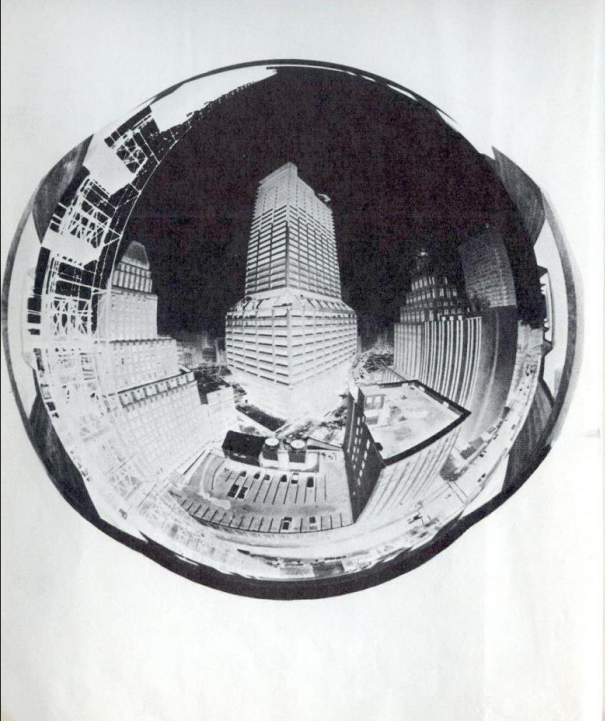

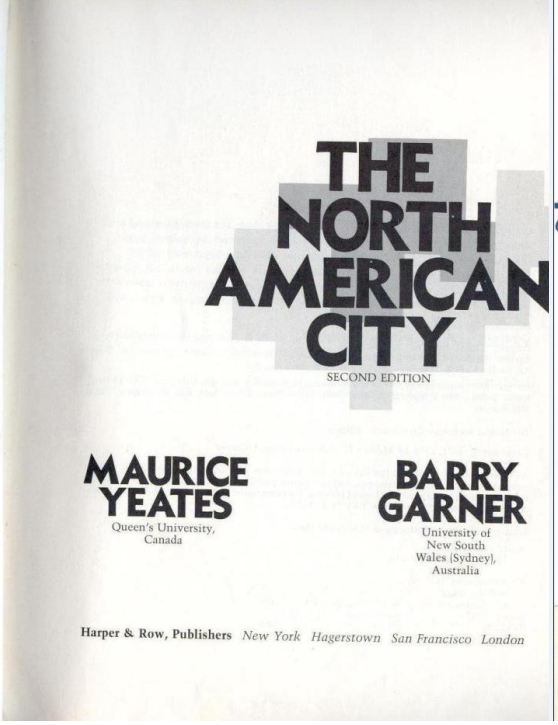

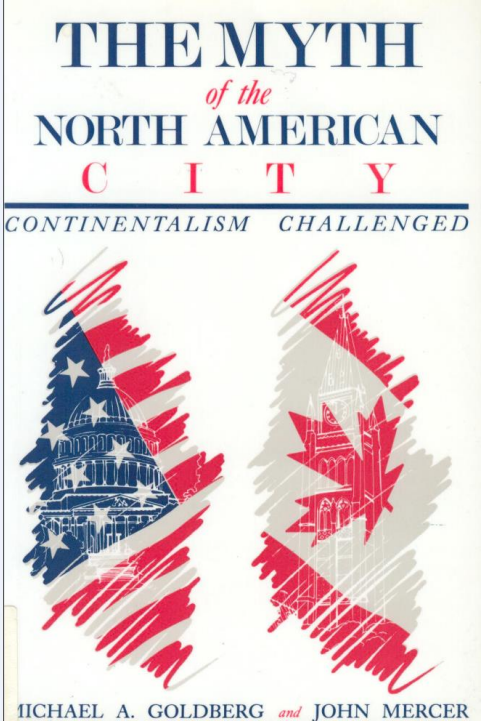

The City, or the Myth? *Sources:* Maurice Yeates and Barry Garner (1976). *The North American City*, Second Edition. New York: Harper & Row, inside front cover. Michael A. Goldberg and John Mercer (1986). *The Myth of the North American City: Continentalism Challenged.* Vancouver: University of British Columbia Press, cover. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

Looking for the North American City

Project background paper
Geography 350, *Introduction to Urban Geography*
Elvin Wyly

> "In a privatized society, problems are solved in a highly individualized manner. The conditions of daily life in many US central cities and certain metropolitan areas have led to withdrawal of certain groups to suburban and ex-urban places."[1]
>
> "What would we find? Other than Tim Hortons and Don Cherry, the new coins and the new spellings -- would it all be pretty much the same? ... I think when Canada speaks, it uses 'we' more often than 'I.' One might sum up the difference between the U.S. and Canada as individualism vs. community. Of course, both countries have both, but there is an unmistakable difference in emphasis."[2]
>
> "...perhaps the North American City is *not* a misconception."[3]
>
> "Bomb Canada: The Case for War." -- satirical headline in the American conservative magazine *National Review*.[4]

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[1] Kim England and John Mercer (2006). "Canadian Cities in Continental Context: Global and Continental Perspectives on Canadian Urban Development." In Trudi Bunting and Pierre Filion, eds., *Canadian Cities in Transition, Third Edition*. Don Mills, ON: Oxford University Press, 24-39, quote from p. 38.
[2] Laura Kaminker (2006). "Cross a Border, Adjust a Mind-Set." *Globe and Mail*, Facts & Arguments, March 15, A14.
[3] Edmund J. Zolnik (2004). "The North American City Revisited: Urban Quality of Life in Canada and the United States." *Urban Geography* 25(3), 217-240, quote from p. 217, emphasis added.
[4] See Adam Daifallah (2011). "It's Cool to Be Canadian." *National Post*, July 29, p. A8.

The North American City

In 1971, Maurice Yeates and Barry Garner coauthored an introductory urban geography textbook, *The North American City*. The book was conceived as an overview of the art and science of urban geography,

> "primarily intended as a textbook for introductory courses ... for undergraduates -- particularly at colleges and universities in North America. Since the book is self-contained, few assumptions are made about the reader's background in human geography. Hence it is designed to cater to the needs of the growing number of students from other disciplines taking courses in urban geography, as well as to the needs of geography majors and honors students."[5]

Yeates and Garner's approach to the subject was deeply shaped by the intellectual context of the day, and thus followed the principles and practices of analytical urban geography -- quantitative revolution methods and techniques, often applied to older theories and insights from the regional-cultural tradition, but always committed to the search for order:

> "In urban geography the search for order is reflected in an increasing concern for generalization, higher degrees of abstraction, and a greater problem orientation."[6]

"St. Peter finds God at the drawing board. 'Let me show you my latest creation,' says God. 'I call it 'Earth.' Isn't it pretty? And best of all, it's in balance.'

'What do you mean?' asks Peter.

God demonstrates: 'This part is cold, this part is hot. This part is dry land, this part is water. This part is forested, this part is plains. Everything in balance.'

'What's this lovely part here?' asks St. Peter.

'Oh, I'm particularly proud of that,' says God. 'I call it 'Canada.' Its people will be humble, kind, thoughtful and intelligent. They'll take good care of my creation and live peaceably with each other and the rest of the world.'

'And the balance you mentioned?'

'I was coming to that,' says God. 'Now, just to the south of there...'"

Dean Messervy (2009). Joke submitted to *Pretty Good Jokes, A Prairie Home Companion with Garrison Keillor*, at www.publicradio.org, last accessed October 13. Washington, DC: American Public Media.

After a short introduction reviewing the foundations of spatial organization and the need for generalization in order to make sense of the infinite complexity of urbanization, the book proceeded in three parts. A section on "The City System" reviewed the evolution of urban patterns, elaborated the urban facets of spatial interaction, and examined the concepts of economic base, the growth of cities, and taxonomies of cities as manufacturing centers, service centers, and other functions. The second section analyzed the internal structure of urban areas, from the relationship between urban growth and transport to land-use, housing, and neighborhood social patterns to commercial and retail analysis and manufacturing site considerations. The third section, "The Urban Dilemma," applied the key theories and methods introduced in earlier sections to urgent policy debates of the time: pollution and urban transportation problems; urban housing problems; political fragmentation and the 'fiscal squeeze'; the prospects for coordinated urban and regional policies; and possible

[5] Yeates and Garner, *North American City*, p. xvii.
[6] Yeates and Garner, *North American City*, 12.

future urban paths. Throughout each of the chapters, the vast majority of attention was paid to the United States (and almost invariably the maps portrayed only the contiguous forty-eight states), with a much smaller section at the end reserved for Canadian cities.

