-making and resource planning (Fischer, 1996:

485-97). Social movements theorists argue that the counter-hegemonic social justice

movement seeks to make changes to these neo-liberal policies of unabated growth

(Steger, 2009). The World Commission on Environment and Development (1987: 8-9)

lists both technology and social organization as relevant in developing global policies for

equitable growth and development; further, it argues that sustainable development can be

accomplished on a global scale only through political systems that are democratic and

that reflect the peoples' will. While technology may be an important input factor to

improve the production of quality goods and improved circumstances, it is the

participation of cosmopolitan citizens in governance and decision-making that is

necessary to determine which policies best reflect their values and preferences.

There are two notable economic models to predict the workings of the steady-state

system and the human economy thereof (the Solow and Harrod-Domar models), each

based on different assumptions of the availability of capital. However, neither model

sufficiently defines 'long-run growth' as bound by the ecological system; these models

assume a capacity for unfettered, continuous growth (Ray, 1998). The position of neoclassical economics and market globalization on a steady state purports that physical parameters (wealth and population) should be adjusted based on non-physical parameters (demand and technology); Daly's (1973b) definition of a steady state presents a paradigm shift from the dominant regime and assumes the reverse: nonphysical parameters should be adjusted based on physical ones; his definition of steady-state economy combines the concepts of 'constant stocks' and 'minimal flow of throughput:'

> an economy in which the total population and the total stock of physical wealth are maintained constant at some desired levels by a 'minimal' rate of maintenance throughput (i.e. by birth and death rates that are equal at the lowest feasible level, and by physical production and consumption rates that are equal at the lowest feasible level). (1973b: 152)

According to Daly, achieving a steady state of this kind is not only a moral choice, but a physical necessity. Daly justifies the need for a steady-state economy because the world is finite, and human ecology is a subsystem of the complex ecological system; he posits that ultimately the economy must become a steady state to avoid the depletion of its resources. While the steady state not need be frozen at any level, it would respond to evolving values and technologies; nonetheless, "[a steady-state economy] must be the norm" (Daly, 1973b: 154).

But part of the decision-making calculus includes considerations of the negative externalities of growthmania; "[p]olitics and morality are acquiring priority over expert rationality" (Beck, 2010: 66). The World Commission on Environment and Development (1987: 147-167) argues that not only are there economic and scientific

reasons[53] for the conservation of the world's species and ecosystems, but that there are moral and ethical reasons as well; the Commission states that conservation of nature "is part of our moral obligation to other living beings and future generations" (1987: 57). To address global ecological concerns, traditional international relations among state actors will be insufficient alone; action at the level of the local government authority it necessary to support state action, if not to assume responsibility where nation-states do not (Bulkeley and Betsill, 2003:32-55).

To describe the political processes that impact urban policies for sustainable development, the planners' triangle illustrates that social priorities (growth, social justice, and environmental protection) emerge alongside economic conflicts: property conflict, resource conflict, and development conflict (Figure 3). The property conflict emerges in prioritizing growth or justice, wherein competing actors seek to maximize their own well-being; the resource conflict emerges in prioritizing growth or environmental protection, wherein actors re-evaluate natural resources; and the development conflict in prioritizing social justice or environmental protection, wherein actors balance environment protection and income equality. The latter two conflicts, the development and resource conflicts, involve devising tradeoffs in the protection of the environment in relation to expanding trade and industry (i.e. growth), and in the protection of the environment in relation to burgeoning impoverished populations (i.e. social justice) (Campbell, 1996: 2-7). Urban politics exhibit both competitive advantages and common interests; through a process of collective choice consensual policy solutions may be identified and implemented

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[53] The WCED's report lists the following as contributing billions of dollars to the world economy: genetic material in the forms of improved crop species, new medicines, raw materials, and wildlife-derived materials.

(Keating, 1991: 1-12). Global cities, because of their interconnectedness to geo-political

units within their regions and beyond their states, position them quite uniquely within

world politics – as socio-political centers of economic and cultural activity, which are at

once local and global in their capacity to identify and deliver solutions to emergent

problems. Further, it is within these geo-political spaces where regulation over goods of

the global commons may contribute to environmental governance.

[FIGURE 3 HERE]

Urban Planning and Market Globalism

Fainstein and Fainstein (1996: 265-282) reintegrate planning and political theories by

typologizing city planning theory into four approaches[54] and their corresponding political

theories, identifying incremental planning and its associated political theory of liberalism

as the *de facto*, dominant planning model; however, while incrementalism is the

prevailing planning model, they contend that it is not truly planning as they define it:

"future-oriented, public decision making directed toward attaining specific goals"

(Fainstein and Fainstein, 1996: 265); liberal theory relies upon the invisible hand to guide

it and incremental planning negotiates the interests and conflicts of atomized political

actors. The competition for resources (scarce, urban, or otherwise) in a free-market

setting is one of the ideological tenets to which economic globalization adheres

(Moghadam 2009: 20-24). Urban institutions play an essential role in creating policy

strategies, particularly in response to the many interests that seek to influence

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[54] In addition to incremenatlism, the remaining three planning models (and their associated political
theories) are: traditional planning (technocratic theory), democratic planning (democratic theory), and
equity planning (socialist theory).

development priorities – be they sometimes discerning and other times indiscriminate, qualified by temporal and spatial factors (Scott, 2008: 33-36). Friedmann (2002) devises two urban development models, the city-marketing model and the quasi city-state model, to account for the economic development policies of post-industrial cities. The city-marketing model reflects the practices of urban centers under the regime of market globalization, where growth maximization is the scope of development and competition is the mode of development; the quasi city-region model, in contrast, presents an urban development policy where multiple objectives (including those with social and environmental outcomes) is the scope and collaboration. Market globalization, thereby, can be evidenced in the evaluation and re-evaluation of the acquisition and use of resources – of urban ecologies or in general. It is this way that concrete terms for the environmental governance may be evidenced at the local level; be devising policies over the management of land-use, transportation, and waste, local governmental authorities develop regulatory and institutional structures that incorporate global environmental values and reflect a form of sustainable urban development.

While the impacts of the hegemonic regime of economic globalization on urban society (i.e. competition between political actors for resources) is inherent to the tenets of the capitalist model, there is also an alternative in an era of globalization: "an integrated, multi-dimensional urban policy" (Moulaert and Scott, 1997: 14). In the context of contested resources and strategies in an incremental planning approach, alternative plans to those of the dominant ideology serve a threefold function: to keep a democratic public informed of alternative choices; to ensure decision-makers win political support from

competing democratic citizens; and to incentivize political actors to produce competitive plans (Davidoff, 1996: 305-18). Thereby, pluralism in planning, by responding to and balancing the demands of political actors and interest groups, encourages full participation and inclusion in the scope of city planning. The modern view of urban planning in politics is one where the decisions spring from the community itself; the role of the planning institutions is to facilitate and aid a planning process – incorporating citizen value preferences and priority interests (Levy, 2003). By involving constituents and citizens, local governments may 'leverage' support of national and international agencies to support policies for sustainable urban development (World Bank, 2010: 333-341).

In the urban setting, the exclusion of any interest group threatens political stability; yet each group seeks to further its goals: economic interests seek growth, political interests seek integrity, and community interests seek rights (Moulaert and Scott, 1997: 14). Nonetheless, it is at the local and regional levels where political actors may most accurately assess development opportunities; what may be successful growth strategy in one city may fail in another. It is through a process at the local level that ensures the local conditions and priorities[55] are considered and reflected in the plans for development (WCED, 1987: 247-248). Scott (2008: 33-36) describes the decision-making process of urban centers as consisting of two interrelated lines: a corrective response to breakdowns of industrial urbanism; and a collective action for services.[56] Both of these interconnected lines are important for policy-makers in addressing growth and

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[55] These include needs, customs, urban forms, social priorities, and environmental conditions.
[56] As Scott identifies pollution as a 'technical breakdown,' it may be concluded that ecological conservation would be a service demanded by a democratic public.

conservation in the urban space. Environmental policy concerns may be addressed only when a community has a coherent, shared vision that outlines the steps to identify and to implement solutions (Costanza, *et.al,* 1996b: 2-4). Further, Prugh, *et.al,* (2000: xv) argue that it is at the community level where competing visions are tested and modified, and that to achieve sustainable urban development requires wide-ranging participation in an engaging political process: "[d]irected sustainability will come about in neighborhoods or not at all."

Ridley and Low (1996: 205-7), in their consideration of the deterioration of the environment, identify a planning approach that reflects Ostrom's (1990) discussion of the tragedy of the commons: there is an alternative to privatization of common resources (which is supported by the tenets of market globalism) to solve the 'commons' problem. At the global level, regimes by sovereign states could be established to promote cooperation and discourage violations; at the local level, stable communities which have concerns for the future could implement and enforce sets of rules to pursue the collective interest. By reorienting the costs and the benefits to incentivize actions that support the collective's goals, international and local laws may effectively avert the tragedy of the 'aerial commons.'

2.5.   **Conclusion.**

The emergence of a universal system in the post-modern era has had, and continues to have, significant impacts on global society, polity, and economy. Neo-classical economic philosophy has been the primary tenet of the dominant regime of market globalization, prioritizing economic growth and expansion over many other values. Social movements reflect political action by individuals and groups in an effort to redefine the value assumptions of the dominant regime, and thereby modify its processes. Participating in global networks to exchange ideas, information, values, and technical expertise, cosmopolitan citizens and environmental movements have become partners with sub-state and regional actors in taking political action over the environmental commons and against the climate crisis. Wide arrays of agents participate in an environmental movement to re-define socio-spatial and geo-political frameworks, and thereby participate as cosmopolitan citizens in global environmental governance.

By considering the impacts of the logic of market globalization on the processes of institutions and structures – at both global and local levels – we can understand how decisions are made, and how organizations and collectivities may seek to introduce alternatives which more accurately reflect their value preferences. This is particularly true within the geo-political spaces of global cities, which are significant centers of activity for global affairs.

3.   **Globalization, City-Regions, and Sustainable Development.**

The literature on cities as social entities traces to the early decades of the twentieth century, when the field of urban sociology emerged to identify the relationship between human ecology and human economy and to describe the geophysical manifestation of that relationship. In addition to the study of the political economy among actors within cities as well as the dynamic of activity between discrete urban units, social scientists seek to explain the impacts of cities on human behavior. Among them include the role of economic, political, and social activities, and their bearing on the patterns of land-use, the configurations of socio-spatial development, and arrangements among geo-political units (Hall, 1966: 20-28).

In 1972, The United Nations initiated (or responded to) an international discourse on the environment, by holding the UN Conference on the Human Environment in Stockholm, Sweden (Stockholm Conference); it was the first time a framework for a structure of global governance to address environmental issues – the Stockholm Conference legitimized the issues of the environmental movement within the forum of world politics, forever changing the terms of the debate over the importance of ecology in global governance, and led to the formation of the UN Environmental Programme (UNEP). In the years since the 1972 Stockholm Conference, the affects of human activity on the environment – particularly those activities which cause climate change and global warming – has become the most prominent global environmental issue; it has led to political and policy action at all levels of governance, from international to local (Harris,

2011: 107-118). In 1992, the 'Earth Summit' in Rio de Janeiro, Brazil (also called the 'Rio Conference'), was attended by one hundred (100) heads of state – ninety-eight (98) more than the Stockholm Conference; at the Rio Conference, an agenda for sustainable development was outlined, identifying environmental protection as a part of development rather than a limitation upon it (Morton, 2011). At the world Earth Summit in Rio, more than 150 states signed the *United Nations Framework Convention on Climate Change* (UNFCCC), whose signators agreed to stabilize greenhouse gas concentrations in the atmosphere to further prevent the harmful effects of human activity upon the ecosphere; in 1994, international protocols were developed to implement the adopted goals of the UNFCCC[57], although this proved difficult because several nation-states (namely, the United States and China) would not forgo their sovereign interests of continued growth in the face of a common problem (Bulkeley and Betsill, 2003: 32-55).

Over the years, the United Nations has led the way with a number of initiatives and programs to halt the effects of climate change – particularly in acknowledging and supporting the roles of sub-national and non-state political actors in global environmental governance. While the UN Environmental Programme (UNEP) has been the 'lead' agency for international environmental conventions, the UN Educational, Scientific, and Cultural Organization (UNESCO), the UN Development Programme (UNDP), and the Food and Agricultural Organization (FAO) have also addressed global concerns for sustainable development (Keck and Sikkink, 1998: 121-164). Even though there has

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[57] The UN Framework Convention on Climate Change (UNFCCC) seeks to advise on and implement conventions to address the scientific, social, and economic concerns of climate change; the UNFCCC consists of a complex, internal hierarchy of relevant and related conferences, boards, committees, working groups, bodies, mechanisms, and arrangements to address this concern.

been progress by the UN, the EU, and their member states in promoting international environmental policies, proposed negotiations, conventions, and protocols have not been entirely successful; in light of these difficulties, there are courses of action that political actors may take toward environmental governance (Ott, 2001). In the absence of international and federal action to address the climate crisis, elected officials and policy-makers acknowledge the imperative for local and municipal governments to take action (Wheeler, 2008: 484). Therefore, while the traditional regime in the era of market globalization attempts to manage the global ecological commons, it increasingly needs non-state and sub-state partners (IPCC, 2013).

Environmental Governance and City-Regions

In addition to negotiating the creation of the UNFCCC at the Rio Conference, state and non-state actors identified the need for plans at local levels to address sustainable development; this was embodied in *Agenda 21*. A series of goals were outlined in *Agenda 21,* a document that identified priorities for world-wide growth that are at once supports ecological sustainability, socially equity, and economic development. With the end of the Cold War and its polarizing geopolitics, this document reflects a promising cooperation among nations and states (Shabecoff, 2000: 155-158). Alongside traditional international activities, *Agenda 21* introduced climate change politics at the local level; specifically, Chapter 28 of *Agenda 21* called for local authority initiatives in support of fulfilling its objectives. The approach that emerged from *Agenda 21,* which argued that the local level is the most appropriate jurisdiction to bring about policy action to reduce the emissions associated with climate change, is referred to as *Local Agenda 21* (LA21);

it contributed to a new localism to address global concerns over the shared conditions of

the ecological system (Bulkeley and Betsill, 2003). Accompanying the processes of

market globalization is the rise of a new regionalism, which "stands in opposition to the

view of the world as a borderless space of flows that is sometimes set forth in discussions

of the future course of international development" (Scott, 2001b: 1); while the processes

of globalization are in many ways unimpeded by socio-spatial boundaries, they cannot be

void of the geopolitical realities of social regional formations. As this shows, cooperative

arrangements among supra-national, national, and sub-national governmental authorities

result in formal and informal exchanges among democratic political and economic units;

these institutional arrangements are in response to global processes and collective

initiatives that reflect preferred political or economic performances – with an increased

perspective on the role of regional political economy (Scott, 1998: 137-143). Certainly

the rise of the city-region as the predominant settlement pattern within which the majority

of the world's population lives (*The Economist, 2010b)* impacts not only social and

cultural activities, but also political and economic.

The socio-spatial phenomena associated with market globalization foretells of the rise of

the region state in global affairs; the region state is "small enough for its citizens to share

certain economic and consumer interests but of adequate size to justify the

infrastructure—communication and transportation links and quality professional

services—necessary to participate economically on a global scale" – at this size, a region

state in most cases is a sub-national unit the size of a large metropolitan area (Ohmae,

1993: 80).[58] Because of the characteristics of these political units, they are at once focused inward and outward, both local and global in their perspective. As discussed by Bulkeley and Betsill (2003), there exist networks of political units of this type and size which constitute a form of global environmental governance. For example, the Committee of the Regions (CoR), which must be consulted by EU institutions throughout the legislative phase, represents the interests of cities and regions in the European Union. The CoR consists of 353 members of regionally and locally elected representatives when taking political or economic action in a set of policy areas, two areas of which include 'environment, climate change, energy' and 'economic and social cohesion, social policy;' in 2013, the Committee of the Regions identified top five priorities, of which includes engaging citizens and debate in Europe – reflecting the strong and continued importance of civil society in cosmopolitan democracy (CoR, 2013). This is one example where a network of regional political units contribute in concrete terms toward the regulation and governance over environmental concerns.

All of the world's economic and social interactions occur within the network of urban settlements; the primary activities that take place within this network reflect the tenets of the global regime: allocation of resources, production and sale of goods and services, investment in and application of technologies. The nature of these activities – whether they grow or shrink – is dependent on the position of the urban center within the global

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[58] Ohmae (1993) describes region states as tending to have a population between five (5) and twenty (20) million inhabitants – smaller than many sovereign states, and much smaller than supra-national IGOs.

system; this has a direct impact on the cities' domestic economies, and vice versa[59] (WCED, 1987: 243-248). These processes are reciprocal; not only do they rely on the administrative and economic activities within urban centers to expand, but the restructuring processes of neoliberal globalization also have significant impacts on the post-modern city (Soja, 2000: 192-208). The structures of the institutions and regimes of neoliberal globalization affect the shape of cities both today and into the future (Preteceille, 1997: 219-221); because past patterns of urban growth reflect the priorities of market globalization, it is projected that future patterns will also: "future growth …will occur in large, multijurisdictional, areas influenced by the global economy—or city-regions" (Dierwechter, 2008: 6). A series of specific developments in the urban landscape is a result of the changes of the world economy: as shifts are observed from an international economy to a global economy, a restructuring ensues which reflects changes in industry, technology, and communication; these changes significantly impact a small number of urban regions which are central nodes in the global flow of resources, goods, and services (Shachar, 1997: 18-21). These global cities (*e.g.,* New York, Tokyo, London, Paris, etc. (see table 3)) adhere to an urban hierarchy, based on their portion of the overall activity within the global economy: the share of MNCs that handle world trade, flow of capital, and financial markets. Under the conditions of an unabated neo-liberal global economic model, "a new regionalism is also becoming increasingly discernible … cities and city-regions are now starting to play a role as important economic and political components of the world system" (Scott, 2008: 15).

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[59] The position of a city within the global structure impacts its capacity to attract global capital, thereby supporting the growth its domestic economy; further, the strength of the domestic economy allows for investment in urban infrastructures to support economic growth, which in turn attracts global capital.

The emergence of these city-regions as global actors is discerned by a path that reflects the logic of market globalization. Following World War II, many advanced democracies adopted Keynesian policies which focused specifically on urban re-investment, and which reflected the continued significance of urban areas as both significant economic centers as well as notable concentrations of ill-adapted infrastructures (physical and otherwise); in the middle of the twentieth century, urban management policies reflected the duplicitous approach that considered urban centers at once the loci of the causes of and the solutions to problems at the local, national, and international levels (Scott, 2008: 32-40). Governmental actors, at both state and local levels, respond to the processes and trends of market globalization with policies and institutions to address these changing realities (Autès, 1997: 229-237). While states with unitary governments tend to have less power-sharing between the different levels of governments than do states with federal, in the post-war period both types of states identified 'regions' as the more efficient administrative geo-political unit for the administration of public goods and services – allowing for a direct response at the lower hierarchical level to local issues and concerns (Scott, *et.al,* 2001: 21-23). The socio-spatial patterns of the twentieth century reflect that of decentralization; for roughly the first half of the twentieth century the metropolitan pattern was contained within smaller densely-concentrated geographic areas[60], whereas in the second half of the century this pattern sprawled rapidly into a hinterland beyond the centers – contributing to concerns by citizenries over open space and environmental quality (Levy, 2003: 14-58).

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[60] Mumford envisioned this pattern of urban growth management as 'concentrated decentralization,' which incorporated Howard's garden city model and Geddes' ecological regionalism model.

To help understand how economic globalization transforms space, Holton (2005) identifies four types of spatial location (global, regional, national, local), and considers whether they are competing or inter-dependent. The traditional approach to understand the relationships between different spatial locations adheres to the tenets of market globalization, which posits that the global level predominates over the local; this approach perceives that the processes of market globalization undermine state sovereignty and local culture, as they adhere to the prevailing universal regime. These economic processes impact land markets, to which governance hierarchies respond with policy measures in two areas: provision of common-pool resources, and diffusion of socio-spatial externalities – which together ensure that collective benefits are adequately protected and equitably consumed (Dierwechter, 2008: 44-52). These changing processes result in a re-territorialization of the economy, of the polity, and of the city: the interpretation of urban territory in response to changing global trends reflects the political economy of the city (Autès, 1997: 230-241).

The globalization of economic activity and the processes of market globalization require a new conceptual architecture to describe its associated new organization structure; foremost elements of this new conceptual architecture are global cities and global city-regions (Sassen, 2001b: 79-85). In the post-industrial era of market globalization, the institutions of local and regional governance have become more sophisticated and more deliberate in their activities, expanding beyond their traditional sub-national political roles and engaging at greater rate and frequency in the machinations of global and local political economies – chiefly as flows among these processes become increasingly

blurred; thereby, the region offers global citizens a fundamental level of socio-political affiliation (Scott, 1998: 142-157). It is neither completely from below nor completely from above through which successful policy reforms will be realized, but instead effective political actions requires a balance of both (Scott, 2001). The impacts of globalization upon urban areas have presented urgent concerns, whose response has been a reconstruction of local participation, political identity, and global citizenship – reflecting the characteristics of the complex interconnectedness among the economic actors of market globalization (Scott, *et.al.*, 2001: 12-18). Bulkeley and Betsill (2003: 15-31) call the reconsideration of the roles of political and governmental actors as a 'new geography of governance,' where traditional hierarchical functions are redistributed upwards to inter-governmental organizations, downward to city-regions, and outwards to non-state actors; the result a reconfiguration of legitimacy and authority among political actors and governmental authorities in a complex system of global governance (see table 2). As a part of this new geography of governance, local governmental authorities seek to develop regulatory structures that respond to the demands, norms, and values of citizens, institutions, and structures – which are at once global and local.

[TABLE 2 HERE]

The systems of economy and ecology are also becoming increasingly interconnected at all levels: local, regional, national, and global; this interdependence results in a series of

causes and effects, whereby phenomena[61] in the economy impact the ecology and *vice versa* (WCED, 1987: 4-9). The impacts of policies of economic globalization promote increasing levels of growth, production, and consumption of goods and resources; because traditional approaches to political economy do not holistically integrate the environment into their analyses – and thereby neglect the impacts of ever-increasing growth on finite natural resources (and nature itself) – they fail to accurately assess the socio-economic impacts of environmental degradation (Kütting, 2004: 25-34). "[E]economy, polity, and culture are structured according to the world-system logic" (Holton, 2005: 56); if the global system is dominated by the tenets of market globalism, then this logic would sturcutre the regimes of the world's economic, political, social, and cultural institutions. Thereby, global cities are at once increasingly economically interconnected and increasingly politically autonomous within a new global system of market exchanges – reflecting an organizational logic that considers the externalities of the dominant global economic regime (Scott, 2008: 14-18). While this logic does not preclude state action in the face of climate risks – uncoordinated responses among states may fail to address the global nature of the climate crisis (Victor, 2012: 115-119). It is within this reality that global cities and city-regions seek to identity political alternatives to the logic of market globalism, when valuing common goods and implementing regulatory structures over shared resources.

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[61] These phenomena include a range of events and trends, including deforestation, overproduction, degradation, pollution, acid precipitation, desertification, droughts, floods, nuclear fallout, among others. Droughts and floods are identified as the disasters that result most often from the mismanagement of growth, increasing significantly in the decades since World War II (WCED, 1987).

The economic imprint of human beings on the world and its natural environment, i.e. the interaction between the socio-sphere and the *biosphère*, is now at a much greater order of magnitude than at any other time in history (Gowdy and O'Hara, 1995: 165). The use of energy resources, and their emission by-products, has significant impacts on the capacity for growth and development; the progress of global development is bound by energy limits. The concern over energy is two-fold: limits of the availability of material resources of existing energy sources; and thresholds on the capacity of the *biosphère* to absorb the by-products of energy consumption. Energy limits may be reached sooner than heretofore projected; the supply of energy is leading to the depletion of scarce fuel supplies, and the emission of acid pollution and carbon dioxide is leading to climate change (WCED, 1987: 57-62). "A long-term sustainable global society must have stable physical relations with the ecosphere,[62]" which entails balanced material exchanges between nature and society, and limited manipulation of the ecosystem; this requires growth that is constrained by a shared vision of acceptable activities within the ecological system, and through which a frame is defined for the discussion and evaluation of socio-ecological outcomes of policy choices[63] (Holmberg, *et.al,* 1996: 17-44). Increased urbanization as it relates to industrialization results in more severe climate events in metropolitan areas; cities are becoming much hotter than their hinter-lands, a phenomenon which meteorologists call 'urban heat islands' – as the predominant population group on Earth, urbanites are the most affected by the negative externalities of

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[62] Holmberg, *et.al*, 1996: 17
[63] The ecosphere (which contains the *biosphère*, the atmosphere, the hydrosphere, the pedosphere (the layer of soils), and the lithosphere (the Earth's core and mantle)) is defined as "that part of the Earth which directly or indirectly maintains its structure and flow using the exergy from the sun/space battery." The *biosphère* is supported by the other spheres. Together, these spheres are the foundation for the sociosphere (human society) (Holmberg, *et.al,* 1996: 21).

global warming (*The Economist,* 2010b). The complex interconnectedness between the socio-sphere and the ecosphere is of increasing relevance to citizens and decision-makers; the documented phenomenon of climate, or global warming, changed is defined thus: "an increase in mean annual surface temperature of the Earth's atmosphere, due to increases in atmospheric concentrations of greenhouse gases, such as carbon dioxide (CO_2), methane (CH_4), CFCs and nitrous oxide (N_2O)" (Bulkeley and Betsill, 2003: 1). The emissions of these greenhouse gases (GHGs), and other byproducts of human activity that contribute to climate change, are related to growth, development, and industrialization. Because more global citizens than ever are urbanites, it stands to reason that the externalities of the processes of 'growthmania' of market globalization are more acutely observed by cosmopolitan citizens; this is bore out in the analysis of Chapter 6.

In its report to the General Assembly of the United Nations, [64] the World Commission on Environment and Development (1987: 11-23) identified a series of recommendations in six areas of interconnected policy, which include a holistic approach among six policy areas: population and human resources; food security; species and ecosystems; energy; industry; and urban development. The Commission points: to the issues that emerge as increasing populations seek access to limited resources; to the moral and ethical responsibilities to conserve the *biosphère* and its species; to the need for a new energy structure for the twenty-first century; to the promise of higher productivity supported by anti-pollution technologies; and to the challenges urbanization pose for local and global populations. Arguing that these six policy areas cannot be treated in isolation of each

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[64] The report, *Our Common Future,* is commonly referred to as 'The Brundtland Commission Report,' named after the Chair of the Commission, Gro Harlem Brundtland from Norway.

other, the Commission urges political actors to overcome institutional gaps that prevent

coordination in these policy areas and to work collectively toward integrated policies for

a regime that supports sustainable development. The approach to environmental

problems in the post Brundtland-era questions the impacts of the policies of growthmania

on the ecology, while affirming the need for scientific reasoning and political reform to

address the issue; further, the Report reminded the global community that cities are not

only crucial economic centers, but also ecological entities that are dependent upon natural

resources for sustenance (Dierwechter, 2008: 61-64). Per the next section, this finding

brings into light the political and ecological roles of urban centers and city-regions in the

evolution of the global system.

3.1.   Cities and City-Regions in the Global System.

While early conceptions of a "world city" view *métropoles* as units within states, the understanding of the global city that I explore in this research project views the urban center to be part of a global network, albeit a singular component. While urban centers maintain distinct national characteristics, there are commonalities among cosmopolitan regions across the globe – and most certainly among those cities within liberal democracies (Keating, 1991: 36-43). While seemingly a paradox, cities, regions, and other sub-state spaces are of great importance in the processes of market globalization – their significance is not blurred or minimized by the deconstruction of space that accompanies the processes of globalization; either because of their endogenous institutional structures or their extra-local connections, city-regions are significant political and economic actors in global affairs (Coe, *et.al*, 2004). "In fact, rather than being dissolved away as social and geographic objects by processes of globalization, city-regions are becoming increasingly central to modern life, and all the more so because globalization has reactivated their significance as bases of all forms of productive activity" (Scott, *et.al,* 2001: 11-12). Since the late 1970s, social scientists and urban theorists have been studying cities as cogs in the process of economic globalization; this analytical approach explores the impacts of market globalization on the social and spatial formation of urban regions (Brenner and Keil, 2006; Bulkeley and Betsill, 2003; Dunning, 2000; Sassen, 2002; Scott, 1980, 2001, 2008, 2012).

An Historical Conceptualization of the City

It was not until the eighteenth century that 'cities' and 'socio-economic change' were

linked and studied together. Adam Smith's treatise on the capitalist system of

production, *Wealth of Nations*, categorized cities as centers of progress where

manufacturing and commerce create urban markets that serve as outlets for rural

production and that promote foreign commerce – important steps in the economic

development of a state (Holton, 1986). The term global city has its roots in a literature

that dates to the Scottish urbanist Patrick Geddes (1915: 46-59); he discusses the

economic roles of a great regional metropolis – identifying it as a "world-city" – upon the

state within which it is located, as well as upon the world-wide economic system. The

characteristics of world cities are centers of economic and political power, which have

large populations to support the 'democratic trading' among the industries of

manufacture, trade, communication, art, technology, research (Hall, 1966: 7-10). The

trajectory of the dominant cities of the budding global capitalist system may be traced

through history, starting with Venice of the 14th century to New York of the 20th century

– with the importance of industrial, financial, and economic institutions for a world-

economy's ascendancy; the distinction between 'the world economy' and 'a world-

economy' is thus:

> *[t]he world economy* is an expression applied to the whole world . . . *A world-economy* only concerns a fragment of the world, an economically autonomous section of the planet able to provide for most of its own needs, a section to which its internal links and exchanges give a certain organic unity (Braudel, 1992: 21-22).[65]

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[65] Italics by author.

As early as 1915, social scientists began to realize the growing linkages among cities in response to increased ties of economy and communication; Geddes (1915: 48-49) discusses the increasing links between New York City and Philadelphia, and an emerging conurbation along the northeastern coast of the United States – decades later identified as the megalopolis of the Northeastern United States, a complex string of interconnected conurbations stretching from Boston to Washington, DC. Much like other world cities theorists, he incorporate Wallerstein's (1974) core-periphery dichotomy and identifies hierarchical zones within a world-economy – each zone with a distinct societal, economic, technological, cultural, and political order, – with the dominant capitalist metropolis at the center; for Braudel, the machinations of the world system are miniaturized and compartmentalized into the space of a world economy, or a city-region. However, this binary structure to describe the complex political and economic patterns of the post-modern era will prove insufficient.

What Braudel identifies as a world economy – a fragment of the world economy – Sassen and Scott characterize as a global city-region: a geopolitical and economic unit that is at once autonomous from and interdependent upon the larger global political economy. The city-region is more than a mere fragment of the whole; global cities are connected to the complex network of socio-economic processes whereby decision-making at the geopolitical units of all levels simultaneously impact socio-spatial patterns at the local, regional, and global. This is consistent with the description of post-modern urbanization in the era of economic globalization:

> [p]ostfordist economic restructuring, intensified globalization, the
> communications and information revolution, the deterritorialization and

reterritorialization of cultures and identity, the recomposition of urban form and social structures, and many other forces shaping the post-metropolitan transition have significantly reconfigured our urban imaginary, blurring its once much clearer boundaries and meanings while also creating new ways of thinking and acting in the urban milieu (Soja, 2000: 324).

This conceptualization of the post-modern city, or what Soja (2000) calls the "post-metropolis," is a re-imagining of the cityspace that reflects the logic of market globalization; it acknowledges the impacts upon urban geography that result from the current form of universalism, which is characterized by a complex interdependence of global structures of economy, politics, and culture.

Political Sociology of the City.

Urban politics consists of two seemingly indistinguishable dimensions: problem-solving and conflict-resolution; while both relate to community-level decision-making, the former focuses on cooperation among interested parties, and the latter focuses on the control of scarce resources. Ultimately, the politics of cities are concerned with the geo-social patterns of growth and development, and the resources that are used or created thereby (Keating, 1991: 36-67). Scott (1980: 1-27) identifies the prioritization of development patterns that result from the discourse between the processes of urbanization and globalization; he calls this phenomenon the urban land nexus, which he describes as "a structured assemblage of *dense polarized differential locational advantages* through which the broad social and property relations of capitalism are intermediated.[66]" Sassen (2002: 103) states that "global cities are strategic sites for the production of [the] specialized functions to run and coordinate the global economy;" in response to the complex nature of the processes of globalization, urban centers provide a worldwide

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[66] Italics by author.

network of resources and talent to support its operational architecture. Under the regime

of market globalization, global cities are foci for economic activity: they attract

corporate investment, and become centers for flexible-manufacturing and service sector

activities; market globalization now more than ever takes the form of a global city-centric

capitalism (Scott, 2001: 4).   The study of global cities requires a standardized approach

for their identification; the characteristics used to classify global cities reflects their

position and role in the processes of market globalization: numbers of MNC

headquarters; concentration of global activities based on the socio-spatial division of

labor; propensity, namely concentration and intensity of activities, of exchange in global

producer services; and rankings of global financial centers. However, it is becoming

clear that even as their economic roles are increasingly important in global affairs, cities

and city-regions function in capacities beyond those solely relegated to the market (Hall,

2001: 59-72).

While cities participate in greater number and frequency within the global economic

system, they nonetheless maintain a local interdependence and economic power; further,

urban economies that participate in the processes of the dominant regime increase at once

their global interconnectedness and local interdependency – they simultaneously expand

without and differentiate within (Scott, 2008: 5-13). Sassen (1998: 195) states that

"[g]lobalization has transformed the meaning of, and the sites for, the governance of

economies;" focusing on the processes of market globalization, she points to two

contrasting conditions that are observed in global cities: placeboundedness and

virtualization. Placeboundedness refers to the benefits of the concentration of resources,

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while virtualization refers to the remunerations of the global integration of information technologies; these two extremes re-inform our understanding of governance of worldwide activity, of the role of place and policy frameworks in the global system, and of our understanding of place-centered governance. These two conditions impact the socio-spatial and geo-political characteristics of a global city; while global cities have similar features, with respect to their participation in the global market, they also have distinct features, with respect to natural and human capital.

While the similarities among global cities allow them to participate in similar ways within the world economy, the distinctions between them allow them to compete for market share of varying activities and functions. Cities and urban centers are the geographic units which have seen a concentration of the many different activities and functions (i.e. financial services, telecommunications, infrastructure) that support the growing and expanding processes of market globalization (Holton, 2005: 61). The relationship between the growth of cities and the expansion of production (agricultural, industrial, etc.) may be explored, both within and beyond the urban center; while cities rely on the production of agriculture and natural resources for growth, cities are also economic organs onto themselves; it is the contestation over its seeming contradictory state of autonomy and dependence that characterizes the global political economy of the city: the post-modern city is at once self-governing and self-directed in activities of reserves and stocks, yet at once dependent and reliant in functions of finance and resources (Jacobs, 1969: 6). Sassen (1998: xxxii-xxxiv) characterizes globalization as processes that generate contestation over values and resources which occur in urban

centers, wherein many of the actors and activities associated with these processes are located. At its most fundamental this competition is over the use of scarce land units, and Scott (1980: 135-172) tells us that only through interface between public and private interests will socio-spatial contradictions be resolved.

For policy-making over ecological resources, the growth of cities over the course of human history may be put into perspective for us: for the first ten thousand years, approximately ten percent of the human population lived in urban areas; today, more than fifty percent of the global population lives in urban centers – and that number jumps to nearly 80% in developed countries; it is projected that in 2050, almost 70 percent of the of the global population will live in urban centers (and 86% in developed countries!). The rapid, geographic expansion of cities results in their extension into surrounding rural and agricultural areas, and its associated impacts on ecology. The expansion of urban geography and population is integrally linked to the growth processes of economic globalization; over eighty percent of global production occurs within urban centers (Gore, 2013: 150-153). The WCED (1987) similarly points to the observed global trends of concentration of resource investment in urban centers and the emergence new, technology-supported patterns of economic and social interaction. Policy arenas that impact land use and urban form, such as infrastructure, waste management, transportation, and community development, are forced to respond to the processes of market globalization and the demands of global citizens at once; land-use planning and urban growth management together are significant policy tools to accomplish sustainable urban development (Dierwechter, 2008: 53-63). Due to global pressures upon these

centers of production and activity, it is the metropolitan region wherein a collective order emerges to devise both a program for both a sustainable development and economic competitiveness (Scott, 2001: 4-6). After all in its most fundamental sense, the city is a political actor that has geo-spatial, functional, and institutional characteristics: it is an urban agglomeration with distinct physical characteristics, which possesses a legally-constituted institutional capacity to manage (or govern) its defined jurisdiction (Keating, 1991: 1-12).

Global Political Economy of Cities and Regions.

Sassen (1998: 211-14) identifies an international grid of strategic sites, i.e. global cities, which support the processes of globalization. Among these cities, there can be identified a hierarchy, whose rankings reflects each member city's share of global economic activity; while this hierarchy of cities can be considered a direct result of the processes of economic globalization, the undertakings of these global activities would not be possible without a system of cities. Thereby, "economic globalization and the evolution of world cities are strongly interdependent and mutually enforcing" (Shachar, 1997: 21). This hierarchy, it could be argued, emerges when certain cities more effectively compete for global resources and thereby secure a 'higher' rank among its peer cities; this presupposes a convergence among global cities of interests of economic benefits that are gained through competition, as identified by the tenets of market globalization. Further, policy approaches and demands by constituents or communities may vary depending upon the governmental systems of the states or the localities (Preteceille, 1997: 222-5).

Scott (2006: 112) defines a regional economy as "a collective entity in the precise sense in that it is a domain of externalities and competitive advantages … [and] a social and political construction as much as it is an expression of atomized competitive relations." City-regions are entities who coordinate over large-scale, intra-urban networks and infrastructures, and who are the principle sites for economic activity and socio-political innovation (Scott, 2008: 133-145). Friedmann (2001) identifies cities and regions as collective actors in global affairs, and whose participation is increasingly significant in a globalizing era of interconnected actors and exchanges. The regional scale more accurately captures the complex interrelation between the patterns of globalization and urbanization, reflecting the economic activity and growth dynamics that occur within the cosmopolis under market globalization – capturing the socio-spatial frame within which their activities and exchanges occur (Sassen, 2001b: 79-87). It is not only the realm of economic competition in which cities take global action; local governmental authorities – and their member individuals, constituents, and groups – are increasingly assuming political roles in global affairs: it is in urban centers where democratic citizens may exert political influence to create legitimate decision-making authorities and shared global visions (Autès, 1997: 229-234). In the global economy, the system of cities is complex and dynamic, which allows innovation and change to spawn, percolate, and mature among its member-municipalities; this system may be intra-metropolitan or inter-metropolitan in nature, depending on the nature and scope of the political concern and the need for policy-specific responses (Alonso, 1973).

Global city-regions "increasingly function as spatial nodes of the global economy and as distinctive political actors on the world stage" (Scott, *et.al,* 2001: 11). Creative responses to external global forces are designed and implemented at the level of metro-region; political responses to economic and ecological concerns are increasingly devised and tested at the regional-level (Scott, 2001: 5-7). In contrasting global cities from global city-regions, and thereby clarifying the definition of the two, Hall (2001: 72) states: "If global cities are defined in terms of their *external* information exchanges, logic suggests that global city-regions should be defined in terms of corresponding *internal* linkages."[67] Therefore, the activities of global city-regions encompass the various internal exchanges – both formal and informal – to respond to the concerns and issues of market globalization. Scott (1998: 142-157) points to the surfacing of regional institutions[68] to address the interests of political, social, and economic agents – both of the global and local levels; in a global system rooted in and dependent upon the economic activities of urban centers, a global environmental governance which considers and responds to the value assumptions of the prevailing set of norms and processes would originate in the geo-political authority of global city-regions.

Global city-regions are socio-spatial entities, who function both in the realms of local and world politics and whose activities are re-orienting social scientists' understanding of spatial formation; principal cities alone no longer accurately reflect spatial organization in the post-modern era – but instead discernible units of local social organization are city-

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[67] Italics by author.
[68] Scott calls these institutions 'regional directorates' and lists some of their features: organizational coordination; legitimacy and authority; capacity to build institutions and establish policies; the warrant for intra-regional engagement.

regions and regional networks of cities.   This geo-political phenomenon is tied to the

processes of market globalization, whereby sub-state actors respond to economic

circumstances by redefining geo-political relationships among themselves and with other

political actors within their regions; city-regions thereby emerge as new and prominent

geo-institutional global actors, whose organizations reflect complex interconnections and

networks of economic activity and intergovernmental relations, at both local and global

scales and levels, which reflects a resurgence of region-based organization. This geo-

political and economic re-organization "can be observed in the forms of consolidation

that are beginning to occur as adjacent units of local political organization (provinces,

Länder, counties, metropolitan areas, municipalities, *départements*, and so on) search for

regionwide coalitions as a means of dealing with the threats and the opportunities of

globalization" (Scott, *et.al,* 2001: 11).

Urban Ecology in a System of Global City-Regions.

Friedmann (2001) describes the city-region

> as a functionally integrated area consisting of both a core or central city (or cities)
> … [and] a region that serves the multiple collective needs of this city and provides
> a space for its future expansion … They include urban satellites, reservoirs, water
> and sewage treatment plants, solid waste disposal facilities, oil and chemical
> complexes, electric power plants, open recreational spaces and amusement parks,
> wetlands, intensive agriculture, horticulture, and small livestock production,
> airports and harbors, industrial and warehousing districts, wholesale markets,
> tourist attractions, historic landmarks, and more … Within this complex of
> seemingly incompatible land uses, the traditional distinction between urban and
> rural ceases to be useful, as even remaining farms and allotment gardens are now
> routinely referred to as *urban* (Friedmann, 2001: 123).

This conceptualization of the city-region abandons any geopolitical or inter-governmental

barriers between spatial entities within the conurbation; thereby presenting a socio-

geographic organization that indicates not only economic exchanges (as understood

through market globalization) among actors, but cultural, political, and ecological ones as well.

In the response to the impacts of the processes of globalization, a countermovement to the dominant ideology and regime emerged which stresses the importance of ecology, place, and culture (Friedmann, 2002: 138). The economic restructuring that has accompanied neoliberal globalization has led central governments to be much less involved in urban development; in response to this, local governments have increasingly claimed economic development as a responsibility – perhaps at the expense of other social programs (Preteceille, 1997: 219-221). It is at the level of local authority, however, that political power and legitimacy are most capable of addressing the interwoven challenges of economy and ecology; local governmental authorities have the capacity to identify local conditions, and thereby determine innovative ways to respond through the management, control, and experimentation – ultimately demonstrating leadership in the development of policies for sustainable development. Thereby, central governments should support and strengthen local governmental authorities as they devise and implement solutions to ecological problems and economic opportunities (WCED, 1987: 238-250). Even as they are bound by the logic and processes of the universal system of market globalization, global cities comprise local political authorities; these geo-political units respond to global problems by developing and implementing local policies.

The political roles of urban centers in world politics are explored by theorists, social scientists, and organizations. Geddes (1915: 46-59) identifies the changing roles of cities in the face of an increasingly industrialized world whose trade barriers are disappearing; for Geddes, growing cities are not simply larger versions of their smaller selves, but new political and economic entities – which require a regional synthesis to fully explain their functions. The changing political roles of urban areas – and their increasing capacity as global political actors – contribute to the expansion of political spaces and legitimization of public action for both local and regional governmental authorities (Autès, 1997: 230-241). Scott (2008: 131) defines global city-regions as those which "consist of enormous expanses of contiguous or semi-contiguous built-up space, often focused on a central metropolis but sometimes even taking the form of juxtaposed metropolitan areas;" these regional systems engage the local and the global at once. Because the political units that collectively form global city-regions are local in nature, they struggle to address widespread problems of the universal system; in democratic societies, the decision-making processes contain participants of all levels and types: civil society, interest groups, local government, etc.

Sassen (1998: 211-12) points to policy efforts by local governmental authorities in response to the processes of market globalization; she identifies these types of political actions by municipal governments as comparable to those of a state's foreign affairs office, as "a variety of initiatives launched by urban governments which amount to a type of foreign policy by and for cities." Geo-politically fragmented conurbations are ill-equipped to respond to the challenges of market globalization, among them transportation

services and environmental protection (Scott, 2008: 142-145). The WCED (1987: 314-323) recommends a series of legal and institutional changes to address global ecological concerns, among which include the strengthening of existing regional and sub-regional organizations, and the creation of new ones, that encourage and support policies of sustainable development. *Cities for Climate Protection* (CCP), for example, is an example of global environmental governance of this sort; by recognizing that nation-states are not the only global political actors, CCP is a transnational network comprised of local governmental authorities which seeks to address the concerns of climate change through policy action at the levels of community and region (Bulkeley and Betsill, 2003).

Policies at the local level are intra-metropolitan in their form and effects; the distribution of the impacts of local policies is felt at the regional level of polity, especially for *métropoles intégrant* in the activities of the world economy. Economic, political, and social effects of policy impact some or all of the member-municipalities within the larger city-region (Alonso, 1973: 195). Scott (1998: 140) describes regions as an "assemblage of economic and social activities formed in response to the centripetal dynamic of agglomeration" – intimating geo-spatial hierarchies of both the urban and global scale, with networks among central-nodes and hinter-lands; it is in response to these changing socio-spatial sites within which arise regional political activities and local governmental initiatives. The social and economic dynamics of collectivity of the urban commons are intra-urban; the geo-political logic of global city-regions reflects the collective reaction of citizenries and interests in the contestation over the use and allocation of resources within the urban space (Scott, 2008: 4-13). The traditional socio-spatial order of the metropolis,

as defined by the Chicago School in the early industrial era, is no longer observed in the same way; the resulting structure is polycentric, rather than concentric: new business centers competing with central business districts (CBDs); internal and external edge cities result from advances in communication technology and limits to supply of land; specialized sectoral subcenters to support global market activities. While specialization leads to decentralization by function, the global city-region is highly centralized by scale (Hall, 2001: 73-74).

Along with the blurring of rigid hierarchies among actors that accompanies market globalization, geo-political boundaries among authorities within global city-regions have also become ambiguous; urban, suburban, exurban, and rural units within the metropolitan regions do not adhere to the traditional hierarchical patterns as observed by urban theorists a century ago – which "can be described as a simultaneous and in a complex process of decentralization and recentralization of the city-region … [where] new poles of urban growth are being created in the periphery, stretching and pinning down the urban fabric in a recentered regional constellation of cities" (Scott, *et.al,* 2001: 18-19). Sassen (2001b) calls this phenomenon a 'new geography of centrality,' and classifies it into four forms: CBD remains central and strategic; a deterritorialized regional grid of dense strategic nodes (as discussed by the LA School); a network of global cities that comprise a regional (or international) transterritorial center; and new forms of digital centrality supported by communication technology. Regardless of the type of centrality, indeed the trends in development and growth reflect consolidation rather than dispersal, even in the face of a growing economic and political order at the

higher, global level; social infrastructure, cross-border networks, and a cosmopolitan identity all contribute to a global connectivity and new spatialities for the urban, thereby supporting these tendencies for centrality.

These patterns of centrality and development indicate an interpretation of the logic of the processes of market globalization; these processes reflect both the manifest technological capabilities of the era, but also the distinct local characteristics of the region. Scott (2006: 87-119) points to a growing body of empirical work, which indicates that the patterns of regional development which have been evidenced in North America, Western Europe, and Japan are also observable in other parts of the world; these socio-spatial patterns of decentralized geography and development are associated with the processes of market globalization. In response to the challenges and uncertainties of the hegemonic neoliberal model, global city-regions experiment with institutional arrangements and policies to address the social, economic, and political realities; urban centers seek to further global competitive advantage, while they seek to enhance local institutional arrangements (Scott 2008: 14-18). And even as the number and frequency of locally-designed programs to increase competitiveness and growth within the framework of market globalization are implemented, studies show that the goals of sustainable development are difficult to achieve if these local strategies are not regionally coordinated (Deirwechter, 2008: 53-64). Divergent local responses to market globalization and ecological conditions are evidenced in global cities – even when there are national policies.

Methods for Conceptualizing Global Cities.

Friedmann (2002) devises a model of urban development called the 'quasi-city-state'

model and contrasts it to the dominant model of development, the 'city-marketing'

model. The scope of the city-marketing model is economic, *i.e.* to maximize growth and

to attract capital (global or otherwise), sacrificing social or environmental concerns; the

mode of the city-marketing development model is zero-sum, where it is perceived that the

city is competing with other cities for resources. The power base of the city-marketing

model is narrow – consisting primarily of business interests who work with government

and transnational capital to promote growth. This model reflects the ideology and

practices of the dominant regime of market globalization. In contrast, the quasi city-state

model incorporates the notions and practices of the city-region to optimize multiple

objectives – including social and environmental outcomes, – to promote collaborative

decision-making, and to maintain an inclusive, democratic base of power. These two

models can be used to describe the policy-making practices observed in discrete local

governmental authorities, and perhaps may even be expanded to consider approaches by

geo-politically fragmented regions.

In light of the increasing roles of metropolitan areas in world politics, researchers and

theorists seek to measure globalization by analyzing the political, economic, social, and

cultural roles of cities. One such example is the Global Cities Index (GCI); *Foreign*

Policy magazine, A.T. Kearney, and the Chicago Council on Global Affairs partnered to

collect and analyze a broad array of data, to construct the index according to twenty-four

metrics across five dimensions,[69] and to rank city-regions based on their capacity to

impact in global society – including cultural and political measures, in addition to the

traditional measures of economic and informational activity that is observed by the

processes of market globalization (*Foreign Policy*, 2008). While size of the city is

important (the analysts limited their universe of cases to city-regions with at least one

million inhabitants), the index attempts to better understand the complex role of urban

centers in the post-modern era of market globalization; "the index aims to measure how

much sway a city has over what happens beyond its own borders – its influence on and

integration with global markets, culture, and innovation" (*Foreign Policy,* 2010: 124).

The biennial analysis gives some insight into the social, economic, and political activities

within global conurbations – namely the limited roles of European state capital-cities and

the increasing influence of Chinese mega-cities in global affairs; nonetheless, the

analytics reaffirm much of the theoretical underpinnings of planning and political

economy: financial centers (i.e. New York, London, Tokyo, Paris) are among the most

highly ranked global cities, reinforcing the perceived relationship between globalization

and urbanization. Table 3 lists the top twenty global cities of 2008, 2010, and 2012.

[TABLE 3 HERE]

I look to this conceptualization of the global city as a baseline for my anaylisys on global

city-regions, whereby the contributions of the greater urban area is considered based on

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[69] The five dimensions are: business activity, human capital, information exchange, cultural experience, and political engagement.

its economic, political, social, and cultural contributions to the universal system of

market globalization.

3.2.   Global Environmental Governance and Sustainable Urban Development.

Stalley (1972: ix) purports "[t]he major domestic issue of our time is the quality of our

life in an urban environment." While the traditional view of neo-classical economics

purports that the human economy may in perpetuity extract resources from the natural

world without consequence, because the human economy is infinitesimal in relation to

the infinite ecology (Daly, 1996: 57-60); "the urban economy is theorized as a dependent

subsystem that like everything else draws on nature for sustenance …[and] sustainable

urban development occurs, at least in theory, when economic activity uses natural

resources only to the point where they can be replenished" (Dierwechter, 2008: 62).