The North American City quickly became a best-seller. The approach grew out of, and in turn helped to reinforce, broad shifts in how geographers were approaching the city -- as more and more analysts abandoned the regional-cultural tendency to view each city as a unique constellation of historical developments, human-environment interactions, and contemporary growth processes. As more people were persuaded by the search for order and spatial organization between and inside cities, the Yeates and Garner text offered perhaps the most prominent textbook treatment of the approach; indeed, the accessible writing style and rich inventory of maps and graphs of *The North American City* stood in sharp contrast to the more tedious presentation that many people found in the few alternatives available at the time. But the merits of the approach could not be entirely separated from the sociology-of-science processes that made the text a best-seller. Edward Taaffe recounts his own memories of crossing paths with Yeates and Garner:

The North American City became one of the best-selling urban geography textbooks in Canada and the U.S., but it had very little Canadian content.

> "Meanwhile, I had left Loyola and come to Northwestern University in 1956, initially in transportation. After Clyde Kohn left for Iowa, I added an urban emphasis to my work. During the Northwestern period, I worked on both urban and transportation questions with such talented graduate students as Barry Garner, Howard Gauthier, Peter Gould, Maurice Yeates, and others. ... Finally, toward the end of my Northwestern stay, I directed two National Science Foundation quantitative institutes together with [Brian] Berry, with Garner and Yeates and graduate assistants."[7]

Reflecting on the significance of these early connections and the subsequent success of the Yeates-Garner text, Taffe borrows Thomas Kuhn's dictum that,

> "at any time, textbooks summarize the working paradigms of a discipline. Noting the concepts and ideas treated in textbooks as they develop through time is, therefore, one way to trace the intellectual history of a field. According to Kuhn, the development of a field is thus linearized in terms of its currently dominant paradigms and previous paradigms are rendered invisible."[8]

[7] Edward J. Taffe (2005). "Some Thoughts on the Development of Urban Geography in the United States during the 1950s and 1960s." In Brian J.L. Berry and James O. Wheeler, eds. *Urban Geography In America, 1950-2000: Paradigms and Personalities*. New York: Routledge, 49-60, quote from p. 53.
[8] Taafe, "Some Thoughts," 51.

Taaffe places *The North American City* firmly on the central axis of a "mainstream" in U.S. urban geography in the 1950s, 1960s, and 1970s. A second edition of *The North American City* was published in 1976; a third in 1980; and a fourth in 1990.

The Myth of the North American City

Despite its popularity, or perhaps precisely because of it, *The North American City* generated a substantial backlash. Although each new edition of the text sought to rectify the apparently dismissive treatment of Canadian urbanism, many critics saw the foundations of the entire enterprise as fatally flawed. The most strident and influential response came when Michael Goldberg and John Mercer co-authored *The Myth of the North American City*, published by the University of British Columbia Press.[9] Their preface is at once provocative and hilarious:

> "Nearly two decades ago, American humorist Richard Armour suggested that the information explosion was clearly out of control and that resort to mere book burning would prove fruitless to stem the tide. Instead, he advocated burning authors to cut the problem off at its root. While as authors we would find the approach too draconian, before proceeding with our addition to the explosion, we provide the reader with some background and justification for worsening this global book crisis."[10]

Goldberg and Mercer began by stating that they were committed to an intellectual understanding, following the conventions of logical consistency and "observable and reproducible facts." But

> "...the work has a strong visceral origin, growing out of our emotional dissatisfaction as much as our intellectual concerns with constructs that blithely lump Canada and the United States into the same analytical laundry basket without proper appreciation of the diversity of the wardrobe to be laundered."
>
> "...our distress arose from the indiscriminate application of American-based ideas about cities and urban policy to a Canadian setting, especially during the 1950s and 1960s. We were both struck by the inappropriateness of the American urban crisis model in Canada. Additionally, we felt a sense of outrage at the imposition of American policies on the Canadian urban framework when these policies and their unintended consequences (most notably freeways and urban renewal) were of dubious value in the United States. In Canada, where an American-style urban dilemma has still to be demonstrated, such a borrowing of inappropriate and enormously costly policies seem to us singularly unintelligent."

Goldberg and Mercer provided a compelling and persuasive critical-intellectual response to the risks that had become clear with the runaway popularity of *The North American City*, and with the broader American tendency to ignore the distinctive context and circumstances of Canadian urban life. "Continentalism" -- the tendency to think of Canada and the United States as

[9] Michael A. Goldberg and John Mercer (1986). *The Myth of the North American City: Continentalism Challenged.* Vancouver: University of British Columbia Press.
[10] Goldberg and Mercer, *Myth*, p. 1.

essentially the same -- was misguided. It could actually be dangerous, if and when the idea was used to make significant decisions. Goldberg and Mercer built a conceptual framework that sought to contextualize that revered notion of "urban systems" that lie at the root of the Yeates-Garner approach to urban geography. For Goldberg and Mercer, the observable rank-size distributions, growth trajectories, and proliferating taxonomies of urban systems were certainly important and interesting, but they were by no means the whole story. Goldberg and Mercer emphasized that all of these economic and equilibrium processes were mediated and shaped by an underlying infrastructure of values and value systems. These value systems influence many aspects of social organization and demographic change, as well as political institutions and economic systems. Value systems -- not some universal, abstract principle of spatial organization -- determine the structures of cities and the pace of change in urban life. As Goldberg and Mercer put it:

Goldberg and Mercer wrote <u>The Myth of the North American City</u> out of frustration with "the indiscriminate application of American-based ideas about cities and urban policy to a Canadian setting."

> "The central tenet of the argument is that cities evolve within the cultural framework of the societies within which they are located. In their spatial and architectural forms, they are manifestations of deeply rooted cultural processes which encompass economic elements as well. Thus, cities and city dwellers are more than just products of a prevailing economic system."[11]

This is not a simple notion of the "city as a mirror" of its culture:

> "Cities are not simply game boards upon which one culture constructs 'monopolyville' while another creates 'equalityville'"[12]

in part because social, cultural, economic, and political life always and quite literally, *takes place.* There is thus an ongoing socio-spatial dialectic; societies change their spaces even while spaces and places influence social change itself.

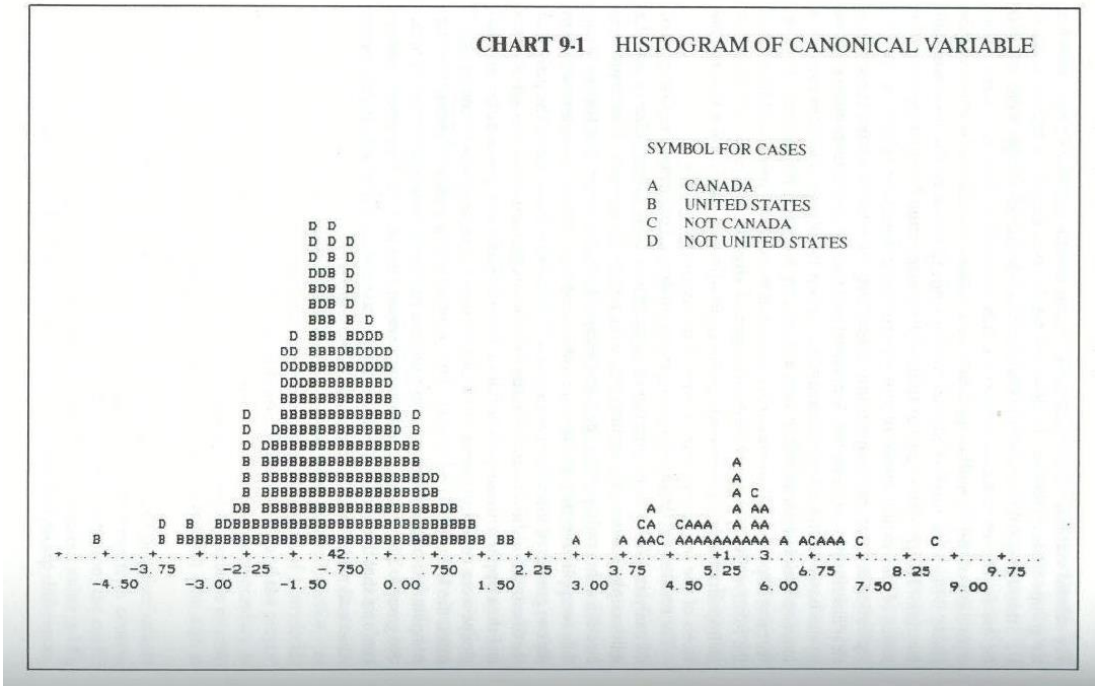
> "The making of a culture lies in a human experience which is always place-specific -- for most, and especially for Canadians and Americans, this place is the city and particular cities at that. Equally, the making of towns and cities occurs in a cultural context."[13]