Industrial and Ecological Modernization

A 1972 report titled *The Limits to Growth* (LTG) published by an intellectual think tank

modeled the global economic system well into the twenty-first century, based on the

assumptions that growth and consumption would continue at the levels theretofore

observed. The study reports that growth could not be sustained at those levels; the model

finds that resources would deplete and pollution would increase, resulting in the decline

of population. Further, the model indicated that by the second decade of the twenty-first

century, industry and agriculture would collapse – stirring up criticism of the validity of

the model, its assumptions[70], and it predictions. However, the rapid rise of oil prices in

the first decade of the 21st century may be seen as an accurate prediction of the LTG

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[70] The primary criticisms of the LTG report were the measures of fossil fuel and mineral reserves, and the levels of pollution emissions.

report, signaling that the report's predictions are a warning of other events yet to come (Bardi, 2011: 1-13).

In the early years of classical economic theory, it was assumed that natural resources were infinite relative to the human economy; however there was no reflection of the impacts of waste by-product on the ecological or economic systems. In our current phase of market globalization, economists rely on the possibilities of technology to address concerns of depletion and pollution – opting not to modify the basic economic assumption of infinite-resources,[71] and thereby maintaining that there are not any limits to growth (Daly, 1996: 33-35). Even when it is recognized that the market globalization policy of 'growthmania' are unsustainable, with ecological modernization, for example, environmental problems of could be solved through technological means and ecological production and consumption will prevail (Brand, 2010). While industrialization has historically resulted in environmental degradation, with ecological modernization future development may be modified to solve ecological problems, and the environment may be protected by integrating ecological practices into business and government accounts (Clement and Schultz, 2011). With ecological modernization, institutional structures of the traditional order (*i.e.,* firms and states) will readily incorporate processes of ecology-induced transformations and include practices such as environmental management systems, eco-taxes, insurance arrangements, and economic supply and demand (Mol, 2002). The ideas of ecological modernization concept—be they first-generation

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[71] Even while most economists concede that certain natural resources and raw materials are, indeed, exhaustible, the basic assumptions of neo-classical economics allow for resource substitutions, which prevent the hegemonic regime to accurately capture the costs of consumption and waste.

predictions of concurrent patterns of development and ecological improvements or second-generation identifications of socio-political circumstances that result in ecological processes—generally limit perceived behavioral changes to state and corporate actors: states modernize structures, and firms restructure hierarchies in accordance (Buttel, 2000); this approach explains the traditional workings of the dominant institutional processes of market globalization, but it may understate the collective agency of sub-state actors, *i.e.* city-regions, and non-state actors, *i.e.* transnational advocacy groups.

The ideas and practices of ecological modernization reflect the priorities of modernization theory, as espoused by Lipset (1959) and Doyle (1986), which propose that industrialization, urbanization, and commercialization are prerequisites of self-sustained economic growth; that modernization and economic growth follow these milestone achievements, as observed in the economies of the advanced capitalist countries, i.e. US, UK, Germany (Clark, 1995). With ecological modernization, the continued practices of economic globalization would bear outcomes within hierarchies and firms to address environmental concerns (Buttel, 2000). It further purports that the current institutions that drive growth – be they economic or political – willingly incorporate environment-induced practices which prove to be economically beneficial in the long-run. Since this approach has heretofore focused on the traditional economic actors of international affairs, it may overlook non-traditional actors in world politics, such as global cities and collective agents (Clement and Schultz, 2011); even as it captures the oversight by international and state institutions as a part of environmental governance, the practices of ecological modernization do not appear consider local

governmental authorities as transnational actors in global affairs, nor the patterns socio-spatial development associated with the processes of economic globalization. The impacts of non-traditional political actors of international relations, however, have not been completely ignored by the international community; the World Commission on Environment and Development (1987: 245-247) advises that strategy of spatial planning for a domestic urban system should depart from the traditional approach of megacity growth but instead should spread assets across a range of settlement centers, thereby reorienting the economic pattern away from the hegemonic model and toward a more balanced investment pattern across and within city-regions. This strategy, it is expected, would avoid the observed pattern of megacity growth and urban decline – which consists of a handful of urban centers that emerge as global cities while others wither as their regional economies weaken.

Cosmopolitanism and the State.

In the face of the changes that result from market globalization, it is expected that the state will respond to circumstances and constraints – both internal and external to the state, with the goal that cooperative linkages between [state] government and business increase the capacity to solve problems (Weiss, 1998: 43-46). However, under market globalization, states have been increasingly under stress as they adjust to the tenets of the prevailing regime and they have thereby been unable or unwilling to formulate policy-specific solutions to urban or regional interests; in response to these economic and social conditions, many cities build local institutions and agencies to secure and advance their positions (Scott, 2008: 36-40; Scott, *et.al,* 2001: 12-14). While neoliberal globalization

distorts the level of involvement of public actors in the private transactions of the

marketplace, many of the operations upon which this regime is based rely highly on

public sector activities, e.g. defense, infrastructure, telecommunications; the trend toward

the privatization of many of these public sector services (i.e., sewage, transit, utilities,

waste processing, education) – particularly in densely populated urban areas – is a

manifestation of the adoption of the principles and practices of market globalization at

the local level. Even though they have been consigned to the private sector, many of

these enterprises require public coordination (Preteceille, 1997: 220). Whether in

developing or developed areas of the world, urban centers face similar crises:

deteriorating infrastructure; air, water, noise, and solid waste pollution; fiscal shortfalls

(WCED, 1987: 234-243).   However, along with their rise as the economic centers of

globalization, city-regions are also "crucial sites for the impact of global democracy and

the strategic arenas for the development of new citizenships" (Holston, 2001: 326);

underscoring the tenets of economic liberalism, both the globalization of economic and

democratic activities are present in the exchanges within these socio-spatial units.

In the face of these urban policy concerns, advocacy organizations have emerged – many

employing information and communication technology of the post-modern era to increase

awareness and to disseminate information. Regardless of domestic structures (i.e.

pluralist or corporatist), all democratic states involve interest groups in their decision-

making procedures for laws and policies; similarly, inter-governmental organizations

involve transnational and non-governmental organizations in their decision-making

procedures for international norms of behavior – in the democratic process, both national

and international institutions look to these non-state actors to represent the interests of citizens and groups. Since 2009, for example, the United Nations has increased the role of non-governmental organizations and global civil society organizations (CSOs), stating that they "play a key role at major United Nations Conferences and are indispensible partners … [who] are consulted on UN policy and programme matters."[72]

While recognition as a member of the NGO community at the UN lends authority and legitimacy to an CSO, it is not necessary for an organization to obtain such a designation to have an impact on global affairs; if a policy concern is of significance to a global citizenry, an organization may at first speak to the need for a response by institutions – at which point the national and international structure respond. Such is the case with the concerns over ecological responsibility and sustainable development. For example, two international non-governmental environmental movement organizations which focus specifically on issues of climate change and sustainable development are '350.org' and 'Global Power Shift.' 350(dot)org's name references the safe upper limit for humanity of parts per million of CO_2 in the atmosphere;[73] Global Power Shift's name is a references the push for investments in alternative energy infrastructure and divestments in fossil fuel energies. These organizations rely almost exclusively upon new media and communication technology (i.e. website, email updates, facebook, twitter, etc.) to raise awareness among a global citizenry about the climate crisis.

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[72] www.un.org/en/civilsociety/index/shtml
[73] 350.org reports that scientists have recorded that as of spring 2013, the planet has about 400 parts per million(ppm) CO_2, and that every year an additional 2 ppm of CO_2 are being added to the atmosphere (www.350.org).

The Alliance for Strategic Sustainable Development is an international hybrid

organization that seeks to develop and employ a unifying framework for sustainable

development, and whose membership consists of researchers, academic institutions,

firms, and organizations. The Covenant of Mayors and Resilient America are two

organizations comprised of local governmental authorities from the EU and the US,

respectively, seeking to devise and implement policy solutions to address the climate

challenge. Created in 2005 by the then-mayor of London, C40 Cities Climate Leadership

Group (C40) is a global network of the world's largest cities; its mission is to develop

and implement policies to reduce GHG emissions and to reduce climate risks by

facilitating active exchange and collaboration of technical expertise and best practices

across a range of program areas.[74] The International Council for Local Environmental

Initiatives—Local Governments for Sustainability (ICLEI) is a world-wide network of

local governmental authorities who seek to address the global challenge to climate

security by creating and implementing local environmental initiatives and policies

(Bulkeley and Betsill, 2003). While C40 focuses on the largest cities, ICLEI focuses on

the smallest governmental authorities. Not only do these organizations create networks

among their memberships to accomplish their specified goals for environmental and

social justice, but these organizational networks also collaborate with each other to

accomplish shared goals and to accelerate climate action. For example, C40 has since

partnered with the World Bank, the Clinton Climate Initiative, and the Carbon Disclosure

Project; and ICLEI has partnered with C40 to accelerate climate action in global cities.

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[74] www.c40cities.org

Bulkeley and Betsill (2003) identify a series of concrete political actions that local governmental authorities may take to create policy environment to support sustainable urban development, which constitute a form of global environmental governance at the local level. These actions include the integration of policy areas which manage the sectors that concurrently are integral to socio-economic development and are instrumental in managing natural resources – namely where economy and ecology intersect; these policy areas are land-use planning, transportation planning, and energy management. Therefore, if local governmental authorities each institute sets of policies that seek to efficiently manage urban common goods, and if these policies are integrated and coordinated across regions and states, there is an opportunity for a successful program for sustainable urban development which reflects the environmental value preferences of a cosmopolitan citizenry.

Global Governance and Sustainable Development.

In 1987, the concept of sustainable development was introduced to the international community with the publication of the *Brundtland Report*; an integral principle of this concept is that economic development and ecological protection may be reconciled to meet both current and future generations' needs. It is in this approach to sustainable development that the concept of sustainable urban development is rooted; the *Brundtland Report* identifies urban areas as centers of population and resource consumption – thereby key geo-political units in the efforts to address the impacts of the socio-sphere on the ecosphere. The consideration for attention to the roles of local political units to address ecological concerns results from the influence of non-traditional actors in the

proceedings of international affairs; two inter-governmental organizations (International Union of Local Authorities (IULA) and United Towns Organization (UTO)), whose memberships comprise at the local governmental authorities (i.e. sub-state political entities), campaigned to include the local perspective in the UN Conference on Environmental and Development's (UNCED) 1992 Rio Conference proceedings. This resulted in the inclusion of *Local Agenda 21* – which promotes global cooperation and coordination among local authorities in ecological governance, – in the final recommendation document (Bulkeley and Betsill, 2003). This marks a significant defining moment: it was recommended that local governmental authorities, such cities and regional political entities, be more intimately involved in the proceedings of global governance in identifying the causes of and solutions to the global crises of ecology and economy, as identified by the WCED's *Report.*

It is the process by which political actors and social agents may voice their environmental value priorities to decision-makers, such that those preferences are considered in the policy-making process that constitutes a form of global environmental governance. By ensuring that the causes of the environmental crises are considered by global institutions, and that solutions to these problems are identified and evaluated by all relevant and interested parties (including non-traditional actors, such as non-governmental organizations and transnational advocacy groups), ensures that the participation of a cosmopolitan citizenry is secured. The problem of ecological degradation is linked to development and growth, which are concentrated in urban centers around the globe. Therefore, structures of environmental governance look to activities within urban centers

to identify causes of and solutions to the degradation of shared natural resources; this process of decision-making is focused both on the global issue and the local action – which are both increasingly blurred by the processes of economic globalization. Further, coordination among local governmental authorities, as well as among states, to address concerns over ecological degradations (*i.e.,* climate change, waste management, etc.) reflects a type of global environmental governance that at once seeks to stimulate action common resources at both the local and global levels at once, recognizing the importance of several communities, both place-based and issue-based (Bulkely and Betsill, 2003). Therefore, a range of political actors and collective agents, contribute to a global environmental governance – not merely because of their existence, but because of the decision-making procedures and policy-making outcomes that reflect the value priorities of an active citizenry.

The mismatch in many global city-regions between the socio-economic organization on the one hand, and geo-political management on the other, makes the creation and implementation of policies and institutions to address intra-urban problems quite complex – even as solutions to problems prove essential to ensure the effective contributions of conurbations in the global economy (Scott, 2008: 32-40). Traditional diplomacy has failed to deliver a cohesive international response to address the risks of changes to the climate induced by industrialization (Morton, 2010; *The Economist,* 2010b; Victor, *et.al,* 2012). One response to concerns over the negative ecological impacts of globalization and urbanization is an urban growth management paradigm that implicates a discourse of sustainable development; urban planning serves as a mechanism to identify collective

value preferences and to design goal-oriented strategies. One example of urban growth

management which focuses on development, redevelopment, and conservation in urban

regions is the smart growth paradigm, which "embraces (and conceptually integrates) the

urban design discourse of New Urbanism, renewed calls for new political regionalism,

and broader discussions of sustainable development;[75]" the smart growth paradigm

engenders a cosmopolitan sensibility in four principles: protect open space and

environmental quality; reduce sprawl through the repurposing of the urban core; support

innovative design and land-use patterns; and support inter-dependent geo-political

collectivities (Dierwechter, 2008: 44-61).

Another impediment to sustainable urban development is the disjuncture in decision-

making between the sectors that oversee economy and ecology, whose understandings are

crucial in developing sound policies that address these areas. It is difficult to identify

policy solutions that address the intersection of economic and ecological systems,

because these two systems generally operate in different measurement units. While the

economic system customarily measures outcomes in monetary units, the ecological

system uses many different physical units to measure outcomes (depending on the

specific policy issue): units of energy, units of CO_2 in the atmosphere, units of

temperature change in bodies of water, units of accessible open space, etc. Further, short-

term economic benefits may come at the expense of long-term ecological costs – as well

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[75] Dierwechter (2008) references three parallel schools of urban design planning: new urbanism, new regionalism, and sustainable development. New urbanism is a hybrid ideology of neo-liberalism which posits that the trends of urban growth management reflect the value assumptions of governance institutions, and that a re-evaluation of priorities will result in improved design practices. New regionalism calls for increased cost- and problem-sharing strategies among geo-politically fragmented local governmental authorities to address collective problems. Sustainable development, also called smart growth or 'green accumulation,' calls for a transformation of the relationships among humans and nature, and binds growth and development by an ecological system.

as long-term costs of mitigation or decreased standard of living (Gowdy and O'Hara, 1995: 163-171). There are significant institutional gaps which limit the coordination among agencies that manage the economy and the environment, preventing a comprehensive and holistic set of policies for sustainable development (WCED, 1987: 9-11). Even still, due to their geo-political concentration of a multitude of natural and human resources, urban centers have notable advantages to address the concerns of climate change: lower per person emissions; higher rates of innovation; higher rates of collective coordination (*The Economist,* 2010b).

Natural Resources and Global City-Regions.

In 1947, Paul Samuelson completed a neoclassical synthesis of economic theory, whose writings replaced natural inputs with abstract measures of capital and labor; Samuelson's theoretical approach to neoclassical economic activity would be the foundation for market globalization. While the tenets of neo-classical economics drive the processes of market globalization, a study of economic thought reveals that not all economic theory is confined to the market exchange, as is the neo-classical view; further, several schools of economic thought hold that social welfare and ethics are integral to the understanding of the workings of the human economy – not that these issues remain outside of the purview of economics. In the 1960s and 1970s, concerns over finite energy resources and limitations of the natural world led to a new school of economic thought: ecological economics; this theoretical approach to economic activity looks to the second law of thermodynamics as a model for the economy – rather than that of a reversible mechanical system (as does the neoclassical approach) – purports that the "economy is not a

mechanical, circular flow, but rather a one-way follow with natural resource streams entering and waste streams leaving the system" (Gowdy and O'Hara, 1995: 119-161).

The flow of natural resource and waste streams are both pronounced and manageable at the local level; citizenries encounter directly the impacts of global and local programs within their communities, and thereby have a greater capacity to identify and to modify policies at the local level. Many local governmental authorities have complete jurisdiction over significant policy arenas that impact the ecological system, such as land-use planning, transportation planning, energy consumption, and waste management; through strategic planning, local governmental authorities may be much more effective in controlling, halting, and reversing the negative externalities which contribute to the degradation of the global ecology. For example, local governmental authorities may use policy initiatives to promote innovations and efficiencies in sectoral activities of energy, waste management, and transportation, creating improved programs for heating and power systems, public transport systems, and methane recovery and recycling systems, respectively (Bulkeley and Betsill, 2003: 32-99). In city-regions of developed or developing states alike, a program of sustainable urban development may be achieved by coordinating and (re-)integrating the activities of land use, infrastructure, transportation, and energy sectors through public policy; in this way, innovative approaches may be identified and efficiencies may be realized (Panayotou, 2001). Policy efforts for sustainable urban development tend be one of two kinds: those that focus on the activities of public sector, and thereby create policies to 'green' publicly-funded activities and have the government 'lead by example' (i.e. require the future acquisition of more

energy-efficient fleets or future construction of more energy-efficient buildings); or those that focus on activities within a geographic area, and thereby create policies that require a set of future activities within a certain jurisdiction comply with sustainable development policies (Wheeler, 2008).

In response to the demands of intergovernmental organizations and civil society, in 1990 the UN Environment Programme and the International Union of Local Authorities established the International Council for Local Environmental Initiatives—Local Governments for Sustainability (ICLEI); ICLEI comprises a global network of local governmental authorities which seeks to address the ecological concerns through processes of multi-level and network governance. Through policy networks, sub-national governments within city-regions contribute to collective decision-making and policy-making processes over complex problems. The defining characteristic of this new governance are these global networks of local authorities of all sizes – not just of the largest or most influential urban actors; policy networks of interested political actors allow for the inclusion of civil society and social movements in the formulation of value priorities, and subsequently in the creation of public policy. For example, in 1993 the membership of ICLEI launched the *Cities for Climate Protection* (CCP) programme, which has identified four goals for local governmental authorities to address the global ecological concerns: (1) to recruit local governments with collective GHG emissions at ten percent (10%) of the global total; (2) to enhance local capacity to address climate change through formal recognition and policy action; (3) to enhance accountability by local governments for the reduction of GHG emissions; and (4) to represent local

government authorities in the many different levels of global and international policy arenas[76]. One municipal authority's action alone would have marginal global impacts; however if many local governments take action, the effects would be significant. This programme attempts to underscore the impact of myriad local actions among members within a network and a global externality; this network represents a form of global environmental governance in the post-modern era. (Bulkeley and Betsill, 2003).

It is through the support of civil society by which improvements in urban conditions are possible; the public opinion of an urban citizenry, and its accompanying public pressure, has led some cities to revise policies which do not reflect the political will. Particularly in the democratic societies of the industrialized world, the capacity for policies of sustainable urban development lies with the political and social choices of its citizens (WCED, 1987: 242-243). Ostrom (2010: 168-200) points out that due to the complexity of the decision-making institutions to manage common-pool resources, any policy outcome is ultimately an experiment; she argues that a network of overlapping, polycentric governance structures would be most advantageous to regulate common-pool resources of an interconnected, global system.

Sustainable urban development, thereby, is the intersection of sustainable planning, global environmental governance, and metropolitan environmental governance. Sustainable planning are the policies and programs that are developed by governmental

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[76] Membership to ICLEI is open only to local governmental authorities, who agree to complete five milestones: "(1) conduct energy and GHG emissions inventory and forecast; (2) establish a GHG emissions target; (3) develop a local action plan to achieve GHG emissions target; (4) implement policies and measures; and (5) monitor and verify results" (Bulkeley and Betsill, 2003: 52).

and institutional organizations to address the concerns of limited and finite resources. Global environmental governance, and its subset metropolitan environmental governance, is the political activities of non-state actors and civil society to voice value preferences for intergenerational equity. The space where these political actors converge is where sustainable urban development occurs, where coordination across the policy areas of land-use planning, transportation planning, and energy/waste management occurs in the prevailing global socio-spatial organization. Figure 4 illustrates these relationships among global political actors.

3.3.   Conclusion.

Urbanization has long been associated with economic growth and industrialization; alongside the processes of market globalization, the mechanisms for urban expansion have significant impacts on cultural, political, and economic factors of global society in the post-modern era. Cities and city-regions are significant components in the global system, supporting activity and exchange among various types of actors and agents. Alongside the globalization of markets is the globalization of democracy; consequently, not only do global cities serve as centers for financial and economic activity, but they are hosts for civil society and social movements.

The various infrastructures of these urban centers house the formation of agency among cosmopolitan citizens, and support their social and political endeavors. The cultural connections among agents within and beyond these socio-spatial geographic entities allow for the discourse among the global and the local – in this way, value priorities can be defined and dissolved among a cosmopolitan citizenry, and thereby ensure the preferences of a global civil society are addressed. It is in these spaces – both physical and non-physical – where global citizens voice their policy preferences for sustainable urban development, both at the local and global scales. And the rising position of global cities and global city-regions in world politics contribute to their socio-spatial and geo-political roles as economic engine, cultural center, and cosmopolis.

As unique political actors within the global system, global cities who take policy action toward sustainable urban development contribute to a form of global environmental governance – particularly when they respond to the expressed cosmopolitan values of an environmental justice collectivities and when they participate in transnational networks for sustainability.

4.   Global Networks of Local Governments.

Global networks of local governmental authorities have emerged as structures for

political actors and social agents to engage in global environmental governance. In

response to the conditions of spatial development associated with economic globalization

and the impacts that these processes have on the consumption of natural resources and the

degradation of finite of common goods, networks for social and political change have

developed to increase the capacity for influence over the increasingly complex and

interconnected decision-making processes that govern the allocation of resources and the

management of the *biosphère*.

The socio-spatial formation of the manmade landscape reflects the logic of the market

globalization; however there are agents who seek to introduce alternative value priorities

in the decision-making processes at varying levels of global governance. The socio-

spatial arrangements that accompany the processes and activities of economic

globalization leads to the configuration of patterns of geo-political structures to

accomplish – or overcome – socio-political formations to achieve shared goals. The

environmental justice movement, for example, has had considerable success in impacting

democratic citizens to perceive the dangers of policies of unmitigated 'growthmania;' the

mark of success, however, of this social movement is observed in policy action. Only

when policy-makers respond to the demands of democratic citizens and implement

programs that reflect their priorities – especially if they depart in some degree from that

of the hegemonic regime – has the movement begun to accomplish its collective goal.

4.1.   Human Ecology in the Post-Modern Era.

At the turn of the twentieth century, social scientists of the Chicago School of urban

sociology described a human ecology that reflected the socio-spatial impacts of the

economic and political patterns of industrialization; they looked to the natural and

physical sciences to explain patterns of human activity, and ascribed scientific methods

of analysis to research studies within the social sciences (namely sociology and

economics). Robert Ezra Park and Ernest W. Burgess of the Chicago School, for

example, observed patterns of urban growth in the context of evolutionary science, and

described how activity within plant and animal communities may be used to understand

activity within human communities. Using the 'web of life' to describe the

interconnectedness of all species within a system, they define human ecology as

'biological economics:' "… an attempt to investigate the processes by which the biotic

balance and the social equilibrium (1) are maintained once they are achieved and (2) the

processes by which, when the biotic balance and the social equilibrium are disturbed, the

transition is made from one relatively stable order to another.[77]"

While the Chicago School looks to the theoretical underpinnings of biology and classical

economics, the Los Angeles (LA) School is decidedly post-modern in its approach to the

analysis of the urban condition; theorists of the LA School argue that there can no longer

be one single model to describe the myriad interactions among global and local actors

and organizations, and thereby these socio-spatial phenomena require multiple alternative

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[77] Robert Ezra Park (2005: 72) defined 'human ecology' in 1936, and subsequently established a research perspective and agenda for urban studies that has lasted well beyond seven decades, and persists to this day.

analytical frameworks to describe the interconnected and complex interactions of the post-industrial global system. Further, they argue that the spatial patterns of post-modernity which manifest themselves in the urban setting are increasingly common-place in the growing metropolitan areas in both developed and developing states, signaling significant global socio-spatial trends as they relate to urbanization, community, industry, and policy. The LA School describes human ecology much like we describe the complexities of the processes of globalization, as that which "takes organization to be nested and overlapping, boundaries to be contingent with respect to purpose and perspective, and scale to be directly attached to processes and functions" (Vasishth and Sloane, 2002; 355).

While social scientists have observed the importance of the interaction between geography, ecology, and economy, so too have other political actors. Starting in the mid-nineteenth century, conservationists have expressed political interest in protecting wildlife and their natural environs. Throughout the twentieth century, social commentary by authors, architects, poets, and playwrights presented the issues of environmentalism to an interested public. Policy makers also take action: creation of legislation, institutions, and hierarchies to address shared ecological concerns. In the post-war years, states created sovereign domestic structures to address internal environmental problems. In the post-modern era, the increase in intensity and frequency of weather incidents spurred collective interest in the 'global commons' as a shared resource; successful global efforts, such as the Montreal Protocol, reinforced the capacity for international cooperation in the face of a shared ecological problem.

In recent years, the effects of human activity on the environment have been of considerable import. Certainly, no one can be given more credit in recent years for bringing the issue of climate change to the public consciousness than Nobel Laureate Al Gore. In his seminal work, *An Inconvenient Truth*, Gore (2007) discussed the crisis of global warming in clear, yet alarming, detail; he presented extensive evidence that average yearly temperatures are increasing, that mountain glaciers are in retreat, that the number of major wildfires are increasing, that the sea-level is rising. In addition to these, some of the other phenomena of industrialization and climate change include: the thinning of the Arctic icecap, the loss of natural habitats, the acidification of the ocean (Victor, *et.al,* 2012: 113). Gore (2007) draws clear connections among the changes in the socio-sphere, *biosphère*, and atmosphere: hurricanes now occur where they had never before; tornadoes form at record-breaking rates and intensities; the world-wide patterns of precipitation are changing, causing floods in some places and droughts in others. Because built environments absorb and retain heat at higher levels than do verdant lands, cities across the globe document all-time records for high temperatures and for heat waves.[78] Urban centers are at port locations with large settlement populations, making them susceptible to severe loss and damage that accompany flooding from severe storms and heat waves from high temperatures. These urban populations, thereby, will be most concerned with the impacts of the ecological crisis – as the global population becomes predominantly urban and be most directly affected by these crises, urban interests are global concerns.