Goldberg and Mercer's argument became deeply influential, although it should come as little surprise that the intervention found a more receptive audience in Canada than in the United States. Beyond the logical consistency of the argument and its firm roots in valuable traditions of social and cultural analysis, what made *The Myth of the North American City* a compelling

[11] Goldberg and Mercer, *Myth*, 5.
[12] Goldberg and Mercer, *Myth*, 5.
[13] Goldberg and Mercer, *Myth*, 5.

work was its unambiguous challenge to continentalism on its own terrain. On the one hand, Goldberg and Mercer undertook careful and comparative considerations of U.S.-Canada contrasts in values and institutions across many domains of urban life: immigration, religion, race, class structure, demographic change; economic institutions and divergent trajectories of urban growth; political structures and political cultures that shaped different histories of federalism; and contrasts in local government structure and urban public finance. Yet their challenge also tactically engaged the continentalism of *The North American city* on its own *methodological* terrain, with careful multivariate analyses of all 277 metropolitan areas then defined by the U.S. Census Bureau, and the 40 principal urban areas defined by Statistics Canada.

The Myth of the North American City included statistical analyses of similarities and differences among more than 300 urban regions in Canada and the United States.



Measuring the Myth. Goldberg and Mercer undertook a large-scale study of several hundred metropolitan areas in the U.S. and Canada, measuring a variety of social and economic characteristics. They used a statistical technique known as discriminant analysis to try to identify variables -- and combinations of variables -- to find out which indicators best distinguished between cities in Canada and the U.S. This graph shows one of their intermediate steps -- a "canonical" variable that is a composite measure of several social and economic indicators. 'Canonical,' from the middle Latin *canonicalus*, comes from the original Greek *canon*, and refers either to something that conforms to church law, or any general principle or body of principles; the term is often used in statistical procedures that can discern general trends from data that appear confusing and complex. Source: Michael A. Goldberg and John Mercer (1986). *The Myth of the North American City: Continentalism Challenged.* Vancouver: University of British Columbia Press, p 248. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

The North American City, and the *Myth of the North American City*, might at first be regarded as obscure academic treatises obsessed with parochial or narrowly-specialized theoretical or methodological debates. But they hint at a deep current of tension and ambivalence that pervades national and regional politics, trade disputes, popular culture, and generalized perceptions of Americans and Canadians. To the degree that the high level of urbanization both in the U.S. and Canada means that cities increasingly help to define what it means to be Canadian, and what it means to be American, the questions are critically important: *Is there such an entity as a "North American City"? Are Canadian cities fundamentally different from United States cities? Has the globalization of the last generation begun to erase some of the differences? Does the variation within each national urban system exceed the differences between them?*

Distinctions and Convergence

Goldberg and Mercer's comprehensive analysis convinced them that 'Contintentalism' was fatally flawed:

> "Overall, the results of the various multivariate analyses generally support the contention that Canadian cities are sufficiently different and distinctive within a North American context that they require separate consideration. While Canadian and American cities may be subject to similar causative processes, such as the transformation of employment structures, population deconcentration or immigration, there are other processes which are structured differently and perform differently, such as intergovernmental relations."
>
> "...Canadian urban areas are very different places to those in the United States. Hence, the notion of the 'North American City' can be of only limited value and may be potentially misleading."[14]

Not long ago, John Mercer collaborated with Kim England to update this assessment, in a chapter titled "Canadian Cities in Continental Context: Global and Continental Perspectives on Canadian Urban Development." England and Mercer explained the difficulties in answering a previous generation's questions when so much national and international discussion in recent years has been focused on the erosion of ***all*** nation-state differences (not just those between the U.S. and Canada).[15] Globalization has altered the context of urbanization worldwide, and perhaps the commonalities between Canada and the United States have been strengthened by their close trade ties and similar experiences with transnational connections. This is the perspective of those analysts who favor the convergence thesis -- the idea that Canadian cities are becoming more "American" as globalization undermines traditions and institutions that have been distinctive to Canada. England and Mercer, however, are not convinced. In a careful

[14] Goldberg and Mercer, *Myth*, 239.
[15] John Mercer and Kim England (2000). "Canadian Cities in Continental Context: Global and Continental Perspectives on Canadian Urban Development." In Trudi Bunting and Pierre Filion, eds, *Canadian Cities in Transition, Second Edition*. Don Mills, ON: Oxford University Press, 55-75.

review of enduring contrasts in population and household change, housing, urban transportation, immigration and ethnicity, and inequality and poverty, England and Mercer maintain that whatever commonalities can be found in globalization processes, they cannot be mistaken for any erosion of significant cross-national differences:

The convergence thesis: some observers see evidence that Canadian cities are becoming more like cities in the U.S.

> "A whole host of large-scale or global processes influence Canadian and U.S. cities. ... These processes have also affected US cities, but the manner of their working out both locally and cross-nationally suggests a degree of distinctiveness that challenges the concept of 'the North American city'..."[16]

Mercer and England provide a careful review of the significant contrasts in urban form, urban and suburban population growth trends, housing, and transportation. And several years later, Mercer and England updated the analysis once again, drawing attention to more recent changes, including

> "two particularly notable cross-national differences in the two contemporary metropolitan systems. First, the Canadian urban system ... grew more slowly than the U.S. urban system in the 1990s (14 percent versus 19 percent in the U.S.), whereas in the 1980s Canada's growth (13 percent) was slightly ahead of the U.S. (12 percent). Second, geographic concentration is more marked in the smaller Canadian urban system, with one-third of the national population living in the three largest CMAs, whereas only about 17 percent of Americans live in the three largest metropolitan statistical areas (MSAs) -- New York, Los Angeles, and Chicago (although, of course, in absolute terms this amounts to more people). Thus, Toronto, Montreal, and Vancouver continue to dominate the Canadian urban system, and now that the national capital region (Ottawa-Hull-Gatineau) has joined the 'million plus' club, the principal cultural, economic, and political Canadian players are well represented at the top of its urban hierarchy. Globally ... Canada's largest cities are increasingly important anchors in the global cities network."[17]

Ultimately, Mercer and England believe that the distinction between public and private functions and principles provides the best way of understanding the durability of cross-national differences. To be sure, Mercer and England recognize that there are some signs of support for the 'convergence' thesis, especially:

1. The broad transition from **manufacturing to services** that is proceeding on both sides of the border,

[16] Mercer and England, "Continental Context," 64.
[17] England and Mercer, "Canadian Cities," quote from p. 25.

2. **Demographic** shifts. Immigration source countries have shifted away from the Global North (primarily Europe) to the Global South (Asia for Canada, Latin America and Asia for the U.S.). At the same time, the native-born, European-origin White populations are, on average, getting older. In both Canada and the U.S., an aging White native-born population will increasingly depend in retirement on the tax contributions of new generations of working-age immigrants from the Global South.

Factors driving a convergence:

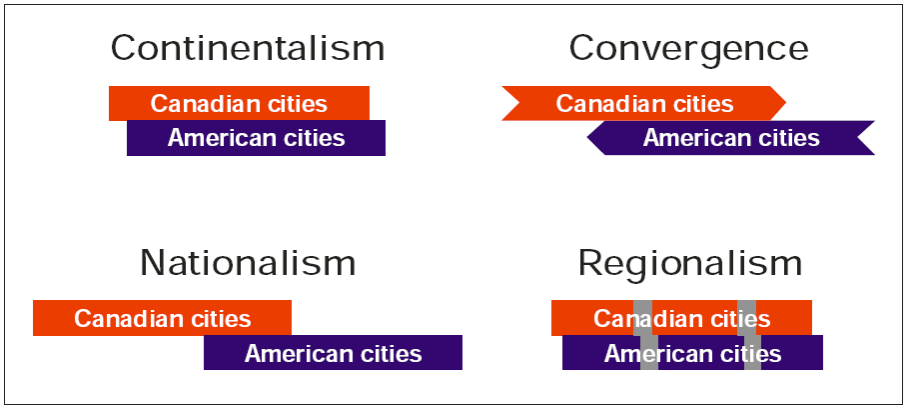
1. The shift from manufacturing to services.
2. Demography: aging European-origin "White" populations, along with increased immigration from the Global South.
3. The dominance of neo-liberal public policy.