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[78] A heat wave is recorded when the ambient temperature measures 100 degrees Fahrenheit (or higher) for three consecutive days.

Reputable periodicals and scholarly journals also discuss the import and impact of climate change. In late 2010, *The Economist* (2010a: 15) acknowledged the reality of climate change by stating "the world is going to go on getting warmer for some time;" linking global warming to human activity, it cites a series of risks to economy and ecology, and calls for international action by political leaders.[79] Over the course of the next century, scientists project that the planet will warm 2.5 degrees (Celsius), or more (Victor, *et.al,* 2012: 113). While climate scientists are not in complete accord over these exact impacts on weather conditions, researchers do agree that warmer ocean waters and a warmer atmosphere will cause stronger and wetter storms (Walsh, 2012). The Atlantic Ocean has warmed approximately $2^{o}F$ ($1^{o}C$) in the last century (Walsh, 2012), resulting in the melting of ocean ice and in rising sea levels of 0.2 meters between the years (and a forecasted rise of another 1.2 meters by the year 2100). Increased urbanization, particularly of urban populations residing in coastal areas, results in increased potential for loss of property and human life in the face of the projected increased frequency of severe weather conditions; flood barriers are a form of adaptation in response to climate change that is public good and that requires collective action to supply safer living conditions. Even as any political action today would do little to halt or reverse the impacts of industrialization on the eco-sphere in the immediate future, policy makers should facilitate adaptation to the consequences of climate change – notably in the delivery of public goods, among which include tools to protect against the impacts of increased weather conditions associated therewith (*The Economist*, 2010b).

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[79] The author of the article specifically cites measures in three areas to address the problem of climate change: infrastructure, migration (i.e. settlement patterns), and agriculture (i.e. food security).

However, disjointed local and national political structures to deal with the climate crisis indicate that the traditional approaches to implement long-term solutions to this global problem may be unsatisfactory – leaving room for alternative approaches in environmental governance. After Superstorm Sandy, for example, local policy-makers have vowed to take action to secure New York City and the metropolitan region from the impacts of future severe weather incidents, such as building barrier surge protectors and waterproofing the underground transit system; meanwhile legislation to develop a national climate agenda dies in Washington, DC (Barrett, 2012); while the regional approach will prove successful in the short-term, alternatives will be required to devise a long-term approach to this daunting weather crisis. Nonetheless, policy actions by New York City (and parallel actions in neighboring New Jersey and Connecticut) to secure the city-region – and other similar policy actions in urban areas around the globe – are examples of a political response that reflects the values of citizens from across the region, the nation, and the world – that of a coordinated effort against severe weather events that result from manmade changes in the atmosphere. However, they are a local responses to a global problem; international relations has demonstrated notable, albeit limited, advances in developing processes to halt or reverse the global trends that cause climate change – even as these value priorities prevail among global citizens.

Widely accepted theoretical approaches may turn to the prevailing global processes for solutions; by attempting to improve existing practices and by maintaining the value assumptions of the dominant regime, an approach may overlook the value priorities of

non-traditional actors, such as non-governmental actors, trans-national advocacy groups, and/or a democratic citizenry. For example, the policy practices of ecological modernization, which looks to the existing structures and institutions of market globalization to devise environmental management systems and economic valuation of environmental goods (Mol, 2002), may fail capture the value priorities of non-state and non-commercial actors. The ecological modernization approach adheres to the logic of economic globalization, whereby solutions to environmental problems may be found through the application of the rational market principles of the economic development and modernization (Clement and Schultz, 2011); it looks to the market for solutions to environmental problems and it perceives that the late-stage processes of industrial modernization recognize environmental concerns, and through further modernization implement policies "in order to address the problems which it has itself created" – particularly if there are true market costs for failure to act (Buttel, 2000: 62). Approaches to global environmental problems, therefore, look to the extant processes among the traditional and economic actors of international relations to resolve pressing environmental problems – sometimes failing to acknowledge the normative concerns therewith associated.

Therefore, the risks from climate change are rising due to the shortfalls of traditional international relations; states are unable to overcome barriers, both domestic and international, to devise a coordinated policy response to ensure the collective interest (Victor, *at.al,* 2012). Even as traditional international and domestic action to address the problem of climate change appears inaccessible, other forms of coordinated action do not.

A broad-reaching plan may be accomplished by reconsidering the link between urban development and climate action; by re-evaluating the way that energy is delivered and consumed; by re-ordering global and local priorities; and by re-imagining the way to address the problem: together, this approach could perceive collective climate action as one that prevents the Earth from warming, but instead as one that promotes its cooling (Morton*, 2010: 26). While the efforts of international diplomats are important in directing large-scale projects to counter the causes and effects of climate change, "effective adaptation [to climate change] will require bottom-up institution building at the local level to engage people on the frontlines of climate change, such as city planners responding to the risk of rising seas … the next era of climate diplomacy should revolve around connecting international experts to those local officials so that information about best practices can spread more readily" (Victor*, et.al,* 2012: 115). The role of non-governmental organizations, civil society organizations, and advocacy networks will be instrumental in supporting this bottom-up form environmental governance and sustainable urban development.

In developing a broad conceptual framework for understanding sustainable development within global city-regions, I consider the overlap of sustainable planning and global environmental governance. In my framework, sustainable urban development is conceptualized as *a dynamic outcome of complex interaction between agents of sustainable planning institutions and actors of global and metropolitan environmental governance structures, as defined by expressed value priorities.* In this sense, it resonates with Keck and Sikkink's view on social and environmental movements. I attempt to

capture the complex interaction between global value preferences and the local policy

demands of cosmopolitan citizens in implementing programs for sustainable urban

development. This conceptualization does not down-play the significant role of inter-

national and state governments; rather, it purports that when the traditional institutions of

international relations do not address the concerns of a democratic citizenry in a

sufficient or timely manner, they will redirect their concerns elsewhere – in the case of

sustainable development, toward municipal institutions and local governmental

authorities. Sustainable urban development, therefore, is not just shaped by locally

specific institutions, but also by a variety of extra-local institutions (e.g. state, inter-

governmental, non-governmental) that impact the activities within the conurbation. I

have summarized this in Figure 4.

[FIGURE 4 HERE]

4.2.   Civil Society, Post-Metropolis, and Global Networks.

The processes of economic globalization have impacts upon social structures, practices, and institutions; some socio-political formations that result from these processes are partially or completely unique to the phenomena of globalization – leading to distinct logics, norms, organizations, and regimes. These formations re-imagine the traditional scalar hierarchy, within which the nation-state is the foremost and exclusive actor in global affairs. Economic globalization fosters the expansion of trans-national corporations and commercial actors as social agents of influence in international affairs; international firms establish complex networks among branches, affiliates, and partners to facilitate their ongoing activities. Global business networks are not the only practices that contribute to the rescaling of international relations; indeed terrorist groups, diasporas, migrant workers, non-governmental organizations, and advocacy groups establish global networks to form cross-border circuits that link agents across the global and the local – often constituting hierarchy dynamics that are simultaneously globally-scaled and locally-nested. This is most evident within the space – both physical and conceptual – of the global city: as centers of commerce and financial activity, global cities are integral to the processes of economic globalization; however, global cities are also political, social, and cultural centers (Sassen, 2007: 11-44).

The networks within which global cities operate are not limited to activities of the economy. The impacts of the processes of globalization are also observed in political development and in the public sector (Fountain, 2006), in policy and decision-making

(Castells, 2006b), as well as in the formation of a network society (Cordoso, 2006); these processes are born by infrastructures created to support the processes of economic globalization, namely technologies and innovations in communication (Jorgensen and Vu, 2006). Global networks emerge and form interconnections – both among actors within the networks and between actors across networks – in response to the socio-spatial spheres within which they operate and the geo-political structures within which they are bound; global networks may function within policy sectors to support democratic institutions by allowing for parallel socio-political hierarchy through which the values and priorities of a democratic citizenry may be voiced (Holton, 2008).

In the same way that market globalization requires of state governments to share economic sovereignty with non-traditional actors (both within and without its borders), so too does it impose upon state governments share political sovereignty; these processes support the politics of place within a common world, whereby the competencies of citizenship are essential to support decision-making. This is particularly evident at the geo-political level of the city-region, as these units are instrumental for citizens to manage the interaction of local and global processes (Kemmis, 1990). The physical landscape of the post-modern city – sprawling, fragmented, and polycentric – necessitates new demands upon the political institutions that manage resources that support the economic and social activities within the metropole. Yet even as the socio-spatial formation of the post-modern city introduces new dimensions for civic activity around common goods, local political economy may be shaped to overcome barriers and to accomplish shared goals; the 'sprawl' associated with the post-modern city does not

preclude the engagement of active, democratic citizens (Williamson, 2010). Ultimately, however, it is through direct engagement with citizens that formal political institutions (e.g. governmental authorities, interest groups) may ensure that the value priorities of a community – be it geographic and/or issue-based – are reflected in the adopted policies (Fischer, 2000); further, it is only through the participation of democratic citizens by which sustainable development may be achieved, ensuring an ongoing process of trial, error, and learning among political actors and social agents toward a collective goal of the effective, long-term management over shared, natural resources by political institutions – both at the local and global levels (Prugh, *et.al*, 2000). Often, however, the geo-political jurisdictions within the post-modern, global city-region does not coincide with its socio-spatial territory – which may prevent area-wide strategic planning over resources and coherent policy for development; through citizen participation and social cohesion, structures for metropolitan governance may resolve these concerns as economic, social, and environmental objectives are defined and implemented – but this requires civic engagement from agents across the city-region, as well as the increased cooperation and integration of key policy sectors toward unified (albeit flexible) structures (OECD, 2001).

One of the ways to overcome the challenges associated with the complexities that accompany the processes of economic globalization is through the formation of networks (Castells, 2006b; Friedmann, 2001; Holton, 2008; Keck and Sikkink, 1998; Sassen, 2007; Thompson, 2003). States, multi-national corporations, international interest groups, and transnational advocacy groups have established cross-border networks to facilitate the

operations of comprehensive organizations; to expedite transactions and exchanges within sophisticated enterprises; to support the exchange of ideas, values, and norms among multifaceted consortia. Indeed, in recent years networks have emerged among local governmental authorities to support various common interests and goals, sustainable urban development among them (Bulkeley and Betsill, 2003). In the next section, I identify several examples of networks which all identify sustainable urban development as a goal and which comprise memberships of non-traditional actors of local governmental authorities and/or civil society. The networks are assembled according to a very basic typology: (1) domestic and cross-border networks, which consist of members within a traditional state or supra-state, or whose members within a state seek to make connections with other similar, foreign actors to increase collaboration or cooperation; (2) international networks, which consist of traditional state actors (i.e., IGOs, NGOs, etc.) who seek to engage non-traditional and/or non-state actors, such as local governmental authorities, in environmental governance; and (3) global networks, which consist of non-traditional and/or non-state actors who seek to simultaneously impact local and global processes,

4.3.   Networks for Sustainable Urban Development.

As a result of the expansion of the global economy over the past three decades, global circuits for capital, investment, and trade have formed to support the associated processes of market globalization among the world's financial centers. This network of global cities constitutes a space within which the majority of the seminal functions of the global economy is organized: it is "[a] transnational urban system [which] is in part an organizational structure for cross-border transactions" – albeit it not limited to the economic domain, but which includes the political, cultural, and social, and which results in a new geography of power articulated by the activities of local places and local agents (Sassen, 2007: 28).

As expected by network theory, and reflecting the characteristics of interconnectedness associated with the processes of globalization, agents who seek to impact decision-making and policy-making over natural resources have formulated networks to accomplish shared goals and outcomes. As the impacts of climate change are universal, global networks of political actors emerge to attempt to identify and implement solutions to these concerns. This study looks specifically to the activities local governmental authorities – and their associations with other social agents – in their efforts to devise policy solutions toward sustainable urban development. Indeed, in recent years there have emerged in world politics a number of significant networks of municipal governments to tackle the problem of climate change; among other things these networks seek to propose policy solutions toward sustainable development in urban areas, which

are perceived by many decision-makers in global affairs to be key socio-spatial units for action because of the levels of resource consumption, patterns of land use, and concentration of economic activity – as well as the degree of innovation – that occur therein.

4.3.1. Domestic and Cross-Border Networks for Sustainable Urban Development.

Domestic and cross-border networks for sustainable development are networks that primarily occur within states (e.g., the United States) or within supra-national states (i.e., the European Union); these networks comprise political actors and agents that seek to further the efforts of sustainable urban development through the creation of advocacy networks within traditionally-defined geo-political boundaries.

Sister Cities International.

Sister Cities International, which fosters connections and cooperation among municipalities around the world (specifically between US and foreign cities), has also adopted sustainable urban development as a program area; a non-profit organization founded in 1956, the sister city network creates partnerships among 'citizen diplomats' from communities within the United States and foreign states to celebrate differences, build partnerships, and empower private citizens.   The Sister Cities Network for Sustainable Development promotes the involvement of civil society in the identification and implementation of projects for sustainable urban development, relying on its vast network (2500 communities in 140 states on six continents) to offer support and aid as they seek to promote programs that reflect the priorities outlined in the UN 2002 World Summit on Sustainable Development (Sister Cities International, 2014).

Covenant of Mayors.

Launched in 2008 by the European Commission, the Covenant of Mayors (CoM) seeks to involve local and regional authorities in the processes of international and global environmental governance; as of March 2014, there are 5180 signatory localities representing over 183 million residents from across Europe. Its primary goal is to support local governmental authorities in the deployment of sustainable energy policies and in the reduction of climate changing emissions. The CoM works to translate environmental goals into measurable outcomes, by supporting programs and projects that support local authorities' efforts to accomplish the intended political commitments. These activities include the preparation of emission inventories, the submission of sustainable energy action plans, and the implementation of benchmark programs by municipal CoM signatories. Participation in the CoM is limited to local governmental authorities of democratically elected institutions, which reflects a structure that values both environmental protection and citizen participation. The CoM identifies itself as a "mainstream European movement involving local and regional authorities," whose signatories benefit by working to improve environmental conditions, to protect common natural resources, and to share with and to benefit from other municipal authorities within the network. The CoM identifies networks of local governmental authorities as its major catalyst for growth, facilitating exchanges of experience among its members as they seek to accomplish a shared goal of sustainable urban development (Covenant of Mayors, 2014).

Resilient Communities for America.

Similarly in the United States, the Resilient Communities for America (RC4A) engages political leaders from local governmental authorities to improve their communities' resilience against the impacts of climate change by promoting policy solutions around inter-related challenge areas, such as disaster readiness, energy security, and strengthened infrastructure; as of March 2014, there are 162 signatory mayors and county leaders. RC4A acknowledges that sustainable development is a concern that extends to all levels of governance, but recognizes the capacity for action at the local level; it asks its member communities to make commitments toward a network of local governmental authorities who shared progress, solutions, and successes. RC4A asks representatives from local governmental authorities to sign an agreement that serves as both a three pronged call to action: for more intergovernmental support for local authorities to address the climate crisis; for commitment toward resiliency as outlined through climate preparedness, energy security, infrastructure renewal, and economic prosperity; and for the creation of a network of local governmental authorities to share solutions, successes, and progress. RC4A offers free resources for local governmental authorities to provide technical assistance to develop adaptation plans and financing plans. Further, the campaign seeks to engage community residents and civil society by providing steps for citizens to take to demand action from local government (Resilient Communities for America, 2014).

4.3.2. International Networks for Sustainable Urban Development.

International networks for sustainable urban development consist of non-state actors, such as IGOs and NGOs, who seek to create networks to promote efforts toward sustainable urban development, often within the traditional parameters of international relations. Although many of the programs and initiatives are innovative and creative solutions to the concerns over the climate crisis, many of the agents are active within political affairs – and the goals of these networks are to have these actors increase attention to political action to address the concerns over finite natural resources and common pool goods.

The United Nations.

The foremost international organization to promote cross-border network activity is the United Nations (UN). The United Nations Environmental Programme (UNEP) was established in 1972, and acts "to promote the wise use and sustainable development of the global environment" (UNEP, 2014); the UNEP has identified six (6) cross-cutting priority areas, which have emerged from global and regional fora: harmful substances, disasters and conflicts, resource efficiency, ecosystem management, environmental governance, and climate change – which together are intended to support efforts to alleviate poverty and to promote sustainable development (UNEP, 2010). The UNEP promotes a series of regulatory approaches; these include policies of adaptation (to build resilience to climate change), of mitigation (to move toward low carbon societies), of emissions reductions, and of finance models to support a sustainable economy. In

understanding the global concerns over the environment, the UNEP recognizes the need

for an urban perspective and for the integration of the urban dimension in the

management of natural resources; through cooperation and partnerships, the UNEP seeks

to support urban areas around the globe to address environmental concerns and to plan

resource efficient cities. One such example of strategic partnership is the Cities Alliance

Partnership, which seeks to laboriously develop magna aliqua through the creation of an

urban network whose focus is to cooperate toward sustainable consumption and resource

efficient economies (UNEP-DTIE, 2014). Networks of this type, the UNEP

acknowledges, are elements of an environmental governance, which allow for the

identification of common environmental priorities and for the quick and effective

response to environmental exigencies; the UNEP identifies the importance of states in the

management of natural resources, but it also lists non-state actors – IGOs, NGOs, MNCs,

and civil society – as having a role in environmental governance, and who act either

individually or collectively in their contributions (UNEP, 2014).

In addition to regulatory approaches, the UN supports the creation of information

networks to accomplish sustainable development goals. UN Secretary-General Ban Ki-

moon identifies sustainable development as high priority for the international community

and listing it first on his five-year action agenda; he states that "[a] new era demands a

new vision and a responsive framework. Sustainable development, enabled by the

integration of economic growth, social justice and environmental stewardship, must

become our global guiding principle and operating standard," and calls for the UN

Framework Convention on Climate Change (UNFCCC) to take action (Yeo, 2013).

Adopted in 1992 at the Rio Earth Summit and ratified in 1994, the UNFCCC has been charged with stabilizing greenhouse has concentrations to prevent human interference with the global climate system; the parties to the UNFCCC requested the creation of the Climate Change Information Network (CC:iNet), which is a clearinghouse for information about climate and which is intended to help state governments, as well as other political actors and agents, to access materials on, to be informed about, and to take action on climate change – to ensure public participation in decision-making and international cooperation on policy-making (UNFCCC, 2014). The Division for Sustainable Development, within the UN Department of Economic and Social Affairs (UNDESA), is charged with promoting and coordinating the implementation of the UN's sustainable development agenda – managing a complex intergovernmental process that involves institutions within and without the UN system (e.g. internal organs (i.e. UNEP, UNDESA); members (i.e. states); and external actors (i.e. IGOs, NGOs, MNEs, etc)). The UNDESA's sustainable development knowledge platform and the UNEP's Environmental Management Group were created to coordinate activities for global environmental governance and sustainable development. Launched in August 2012, the UN Sustainable Development Solutions Network (UNSDSN) seeks to support sustainable development solutions at local, regional, national, and global scales by promoting joint learning and integrated approaches for the complex, interconnected global system; currently consisting of national and regional networks of 127 members, it coordinates partnerships among UN agencies, financing institutions, research institutions, universities, firms, and civil society organizations – particularly in the UN's efforts to

mobilize development practitioners to support its sustainable development agenda. C
(UNSDSN, 2014).

In 1999, the UN General Assembly adopted the *International Strategy for Disaster Reduction* (UNISDR), which seeks to reduce disaster risks – rather than respond to disaster outcomes; the UNISDR identifies that one of the highest concerns for disaster reduction is making cities resilient to the effects of climate change, and it purports that a post-2015 framework for disaster risk reduction should include the participation of local governmental authorities in addressing climate change. In August 2014 at an ISDR Conference, UN Secretary-General Ban Ki-moon "call[ed] for the need of world leaders to address climate change and reduce the increasing risk of disasters – and world leaders must include mayors, townships and community leaders" (UNISDR, 2014), the secretary-general has since appointed former mayor of New York City, Michael Bloomberg, as Special Envoy for Cities and Climate Change, whose responsibilities will include to work with mayors and local governmental authorities to take action to combat climate change (Hasan, 2014). Launched in May 2010, UNISDR's 'Making Cities Resilient' campaign specifically addresses the concerns faced local authorities over environmental governance and risk management; the campaign seeks to increase partnerships, and to elevate the UNISDR as a knowledge management hub within which local authorities may turn for technical expertise   The UNISDR's resiliency campaign currently focuses building implementation capacity, cooperation across local authorities, shared planning technical among municipalities; along with providing briefs, guidelines, and toolkits (which identify the tenets of and action toward sustainable urban development), it also seeks to

have local governmental authorities conduct self assessments and resiliency reports – to

establish a baseline by which the local governmental authorities may begin to move

toward a program of sustainable urban development. As of March 2014, 1,736 local

governmental authorities from around the globe are participating in the campaign; 133

cities have completed local progress reports (UNISDR, 2014).

Clinton Foundation.

The Clinton Foundation has its roots in a series of policy initiatives that were undertaken

by former President Bill Clinton in the years after his service in the White House. The

Clinton Foundation seeks to build partnerships among the businesses, NGOs, states, and

citizens to find solutions to problems within five (5) issue areas: climate change,

economic development, global health, health & wellness, and women & girls. Initially

started in 2001 with an HIV/AIDS initiative to improve access to care and treatment, the

Foundation now has eleven (11) interconnected initiatives, which include a global

initiative, a development initiative, and a climate initiative. The Foundation seeks to

build upon connections among actors and agents within public affairs and industry to

work toward developing and implementing solutions to various challenges; these

networks support the many initiatives that are outlined by the Foundational – as well as

others beyond.

Established in 2005, the Clinton Global Initiative (CGI) seeks to assemble global leaders

from the private and public sectors to work together to create and implement solutions to

the world's challenges; the members of CGI participate within one (1) of nine (9) cross-

cutting tracks, which include at least four (4) areas that contribute to global

environmental governance: the built environment, energy, environmental stewardship,

and response & resilience. Participants of CGI create a plan to address a specific

challenge, and commit to take action toward that goal; commitments may include to

donate resources or funds to an organization that addresses the global challenge, or to

participate in a cross-sectoral partnership to accomplish a measurable outcomes. For

example, a real estate development enterprise committed to launch a fund to invest $1

billion over five (5) years in the development of green building designs for new and

retro-fit construction; the innovation and technology that results from this investment

may have lasting effects on sustainable urban development practices -- and which may

never have been generated without the existence of the non-governmental organization;

and, a foundation committed funding to the universities in the England and Bangladesh to

create policy-relevant data on the impacts of climate change on poor urban residents of

Bangladesh and to commit to knowledge transfers between the academic institutions to

improve conditions. To date, CGI members have made over 2500 commitments in over

180 states worth $88 billion and which impact the lives of over 430 million people

(Clinton Global Initiative, 2014).

In addition to having the world's most influential leaders commit to action to address the

most challenging concerns that we face, CGI also seeks to involve young citizens and

rising leaders. CGI also holds an annual conference, CGI University, established in

2007, is a conference for college students to participate in workshops and seminars where

they learn to take steps to solve global problems, to create action plans, and to build

relationships. These meetings and programs are designed to build networks of leaders – both established and rising – to acknowledge their responsibilities as global citizens to commit to action; these networks not only are useful in accomplishing ot5h short-term and long-term goals to address various pressing challenges – both now and in the future.

The Clinton Climate Initiative (CCI) seeks to promote programs for sustainable development, which simultaneously fight climate change and grow economies. Comprised of four (4) programs which work to identify solutions to and reverse the affects of climate change, the CCI works with public and private sector partners to implement programs to access to clean energy technology, and to deploy programs that increase energy efficiency at government, corporate, and individual levels.

CCI's program on the built environment works to deploy market-based approaches to reduce energy consumption and increase energy efficiency – and thereby reduce carbon emissions – within the built environment; specifically, this program seeks to promote alternative approaches to energy management within structures and buildings – which may account for up to 80% of carbon emission within urban centers. CCI's building retrofit program works with private, public, and non-profit sectors to develop models for energy efficient investments building practices. CCI's home energy affordability loan program facilitates energy upgrades in commercial and domestic structures by creating innovative financing mechanisms; the pilot program has resulted in a reduction of over 2700 tons of GHG emissions, and will be replicated elsewhere. CCI is also in partnership with the C40 Cities Climate Leadership Croup (which is discussed in greater detail later),

to focus on the roles of large cities in reducing carbon emissions (Clinton Foundation, 2014).

Climate Reality Project.

The Climate Reality Project is a non-profit organization that was founded in 2006 by former Vice President and Nobel Laureate Al Gore; the goal of the organization is to build an environmental movement comprised of global citizens who demand action on the climate crisis. Not only has Al Gore successfully influenced policy-making makers at the highest levels of government and industry about the concerns of the climate crisis, but he uses his political capacity to educate global citizens as well.

The Climate Reality Project has eight international offices, one on every continent and two in Asia. The Climate Reality Project identifies itself as a global cultural movement, whose goal is to inform and educate citizens about the current condition of the ecosystem and the effects of a continued policy of growthmania fueled by climate changing energy, and to give democratic citizens the tools to demand policy changes from political leaders and decision-makers. The Project consists of a series of initiatives which seek to engage citizens on climate-related issues, such as an electronic form to instantaneously electronic send letters to political leaders to adopt clean fuel policies, or a tool to find out which elected officials continue to deny the science of climate change.