3. The mounting political and institutional pressures, now widely described as '**neo-liberalism**,' to reduce social-service spending, create 'business-friendly' tax and investment policies, and nourish all possible sources of entrepreneurial innovation.

Nevertheless, Mercer and England conclude that pressures for convergence need not inspire precisely the same responses. The distinction between public and private functions, for example, plays a crucial role in urban change as well as urban policy. U.S. and Canadian societies are separated by important differences in attitudes towards government, individual rights and responsibilities, and perspectives on collective problems facing large groups (i.e., problems that cannot be solved by individuals or families on their own). Mercer and England conclude that public-private divisions are strong enough to maintain durable contrasts between life in U.S. and Canadian cities:

> "Thus, it is our considered judgment that the distinctiveness of Canadian cities can still be conveyed by asserting that Canadian cities are more public in their nature and US ones are more private.... But rather than these being sharply drawn polarities, the concepts need to be seen as having both a range and overlap on a public-private continuum anchored by ideal types."
>
> "The public city is more attuned to Canadian values, ideologies, and practices. It expresses a strong commitment to a greater emphasis on collectivities over individuals, although this has weakened with the emphasis on individual rights and freedoms of the Canadian Charter of Rights and Freedoms ... ; to the maintenance of social order and effective public practices over individual pursuits; to a greater trust and belief in the competence of governments and their bureaucracies, though this has clearly diminished in recent decades as the effectiveness of the public sector has been widely and relentlessly attacked by ideologues in Canada and elsewhere; to the idea of active intervention in the chiefly private process of city-making by city and suburban planners, some

working for innovative forms of metropolitan government. Public cities are also places where there is a higher quality of urban development ..."[18]



Conceptual Interpretation of U.S.-Canadian Urban Contrasts. Source: Thomas Ott (2004). "Are Canadian Cities Becoming More American? Evidence from the West." *Journal of the Association for Canadian Studies in German-Speaking Countries* 24(1), 162-175, figure from p. 165. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

Continuous Continua

The Latin *continuum* (n.) denotes something capable of being divided infinitely (as is often believed about space and time), while *continuous* (adj.) describes connection throughout, uninterrupted in space, time, or sequence. The degree of interconnection in continental context remains disputed, and the 'infinite divisions' along the public-private continuum proposed by Mercer and England may actually conceal sharp disjunctures.[19] In other words, the debate continues, and I have no interest whatsoever in giving you a definitive answer or telling you ***what*** to think; I'm much more interested in getting you engaged in ***how*** to think about these issues, how to sift the evidence so you can come to your own conclusions. In this as in many other domains of scholarly inquiry, the questions we ask, and the approaches we use in providing answers, are in some ways more important than the answers.

In recent years, the 'Continentalism' debate has evolved in four fascinating new directions. Understanding these developments will put you in a better position to evaluate the evidence for the convergence thesis, and for the argument that cross-national differences will endure.

First, analysts have recognized the deep cultural-regional variations that place substantial limits on the claims made on both sides of this debate – by defenders of the Continentalist perspective,

[18] Mercer and England, "Continental Context," 71-72.
[19] Specifically, there are important policy questions that may be subject to a 'tipping point,' such that once public sentiment on a particular issue moves incrementally in the direction of the private city, a cumulative and qualitative shift takes place that may fundamentally transform the entire conceptual, discursive, and institutional landscape. The privatization of public goods and once-publicly controlled institutions over the last twenty-five years, in both the U.S. and Canada, has provided some evidence for this political tipping-point dynamic.

as well as its critics. Goldberg and Mercer's landmark 1986 book, includes an absolutely critical caveat:

> "We write this book about Canadian and American cities from an Anglophone perspective. The Francophone cultural presence in Canada is a major differentiating cross-national factor, yet one that regrettably is largely beyond our competence and clear comprehension. We acknowledge this limitation of our work and upon our perspective (too often glossed over by others), denying us and you the reader, the insights of the Francophone perception and intelligence. It is frustrating to recognize that there is a social fact so central to shaping Canada and its urban areas that we cannot fully interpret within a Canadian or North American context."[20]

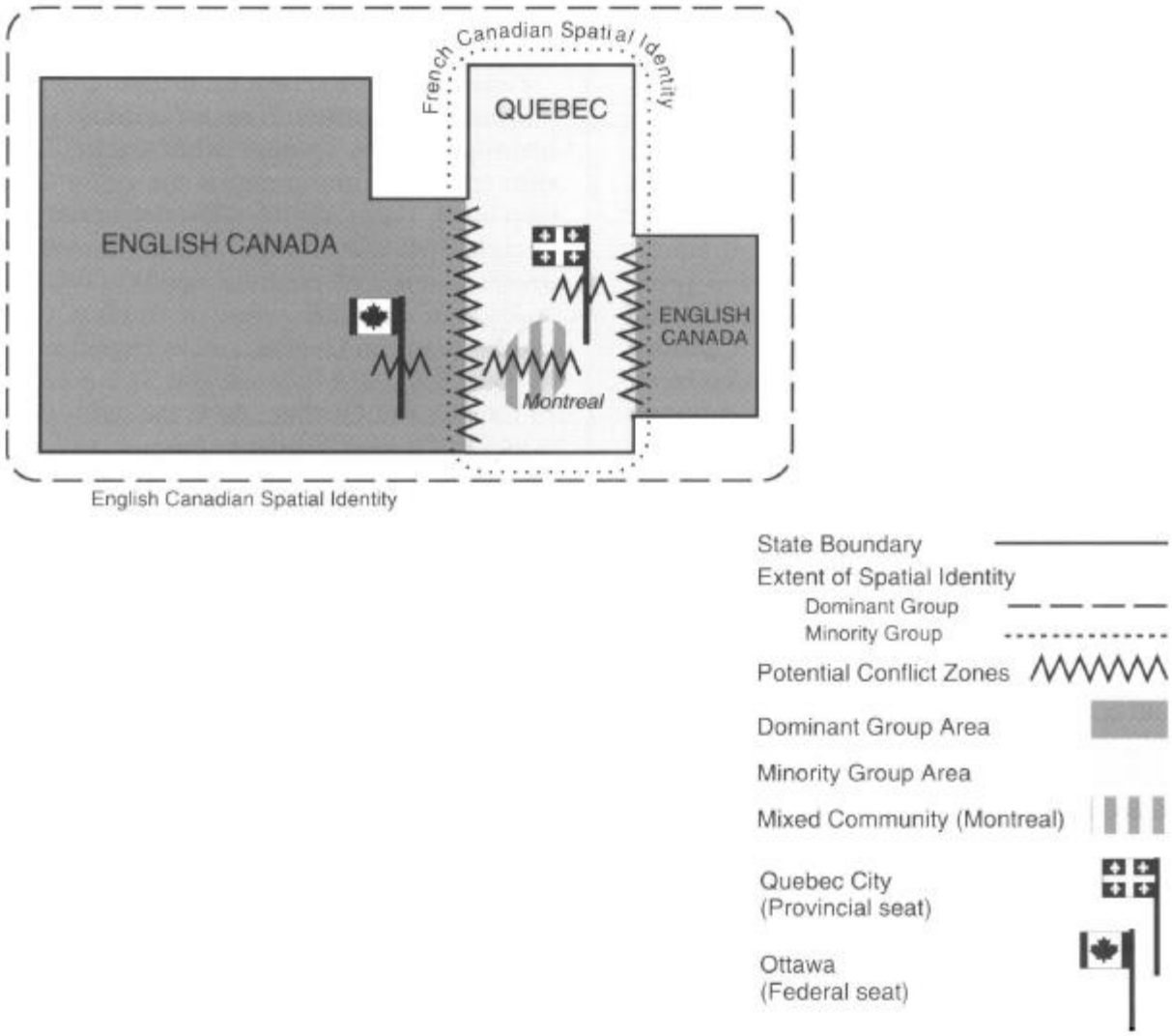
What this means is that there are enormous regional-cultural variations within both the U.S. and Canada that complicate and multiply the comparisons that must be made in any attempt to analyze the idea of 'the' North American City. Indeed, David Kaplan goes so far as to suggest that the defining essence of Canada is a diverse, multi-national state with ambivalent spatial identities. Anglophone and Francophone Canada began separately, and have never been completely reconciled:

> "In the period between Confederation and the present, two distinct national identities have matured along with the Canadian state. The identity of the French-Canadian nation has turned from a focus on the Roman Catholic Church to a reliance on provincial authority, while English-Canadian identity has evolved from its strongly British affiliations toward an identity that envelopes all of Canada's diversity. These changes in French Canadian and English Canadian *national* identities betoken shifts in their *spatial* identities."[21]

It is possible to sketch a simplified map of these spatial identities. There are overlaps and exceptions in this simple representation, to be sure. But the relative focus of French-Canadian spatial identity on the province of Quebec -- juxtaposed with an English-Canadian spatial identity that "encircles the entire Canadian state,"[22] creates the potential for significant tension in three major conflict zones:

1. The border between Quebec and its Anglophone-majority neighbors.
2. Montreal.
3. The capitals of Canada (Ottawa) and Quebec (Quebec City).

[20] Goldberg and Mercer, *Myth*, xix.
[21] David H. Kaplan (1994). "Two Nations in Search of a State: Canada's Ambivalent Spatial Identities." *Annals of the Association of American Geographers* 84(4), 585-606, quote from p. 599, emphasis added.
[22] Kaplan, "Two Nations," p. 599.



Canada's Ambivalent Spatial Identities. Source: David H. Kaplan (1994). "Two Nations in Search of a State: Canada's Ambivalent Spatial Identities." *Annals of the Association of American Geographers* 84(4), 585-606, figure from p. 600. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

Kaplan's work on Canada's ambivalent spatial identities has major implications. It may very well be that the contrasts between Francophone and Anglophone Canada are just as significant for cities and urban life as are the differences between Canada and the United States. Similarly, it could be argued that the U.S. South diverges from the rest of the U.S. just as much as the U.S. does from Canada.

Second, the simple continuum of "private" and "public" cities proposed by England and Mercer, although useful, may be missing some of the more interesting realignments in society, economics, and politics in North America, and indeed in all other industrialized urban societies. Public and private dualities are typically associated with a parallel dichotomy between 'markets' and 'government' intervention; but in recent years, these twin dualities have been blurred and

reconfigured in important ways. In both the United States and Canada, many of the important innovations (regardless of which political interests desire them or dislike them) have been examples of what we might call "public markets" and "private governments" -- instances with do not fit neatly on the single continuum proposed by England and Mercer.

Third, there have been efforts to update some of the methodology (as well as the arguments) made in the *Myth of the North American City*. Note that England and Mercer's chapter does not include a multivariate analysis of the contrasts between U.S. and Canadian cities. In a recent article, Edmund J. Zolnik devised a multivariate analysis of a wide range of quality of life indicators, and concluded that while there are enduring contrasts between U.S. and Canadian cities, there is a regional entity that straddles the border and can accurately be described as "the North American city."[23]

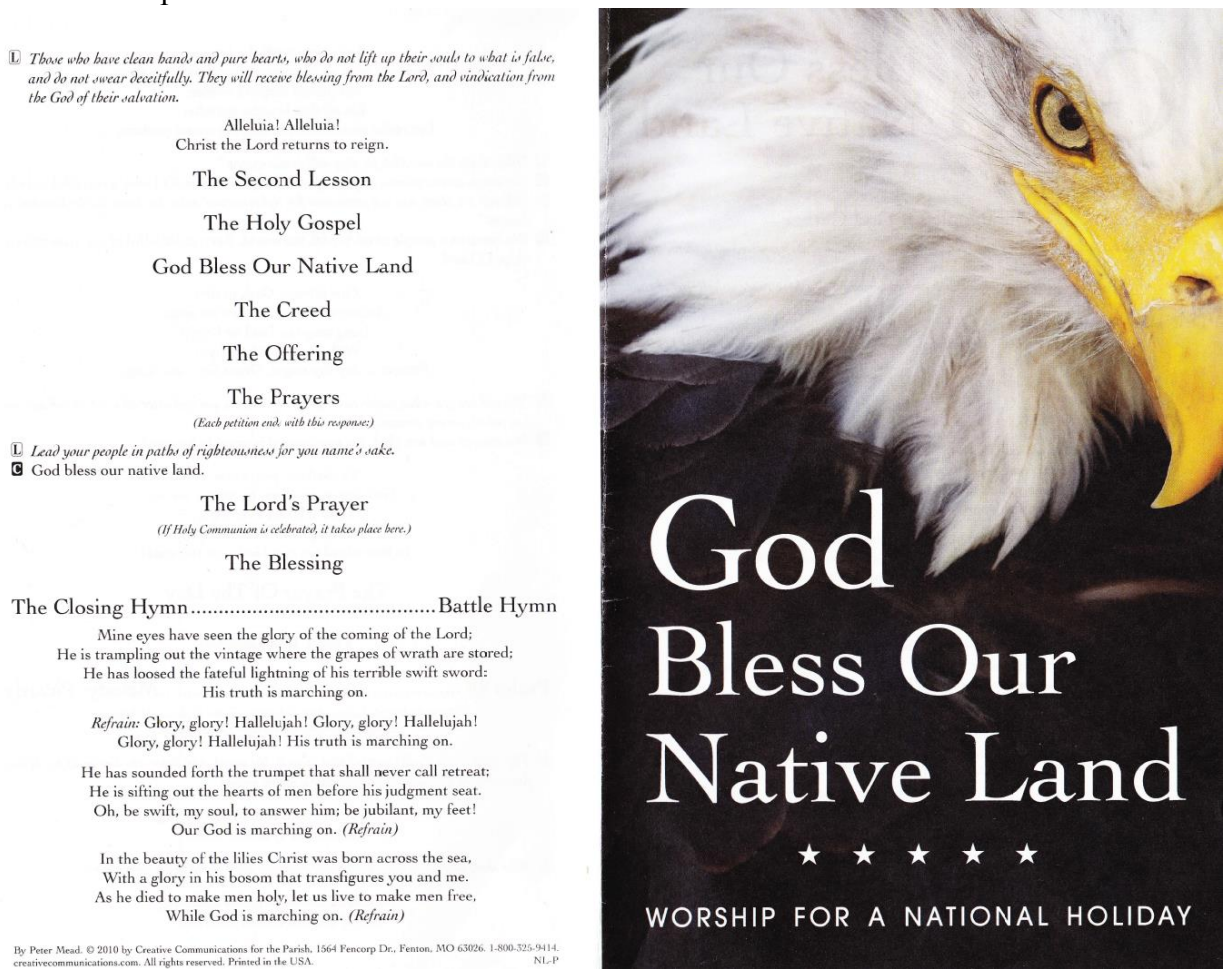
Recent turns in the "Continentalism" debate:

*1. It is now recognized that cultural-regional divisions **within** Canada may exceed cross-national differences **between** the U.S. and Canada.*
2. The "public-private" continuum is only one of several axes of difference among North American cities.
3. There is some statistical evidence to support the idea of a mixed U.S.-Canada urbanism that could be called "the North American City."
*4. The U.S.-Canada binary is **performative**: it shapes perceptions, actions, and decisions, as illustrated by Lees and Demeritt's analysis of "Sin City" and "Sim City" urban planning discourses.*

Fourth, whatever continuum we choose, it acts as do all binary oppositions. It is *performative*, and it helps to define communication, assumptions, and understanding. Media images are essential to how Canadians see U.S. cities, how Americans see Canadian cities, and how residents see their local city in relation to alternatives. Loretta Lees and David Demeritt analyze how this process plays out in the case of public discussion of how Vancouver's South Granville Street should be redeveloped. Lees and Demeritt show how the images and contrasts in planning discussions -- as well as local newspaper and television portrayals -- alternated between a "Sin City" representation of a nightmarish future of crime, violence and decay, versus a "Sim City" representation in the style of the popular computer urban simulation game. Sim City portrays a future of carefully-planned spaces of civility, economic revitalization, and environmental sustainability. Lees and Demeritt suggest that Sin City discourse is typically used to describe the prospects of U.S. urban problems (think of the images of crime and violence from Los Angeles, or Detroit, etc.), while Sim City images are often used to celebrate the achievements of planning decisions that have created successful, high-rise luxury residential developments in the urban core in recent years. Lees and Demeritt conclude that in Canada,

[23] See Zolnik, "The North American City Revisited."