The foremost initiative of the Climate Reality Project is the Climate Reality Leadership Corps, which seeks to establish a network of environmental activists who are committed

to educate others about the reality of climate crisis and to inspire communities to take

action against climate change. There is no cost to participate in the training. An example

of providing relevant information to democratic citizens to assist them in their

participation and contribution to the policy-making processes, the Climate Reality Project

is a growing transnational advocacy network comprised completely of global citizens –

each one of whom commits to use the information that is provided to address the climate

crisis and to influence the decision-making processes – be it within the family,

community, or state. Each training is presided over by Al Gore himself, during which he

trains each new cohort of environmental activists on the issues of climate change and the

importance of sustainable development. Since 2006, the Climate Reality Project has

hosted twenty-four (24) trainings across the globe, and has trained nearly 6000 climate

leaders in over 100 nations from various industries and sectors; there are three trainings

scheduled in for 2014, in Australia, Brazil, and South Africa. The trainings consist of a

three-day series of sessions during which attendees learn the latest science of climate

change, best practices in public speaking, community outreach strategies, and organizing

skills. Each climate leaders agrees to perform within a year of completing the training

ten (10) 'acts of leadership' to inform others about the climate crisis: give a presentation;

write a blog; write a letter to the editor; meet with local or state leaders; organize actions.

The mission of the Leadership Corps is to create a global network comprised of a cadre

of environmental activities who are "a dynamic group of world-changers shaping the

conversation on climate in forms from family dinners to international summits and

building a 21st-century movement for solutions" (Climate Reality Project, 2014).

4.3.3. Global Community Networks for Sustainable Urban Development.

Global networks for sustainable urban development consist of non-traditional, non-state

actors in international relations, namely local governmental authorities; municipal actors

work within global networks for sustainable urban development to establish heretofore

unseen vehicles for exchange of ideas, practices, and solutions to address the concerns

over the climate crisis – with a particular focus on the programs and policies that local

communities may adopt and implement to have tangible results at the local level.

C40 Cities Climate Leadership Group.

The C40 Cities Climate Leadership Group (C40) is a network of megacities that seeks to

address climate change, to reduce greenhouse gas emissions, and to address climate risks,

both locally and globally; the organization and its members are committed to

implementing local policy actions to address the global climate crisis. Created in 2005,

C40 began when Mayor of London Livingstone convened local political leaders from

eighteen (18) global cities to address the concerns of climate change; the goal was to

have the leaders pursue cooperative action toward reducing GHG emission, which

resulted in the parties signing an agreement to create procurement policies and

technology-exchange programs. Shortly after, C40 partnered with Clinton Climate

Initiative of the Clinton Foundation to work toward their shared concerns over climate

change – with the Cities Program focusing specifically on programs for sustainable urban

development. Having had expanded to forty (40) members, the organization adopted its

current name – although it has since sixty-six (66) affiliated members, classified under

four categories (steering committee member, innovator city, megacity, observer city)[80]; the C40 network accounts for over 8% of the world's population (see table 4).

[TABLE 4 HERE]

The C40 network brings together global cities to address climate change; acknowledging each member city's unique concerns, C40 aims to connect cities to share technical expertise on best practices – allowing each city to adopt policies and programs that reflect their needs and circumstances. C40 has identifies seven initiatives for local governmental authorities to address to end climate change: adaptation and water; energy; finance and economic development; measurement and planning; solid waste management; sustainable communities; and transportation; the organization promotes policy action within these initiatives, providing technical assistance and a support system to facilitate action by member cities. The organization identifies various types of actions that a local governmental authority may take on climate change; it defines a climate actions "[c]omprehensive range of methods by which city governments are tackling climate change … the principle unit being quantified and assessed" (C40, 2014c); examples of actions include dedicated cycle lanes, cycle hire/share programs, increased transit access, energy performance certifications, efficient outdoor lighting. The

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[80] Megacities are either one of the top global cities, or city-regions that with core populations of 3 million and/or regional population of 10 million or more; Innovator Cities are cities that do not qualify as Megacities, but have shown leadership in climate change; Observer Cities is the initial admission category for cities who have not yet met the year-one participation requirements (short-term) or the participation category for cities who are unable to approve participation at the local regulatory level. The C40 Steering Committee consists of the mayors of 10 member-cities, who serve on a rotating basis and who provide strategic direction and governance for the network.

organization offers technical assistance in realizing the goals of the actions through

participation in the network, as well as tracks the action and its outcomes (C40, 2014b).

In August 2013, C40 published *Climate$^+$ Development Program: Framework for Climate Positive Communities,* where it worked in partnership with the Clinton Climate Initiative of the Clinton Foundation and the US Green Building Council to develop the C40 Climate Positive Development Program. It defines climate positive development as "urban development that [will] reduce greenhouse gas emissions below zero in an economically viable manner … [and] will reduce the emission the emissions they create and offset the remainder by removing emissions from their adjacent communities" – which eliminates the incentive for local governmental authorities to 'sell' or 'trade' emission with less-prosperous communities nearby (C40 2013: 2). While acknowledging the need for flexibility for cities based on different climates, fuel supplies, and political landscapes, the framework seeks to standardize the measurement of emission impacts while allowing members to address three sources of operational emissions (thermal/electrical energy use, waste, transportation) – if a mayor's executive power is limited in one sector, she may focus on another to accomplish target goals. The framework outlines a credit system whereby cities may monitor and account for progress, and the document identifies categories, examples, and processes for cities to realistically identify and successfully accomplish goals. The framework describes the application process for incentivizing and rewarding green design among development partners (including stakeholders from the private sector, civil society, etc.), and program requirements for review and progress toward sustainable urban development – which

include a climate positive roadmap, measurement and verification plans, timeline of

milestones (C40, 2013). This program is a clear step toward sustainable urban

development, which outlines specific steps toward the reduction of GHG emissions,

toward reversing climate change, and toward sustainable urban development.

C40 conducts research to offer its members, as well as partner agencies and interested

actors, data to support efforts to understand the roles that cities play in climate change

and to stimulate cities to adopt approaches that will end climate change. In the study,

Climate Action in Megacities: C40 Cities Baselines and Opportunities, a quantitative

analysis of the powers of executive officials at the local level is conducted, and

measurements show that local governmental authorities have significant power to take

meaningful action on climate change. The report, for example, has counted 8068 climate

actions that are being taken by member cities across various sectors (i.e., private

transport, mass transit, buildings, outdoor lighting, energy supply, waste, water) (C40,

2014a).   Another report conducted by the organization shows a trend of increasing and

expanding climate action among its member cities; further, the results of the survey study

show that local executives take action in policy areas over which they have high levels of

control (e.g., adaptation, outdoor lighting, buildings, mass transit) and innovate through

partnerships in sectors where they have less control (e.g., information & communication

technology, energy supply) (C40, 2014b).

C40 comprises of a system of networks of active working groups of member cities,

centered around various topics of common interest; the networks are designed to respond

to the needs and demands of the membership, which reflects a data-driven effort to identify and create networks that reflect the members' priorities. There are currently thirteen (13) networks, examples of which include (by initiative): bus rapid transit (transportation); climate positive development (sustainable communities); green growth (finance and economic development); private sector building energy efficiency (energy); sustainable urban development (sustainable communities). The networks are supported by C40 staff, who facilitate the transfer of knowledge and exchange among the members and who provide technical assistance to members. The organization staff also provide direct support to member cities as they attempt to create and to implement local policies, programs, or projects toward sustainable urban development, relying institutional memory and the network of members to offer accounts of past experiences, best practices, and successful outcomes. The C40 networks "facilitate knowledge transfer and peer-to-peer exchange between individual city staff members responsible for implementation with the aim of sharing challenges, opportunities and best practices. Networks can also provide a platform for problem solving" (C40, 2014d). In 2011, C40 announced a partnership with ICLEI—Local Governments for Sustainability to streamline financing, GHG accountability accounting, and uniform reporting.

In addition to supporting leaders in city government to develop programs for sustainable urban development, C40 offers a vehicle for democratic citizens and interest groups to take action on climate change; is asks citizens to take small individual actions toward sustainability by identifying '11 simple things' to do to reduce one's own and one's city's carbon footprint, of which are mainly reductions in energy consumption and of which

some steps include: changing incandescent light-bulbs for compact fluorescent lights; buying locally grown foods; planting native species; encouraging employers to offer commuter benefits. Also, C40 encourages individuals to get involved in conversations about climate change via social media networks, such as Twitter, and too increase awareness about the concerns over climate change and the steps toward sustainable living (C40, 2014).

ICLEI—Local Governments for Sustainability.

A partner of C40, a supporter of the CoM, and a sponsor of RC4A, ICLEI—Local Governments for Sustainability is a global network of local governmental authorities that seeks to identify and implement solutions for sustainable urban development. ICLEI also works closely with the various agencies of the United Nations to promote sustainable communities. Originally founded in 1990 at the by over 200 local governments from 43 countries who were convened at the UN's World Conference of Local Governments for a Sustainable Future in New York as the International Council for Local Environmental Initiatives (ICLEI), the association officially changed its name in 2003 to 'ICLEI—Local Governments for Sustainability' to reflect a modified mandate in the tagline while keeping its familiar and recognizable abbreviation in its title. While the association was created during a conference hosted by the inter-governmental organization of the UN, ICLEI was founded by local governments. The mandate for the association is to "build an active and committed municipal membership of local spheres of government (local and regional governments and authorities) as well as international, regional, national and sub-national local-government associations" (ICLEI, 2011: 4).

ICLEI finds that local governmental authorities have tremendous potential in improving the conditions of the ecosystem by creating and implementing policy action toward sustainable urban development, and that they are assuming important, albeit distinct, in that effort; global citizens would benefit greatly from the involvement of local governmental authorities in the activities of global environmental governance, and from the cooperation among cities, states, and firms over the management of natural, finite resources (ICLEI, 2010). ICLEI identifies itself as a "democratic association of local governments," with a governance structure of elected representatives from its membership that adopts strategic plans and manages operations toward achieving a collective commitment for sustainable urban development (ICLEI, 2000).

ICLEI seeks to support and to provide technical support to its members in their local initiatives toward sustainable urban development, as well as to support a network of local governmental authorities where in an exchange of experiences may take place. ICLEI is a global organization comprised of fourteen (14) offices within sixty-eight (68) states. The association consists of secretariats and offices, which include the World Secretariat (in Bonn, Germany), the European Secretariat, the Africa Secretariat, the South American Secretariat, the Canada Office, the Korea Office, and the Japan Office (ICLEI 2014). ICLEI-USA is headquartered in Oakland, California; it is the largest of ICLEI's regional branches, serving over 600 local governmental authorities. ICLEI identifies its member network as a leader of national and global movements toward sustainable urban

development – taking political and policy action to advance climate protection and clean energy (ICLEI-USA, 2014).

Membership eligibility is limited to local and regional governmental authorities, which supports the association's work mandate to "promote the role of local government as a necessary innovator and implementor of sustainable development and environmental policy" (ICLEI, 2011: 5). ICLEI offers its members "the most cost-effective option to help [them] reach their goals [for sustainable urban development]," and offer skills training to build capacity and knowledge within local institutions, free toolkits and resources as comprehensive guidance documents, technical support, national and international promotion through policy action and press outreach, networking events, and regular communication and updates via electronic newsletters (ICLEI-USA, 2014). ICLEI membership is limited to local governmental authorities, and requires an annual a sliding scale fee payment (ranging from $120 USD to $3500 USD) based upon type of organization, gross national income per capita, and population. ICLEI "encourages its members to make a self-defined commitment to its citizens to address climate change and sustainability" (ICLEI-USA, 2014) – and since membership to ICLEI is self-selecting, it is clear that local governmental authorities have both the political will and citizen support to initiate policy-action toward sustainable urban development.

Membership to ICLEI includes access to resources, tools, trainings, and events. ICELI acknowledges that each local governmental authority faces distinct social, political, and economic circumstances; nonetheless it identifies a set of key components to help

municipal governments initiate a program for sustainable urban development within their

communities – assuring its members that the organization's tools and the network's

guidance will assist them in their efforts. ICLEI offers regular trainings to assist its

members in using available tools and resources, with specific efforts in helping staff and

officials understand the significance and processes in completing greenhouse gas

emissions inventories. In addition to direct support, ICLEI provides its members with

access to international, federal, regional, local, and private resources – as well as 'lessons

learned' and case studies from member municipalities – (e.g., collections of action items,

policy plans, regional program initiatives, recycling programs, sample job descriptions,

grant access guides, energy codes, etc.) to support them at their various stages of the

development and implementation of policies for sustainable urban development. ICLEI

also provides information and resources to promote climate action; this includes affecting

policy, financing staff, and utilizing the media. ClearPath is an online tool that assists

local governmental authorities to develop greenhouse gas inventories, to track emissions

progress over time, to forecast future emissions, and to analyze benefits of various policy

measures. The online cloud-based platform supports municipal governments in their

efforts to achieve the five milestones for climate mitigations, and a methodology to

measure baseline emissions and emissions reductions (ICLEI-USA, 2014).

ICLEI identifies itself as the "world's leading association of cities and local governments

dedicated to sustainable development" (ICLEI, 2014). Comprised of 1098 local

governmental authorities across the globe, it is a network of urban regions, cities, towns,

and counties which promotes local action for global sustainable development, and which

supports local governmental authorities to develop green urban economies. ICLEI also

identifies itself as a 'powerful network' comprised of recognized leaders on climate

action and sustainability who are leading the effort to build communities that are both

ecologically sound and economically viable (ICLEI-USA, 2014), and as a 'network of

networks,' linking local governmental authorities to collaborate over approaches toward

sustainable urban development and to exchange information about the practices toward

the implementation of policies. ICLEI claims that its network "provides a space where

seasoned practitioners can sharpen their skills and share their knowledge … where core

skills are learned, shared and refined … where collaboration is born" (ICLEI, 2014). The

organization offers a vehicle for local governmental authorities to collaborate in their

efforts toward sustainable urban development by proving a framework, technical

assistance, and access to a network of local governmental authorities. ICLEI has

established a series of networks that focus on specific issues, goals, or regions; for

example, the Fast Growing Cities Network addresses concerns of rapidly-growing urban

centers, while the Ecocities Network addresses policy action toward reshaping the spatial

structure of cities through the reversal of sprawl (ICLEI, 2014). These networks of local

governmental authorities – a global community of local communities – have the potential

to provide municipalities a multitude of by linking municipal authorities regionally,

nationally, and globally.

ICLEI supports local governmental authorities work toward sustainable urban

development by connecting leaders, acceleration action, and strengthening capacity at the

local level. Its approach to accomplish this effort is to pursue interrelated urban agendas

around sustainable urban development, to sponsor events and training for information exchange, to develop new initiatives in response to changing concerns, to advocate for international environmental policy, and to equip local governmental authorities with news and information. ICELI identifies eight urban agendas to pursue, which are designed to support local governments in their efforts to implement sustainable urban development policies. The urban agendas are sustainability, biodiversity, carbon-reduction, resource efficiency, and infrastructure renewal; the organization also provides trainings for officials from local government to meet with experts, business and industry leaders, academics, civil society, and state representatives to exchange ideas, solutions, and approaches toward sustainable urban development. In addition, ICLEI offers tools for local authorities in conducting self assessments, climate adaptation plans, financial plans, green building decision-making, and public awareness evaluations – do document baseline metrics and progression over time toward a green urban economy (ICLEI, 2014).

Two specific approaches that ICLEI promotes in establishing and implementing policies for sustainable urban development are the STAR Community Index and the Five Milestones for Sustainability programs. The STAR Community Index Sustainability Goals and Guiding Principles establish a collectively-defined standard and a vocabulary that local governments to use as they work to create and implement programs toward sustainable urban development. The STAR Community Index comprise ten (10) guiding principles and eighty-one (81) goals, which offer political and community leaders a 'vocabulary' to define their goals – as well as a performance-based system to measure and rate their efforts toward sustainable urban development. The STAR Index allows

communities and local governments to align priorities and to work toward achieving the Five Milestones (ICLEI-USA, 2014)

The Five Milestones for Sustainability outlines a series of steps for local governmental authorities to follow toward sustainable urban development – including preliminary steps of a leadership commitments by local executives and legislatures toward sustainable urban development (i.e., public pronouncements, appointment of a sustainability coordinator, formation of an internal inter-departmental team to participate in the sustainability plan, creation of an external sustainability advisory board). The five (5) milestones include conducting a sustainability assessment, setting sustainability goals, developing a sustainability plan, implementing a sustainability plan, and monitoring/evaluating progress; ICLEI offers access to tools and networks to support local governmental authorities in their efforts through the five milestone process – including online platforms and technical assistance. Most importantly, ICLEI provides local governmental authorities with a standardized methodology to calculate GHG emissions, to establish achievable target and reduction emissions, and to monitor performance, and access to a tool to measure and comply with climate mitigation goals – including setting benchmarks, targets, and action plans (ICLEI-USA, 2014).

To accomplish its goals toward global efforts for sustainable urban development, ICLEI creates partnerships with other organizations. For example, ICLEI-USA partnered with the U.S. Green Building Council, the National League of Cities, and the Center for American Progress to create its STAR Community Index program. Also, ICLEI received

sponsorship from Office Depot to create the Green Business Challenge, where it offers

$20000 US to local governments to launch the program; the incentive for the local

governmental authority is to involve the business community in working toward local

sustainability priorities by training business partners about and rewarding them for

achieving energy efficiencies – which also supports the local governmental authorities in

meeting their milestones. Another partnership of great importance – and a source of

significant attention – is the role of community groups, civil society, and democratic

citizens in achieving policies for sustainable urban development; ICLEI identifies

community members as indispensible in achieving success toward sustainable urban

development – offering constituent outreach and communications guides, event planning

resources, and climate communication guidelines to ensure clear and concise delivery of

policy goals. ICLEI also offers webinar resources, allowing its membership to access

training and resources from anywhere at any time (ICLEI-USA, 2014).

4.4.   Networks and Global Environmental Governance.

The networks for sustainable urban development contribute in various ways to the activities of world politics; they share the characteristics of developing and using the network structure to engage actors, to exchange information, and to take action toward a common interest or shared goal. All of the networks discusses in the previous section have identified sustainable urban development as an area of policy interest, but the character and structure of the networks result in somewhat different activities and outcomes; these networks have been categorized into three typologies, thus: cross-border/domestic networks for sustainable urban development; international networks for sustainable urban development; and global networks for sustainable urban development.

Cross-border and domestic networks build ties among agents within cities from different states, building economic, political, and cultural bonds across nations and peoples. International networks comprise political actors who participate in significant ways in the affairs of the international system; these may be traditional actors who respond emergent concerns in new ways – as does the inter-governmental organization of the United Nations by creating offices and networks for sustainable development; or as does the non-governmental organizations of the Clinton Foundation by participating in the activities of international relations fostering heretofore unseen collaborations among agents, and the Climate Reality Project by raising awareness by democratic citizens to demand action by government. Global networks are distinct in this typology in that, unlike cross-border/domestic networks they seek to influence decision-making in global

affairs, and unlike international networks they comprise non-traditional, sub-state actors who seek to influence decision-making in global affairs.

The two examples of global networks for sustainable urban development discussed here are the C40 Cities Climate Leadership Group (C40) and ICLEI—Local Governments for Sustainability (ICLEI). While they are similar in their interests and goals toward supporting policies for sustainable urban development, there are some differences. Membership to C40 is limited to the largest of the world's cities, while ICLEI is open to local governmental authorities of all sizes – not excluding the municipalities with the largest populations or geographies. Certainly the development activities of the world's megacities are important political actors in global affairs; however as the discussion demonstrates earlier, the socio-spatial parameters captured by global city-regions reflects the complex roles of urban centers within the global system – and to exclude the great numbers of smaller political units of municipal governments would limit the progress toward a collective action on sustainable urban development. Therefore, the analysis that follows reflects the activities of a set of smaller local governmental authorities within global city-regions as participants in what Bulkeley and Betsill (2003) identify as a form of global environmental governance; by exploring these global networks, I am able to demonstrate that these small, sub-state actors are influenced by global values, norms, and institutions, and to measure specific policy action that they take in relation to that influence.

The New York conurbation, and the local governmental authorities that are members therein, they are particularly susceptible to the values and norms of global structures because they are members within a socio-spatial configuration of one of the foremost global city-regions and units within the geo-politically fragmented landscape; this leaves a political void among local actors who seek guidance in creating and implementing policies for sustainable urban development. For these reasons, the New York City-Region offers a rich study on political action among local governmental authorities as they manage the demands of democratic citizens – both at the local and global levels; as would others within federal systems that have high levels of local autonomy and whose geographic landscape may be spread among several political jurisdictions.

It is within the structures of these networks that allow for local governmental authorities, and the democratic citizens who give them authority and legitimacy, to engage in a form of global environmental governance. By coordinating the political activities of sub-state actors who seek to identify, implement, and measure policies for sustainable urban development, these global networks establish a set of norms – as observed through green initiatives, local action plans, and public policies. The institutional structures maintained by the advocacy network act as vessels within which institutional memory may be documented and recorded for current and future members; the activities of the advocacy network serve as a conduit through which information may be exchanged and assessed among its membership. These structures and activities combine to support existing local governmental authorities – and to attract new ones – in their efforts to create and to deliver programs for sustainable urban development.

In addition to the goals of the organizations discussed in the previous section, C40 also holds regular meetings of its membership to establish goals, and to identify actions to accomplish those goals. For each member city, an assessment of mayoral powers is conducted to ascertain the local executive's power over various policy areas (e.g., buildings, energy supply, public transport, waste); these assessments posted on the C40 website and thereby made public for interest and civil society groups to review. The C40 network holds biennial mayors summits to discuss current and ongoing issues and actions toward addressing climate change; in February 2014, the mayors summit convened to advance policy action toward resilience and livability. The mayors exchange details of local policy initiatives to address the concerns of climate change: for example, Melbourne constructed government housing that reduces carbon emissions and energy consumption; Seoul has a 'car-free days' policy that incentivizes transit ridership and has reduced CO_2 emissions annually; Berlin created a model to improve energy efficiency of buildings; and New York has a program to reduce municipal GHG emissions by 30% before 2017. Each of these examples demonstrate partnerships among industry, civil society, and local government in an effort to deliver programs and to create policies that work toward sustainable urban development – identifying 'next steps' each municipal government will take toward accomplishing its policy initiative. The C40 network allows its members to discuss these approaches, as well as over time to relay successes and problems, so that 'best practices' may be adopted by others – and perhaps even avoid certain approaches that may not have been successful. Membership within the C40 network, however, is limited only to the largest cities.

While the activities of the largest cities is important in the management of global resources and toward achieving climate action, there are many political actors at the level of local government who are excluded from participation because they do not meet the membership requirements – and thereby will not benefit directly from participation in and contribution to the processes of global environmental governance. While ICLEI limits its membership to local governmental authorities, it does limit its membership to the largest municipal governments. Through participation within the ICLEI network, a local governmental authority is able to both contribute to the processes of global environmental governance as well as to benefit from the collective actions other local political actors from around the globe. Further, because there are a larger number of more smaller-sized local political actors, they afford the potential to collectively make significant contributions to the efforts to halt and reverse the effects of climate change through measureable action.

Not only do these networks allow for exchange among its membership, but the formal – albeit flexible – structure also allow for exchanges across networks. For example in an open letter to the UN's Open Working Group on Sustainable Development Goals, the current chair of C40 (Mayor Eduoardo Paes, of Rio de Janeiro) advocated for the adoption of a specific urban goal among the new sustainable development goals. In June 2011, C40 and ICLEI work together to establish a global standard to measure greenhouse gas emissions at the community level, and which permits a common approach in accounting and monitoring of progress among the largest and the smallest local

governments, which was released for consideration by the UN Framework Conventions on Climate Change (UNFCCC) 17th Conference of Parties later that year. In this way, in addition to serving as internal networks for the local governmental authorities, C40 and ICLEI also serve as advocates for their memberships in global affairs.

4.5. Conclusion.

Networks for sustainable urban development have emerged to assists local governmental

authorities in addressing the concerns over the impacts of climate change upon the built

environment. Some of these networks are embedded within larger organizations, which

have several areas of interest or activity, while others of these networks are focuses

specifically upon the issues of balanced development and resource management. The

approaches of the networks identified here are different, with some seeking to engage

local governmental authorities to influence actors at the highest levels of international

relations, while other seek to increase the involvement leaders from industry and the

private sector, while others still seek to create a cultural movement among citizens and

members of civil society. The advocacy networks that I explore to the greatest extent in

this dissertation are the networks comprised of local governmental authorities who – with

the contributions and support of their constituents – seek to develop and implement new

and innovative policies and programs for sustainable urban development, and who utilize

newly-created networks to exchange ideas, information, and practices to accomplish

these goals.

Most of these networks were created, or reorganized, since the start of the new

millennium – very recent additions to the processes of global affairs. I argue that these

networks emerged to participate in the activities of global affairs not only in response to

the apparent policy concerns over sustainable development in the face of increased

urbanization, but also because of the absence (at that time) of international structure and

institutions to address the concern. While traditional international organizations, such as the United Nations, are now addressing these with great effort (i.e., Sustainable Development Goals, and the Post-2015 Agenda) the actors and networks that were created in the early years of the twentieth century continue to be active partners – if not the primary voices – for local governmental authorities in the concerns over the impacts of growthmania upon finite resources and for policy solutions toward sustainable urban development.

The complex nature of these networks reflects the characteristics of the global system, within which these political actors seek to influence the processes of global environmental governance. Through the participation in these networks, local governmental authorities are able to adopt and to exchange value priorities which reflect interests of a global community – both as expressed by global democratic citizens and global community leaders. For example in the following section, four of the five the case studies consist of members of ICLEI, all of whom indicate during interviews and in surveys the role of the global network upon their efforts toward sustainable urban development.

These networks reflect the needs of local governmental authorities as they work toward developing and implementing policies toward sustainable urban development; they reflect the values of global citizenry, within whose networks these values are further propagated through the exchange of information and the shared goal of the implementation of regulation over natural resources of the global commons.