"...the coding of urban problems as American is a common, and often very effective, rallying cry for urban reform of the type imagined in Sim City discourse. This peculiarly Canadian practice makes the tone of urban imagery, like the cities themselves, quite different on opposite sides of the United States - Canadian border. This is not necessarily cause for celebration, as it is often taken to be in Canada. Canadian cities face many of the same pressures as American ones. Recognition of Canadian distinctiveness and nationalist pride in the inappropriateness of American models of the North American City and of inner-city decay can also lead to complacency and denial that Canada has any serious urban problems of its own."[24]



L *Those who have clean hands and pure hearts, who do not lift up their souls to what is false, and do not swear deceitfully. They will receive blessing from the Lord, and vindication from the God of their salvation.*

Alleluia! Alleluia!
Christ the Lord returns to reign.

The Second Lesson

The Holy Gospel

God Bless Our Native Land

The Creed

The Offering

The Prayers

(Each petition ends with this response:)

L *Lead your people in paths of righteousness for you name's sake.*
C God bless our native land.

The Lord's Prayer

(If Holy Communion is celebrated, it takes place here.)

The Blessing

The Closing Hymn.....Battle Hymn

Mine eyes have seen the glory of the coming of the Lord;
He is trampling out the vintage where the grapes of wrath are stored;
He has loosed the fateful lightning of his terrible swift sword:
His truth is marching on.

Refrain: Glory, glory! Hallelujah! Glory, glory! Hallelujah!
Glory, glory! Hallelujah! His truth is marching on.

He has sounded forth the trumpet that shall never call retreat;
He is sifting out the hearts of men before his judgment seat.
Oh, be swift, my soul, to answer him; be jubilant, my feet!
Our God is marching on. *(Refrain)*

In the beauty of the lilies Christ was born across the sea,
With a glory in his bosom that transfigures you and me.
As he died to make men holy, let us live to make men free,
While God is marching on. *(Refrain)*

Sunday-Morning Binary. Sometimes the simplest words betray the most foundational assumptions of nationhood and contemporary national identity. A program from a Lutheran church service one of the states of the Confederacy, to celebrate Independence Day on July 4, 2010. "God Bless Our Native Land" might at first catch your eye as a reference to the land of indigenous, aboriginal Native Americans; but the phrase was instead offered as a prayer for a congregation composed almost exclusively of Non-Hispanic, European-origin Whites. For many Whites in the United States, the word "native" has begun to take on different meanings, to distinguish people born in the U.S. from immigrants. Peter Mead (2010). *God Bless Our Native Land: Worship for a National Holiday.* Fenton, MO: Creative Communications for the Parish. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

[24] Loretta Lees and David Demeritt (1998). "Envisioning the Livable City: The Interplay of 'Sin City' and 'Sim City' in Vancouver's Planning Discourse." *Urban Geography* 19(4), 332-359.

Binary, Reflected. The Canadian press sometimes presents stories in ways that encourage Canadians to see themselves, first and foremost, as not Americans. Opportunities to highlight the differences are especially important in foreign affairs and international opinion polls; poll results on the eve of the G8 and G20 Summits in Ontario indicated that Canada is seen as a decisive world economic and political power by the so-called BRIC countries -- Brazil, Russia, India, and China. The same does not apply for the U.S. and the other major powers of the G8. The Globe & Mail (2010). "The G8/G20 Summits: Global Impressions." *Globe & Mail*, June 21, A1. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

A Closer Look at Zolnik's Study

Let's consider a closer look at the work of Ed Zolnik, who is now an Associate Professor of Geography at George Mason University. In his graduate studies, he undertook an effort to update and refine the debate over the North American City. After reading through what is now a vast literature on this issue of 'Continentalism,' Zolnik wondered that

> "...perhaps the North American city is not a misconception. First, reanalysis of the multivariate data from Goldberg and Mercer by Ewing (1992) revealed that the Canadian City is not as distinctive if one accounts for the differences between Canadian and U.S. metropolitan areas in central city-to-suburban population

> ratios as well as urban racial mix and population. Second, given the centripetal forces of technological, economic, and cultural globalization (Frisken, 1994; Bourne, 1996) and the concomitant continuance of international urbanization since 1970, one might expect to find a converging transnational urban system (Sassen, 2000) between Canada and the United States."[25]

To test this idea, Zolnik worked to assemble a comparable set of indicators for a sample of metropolitan areas in the U.S. and Canada. He sought measures to capture differences in the overall quality of life, and since different units of government often collect information in different ways, this meant that Zolnik was not able to include all cities. He devised several logical criteria to select 25 U.S. metropolitan areas, to measure alongside the 25 Census Metropolitan Areas (CMA) defined by Statistics Canada at that time.[26] Zolnik's analysis of the quality of life indicators was revealing. There is evidence that some cities are clearly Candian, while others are unmistakably American. But Zolnik also found evidence to support the claim that there is a group of urban centers with a distinctive, hybrid, "North American quality." Some U.S. cities resemble the overall profile of Canadian urban areas, while a few Canadian cities fit the U.S. mold rather well (see the figure below).

North American Cities, as measured by indicators of urban quality of life. Source: Edmund J. Zolnik (2004). "The North American City Revisited: Urban Quality of Life in Canada and the United States." *Urban Geography* 25(3), 217-240, figure from p. 237. Reproduced here pursuant to Sections 29 ("Fair dealing for the purpose of research, private study, education, parody, or satire") and 30.04 ("work available through Internet") provisions of Canada Bill C-11.

[25] Zolnik, "North American City revisited," pp. 217-218.
[26] For the 2006 Census, Statistics Canada expanded the number of CMAs to 33.

Zolnik's analysis is an intriguing one. But things get even more interesting, because Zolnik was kind enough to share his data with us. This means we can explore the evidence ourselves, and sort through the various measures in all their rich complexity (see the table below).[27]

Variables to Measure the North American City.

		Canadian Metros (25)				U.S. Metros (23)			
Variable	Description	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
ahi96	Average household income US$ 1996	53,732	6,203	42,400	67,500	66,478	9,275	48,100	84,600
cr96	Violent and property crime per 100,000 pop 1996	6,371	1,605	4,165	9,997	6,156	2,047	2,989	12,917
ea96	Share of Pop 25+ with Bachelor's Degrees 1996	18.79	4.22	12.10	28.30	21.60	5.74	11.40	37.00
imr96	Infant deaths per 1,000 live births 1996	6.032	1.442	4.000	9.400	7.317	1.294	4.300	9.000
o96	Second daily max one-hour Ozone, ppm 1996	0.0712	0.0154	0.0500	0.1000	0.1091	0.0186	0.0800	0.1600
p96	Total population 1996	714,586	1,012,394	125,562	4,263,757	2,867,810	2,729,604	136,605	9,056,076
t96	Homeownership rate 1996	62.10	5.82	48.40	71.30	63.64	9.36	33.00	71.70
ur96	Civilian unemployment rate 1996	9.604	2.058	6.600	14.200	4.817	1.507	3.000	8.200
cr91	Violent and property crime per 100,000 pop 1991	6,100	1,649	3,910	9,649	6,587	2,157	3,117	12,786
imr91	Infant deaths per 1,000 live births 1991	6.548	1.087	5.200	9.200	9.283	1.675	5.600	12.100
p91	Total population 1991	666,614	927,940	124,427	3,893,046	2,731,183	2,672,080	133,000	8,931,286
den96	Population per sq km 1996	260.0	221.4	35.8	826.7	480.5	630.6	41.7	2900.8
crchg	Change in crime rate	271	1173	-1466	5339	-431	427	-1605	198
imchg	Change in Infant Mortality Rate	-0.52	1.56	-3.70	3.40	-1.97	1.30	-5.50	1.00
ppchg	Percent change in total population	4.88	3.75	-0.29	14.30	6.11	5.04	-1.37	19.61

Source: Adapted from dataset described in Edmund J. Zolnik (2004). "The North American City Revisited: Urban Quality of Life in Canada and the United States." *Urban Geography* 25(3), 217-240. Re-analyzed with permission.

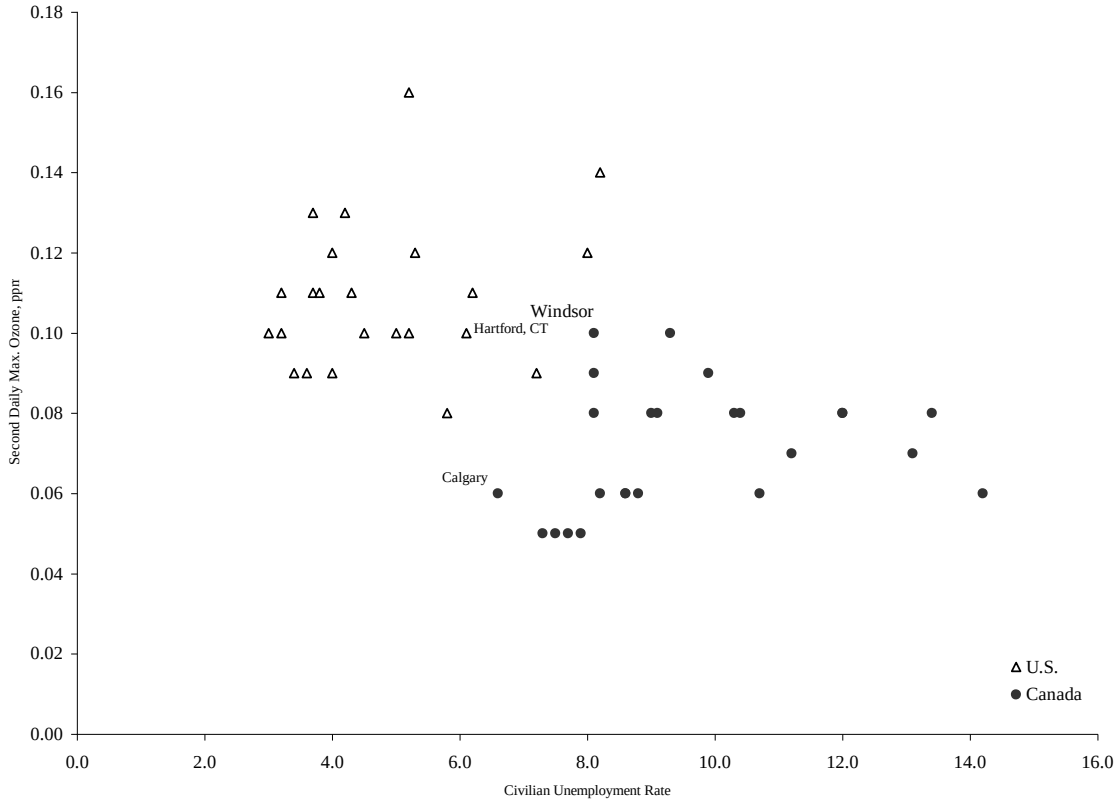
Several comparative aspects of these simple measures stand out. Note that the average household income is substantially higher in U.S. metropolitan areas compared with Canada -- but also keep in mind that the average is biased by outliers at the very top of the distribution. The range from minimum to maximum average incomes is much larger in the U.S. -- between $48,100 to $84,600, compared with $42,400 to $67,500 in Canada. Crime, infant mortality, educational attainment, and many other indicators seem roughly similar across the two groups. But looking at individual indicators can only tell us so much. We need to consider a *multivariate* approach to examine how the combination of different measures can help to identify contrasts and similarities.

***Discriminant analysis**: a statistical technique that helps identify measures that best distinguish different groups of observations. For example, which measure -- income, unemployment, growth rate -- best distinguishes Canadian from U.S. cities?*

One technique for doing this is called **discriminant analysis**. The approach involves selecting variables, and combining different measures, in ways that maximize the between-class variance while minimizing the intra-class variance between different groups of things. To illustrate, let's say that we measure our 25 Canadian metropolitan areas, and our 23 U.S. metros, on two variables: the civilian unemployment rate, and the second daily maximum one-hour concentration of atmospheric

[27] Because it is crucial to have comparable data for each observation (metropolitan area) on a comparable basis, changing any decisions on which measures to use can require tradeoffs. I made several decisions to change some of the indicators provided in Zolnik's dataset, and since I felt it was important to measure the change in crime rates as well as their levels in 1996, this meant that I had to exclude two metropolitan areas from his U.S. sample -- Riverside-San Bernardino, California, and Santa Fe, New Mexico.

ozone, in parts per million. In both cases, higher values can be interpreted as less desirable for local quality of life. If we graph the metropolitan areas on these two measures, it becomes clear that neither provides an absolutely perfect way of distinguishing between Canadian and U.S. patterns. If we choose unemployment, then it is possible to distinguish most cities on different sides of the border, but not all; Calgary becomes undistinguishable from several U.S. cities. On the other hand, if we focus on ozone concentration levels -- the vertical axis -- then Windsor, Ontario looks exactly the same as Hartford, Connecticut. What we really need, then, is a way to combine these two variables.

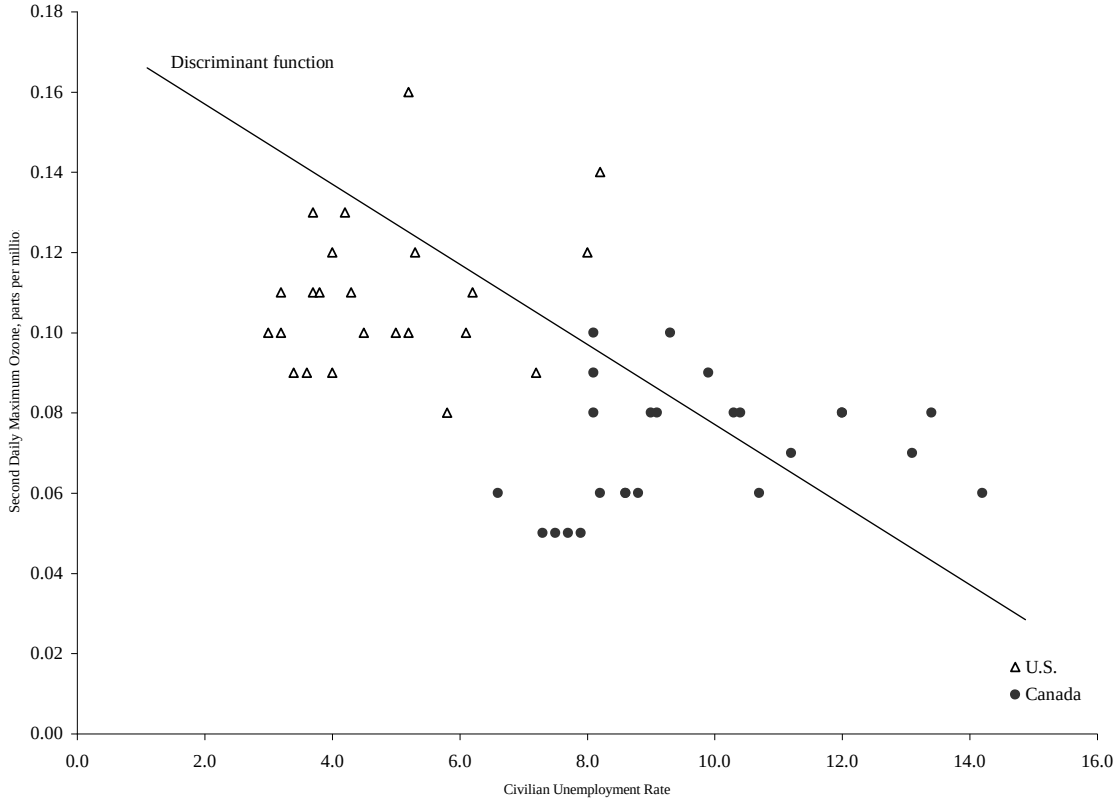


Unemployment Rate and Ozone Concentration for a Sample of U.S. and Canadian Cities. *Data Source:* Adapted from dataset described in Edmund J. Zolnik (2004). "The North American City Revisited: Urban Quality of Life in Canada and the United States." *Urban Geography* 25(3), 217-240.