5.   Environmental Governance in the New York City-Region.

Urban cores and their environs are significant social, political, and economic agents in

the post-modern era. Global cities are engines of activity and exchange among citizens,

groups, and organizations, which are linked to the processes of globalization (Friedmann,

2002; Fainstein and Fainstain, 1996; Holton, 1986, 1992, 2009; Sassen, 1998, 2001,

2002, 2005; Scott, 1980, 1998, 2001, 2006, 2008). International metropolitan centers

have been increasing in number, magnitude, and power since the onset of the industrial

era (Park, 1936; Wirth, 1930); global cities are projected to continue to grow and expand

into the future. These urbanized areas are defined by their economic, political, and

cultural activities, as much as they are defined by their geographic boundaries; actors in

the system of market globalization, global cities and their decision-makers contribute to

the policies and the processes of the governance of the global regime (Preteceille, 1997;

WCED, 1987). This study explores how the processes of market globalization are

interpreted and how the values of sustainable development are realized by democratic

citizens of the global city-region of New York. The geographic boundaries of the New

York City-Region are identified in Figure 5.

[FIGURE 5 HERE]

To operationalize the geographic boundaries of the New York City-Region (NYCR), I

turn to the designation procedures outlined by the United States Census Bureau, as

defined by the Office of Management and Budget (OMB); the OMB updated definitions

for statistical areas for all federal agencies and that collect and publish data for

metropolitan, micropolitan, and combined statistical areas. Micropolitan statistical areas comprise urban clusters (areas with populations between 10000 and 50000) and their adjacent territories. Metropolitan statistical areas are county-based,[81] with urbanized cores (areas with populations greater than 2.5 million, which may include micropolitan divisions) plus their adjacent territories; 57% of US counties and, as of June 1999, approximately 80% of the US population lie within metropolitan statistical areas. Combined statistical areas may be comprised of interconnected metropolitan and micropolitan statistical areas, and they are "characterized as representing larger regions that reflect broader social and economic interactions, such as wholesaling, commodity distribution, and weekend recreation activities, and are likely to be of considerable interest to regional authorities and the private sector … as measured by commuting [patterns]" (OMB, 2009: 9).

In the United States, this basis for the measurement of a combined statistical area, which consists of the principal city and adjacent territories, is consistent with the theoretical and analytical treatments of a city-region. When referencing the New York City-Region, I use the US Census Bureau's delineated of 'New York-Newark-Bridgeport, NY-NJ-CT-PA Combined Statistical Area,' which is comprised of the following: Bridgeport-Stamford-Norwalk, CT Metropolitan Statistical Area; Kingston, NY Metropolitan Statistical Area; New Haven-Milford, CT Metropolitan Statistical Area; New York-Northern New Jersey-Long Island, NY-NJ-PA Metropolitan Statistical Area;

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[81] Or their equivalent entities, i.e. boroughs in Alaska, parishes in Louisiana, municipios in Puerto Rico, and independent cities in Maryland, Missouri, Nevada, and Virginia.

Poughkeepsie-Newburgh-Middletown, NY Metropolitan Statistical Area; Torrington, CT

Micropolitan Statistical Area; and Trenton-Ewing, NJ Metropolitan Statistical Area. This

is a fragmented geo-political area, with complex cultural, social, political, and economic

connections among its citizens and groups, both within and beyond the region. This

approach to identify and delineate the geographic boundaries of the New York City

combined statistical area (CSA) very much reflects the theoretical discussion of the geo-

political and socio-spatial markings of a city-region; the New York City CSA may be

handily used to demarcate the geographic area of the New York City-Region, along with

it many internal political units. Therefore, I use the US Census Bureau's delineation of

the geographic boundaries of the New York City CSA as the definition of the New York

City-Region.

Consistent with the literature on global cities and global city-regions (Mayer, 2006;

Sassen, 1998, 2001, 2002, 2005; Scott, 1980, 2001, 2006, 2012), the geo-political and

socio-spatial activities within the New York City-Region (NYCR) are explored by

studying the creation and implementation of policies for sustainable urban development.

Policies for sustainable urban development is defined along the metrics that are described

by Bulkeley and Betsill (2003): the institutional alignment at the local level over sectoral

activities of land use planning, transportation planning, and energy management, With

increased efforts to integrate these policy areas a more effective model of socio-economic

development may be achieved, thereby more efficiently managing the resources over

which they govern for current and future generations. Therefore, foremost among the

analysis of the cases is to determine the extent to which the three aforementioned policy

areas are aligned within the local governmental authority's hierarchical management, thereby giving an indication of the extent to which policies for sustainable urban development are evidenced.

The position of New York City metropolitan area as a global city indicates that economic, political, and social exchanges will take place, affording its inhabitants the status of global citizen. As a global city, NYC has great influence beyond its borders; as a global city-region, there is also a great level of exchange among political units within the geographic area. Democratic citizens identify and voice value preferences; at global and local levels, these exchanges among cosmopolitan citizens drive social and political activity both within and beyond the boundaries of the urban center, the metropolitan region, and their environs. These exchanges of ideas – just as the exchanges of commodities, resources, and goods – occur within and beyond the political units of the regional centers, between global cities and within global city-regions. These municipal case studies explore the complex interactions between governments, organizations, and civil society as they seek to devise policies and programs for sustainable urban development that reflect their values, and together offer insight into the environmental governance within the city-region as a whole.

5.1.   Municipal Case Studies of the New York City-Region.

The following case studies are of local governmental authorities within the New York City-Region. The case studies provide analytical generalization in the exploration of the relationship between global environmental values and local sustainable development policies; therefore, the universe of cases is limited to municipal authorities who have devised policies for sustainable urban development. All but one of the cases (Jersey City) are members of ICLEI—Local Governments for Sustainability at the time of interview, reflecting that through participation in the global network values and norms are exchanged between the global and the local levels, as observed through policy action. The case studies were selected because of their shared geographic, economic, and social characteristics, allowing for comparison among these geo-political units within the New York City-Region.

The case study reports consist of a general description of the local governmental authority, including demographic information and a description of the political structure; a description of the sustainable urban development policies and programs, including policies in operation, their development and implementation processes, and their outcomes; and a description of the relationship between the governmental structures and civil society in the policy-making process. Five cases were selected from three states (Connecticut, New Jersey, New York) within the New York City-Region.

The goal of the case studies is to capture administrative changes within the local authorities to implement policies for sustainable urban development, and to identify which stakeholder groups play an important role in contributing to sustainability policies; further, to determine the relevance of the role of civil society in this process, the studies seek to determine whether stakeholders are involved in the creation and/or the implementation of sustainable urban development policies – and if so, to what extent. This statistical generalization allows me to look at how the characteristics of community shape the types of policies, as well as whether – and how – local governmental authorities respond to global environmental values, as discussed in greater detail in the next chapter on the methodological analyses of this study (see Chapters 5.1 and 5.2).

The electronic surveys were issued in January of 2011, and the case study interviews were conducted in March and April of 2011. The five local governmental authorities in the New York City-Region which comprise the case studies for this report are: the Village of Dobbs Ferry, NY; the City of Jersey City, NJ; the City of New Brunswick, NJ; the City of Newark, NJ; and the City of Stamford, CT. In addition to a comprehensive review of public action by each municipality toward the implementation of sustainable development policies, I use a survey to inform us of the efforts by these geo-political units within the New York City-Region in developing regulatory structures toward sustainable urban development. I call upon the surveys to capture efforts by each local governmental authority to devise a comprehensive approach toward sustainable urban development, to gauge the extent to which policy action is formal and/or permanent, and to assess the importance of the role civil society in the delivery of programs for

sustainable urban development. As elements within both the global city-region and members of the transnational network, these local governmental authorities contribute to global environmental governance as described in previous discussions.

5.1.1. Dobbs Ferry, Village of

The Village of Dobbs Ferry is located in the state of New York, 25 miles northeast of New York City; it was incorporated in 1873 as Greenburgh, and adopted its current name in 1882. The Village of Dobbs Ferry is 3.2 square miles, remains a part of the Town of Greenburgh, and sits on the eastern bank of the Hudson River and on the western bank of the Saw Mill River; located on the Hudson line (serviced by the Metropolitan Transportation Authority's Metro-North Railroad), the brief train commute to New York City has favored Dobbs Ferry's location as a bedroom community. The 2009 population estimate for the Village of Dobbs Ferry is 11,221; this is a six percent increase in the measurement of its population since 2000 (Office of Management and Budget, 2009).

The median household income is $101,167 and the per capita income $50,960; the rate of unemployment is 7.2% and the rate of owner-occupied housing tenure is 61.4%. The major industries (and its percentage of the employed population) of Dobbs Ferry are: educational services, and health care and social assistance (33.2%); professional, scientific, and management, and administrative and waste management services (16.6%); finance and insurance, and real estate and rental and leasing (10.0%). Dobbs Ferry has a very highly-educated population, with 55.0% of its population having a bachelor's degree or higher (US Census Bureau, 2011). Dobbs Ferry is primarily a residential community. Located in Westchester County, Dobbs Ferry is part of the New York-White Plains-Wayne, NY-NJ metropolitan division, which is part of the New York-Northern New

Jersey-Long Island, NY-NJ-PA metropolitan statistical area, which is part of the New York-Newark-Bridgeport, NY-NJ-CT-PA combined statistical area.

The municipal government of the Village of Dobbs Ferry consists of the Village Board of Trustees, which is composed of the Mayor, Deputy Mayor, and five Village Trustees, who are elected at-large to 2-year staggered terms. The Village of Dobbs Ferry is part of the State of New York's 92nd State House district; 35th State Senate district; and New York's Seventeenth and Eighteenth Congressional Districts.

The Village of Dobbs Ferry approaches sustainability in two ways: activities and procedures that address sustainability as part of its internal operations; and policies and programs that address sustainability within the community. The Village has a series of committees, task forces, and commissions that address policies of sustainable development; within these administrative bodies, there is a great deal of over-lap among memberships, goals, and activities. Some of the over-lap results from the interests of the elected or appointed officials to sit on committees that address different aspects of sustainability; this over-lap also results from legislatively mandated requirements. For example, the Chair of the Planning Board is required to sit on the Conservation Advisory Board; in addition, the Chair of the Energy Task Force is also a regular member of the Downtown Improvement Committee. Thereby, participants who sit on different

committees and boards may consider different elements of sustainability, from energy

management to economic development, from zoning to conservation. Through the

decisions and recommendations of the various boards, committees, and task forces, the

Village has developed and implemented policies and programs for sustainable urban

development; these include mandates for open space, targets for greenhouse gas emission

reductions, and plans for environmentally sound growth along its riverfront.

In February 2011, the Village created a 'Green Team' to consider sustainable approaches

for its internal operating procedures. Recognizing that the Village is instrumental in

meeting emission target goals, the Green Team seeks to inform civil servants and

officials about sustainability issues and practices. The Green Team is headed by the

Village Clerk, and it consists of departmental heads from different Village agencies; the

Green Team meets to develop ways to save energy at the workplace across agencies and

departments, e.g. the Library, Department of Power and Water, the Village

Administration, etc. The goal of the Green Team is to increase sustainability activity at

every level of village government.

The Village's Land Use Committee (LUC) was created in 2000, and has been charged

with the re-evaluation of land-use regulation. Since its creation, the LUC has attempted

to implement land use objectives that reflect sustainable urban development, referring to

the principles of the Charter of the New Urbanism as one of its guides. The Land Use

Committee's former chair, and one of its original members, calls this approach 'context-

based zoning:' one in which a land-use policy's "objective is to find a way to repair the fabric [of the community] at a smaller scale." Thereby, the LUC has recommended the adoption of regulatory programs that reflect the character of the community, consider the historical arc of the Village, and feature sustainable urban development approaches. An example of a policy outcome that includes these objectives is the LUC's recommendation to the Village Board to mandate clustered development – or to mandate *connected open spaces*, as it has alternatively been identified in the LUC's white paper – through which sustainable development goals would be realized within the Village: the reduction of greenhouse gases that result from less vehicle miles traveled, the protection of environmentally sensitive spaces that results from increased open spaces. The white paper on mandating cluster development recognizes the work – and supports the requests – of other boards and task forces that address sustainable urban development; for example, the LUC referenced the work by the Task Force on the Energy and the Environment to reduce greenhouse gas emissions, as well as the Conservation Advisory Board's efforts to inventory and maintain open space. By referencing these components and recommendations of sustainable urban development policies and programs, the LUC has reinforced these efforts across governmental entities within the local authority, thereby contributing to the integration of this approach across departments and policy areas.

In 2008, the Mayor and the Village Board created a Task Force on Energy and the Environment, or the 'Energy Task Force,' which has adopted the motto "what is good for the environment can also be good for business." A Trustee of the Village Board, who has

a passion for sustainability, recommended to the Village Board and to the Mayor to address issues of sustainable growth; this recommendation was approved and the Task Force was created. The Task Force consists of nine residents of the Village, who are appointed by the Mayor. The expressed goal of the Task Force is to address issues of sustainability. The Task Force has made recommendations to the Village Board on programs to reduce greenhouse gas (GHG) emissions and to adopt an emissions reduction target; it has proposed a single plan for the community, wherein a goal of a 20% reduction in GHG emissions may be realized. The Task Force has actively pursued grant funding for efficient and renewable energy projects (e.g., lighting retrofits, LED street lights, an HVAC overhaul). The Task Force has also engaged the Village merchants in an effort to promote bicycle pathways along the riverfront and aqueduct – both to increase alternative transportation among Village residents, and to increase eco-tourism by cyclists from other parts of the metro area; members of the Task Force have engaged adjacent and nearby Villages to support this effort. The active involvement of community stakeholders on this committee has been identified by village staff and appointed officials as a crucial component in growing the efforts for sustainability; as members and appointees to task forces and committees, residents share professional and industry expertise in the Village's effort to create and to deliver sustainable urban development programs. To support, to track, and to facilitate the involvement of community stakeholders, the Village Clerk has a highly systematic method to engage residents who are interested in becoming involved—as well as to respond to their demands.

The Energy Task Force has taken on and completed a number of initiatives that further

the goals of sustainable urban development, energy efficiency, and environmental

protection, including the installation of solar panels on village-owned buildings, LED

lighting replacements, installation of an energy-control system in the Village Hall and

Library Building; the automated energy usage tracking system in the Village Hall and

Library Building allows the municipality to measure and modify its energy consumption

– which have proven to contribute to energy efficiencies and cost savings. In April 2012,

the Energy Task Force collaborated with the Village Board, the City Library, the

Recreation Department, the Middle School, the High School, and community residents to

organize a clean-up for Earth Day; in July 2013, the Village Board committed to

participate in the Westchester Solar Initiative to promote the installation of photovoltaic

(PV) panels upon the rooftops of municipal, commercial, and residential buildings.

In addition to internal efforts to create sustainable urban development policies, the

municipalities of Southern Westchester County are in the process of establishing a

consortium. Modeled after a similar arrangement of municipalities in Northern

Westchester County, the consortium would be an informal network of eight

municipalities that would work together to share ideas and to pursue resources. The

consortium would consist of committees that address common concerns about waste,

energy, community outreach, etc. and would work to assist in the creation of

sustainability development plans for each of the member municipalities. Dobbs Ferry

heads this effort, and is the hub for this consortium. Dobbs Ferry is recognized by the

New York State Energy Research and Development Authority and the Mid-Hudson

Region for its work on projects for sustainable development.

Dobbs Ferry is also a member of the international organization Local Governments for

Sustainability – ICLEI, which has provided a structure and a plan for local governmental

authorities that seek to develop and to implement sustainable development policies; this

has helped Dobbs Ferry to use an "agreed-upon" process in developing an action plan to

address issues of sustainable development.

These efforts by community stakeholders and elected officials have led to increased

sustainable urban development policies and programs in Dobbs Ferry. The

recommendations by the Land Use Committee to mandate clusters, to modify the system

of zoning classification, and to offer market incentives to the support these proposed

policies – a program that integrates the policy areas of energy management, land-use

planning, and transportation-planning – is one example of a sustainable urban

development policy that has emerged.

5.1.2. Jersey City, City of

The City of Jersey City is located in New Jersey, 5 miles west of New York City; it was settled in 1623 and incorporated in 1820. At 21.1 square miles, the City of Jersey City is the second largest municipality in New Jersey, it is the county seat of Hudson County, and it sits on the western bank of the Hudson River; with both subway and ferry service connections to New York City, Jersey City is a major transit hub. The 2009 population estimate for the City of Jersey City is 242,503; this is a one percent increase in the measurement of its population of 2000. The median household income is $51,826 and the per capita income is $29,886; the rate of unemployment is 6.2% and the rate of owner-occupied housing tenure is 32.0%. Jersey City is a diverse community, with 61.0% of its population identifying itself as a race other than white; 49.3% of its population speak languages other than English at home. The major industries (and its percentage of the employed population) of Jersey City are: educational services, and health care and social assistance (19.5%); professional, scientific, and management, and administrative and waste management services (15.1%); financial and insurance, and real estate and rental and leasing (14.6%); retail trade (9.2%); transportation and warehousing, and utilities (8.3%). Jersey City's transit links to Newark Penn Station, New York Penn Station, and Port Authority—via Port Authority Trans Hudson (PATH) trains, the Hudson-Bergen Light Rail, New Jersey Transit buses, and water taxis & ferries—make it a convenient location for commuters, of which 53.5% use public transportation or walk to commute to work (U.S. Census Bureau, 2011).

Jersey City is the home to New Jersey City University, as well as the highest-ranked public high school in the state of New Jersey; due to its proximity and accessibility to Wall Street and mid-town Manhattan, Jersey City's Exchange Place – "Wall Street West" – serves as a financial center, housing the tallest building in New Jersey (City of Jersey City 2011). Jersey City is a part of the New York-White Plains-Wayne, NY-NJ metropolitan division, the New York-Northern New Jersey-Long Island, NY-NJ-PA metropolitan statistical area, and the New York-Newark-Bridgeport, NY-NJ-CT-PA combined statistical area (Office of Management and Budget, 2009).

The municipal government of the City of Jersey City comprises a mayor-council system. The City Council consists of nine members who serve four-year terms; the City Council consists of six ward councilpersons and three at-large councilpersons (including the Council President), who serve terms contemporary to the Mayor's (City of Jersey City 2011). The City of Jersey City is part of the State of New Jersey's 31st, 32nd, and 33rd Legislative Districts; and New Jersey's Ninth and Thirteenth Congressional Districts.

Jersey City's effort for sustainable urban development has been institutionalized with the creation of three different administrative groups: the Environmental Commission; the Green Committee; and the Jersey City Green Team. The Environmental Commission consists of a volunteer citizen board which makes recommendations to the council and planning board on development and planning decisions, based on an inventory of the City's natural resources; in this capacity, the Environmental Commission assumes a role

of an additional 'arm' of government. The Green Committee consists of volunteer members of four specific governmental agencies – either city or independent: Department of Public Works; the Department of Administration; the Law Department; the Department of Housing, Economic Development and Commerce – as well as one member of the general public, which seeks to develop an operations-oriented approach to implement an environmental perspective to the acquisition of goods. The Jersey City Green Team consists of a coalition of community groups which seeks to further urban sustainability.

The Environmental Commission has been charged with three tasks: to prepare a storm-water management manual; to catalogue the City's open spaces; and to conduct a natural resources inventory. The Commission's mission is to increase environmental awareness and to sustain the city's natural resources; these products – namely the natural resources inventory – may become the basis by which policy decisions are made. The Commission consists of 7 appointees, who meet regularly and actively advocate for the long-term protection of the City's identified natural resources.

In January 2009, the City Council of Jersey City passed four ordinances that adopt sustainable urban development practices: requiring city-owned buildings and municipal projects to undertake construction projects which incorporate green building standards; creating incentives for sustainable building standards; requiring the procurement of green products whenever possible and materials by city agencies; and requiring the purchase of green vehicles by city agencies. In 2011, the Mayor announced the '365 Days of Green'

campaign, which outlined a series of sustainable urban development initiatives. These initiatives include an energy audit of municipal buildings and a community garden/adopt-a-lot program. To reduce storm-water overflow, the Jersey City Environmental Commission has made recommendations for green infrastructure initiatives (such as the use of porous pavement and rain gardens) and for storm water fees to manage the costs of water run-off, to encourage investment in green infrastructure, and to pay for sewer upgrades and green pilot projects.

The City also coordinates partnerships among agencies, both within and without its hierarchy, to implement sustainable urban development programs. The City and the Jersey City Redevelopment Authority have partnered to establish urban agriculture greenhouses; to offer rebates to residents and businesses for the installation of high-efficiency solar water heater units; to offer low-interest loans to residents and businesses to make energy-efficient weatherization, insulation, lighting, heating, and air-conditioning replacements and improvements. The City is partnering with the New Jersey City University (NJCU) to study food insecurity and urban agriculture in Jersey City. The City is also partnering with local supermarkets to develop a plan to promote the recycling of plastic shopping bag and the marketing of reusable shopping bags.

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5.1.3. New Brunswick, City of

The City of New Brunswick is located in New Jersey, 35 miles southwest of New York

City; it was established in 1730 and incorporated in 1784. The City of New Brunswick is

5.8 square miles, is the county seat of Middlesex County, and sits on the southwest bank

of the Raritan River; located on the Northeast Corridor rail line (serviced by both New

Jersey Transit and Amtrak), New Brunswick is roughly half-way between the Cities of

New York City and Philadelphia . The 2009 population estimate for the City of New

Brunswick is 51,579; this is a six percent increase the measurement of its population in

2000. The median household income is $45,645 and the per capita income is $17,391;

the rate of unemployment is 8.6% and the rate of owner-occupied housing tenure is

27.3%. New Brunswick is a diverse community, with 50.5% of its population speaking

languages other than English at home. The major industries (and its percentage of the

employed population) of New Brunswick are: educational services, and health care and

social assistance (21.9%); professional, scientific, and management, and administrative

and waste management services (14.4%); manufacturing (13.1%); arts, entertainment,

and recreation, and accommodation and food services (12.2%). (US Census Bureau,

2011)

New Brunswick is the home to Rutgers University; it is also home to the headquarters of

Johnson & Johnson and is dubbed the "Health Care City." New Brunswick, along with

adjacent Edison, forms a N.J. metro division of the greater New York-Northern New

Jersey-Long Island, NY-NJ-PA metropolitan statistical area, which is part of which is

part of the New York-Newark-Bridgeport, NY-NJ-CT-PA combined statistical area; the Edison-New Brunswick metro division consists of a population of 2.34 million people (Office of Management and Budget, 2009). The municipal government of the City of New Brunswick consists of a mayor-council system. The City Council consists of five members elected at-large to 4-year staggered terms, of which a Council President is elected by the Council to a 2-year term. The City of New Brunswick is part of the State of New Jersey's 17th Legislative District; and New Jersey's Sixth Congressional District.

The City of New Brunswick has not created any committees or offices to address issues of sustainable urban development, although the Mayor has assigned a "point person" to oversee and to coordinate sustainability programs. The departments and offices that address this policy area – Department of Planning and Development, Department of Public Works, Environmental Commission, Department of Administration, Office of the Mayor – are assembled regularly for executive meetings; it is at that time that issues about integration and coordination could be raised and address, as well as the goals and initiatives of the Mayor voiced. Over the past three years, the Mayor's 'point person' as sought federal, state, and county grants to initiate and to fund sustainable urban development projects: funds to study solar projects and to develop an energy conservation strategy, from the US Department of Energy; funds to conduct a carbon footprint study, from the NJ Department of Energy Protection; funds to purchase and install solar-powered LED path lights, from Middlesex County's Sustainable Energy.

The City currently has three major policy programs that have been implemented to address sustainability: a waste management campaign; a solar panel project; and an energy-efficient outdoor lighting program. The waste management program, also an anti-litter campaign, was implemented with a grant from the state program Sustainable Jersey; the funds were used to create single stream collection of recyclable products. The goals of the program are to reduce the levels of waste sent to landfills, to manage reusable resources, and to increase the levels of materials re-introduced into the production system; ultimately, by reducing waste, the program hopes to reduce greenhouse gas emissions produced at landfills.

The solar panel project is a partnership among several agencies: the City; the Board of Education; the Parking Authority; the Housing Authority (which has recently removed itself from this project). The project consists of energy investors, who have provided capital and have struck a price for energy for the participants. The public agencies and departments have solar panel unites placed upon their property, which are used to create solar energy; the investors capitalize all equipment, and are provided credits for energy that is produced in excess of demand. Installation of unites began in August 2010; units have been placed at the sites of three schools, three parking decks, and a water treatment facility. This project is expected to meet the energy of each of the sites, as well as provide excess energy to return to the grid – reducing the energy expenses for each of the agencies.

The outdoor efficient lighting program began with the installation of lighting in a neighborhood park; all lighting upgrades were solar-powered, LED path lights with a 10-12 year life span. In addition to the park project, a pilot project on George Street in Downtown New Brunswick – the City's 'main street' – includes the installation of LED lighting fixtures for path street-lights; the lighting fixtures are considerably brighter, thereby reducing the number of lighting fixtures required and subsequent costs to operate. Since November 2011, the City projects a combined savings of approximately $10,000 a year – savings in both cost and energy consumption.

The City has also created partnership with governmental authorities, institutions, and businesses to reduce congestion. The City has partnered with Rutgers University on many projects to reduce vehicular traffic and to increase bicycle and pedestrian alternatives to auto transportation. The City has partnered with nearby industry to create shuttles to transit centers, such as between the hospitals and train station. The City, Middlesex County, and Somerset County are conducting a corridor study for Easton Avenue to improve transportation and to remove vehicular traffic. The City promotes the New Jersey Office of Clean Energy's to replaces inefficient furnaces, boilers, central air conditioners, and lighting systems with energy more efficient models for local businesses. The City has sought and obtained 'transit village' status from the State of New Jersey, which allows for high-density development near transit hubs and job centers, to support 'smart growth' urban development, to reduce reliance upon automobiles for travel, and to efficiently use land, infrastructure, and other resources.

The City has joined ICLEI – Local Governments for Sustainability to obtain technical assistance in its development of a local action plan; this international organization assisted New Brunswick in using a standard format to measure and to report greenhouse gas (GHG) emissions. Subsequent to its measurement of GHG emissions, the City has adopted a goal of a 20% reduction by 2020; the City proposes to see a 17% reduction of energy usage for municipal-owned operations sooner.

In an effort to monitor energy consumption, each individual City department is budgeted an energy allowance, rather than energy budgeted city-wide by the Public Property's budget; thereby, each City department is much more aware of its energy usage, as a result would become more efficient in the use of energy. While there have not emerged any new, permanent administrative structures to address sustainable urban development, the Mayor has incorporated these goals into the regular operations of city administration. By assigning a 'point person' through which many of the efforts are channeled – namely seeking of funding opportunities and creating partnership – the City administration has been able to develop and to implement an integrated approach across different agencies and departments. Thereby, the initiatives and the goals for sustainable urban development have become internalized within the entire administrative structure.

5.1.4. Newark, City of

The City of Newark is located in New Jersey, 10 miles west of New York City; it was established in 1666 and incorporated in 1836. At 26.0 square miles, the City of Newark is the largest municipality in New Jersey, it is the county seat of Essex County, and it sits on the eastern bank of the Newark Bay; with both the Newark Pennsylvania and Broad Street Stations, Newark is a major regional rail and transit center. The 2009 population estimate for the City of Newark is 278,154; this is a two percent increase in the measurement of its population of 2000. The median household income is $35,507 and the per capita income is $17,178; the rate of unemployment is 12.4% and the rate of owner-occupied housing tenure is 25.3%. Newark is a diverse community, with 70.4% of its population identifying itself as a race other than white; 45.3% of its population speak languages other than English at home. The major industries (and its percentage of the employed population) of Newark are: educational services, and health care and social assistance (22.5%); construction (10.6%); professional, scientific, and management, and administrative and waste management services (9.7%); retail trade (9.4%); transportation and warehousing, and utilities (9.1%) (US Census Bureau, 2011). Port Newark is part of the Port Authority of New York and New Jersey, and is the largest cargo facility therein; in operation since 1928, the Newark Liberty International Airport was the first major airport in the NY metropolitan area.

Newark is the home to Rutgers University and the New Jersey Institute of Technology; it is also home to the headquarters of Prudential Financial, IDT Corporation, New Jersey

Transit, Public Service Enterprise Group (PSEG), and Horizon Blue Cross and Blue

Shield of N.J. Newark's recently-built Prudential Center hosts two major professional

teams, the New Jersey Devils and the New Jersey Nets. Newark is a principal city of the

New York-Northern New Jersey-Long Island, NY-NJ-PA metropolitan statistical area; is

part of the Newark-Union, NJ-PA metropolitan division; and is part of the New York-

Newark-Bridgeport, NY-NJ-CT-PA combined statistical area (Office of Management and

Budget, 2009).

The municipal government of the City of Newark comprises a mayor-council system.

The Municipal Council consists of nine members who serve four-year terms; five council

members are elected at-large and four are elected by individual municipal wards. The

City of Newark is part of the State of New Jersey's 27th, 28th, and 29th Legislative

Districts; and New Jersey's Tenth and Thirteenth Congressional Districts.

The City of Newark's efforts for urban sustainability have begun to be institutionalized

through the creation of the administrative structures both within city government and

within the community: the Office of Sustainability and the Environmental Commission,

respectively. The Office of Sustainability seeks to promote sustainable urban

development by engaging the business and civic communities; it does this by working

closely with other city entities, such as the Division of Economic Development, the

Division of Planning, the Department of Neighborhoods and Recreation Services, the

Department of Engineering, the Business Administrator's Office, the Office of the

Mayor. The Office of Sustainability also works with agencies outside of the City, such as the School District, the Housing Authority, and private firms. The Environmental Commission is a vehicle through which community leaders and citizens may engage in the development of sustainable policies, which attempts to ensure the relevance of sustainable development programs. Launched in 2008, the Office of Sustainability is housed in the City's Division of Economic Development. Also contributing to the City's sustainability is the Municipal Green Team, which consists of all City departments; the goal of the Green Team is to improve energy efficiency of municipal operations, by increasing recycling within city government buildings and by reducing the use of paper through an electronic record filing system.

In January 2010, Princeton University completed a sustainability framework for the City. The City is currently in the midst of completing a Sustainability Action Plan, which identifies five policy areas for sustainable urban development: waste management; water management; asthma-causing air pollutants; greenhouse gas emissions; and energy efficiency. Taken together, the City's efforts for urban sustainability are centered around goals: greening the city; saving energy; promoting green economic development and green jobs; improving environmental health, education, and involvement. These documents identify benchmarks and measurable results to monitor successful implementation of sustainability programs; also included in the Sustainability Action Plan are stakeholder priorities. Included in the process are regular meetings and involvement of stakeholders at several levels. In addition, there are efforts to include sustainability elements in the city's Master Plan.

In December 2008, efforts for sustainable urban development were announced by the Mayor when he launched the 'Newark Conserve' initiative. The energy and recycling awareness program seeks to promote ways to save energy and resources by deploying solar recycling containers throughout the City. The goal of the program is to promote awareness and to educate residents to take simple measures toward energy-conservation and recycling at home and in the workplace. The Mayor also urged home-owners and home-buyers to take a home energy analysis; income-eligible residents of the City may make their homes more energy efficient by making minor modifications that are available through free home improvement programs. To promote awareness of alternative products that both save energy and costs, the City distributed thousands of free energy-efficient light bulbs to residents of the city.

The Office of Sustainability works with the Division of Economic Development, among other city agencies, to deliver a comprehensive approach to sustainable urban development. Urban sustainability initiatives have been championed by the Mayor. The City has introduced a series of initiatives and programs to promote urban sustainability and to establish lasting ties with partners. In April 2009, the City of Newark partnered with labor unions (the Laborers' International Union of North America (LIUNA)) and an non-profit (Garden State Alliance for New Economy (GANE)) to launch a green collar training program; the program is intended to provide training and skills to Newark residents in eco-friendly and energy efficient construction projects and to promote the growth of an environmentally-friendly construction industry. The City is also in the

midst of redefining the central business district, to become a "Zero Waste Downtown" with signature urban sustainability projects that include operations-oriented processes that reduce waste and improve energy efficiency; the Office is in the midst of getting private partners to support this initiative. At the Port of Newark, the City is attempting to work with partners to initiate an electric vehicle plug-in infrastructure.

In July 2009, the Mayor announced the City's participation in the 'live where you work' program – which is a workforce housing program that assists homebuyers with low-cost mortgages, when they purchase homes in the municipalities within which they work. The City is partnering with the New Jersey Housing and Mortgage Finance Agency to build sustainable communities by attempting to eliminate automobile commutes, and thereby reducing greenhouse gas emissions. The Office of Sustainability has begun a series of community outreach workshops on urban sustainability, to involve residents, constituents, community leaders, major organizations, and environmental advocates.

The City's 'climate prosperity initiative' seeks to realize savings through energy efficiency. The City developed a collaborative energy initiative to address energy management at municipal, residential, and commercial sectors. The initiative connects residents and merchants with weatherization programs to reduce utility usage, including facilitating access to state rebate funds for installation of energy efficient hot water heaters. In August 2009, the Mayor opened a renovated motor vehicle repair facility, which was built with green construction techniques. The garage has air pollution control equipment to reduce its carbon footprint, energy-efficient lighting, and solar energy

panels to generate the facility's electricity. The roof-top solar panel system is a result of a the City's partnership with firms located in Newark; the City, a realty agency, and a infrastructure redevelopment firm have partnered to deliver a project that includes a cost-saving strategy for the city as it completes its regular services, while also increasing energy efficiency. The City announces a series of ongoing events, such as community gardening with the City of Newark Adopt s Lot program; community greening, tree planting, and outdoor education (such as guided bird walks) with the Greater Newark Conservancy and the NJ Meadowlands Commission.

In March 2009, the Mayor created the Environmental Commission and nine members from the community were appointed to oversee the City's environmental policies. The City seeks to engage community stakeholders not only through the Environmental Commission – which consists of members from environmental interest groups and neighborhood park associations – but also by supporting development corporations to attract green commerce and solar technology industry to Newark. There are half a dozen firms who design, install, or finance solar systems within the city-limits – securing the City's role as a host to this growing industry that contributes to urban sustainability both within and beyond the city's borders.

5.1.5. Stamford, City of

The City of Stamford is located in Connecticut, 39 miles northeast of New York City; it was established in 1641 and incorporated in 1893. The City of Stamford is 52.1 square miles, is the largest municipality in Fairfield County, and sits on the northern bank of the Long Island Sound.

The median household income is $76,134 and the per capita income $46,928; the rate of unemployment is 5.7% and the rate of owner-occupied housing tenure is 57.9%. The major industries (and its percentage of the employed population) of Stamford are: professional, scientific, and management, and administrative and waste management services (18.2%); educational services, and health care and social assistance (17.2%); finance and insurance, and real estate and rental and leasing (13.6%); retail trade (10.5%). Stamford has a very highly-educated population, with 43.5% of its population having a bachelor's degree or higher. Because Stamford's contains many large office buildings, it is a regional employment destination; the City's core business center is adjacent to its transit hub. A number of large firms maintain corporate headquarters in Stamford: World Wrestling Entertainment, UBS, and the Royal Bank of Scotland (US Census Bureau, 2009).

Located on the New Haven rail line (serviced by both the Metropolitan Transportation Authority's Metro-North Railroad and Amtrak) with a large train station and two branch stations, Stamford serves as a major transfer hub for local and regional rail lines. The

2009 population estimate for the City of Stamford is 121,026; this is a three percent increase in the measurement of its population since 2000. In Fairfield County, Stamford is a principle city of the Bridgeport-Stamford-Norwalk, CT metropolitan statistical area, which is a part of the New York-Newark-Bridgeport, NY-NJ-CT-PA combined statistical area; the Bridgeport-Stamford-Norwalk, CT is a metropolitan New England City and Town Area (NECTA), forming one of the component areas of the Bridgeport-New Haven-Stamford combined NECTA (Office of Management and Budget, 2011).

The municipal government of the City of Stamford consists of a mayor-council system. The Board of Representative comprises the city council, whereby 2 representatives are elected from each of the 20 city districts; mayors and representatives serve for 4-year terms. The City of Stamford is part of the State of Connecticut's 144th to 149th State House districts; the 27th and 36th State Senate districts; and Connecticut's Fourth Congressional District.

The City of Stamford's sustainable urban development program began in 2007, when the Mayor announced a set of sustainability goals for the City and established a task force on sustainability, Sustainable Stamford, to oversee the program. In June 2007, the City's efforts for sustainable development were codified by a city ordinance, which established sustainable development design standard requirements. The sustainable development design ordinance took effect in December 2007; it required that all new City buildings over 5,000 square feet in height meet LEED (Leadership in Energy and Environmental

Design) Silver certification level, and that this LEED certification compliance be met prior to the issuance of building permits by the City. The task force—Sustainable Stamford—consists of members of city staff, the business community, environmental interest groups, educational and religious institutions, and the community. Of the civil servants, representatives from the Department of Planning, Department of Solid Waste, Bureau of Land Use, Department of Engineering (Energy/Utility Manager).

Many of the sustainable urban development initiatives that Stamford has addressed emerged subsequent to the completion of a Local Action Plan, in February 2005, to reduce greenhouse gas (GHG) emissions – although the City had been devoted to a program of comprehensive energy management since 1998. The Plan contained a GHG emissions inventory and an emissions reduction target, as well as a series of existing and proposed emission reduction measures for the local governmental authority; these measures included policies and programs for energy and waste management, land-use planning, and transportation planning. Since 2007, the Sustainable Stamford task force has recommended programs to implement some of these goals, including a sustainability amendment to the City's Master Plan; these programs are in the policy areas of renewable and efficient energy, recycling and waste management, transportation planning, and community planning. The City is currently in the process of conducting a re-inventory of its GHG emissions to assess its progress on its efforts for their reduction.

The City's sustainable urban development program makes great efforts to involve the private sector; it encourages corporate partners to adopt procedures that are cost effective, energy efficient, and environmentally sound. Sustainable Stamford partnered with nearby municipalities and a building management association to create a 'corporate sustainability challenge' for office parks in southern Connecticut; small, medium, and large corporate building managers are asked to benchmark their energy and water usage, and to adopt sustainability policies. Several firms have accepted the 'challenge,' and will be publically acknowledged by the City for their roles in contributing to sustainable urban development. Sustainable Stamford has also encouraged the private sector to build energy-efficient structures within the City, with two large office buildings meeting LEED gold standards; in addition, much of the commercial development is centered near the City's transit hub, and new residential neighborhoods are encouraged around branch train line stations – promoting alternative transportation options and thereby reducing emissions. The Sustainable Stamford task force has proposed an ordinance on construction projects to include on-site waste recycling, which is expected to be adopted. As of August 2013, Sustainable Stamford lists nearly one hundred energy-efficient projects throughout the City of Stamford, including investment in LED street and traffic lights, clean energy solar systems, and energy management systems. Sustainable Stamford works to make electric vehicle charging stations available, and announces their locations for public use. Sustainable Stamford partners with the Stamford Downtown Special Services District to establish Local Harvest, which supports the growth of micro agriculture initiatives to reduce emissions associated with the transport of foodstuffs. It

also maintains a list of suggested actions that residents may take to promote energy efficiency on its website.

In 2007, the City's Economic Development director championed the Energy Improvement District ordinance, to address energy sustainability. The ordinance allows Energy Improvement Districts to produce their own energy on-site, as well as co-generation structures to create and to share energy among several on-site or nearby commercial structures. The goal of the District is to attract business to Stamford, while reducing the cost of energy by taking buildings off of the energy grid and by eliminating expense of energy travel. The Energy Improvement District was formally delineated within the City border; while there have not been any projects within the Energy Improvement District, the innovative approach reflects the City's efforts to consider innovative initiatives toward sustainable urban development approaches. The City promotes the State of Connecticut's Commercial Property Assessed Clean Energy (C-PACE) program (as well as the many other state-run clean energy financing and investment programs), which assists commercial and multi-family property owners to access financing for energy upgrades for their buildings; the green initiative is promoted by the current governor of Connecticut, who is the former mayor of Stamford.

Sustainable Stamford also seeks to increase recycling and reduce waste – both at the residential and commercial levels. A member of Sustainable Stamford donated time and expertise to design a recycling outreach campaign, which has been in effect throughout

the City since 2009; announcements and fliers to promote recycling were mailed out, and advertisements and posters were placed in schools and at bus stations. Trainings about single-stream recycling programs were conducted at offices and schools.

5.2.   Cross-Case Analysis and Results.

In order to assess each local governmental authority's effort to address concerns over

climate change, a number of approaches are used. An electronic survey and an in-person

interview ascertain the roles of government, civil society, the business community, and

other interested partners; the survey was completed by an official of the municipal

government, and a follow-up interview was conducted with the same official (and in one

instance (Dobbs Ferry), during the interview the city official was accompanied by a civil

servant from another municipal agency and a member of the community).

The survey questionnaire was used to quantify the importance various constituent groups

– principally civil society – in the creation and implementation of policies for sustainable

urban development; specifically, in tying to the statistical generalization on global values,

this measure is meant to reflect the responsiveness of local governmental authorities to

the demands of a cosmopolitan citizenry to concerns over the management of ecological

resources. In addition to gauging the perceived importance of civil society by the local

governmental authority to take policy action, the questionnaire captures efforts by the

local governmental authority to make internal structural changes to reflect the proposal

by the transnational network (ICLEI) for a common approach toward global

environmental governance. Together, these measurements attempt to quantify reflect the

hypothesis of this dissertation: that local governmental authorities within global city-

regions are influenced by the value priorities of global citizens and international

organization toward global environmental governance.

In addition to the survey and the interview, an assessment of policies and programs for

sustainable urban development was conducted by reviewing legislative actions,

proclamations, programs, and other official actions by the local governmental authority.

This design measures local policies for sustainable urban development across four

dimensions: citizen support; stakeholder involvement; political action; and

administrative structure. Two of these measures are of particular interest: (1) to

determine the role of civil society in prompting the local governmental authority to take

action for sustainable urban development, and the subsequent participation levels of

citizens and stakeholders; and (2) to document political action (as determined by

proclaiming value priorities, announcing plans, proposing and/or enacting legislation,

mandating operating procedures, creating programs, reorganizing hierarchies) by the

local governmental authority. This is captured in table 7.

[TABLE 7 HERE]

This analysis revealed that all of the local governmental authorities studied had taken a

form of political action on sustainable urban development; this was expected, as the

universe of cases was limited to those municipalities within the NYCR which have

identified sustainable urban development as a policy priority. There was a variation of

political action, however; this variation reflected the specific characteristics of the

communities. For example in New Brunswick, which has a strong and active partner for

environmental protection in Rutgers University, the efforts were not formalized in

legislation but instead announced in a mayoral address; in Stamford, where a past mayor

was a champion for the environmental protection, the efforts were formalized and codified in different ways – including an innovate 'challenge' for firms within the City to adopt energy efficiencies. While all municipalities acknowledged the importance of the support of citizens to establish policies for sustainable urban development, not all included stakeholders in the implementation process. Three of the five municipalities modified existing structures, or created new ones, to create and to implement local policies for sustainable urban development; the modifications generally included creating committees to address issues of sustainable urban development by bringing together agencies (e.g. land-use planning, transportation planning, waste management, etc.) which theretofore had not regularly met – one, Newark, authority created an office specifically to address issues of sustainable urban development, which reports directly to the mayor.

This cross-case analysis reveals that while most of these local governmental authorities have collaborated with an international organization (ICLEI) for technical assistance for and guidance on best practices on developing local policies for sustainable urban development, the specific approach that each municipality takes to accomplish this goal is unique to its circumstances and to its needs. Even as the one municipality, Jersey City, did not join the IO, it nonetheless compares quite similarly to the others in the study: the norms are not only transferred vertically from the global to the local, but they are transferred horizontally as well – or perhaps in some other way that is not captured in this analysis. This reflects the complex, interconnected relationship among political actors within the global system.

6.   Methodological Strategy: Global Values and Local Policies.

The goal of this research project is to better understand the relationship between global

values and local policies for ecological protection. The study focuses on shared value

priorities of global democratic citizens in the context of a shared, common resource; in

this case a global commons comprises the ecosphere, the atmosphere, and the *biosphère*.

The socio-sphere is the realm of social, economic, and political activity that has a direct

impact on the global ecology; it is the global processes and human activity over which

cosmopolitan citizens govern. This study explores under what conditions local policies

for sustainable development – specifically within urban areas – relate to citizens'

attitudes for environmental protection.

The approach to this study is two-pronged: (1) statistical generalization is used to

understand and to make inferences about the value priorities of a population of

democratic citizens; and (2) analytical generalization is used as a template to compare

policy outcomes at local governmental authorities. [82] The values and policies, about

which inferences are made and over which outcomes are compared, focus on

environmental protection; this study seeks to better understand whether, and under what

circumstances, global environmental values translate into local sustainability policies. I

predict that the findings will show that local governmental authorities will address the

ecological policy concerns of a global citizenry, if traditional hierarchies of international

affairs are unable to do so.

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[82] For example, see Yin (2003).

6.1.   Global Environmental Values: A Statistical Generalization.

To determine the value priorities for environmental protection of a global democratic

citizenry, I conduct a statistical generalization of a large survey sample. I use the

International Social Survey Programme 2000: Environment II (ISSP 2000), a cross-

national, cross-cultural survey of democratic citizens from 26 nation-states from Asia,

Europe, North America, and South America. The data was collected from a multi-stage

random sample, using a standardized questionnaire; the goal of the survey is to assess

attitudes to and preferred government measures for environmental protection; in this way,

the survey reveals the value priorities for environmental protection of a cosmopolitan

citizenry, and the preferred policies to accomplish environmental outcomes.

I use a logistic probability model to measure the attitudes of global democratic citizens

for environmental protection and sustainable development. This categorical data analysis

estimates the corresponding effect of select characteristics of democratic citizens on

attitudes toward environmental protection, and thereby captures the value preferences of

a cosmopolitan collectivity. The binary logit models measures the probability of attitudes

in support of environmental protection: Model 1 represents the probability for support of

sustainable development policies by limiting the activities of firms, where 1 = 'supports

policies of sustainable development' and 0 = 'does not support politics of sustainable

development,' and Model 2 represents the probability for support of sustainable

development policies (SDP) by limiting the activities of citizens; where the probability of

the outcome is bounded between 0 and 1.[83]

$$ln\left(\frac{p}{1-p}\right) = \sum_{k=1}^{K} \beta_k X_k$$

The significance of the two models is an attempt to measure attitudes toward conflicting

values among cosmopolitan citizens within a universal system of market globalization:

individual liberties and common interests; among the many value judgments of

cosmopolitan citizens is the determination of the legitimate role to limit individual rights

vis-à-vis a social contract. These models look to the willingness to limit the behaviors of

firms and of individuals to secure a common good, specifically to safeguard the global

environmental commons. In this way, these models measure the value preferences of

global democratic citizens, and thereby capture a global environmental ethic.

The models of SDP are functions of gender, marital status, income, political philosophy,

and urban residence. To test the hypothesis of this research project, which asserts that

support for sustainable development is a characteristic that will be greater among urban

populations, an odds ratio of support for policies of sustainable development for urban

compared to rural residents is used; it can be expressed thus:

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[83] For example, see Liao (1994).

$$Odds\ Ratio = \frac{\left[\dfrac{p(SDP)_{urban}}{1 - p(SDP)_{urban}}\right]}{\left[\dfrac{p(SDP)_{rural}}{1 - p(SDP)_{rural}}\right]}$$

Model 1. Analysis of Model 1 (Table 5) tells us that the odds of supporting policies for sustainable development by limiting the activities of *firms* are highly significant among urban residents ($p < 0.001$); urban residents are on average 22.7% more likely to support these types of sustainable development policies than rural residents. Average likelihood of support of these kinds of sustainable development policies among democratic citizens are similar for males and females; for married and single respondents; for all income levels; and regardless of political philosophy.

[TABLE 5 HERE]

[TABLE 6 HERE]

Model 2. Analysis of Model 2 (Table 6) tells us that the odds of supporting policies for sustainable development by limiting the activities of *citizens* is also highly significant among urban residents ($p < 0.001$); urban residents are on average 17.6% more likely to support these types of sustainable development policies than rural residents. The observed odds suggest that urban residency is a factor which influences attitudes toward and values for environmental protection. Average likelihood of support of these kinds of sustainable development policies among democratic citizens are similar for males and

females; for married and single respondents; for all income levels; and regardless of political philosophy.

These models tell us that global democratic citizens in urban areas are more likely to support policies for sustainable development than those in rural areas, holding all other variables constant; this reflects the evolving relationship between urbanization and globalization, whereby global citizens within urban centers recognize more readily the negative externalities of market globalization upon the global ecology.

While it is not surprising, for example, that citizens would support policies to limit the activities of corporations to protect the environment, it is evidence of a collective value when citizens favor impositions over the activities of individuals to safeguard a common interest; the statistical analysis demonstrates that there is a clear value priority among cosmopolitan citizens to protect the ecological commons, even in the face of possible limitations on individuals behaviors. Further, married citizens, on average, are 17.9% more likely to support sustainable development policies that limit the activities of citizens; while marital status has no impact on the likelihood to support sustainable development policies that limit the activities of firms – the appearance of this statistically significant correlation, I argue, is a result of a nascent sense of intergenerational equity that may surface within family units, particularly for parents who value a standard of living (which includes access to ecological common goods) for their offspring that is at least as high as the current standard of living. The liberties of private individuals are guarded insofar as they do not harm the well-being of the entire community or of future

generations; cosmopolitan democracy protects the rights of individuals foremost, until those rights present a concern for the common good, at which point value priorities require for the collective refinement of the social contract[84].

These results support theoretical propositions that value preferences for the protection of the environmental exist among global citizens, and that this attitude is marginally more significant among urban residents. This, in turn, results in demands for policies for sustainable development by urban residents, which reflects the shared value priorities of a cosmopolitan citizenry; further, the highly significant, albeit slight, odds for the support of policies for sustainable development by urban residents (over rural residents) translates into increased demands by urban citizens upon their governmental authorities to implement policies to reflect their values.

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[84] For example, see J.-J. Rousseau (1762).

6.2.   Local Policies for Sustainable Development: An Analytical Generalization.

To determine the relationship between global values and local policies for sustainable

urban development, I analyze the results of survey and interviews of local governmental

authorities within the New York metropolitan area, which were completed over a series

of weeks in the spring of 2011. In addition to the surveys and interviews, I conduct an

extensive review of administrative and policy actions; I look for changes in hierarchies

within administrative and departmental units of local governmental authorities to increase

coordination among land-use, transportation, and waste management sectors. These

approaches reflect findings of social scientists which indicate that efforts toward a more

integrated and holistic approach among these sectors at the local levels support

sustainable urban development.[85]

I use an embedded case study design; municipalities are the units of analysis, which are

embedded within the context of the New York global city-region. While this analytical

approach does not belie the true nature of the global city-region as an increasingly

singular and unitary actor in world politics, it does reflect the reality that American global

city-regions lack over-arching, regional policy-making institutions; therefore, these cases

are particularly suitable for the theoretical discussions on globalization and urbanization

outlined in Chapter 3 – pointing to the roles of communities (both geographic and issue-

based) in the governance of common resources. In this way, an exploration of these sub-

units of American global city-region gives insight into the relationship between global

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[85] For example, see Bulkely and Betsill (2003).

values and local policies, and the governance task of civil society to assume a legitimate

role where a regional political infrastructure is absent. This analytical approach explores

the actions of municipal authorities embedded within global city-regions in response to

value priorities – expressed or intimated – of global and local stakeholders.

The universe of cases was limited to municipal government authorities who have begun

to respond to concerns over environmental protection and sustainable development. At

the time of the interviews and data collection, all but one of the five cases (Jersey City)

were members of ICLEI. The case studies consist of five local governmental authorities

within the New York City-Region; they comprise municipalities of different sizes, with

different industrial activities, and within three different states across the city-region. All

of the case studies have strong ties to the principal city of New York, clearly within its

sphere of social, economic, and political influence. The cases that have been selected

have similar characteristics, notwithstanding their shared feature of proximity to NYC

and inclusion within the NYC city-region. This approach allows for a replication, both

literal and theoretical, across all American global city-regions, as well as across geo-

politically fragmented global city-regions in other parts of the world.

New York City (NYC) itself has taken a strong lead – regionally, nationally, and globally

– in its efforts to address concerns over ecological protection and climate change and has

presented itself as a model for local governments across the region, the nation, and the

world in the field of sustainable urban development; however, New York City itself is not

included among the case studies because it would be very difficult to draw comparisons

with other local governments within the region; NYC's population, economy, budget, etc. precludes it from generalizability alongside the other cases – the only possible cases with which NYC could be compared are the urban cores of other city-regions (i.e. Chicago, London, Los Angeles, Paris, etc.). However, further study which explores the policies for sustainable urban development within New York City (proper) is warranted, albeit beyond the scope of this research project.

The five cases are as follows: the City of Jersey City, the City of New Brunswick, the City of Newark, the City of Stamford, and the Village of Dobbs Ferry. An electronic survey was sent to government officials within each of the municipal hierarchies who have been designated the responsibility to oversee programs for sustainable urban development, as determined by the local governmental authority. The brief questionnaire (Appendix A) was issued and completed by the local governmental authority prior to the in-person interviews; the questionnaire sought to determine whether internal institutional changes occurred to define, to establish, and/or to implement programs of sustainable urban development. If there were organizational changes to address this policy concern, the role of civil society was evaluated: whether members of the community are included in the organizational structure; and if so, which members of the community participated (citizens/activists/civil society, non-profit organizations, businesses/merchants). To determine the 'importance' of these policy efforts, city officials were asked to whom the head of the sustainable urban development structure reported.

Subsequent to the electronic questionnaire, interviews were arranged with civil servant employees for each of the case studies. An extensive review of political actions to promote sustainable urban development was done for each of the local governmental authority; all legislative and executive orders, policies, programs, speeches, and pronouncements were documented and catalogued. A multi-level case study protocol assisted during the in-person interviews for data collection from each single case; the protocol was used to collect data about the specific policies and programs about the local governmental authority, to identify the roles of civic interest groups and stakeholders, and to describe the administrative structure which oversees or implements policies for sustainable development.   The case study protocol is in Appendix A.

The case study protocol measures local policies for sustainable urban development across four dimensions: political action; citizen support; stakeholder involvement; and administrative structure. 'Political action' captures a vocalization or introduction of policies or programs for sustainable urban development. 'Support of citizens' captures the role of civic interest groups in creating – or demanding the creation of – policies for sustainable urban development; 'stakeholder involvement' captures the participatory role of civic interest groups in implementing policies for sustainable urban development (i.e. community boards, committees, etc.). 'Administrative structure' captures any modifications to the internal hierarchy of the local governmental authorities to either create policies or oversee programs for sustainable urban development. Together, these four dimensions give insight into the significance of a civil society in the creation and implement of policies for sustainable urban development

This analytical generalization indicates that the support of citizens in the creation of local policies for sustainable development is required across the board; every local governmental authority identifies the roles of citizens in the creation and implementation of policies for sustainable development. All but one local government authority identifies the importance of stakeholder involvement in this process; the outlier, New Brunswick, has a very strong partner in a university, which has taken a leadership role among its student population and in the community to create programs for environmental protection. Two of the cases, Jersey City and New Brunswick, have not created administrative structures specifically intended for the creation and oversight of sustainable development policies and programs, even though there have been efforts nonetheless to accomplish these goals; on the other extreme, however, Newark has created an administrative structure whose lead reports directly to the city's mayor, rather than a department or agency head (for example, to the head of the planning department or the parks authority). The results of the survey instrument and protocol questionnaire are summarized in Table 7.

7.   Conclusion.

This research study explores the relationship between global values and local policies for sustainable urban development; it explores the relationships between globalization, urbanization, and environmental governance. By looking at the transformation of human ecology in the post-modern era, I investigate the impacts of the human activity on the natural environment. Decision-makers assess the impacts of the human economy on the ecology, and respond with policies and programs to improve the well-being and the standard of living for a population; they create policies to safeguard community health, to manage the use of lands, to protect the environment, and to clean the waters and the air. This study looks specifically at the roles of a global citizenry, and the local governmental authorities to define priorities and to secure benefits – both in the present and in the future. These actions are derived from a set of global values among cosmopolitan citizens, who direct their concerns to many levels of government to ensure that their value priorities are observed and that their interests are secured. When costs are uncertain, when interests differ, and when values conflict, it is these circumstances under which citizens send clear signals to decision-makers about which value preferences shall be prioritized.

Under the present universal regime of market globalization, economic growth has been identified as the value priority; economic growth promises prosperity and well-being for individuals across the globe. However, as the negative externalities of human activity are documented, collectivities and movements coordinate in complex networks to ensure that

decision-makers include their values for environmental protection when determining the processes of globalization. If traditional structures of international relations are unable to respond to the values and norms of a global citizenry, democratic citizens seek other outlets to ensure that their values are translated into policy. When international organizations do not overcome sovereign interests to sufficiently address the values of a cosmopolitan society, it turns to local governmental authorities instead. And municipal authorities rely upon civil society – at both the local and global levels – in the successful creation and delivery of sustainable urban development policies.

This study finds that support for sustainable development policies remains constant across most demographic variables which reflects a global value for environmental protection. Political action directed toward local governmental authorities occurs not only when international institutions insufficiently address the environmental policy concerns of global citizens, but also when there is agreement by many actors that the local level may be best apt to address the concern.

Illustrations.

Table 1. Three traditions in the theory of economy and society.

	Basic Focus	**Prominent Individuals and Movements**	**Some Key Concepts**
Economic Liberalism	Private economic interests and market freedom	Adam Smith; neo-classical economics; Milton Friedman; public choice theory	Individual sovereignty; self-interest; rationality; the self-regulating market; cosmopolitanism; market globalism
Political Economy	Power relations in economic life	Ricardo, Mill, and Marx; world systems theory; collective action	Social relations of ownership, production, and exchange; property rights; capitalism; commoditization and decommoditization
Economic Sociology	Markets, power, and culture	Enlightenment; Weber and Durkheim; Polanyi; collective behavior; social movement theory	Modes of social integration of economy and society; rationalization; justice globalism

Source: Adapted from Holton (1992).

Table 2. From government to governance.

	Old government	*New governance*
Location of power	he state	The state and civil society
Exercise of power	Hierarchy and authority	Networks and partnerships
Actors	The public sector	Public, private and voluntary sectors
Role of the state	Providing, commanding, controlling	Steering, enabling, facilitating, collaborating, bargaining

Source: Bulkeley and Betsill (2003).

Table 3. Global Cities Index: 2008, 2010, 2012.

2012	2010	2008	
1	1	1	New York
2	2	2	London
3	4	3	Paris
4	3	4	Tokyo
5	5	5	Hong Kong
6	7	6	Los Angeles
7	6	8	Chicago
8	10	9	Seoul
9	11	13	Brussels
10	13	11	Washington, DC
11	8	7	Singapore
12	9	16	Sydney
13	18	18	Vienna
14	15	12	Beijing
15	19	29	Boston
16	14	10	Toronto
17	12	15	San Francisco
18	17	14	Madrid
19	25	19	Moscow
20	16	17	Berlin

Source: A.T. Kearney, *2012 Global Cities Index and Emerging Cities Outlook,* (2012).

Table 4. Member cities of C40 Cities Climate Leadership Group.

Member City (State)	Status*	Global Cities Index Ranking 2012[†]
Addis Ababa (Ethiopia)	Megacity	N/R
Amsterdam (The Netherlands)	Innovator City	26
Athens (Greece)	Innovator City	N/R
Austin (United States)	Innovator City	N/R
Bangkok (Thailand)	Megacity	43
Barcelona (Spain)	Megacity	24
Basel (Switzerland)	Innovator City	N/R
Beijing (China)	Observer City	14
Berlin (Germany)	Steering Committee	20
Bogotá (Colombia)	Megacity	55
Boston (United States)	Megacity	15
Buenos Aires (Argentina)	Steering Committee	22
Cairo (Egypt)	Megacity	50
Cape Town (South Africa)	Observer City	N/R
Caracas (Venezuela)	Megacity	57
Changwon (South Korea)	Innovator City	N/R
Chicago (United States)	Megacity	7
Copenhagen (Denmark)	Innovator City	42
Curitiba (Brazil)	Innovator City	N/R
Dar es Salaam (Tanzania)	Observer City	N/R
Delhi NCT (India)	Megacity	48
Dhaka (Bangladesh)	Megacity	63
Hanoi (Vietnam)	Megacity	N/R
Heidelberg (Germany)	Innovator City	N/R
Ho Chi Minh City (Vietnam)	Megacity	61
Hong Kong (China)	Steering Committee	5
Houston (United States)	Steering Committee	38
Istanbul (Turkey)	Megacity	37
Jakarta (Indonesia)	Steering Committee	54
Johannesburg (South Africa)	Steering Committee	52
Karachi (Pakistan)	Megacity	62
Lagos (Nigeria)	Megacity	59
Lima (Peru)	Megacity	N/R
London (United Kingdom)	Steering Committee	2
Los Angeles (United States)	Megacity	6
Madrid (Spain)	Megacity	18
Melbourne (Australia)	Megacity	32
Mexico City (Mexico)	Megacity	34
Milan (Italy)	Innovator City	41

Moscow (Russia)	Megacity	**19**
Mumbai (India)	Megacity	**45**
Nairobi (Kenya)	Observer City	**56**
New Orleans (United States)	Innovator City	**N/R**
New York (United States)	Megacity	**1**
Oslo (Norway)	Innovator City	**N/R**
Paris (France)	Megacity	**3**
Philadelphia (United States)	Megacity	**N/R**
Portland (United States)	Innovator City	**N/R**
Rio de Janeiro (Brazil)	Steering Committee	**53**
Rome (Italy)	Megacity	**28**
Rotterdam (The Netherlands)	Innovator City	**N/R**
San Francisco (United States)	Innovator City	**17**
Santiago (Chile)	Innovator City	**N/R**
São Paulo (Brazil)	Megacity	**33**
Seattle (United States)	Innovator City	**N/R**
Seoul (South Korea)	Steering Committee	**8**
Shanghai (China)	Observer City	**21**
Singapore (Singapore)	Observer City	**11**
Stockholm (Sweden)	Innovator City	**27**
Sydney (Australia)	Megacity	**12**
Tokyo (Japan)	Steering Committee	**4**
Toronto (Canada)	Megacity	**16**
Vancouver (Canada)	Innovator City	**N/R**
Venice (Italy)	Innovator City	**N/R**
Warsaw (Poland)	Megacity	**N/R**
Washington, DC (United States)	Megacity	**10**
Yokohama (Japan)	Megacity	**N/R**

[*]The four status categories are Steering Committee, Innovator City, Megacity, and Observer City (discussed in Chapter 4.3).

[†]N/R – Not ranked (2012 Global Cities Index ranks only top 66 global cities).

Source: Adapted from *C40 Cities Climate Leadership Group*, http://c40.org/, (2014); and A.T. Kearney, *2012 Global Cities Index and Emerging Cities Outlook,* (2012).

Table 5. Support for sustainable development policies by limiting the activities of firms.

Variable	Odds Ratio	Std. Err.	z
Urban/Rural	1.227	0.077	3.24
Male/Female	1.039	0.062	0.63
Marital Status	1.054	0.065	0.85
Income	1.053	0.014	3.81
Political Philosophy (Left/Right)	0.999	0.02	-0.03

N = 15209; $X^2(5) = 26.82$

**Table 6.** Support for sustainable development policies by limiting the activities of citizens.

Variable	Odds Ratio	Std. Err.	Z
Urban/Rural	1.176	0.050	3.82
Male/Female	1.001	0.040	0.04
Marital Status	1.179	0.048	4.02
Income	1.031	0.009	3.34
Political Philosophy (Left/Right)	1.013	0.013	0.95

N = 14459; $X^2(5) = 43.89$

**Table 7.** Local policies for sustainable urban development.

Municipal Authority	Sustainable Urban Development Action	Support of Citizens?	Stakeholder Involvement?	Administrative Structure?
Dobbs Ferry, NY	2010 vision plan; mandating cluster; ordinance	Yes	Yes	Yes
Jersey City, NJ	2009 ordinance; 2011 initiatives	Yes	Yes	No
New Brunswick, NJ	2009 state of the city address	Yes	No	No
Newark, NJ	2008 speech; 2009 initiatives; 2010 sustainability framework	Yes	Yes	Yes
Stamford, CT	2004 local action plan; 2005 energy campaign; 2007 task force, ordinance, initiative; 2010 local action plan, challenge	Yes	Yes	Yes

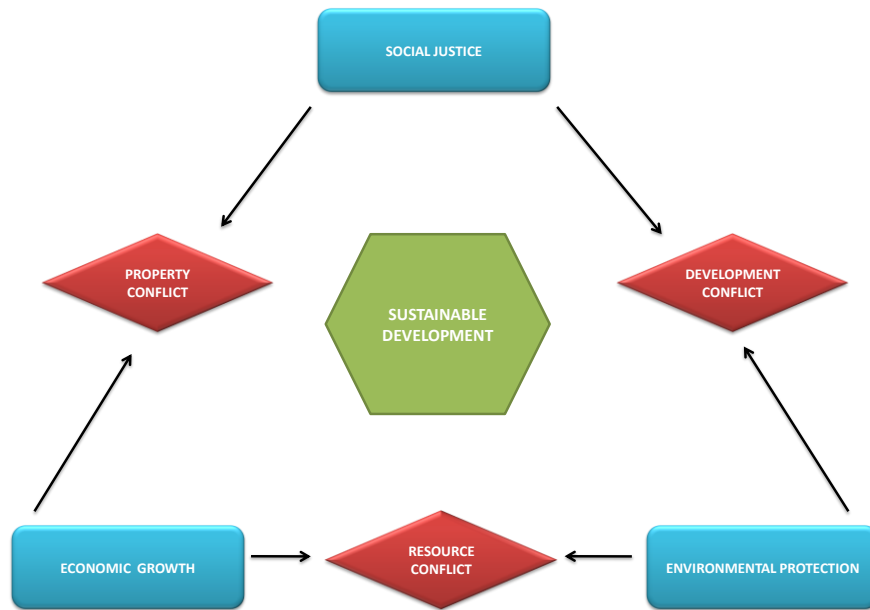**Figure 1.** The approximate percentage of the global urban population, by century.
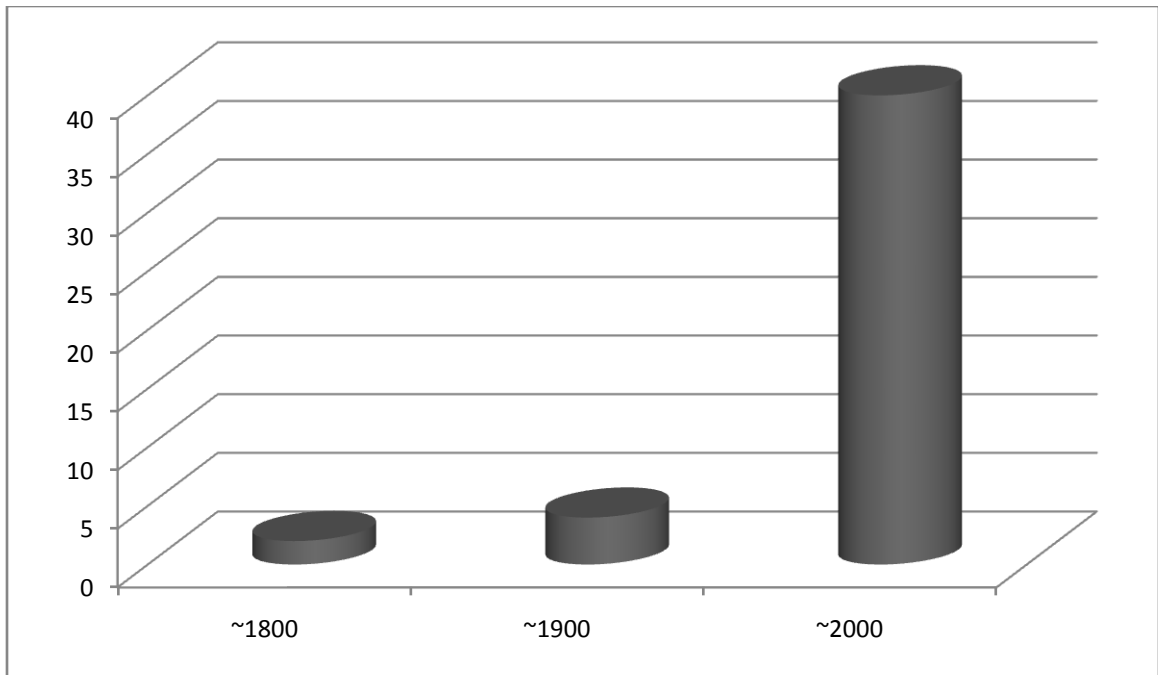
Source: Jamieson (2002).

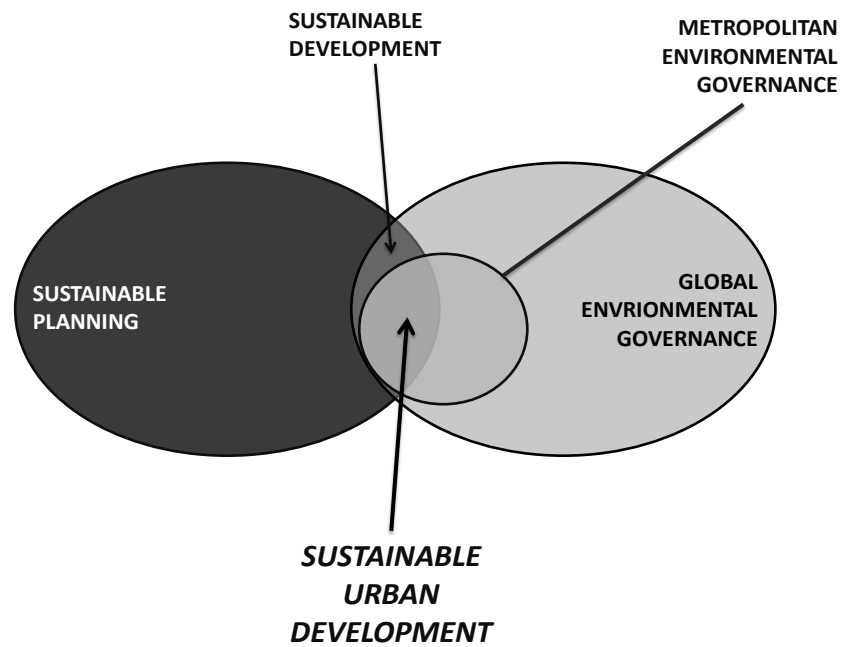**Figure 2.** The economy as an open subsystem of the ecosystem.
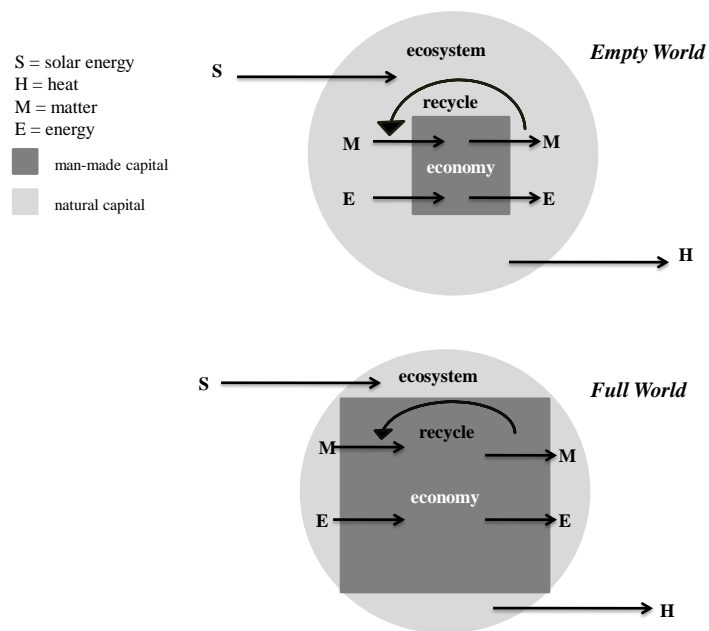
Source: Daly (1996).

Figure 3. Planners' Triangle.

Source: Adapted from Campbell (1996).

Figure 4. A framework for analyzing sustainable urban development.

Figure 5. The boundaries of the New York City-Region, per the designation procedures of the US Census Bureau.

Source: www.absoluteastronomy.com (2011).

Appendices.

Appendix A.   **Questionnaire.**

Hello. I am carrying out a study of sustainable urban development programs or policies at the local level. Your municipality or county has been chosen because it belongs to the CCP. Your input will be strictly confidential, but it will contribute to a better understanding of how local governmental authorities define, establish, and/or implement programs of sustainable urban development.

For Questions 1, 2, and 3:
On a scale of one (1) to five (5), where (1) is Very important, (2) is Fairly Important, (3) is Neither Important Nor Unimportant, (4) is Fairly Unimportant, and (5) is Very Unimportant, indicate the level of importance of the following factors in establishing policies of sustainable urban development

Q1	Support of Citizens	1 – Very Important	2 – Fairly Important	3 – Neither Important Nor Unimportant	4 – Fairly Unimportant	5 – Very Unimportant
Q2	Support of Public Officials	1 – Very Important	2 – Fairly Important	3 – Neither Important Nor Unimportant	4 – Fairly Unimportant	5 – Very Unimportant
Q3	Support of Business Community	1 – Very Important	2 – Fairly Important	3 – Neither Important Nor Unimportant	4 – Fairly Unimportant	5 – Very Unimportant

Q4. Which departments, agencies, or offices are involved in to define, to establish, and/or to implement programs of sustainable urban development?
   □ Land-Use Planning
   □ Transportation Planning
   □ Energy Management
   □ Waste Management
   □ Parks & Recreation
   □ Others (Please identify):

Q5a. Does the organizational structure include members of community?
  □ Yes
  □ No

Q5b. If so, which members of the community?
  □ Citizens, activists, civil society
  □ Non-profit organizations
  □ Business, merchants

Q6. Is there a new organizational structure to address sustainable urban development, which did not exist prior?
  □ Yes
  □ No

Q7. To whom does the highest official responsible for sustainable urban development report?
  □ Mayor, Executive Officer, City Manager
  □ City Council, Board of Freeholders
  □ Head or Director of Department/Agency/Office
  □ Other (please identify):

Q8a. At the local level, have new policies or programs for sustainable urban development emerged?
  □ Yes
  □ No

Q8b. If so, did these policies and/or programs emerge **before** or **after** the creation of a sustainable urban development organizational structure?
  □ Before
  □ After

Q9. In developing policies and/or programs for sustainable urban development, how important is climate control?

1 – Very Important	2 – Fairly Important	3 – Neither Important Nor Unimportant	4 – Fairly Unimportant	5 – Very Unimportant

Q10. What are the types of assistance that the local governmental authority has obtained from ISDP?
  □ Technical
  □ Legal
  □ Financial
  □ Political

Q11. When did the municipal authority join?

Q12. What is the population of the municipal authority?

Q13. What is the annual budget of the municipal authority?

Appendix B.   **Protocol Questions**

- Define a policy or program put into place within the local municipal authority since 1990, aimed directly at promoting sustainable urban development; does the policy or program have a name?
    - Operationalize the policy/program by placing the actions and events into a logic model framework; collect information about the chronology of these actions and events, as well as their causal relations
    - Collect data related to the nature and extent of any improvements for the relevant time period—for example
        - Raised expectations or consensus over goals
        - Created administrative structures (e.g. committees, offices, departments) to develop or implement policy/program
        - Increased participation by interest groups or stakeholders
- Define role of civic interest groups and stakeholders in promoting sustainable urban development; do the groups or stakeholders participate in a formal way?
    - Operationalize the participation process by placing actions and events into a logic model framework; collect information about the chronology of these actions and events, as well as their causal relationships
    - Collect data related to the changes in civic participation for the relevant time period—for example
        - Community or civic pressure to address policies/programs
        - Types of stakeholders present at different stages
        - The current role of various stakeholders (business, civic, etc.)
        - Types of citizen participation currently formalized
- Define the role of any formal administrative structure to devise or implement policies/programs; does the administrative structure have a name?
    - Operationalize the creation of an administrative structure by placing the actions and events into a logic model framework; collect information about the chronology of these actions and events, as well as causal relations
    - Collect data related to the nature and extent of any administrative changes for the relevant time period—for example
        - Did the administrative structure exist prior to the creation of policies/programs? **OR** Did the administrative structure emerge because of policies/programs?
        - How does the administrative structure fit within the local governmental authority's political structure?
        - Is the administrative structure permanent or temporary?
        - Are officials elected, selected, or appointed?
        - Do citizens and stakeholders participate? How?

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1995	Conferred the degree of Bachelor of Arts, in sociology from Rutgers College and in urban planning from the Bloustein School of Planning and Public Policy, Rutgers University, New Jersey, USA.
1995	Began work as a community planner and Volunteer in Service to America (VISTA), the inaugural cohort of the AmeriCorps Program, Philadelphia, Pennsylvania, USA.
2001	Conferred the degree of Master of Public Policy, concentration in urban policy analysis, University of Chicago, Illinois, USA.
2001	Awarded Presidential Management Fellowship, Washington, District of Columbia, USA.
2001	Began work as a transportation program specialist with the Federal Transit Administration, U.S. Department of Transportation, Los Angeles, California, USA.
2003	Selected as Leadership Associate, Federal Executive Board, Los Angeles, California, USA.
2007	Initiated as full member to AMΓ, the National Collegiate Foreign Language Honor Society for the study of French, California, USA.
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