The essential idea of discriminant analysis is very simple: you can simply eye-ball a line cutting diagonally through the points on this graph that would be able to distinguish the two groups in a way that each individual measure cannot. This is called a **discriminant function**. In the case at hand, it looks quite simple: just draw in a line and there is almost a perfect separation.[28] But keep in mind that we're just using two variables -- quite a simple example for illustration purposes. But with a general procedure, this approach can be applied not just with two variables, but with many different indicators. The general procedure developed by statisticians in the early years of the twentieth century is often referred to as Fisher's linear discriminant function. It is

[28] In just a few cases, the software has drawn some points on top of one another, so the separation would not be completely perfect, but very close.

obtained by creating a linear equation with weights for the original variables, defined in such a way that the ratio of the between-group sum of squares to the within-group sum of squares is at a maximum. We are not statisticians, of course -- we're urban geographers! -- so we do not need to wade through all of the details. But we can appreciate what this statistical approach can allow us to study about the similarities and contrasts among and within different groups of cities.



The Basic Idea of Discriminant Analysis. If we can define a new variable -- a composite measure from the unemployment and ozone indicators -- it will be much better at separating the U.S. and Canadian cities. *Data Source:* Adapted from dataset described in Edmund J. Zolnik (2004). "The North American City Revisited: Urban Quality of Life in Canada and the United States." *Urban Geography* 25(3), 217-240.

Below is a set of code that reads in Zolnik's data, and performs a simple discriminant analysis to define the discriminant function. Don't worry about all the technical jargon; this is peculiar to the statistical software I use -- the Statistical Analysis System, or just SAS. There are many different software choices out there, and most of them allow you to do an analysis by just navigating through menus. I learned to write code like this for SAS years ago, and so I never bothered to learn how to use the menus.

```
libname g350 "c:\sasdat\g350";
options linesize=200;

*Read in the raw data;
************************;
data g350.zdata(compress=yes);
         infile "c:\sasdat\g350\zolnik.csv" delimiter="," missover;
length country $ 10;
length metro $ 50;
```

```
input code country metro ahi96 cr96 ea96 imr96 la96 o96 p96 t96 ur96 ahi91 cr91 imr91 p91;


        label ahi96="Average household income US$ 1996";
        label cr96="Violent and property crime per 100,000 pop 1996";
        label ea96="Share of Pop 25+ with Bachelor's Degrees 1996";
        label imr96="Infant deaths per 1,000 live births 1996";
        label la96="Land Area square kilometers 1996";
        label o96="Second daily max one-hour Ozone, ppm 1996";
        label p96="Total population 1996";
        label t96="Homeownership rate 1996";
        label ur96="Civilian unemployment rate 1996";
        label ahi91="Average household income US$ 1991";
        label cr91="Violent and property crime per 100,000 pop 1991";
        label imr91="Infant deaths per 1,000 live births 1991";
        label p91="Total population 1991";

        den96=p96/la96; label den96="Population per sq km 1996";
        inchg=((ahi96-ahi91)/ahi91)*100; label inchg="Percentage change in avg household income";
        crchg=cr96-cr91; label crchg="Change in crime rate";
        imchg=imr96-imr91; label imchg="Change in Infant Mortality Rate";
        ppchg=((p96-p91)/p91)*100; label ppchg="Percent change in total population";

        run;

proc discrim data=g350.zdata out=g350.discout crosslisterr;
        class country;
        id metro;
        title "Simple Illustration of Discriminant Analysis";
        var ur96 o96;
        run;
```

The last section of code requests that SAS perform a simple discriminant analysis, to see how well a combination of unemployment rates and ozone levels can distinguish cities in the U.S. and Canada ('class country', and 'id metro'). The results look like this:

```
              Simple Illustration of Discriminant Analysis              182
                                        09:37 Thursday, October 2, 2008

                           The DISCRIM Procedure

            Observations      48          DF Total               47
            Variables          2          DF Within Classes      46
            Classes            2          DF Between Classes      1

                         Class Level Information
              Variable                                              Prior
   country    Name        Frequency       Weight    Proportion    Probability

1
   Canada     Canada             25      25.0000      0.520833       0.500000
   US         US                 23      23.0000      0.479167       0.500000

                Simple Illustration of Discriminant Analysis              183
                                        09:37 Thursday, October 2, 2008

                           The DISCRIM Procedure

             Pairwise Generalized Squared Distances Between Groups
                       2                        -1
                      D (i|j) = (X - X )' COV    (X - X )
                                 i   j           i   j

                    Generalized Squared Distance to country
                      From
                      country        Canada            US

                      Canada              0      15.08516
```

US 15.08516 0

Linear Discriminant Function

$$\text{Constant} = -.5\ \bar{X}_j'\ COV^{-1}\ \bar{X}_j \qquad \text{Coefficient Vector} = COV^{-1}\ \bar{X}_j$$

Linear Discriminant Function for country

Variable	Label	Canada	US
Constant		-18.97611	-21.56883
ur96	Civilian unemployment rate 1996	2.54148	0.75190
o96	Second daily max one-hour Ozone, ppm 1996	190.22232	362.09366

The DISCRIM Procedure
Classification Summary for Calibration Data: G350.ZDATA
Resubstitution Summary using Linear Discriminant Function

Generalized Squared Distance Function

$$D_j^2(X) = (X-\bar{X}_j)'\ COV^{-1}\ (X-\bar{X}_j)$$

Posterior Probability of Membership in Each country

$$Pr(j|X) = \exp(-.5\ D_j^2(X)) \ /\ SUM_k \exp(-.5\ D_k^2(X))$$

Number of Observations and Percent Classified into country

From country	Canada	US	Total
Canada	24	1	25
	96.00	4.00	100.00
US	1	22	23
	4.35	95.65	100.00
Total	25	23	48
	52.08	47.92	100.00
Priors	0.5	0.5	

2

Error Count Estimates for country

	Canada	US	Total
Rate	0.0400	0.0435	0.0417
Priors	0.5000	0.5000	

Posterior Probability of Membership in country

metro	From country	Classified into country	Canada	US
Miami_FL_PMSA	US	Canada	* 0.5493	0.4507
Windsor_ON	Canada	US	* 0.4022	0.5978

3

* Misclassified observation

The software gives us a lot of detail, but all we really need to focus on here are the three red numbers I've added to help interpret the output. The results indicate that (**1**) we have 48 cities to classify, and that when these two variables are used to define a discriminant function, the result is that we are able to successfully classify all but two observations -- one Canadian city is mistakenly grouped with the U.S. metropolitan areas, and one U.S. metro is falsely linked to Canadian cities. (**2**) The one Canadian error (Windsor, Ontario) yields an error rate of 4 percent for Canadian metropolitan areas (1 error out of 25); while for the U.S., the error (Miami) is 4.35 percent (1 out of 23). Note that (**3**) the discriminant model estimates a 54.9 percent chance that the profile of Miami -- in terms of its ozone and unemployment characteristics, is a Canadian City. Meanwhile, the model assigns a 59.8 percent chance that Windsor is actually a U.S. city.

Now things get really interesting. What happens if we choose different indicators to try to distinguish these two sets of cities? Given all the discussion in the literature and in public life about income and class differences, we would expect measures like income, education, and homeownership rates to distinguish Canadian and U.S. cities; this works quite well (see Model 1 output below). But income can be a problematic measure, since a higher cost of living simply requires more income to satisfy individual and household needs. So how about a model based on critical measures of societal outcomes, like violent and property crime rates, and infant mortality rates? That model works well too (see Model 2 output below). On the other hand, if we use population density and population change (Model 3), the distinctions between U.S. and Canadian cities becomes rather blurry and inaccurate. And notice that the three approaches mis-classify different sets of cities. How should we interpret these misclassifications, for the overall pattern, and for each city?

Model 1 SAS Code

```
proc discrim data=g350.zstand out=g350.disc1 crosslist;
        class country;
        id metro;
        var ahi96 t96 ea96;
        Title "Income, Tenure, and Education";
        run;
```

Model 1 Output

Income, Tenure, and Education

Posterior Probability of Membership in country

metro	From country	Classified into country		Canada	US
Atlanta_GA_MSA	US	US		0.1603	0.8397
Boston_MA-NH_PMSA	US	US		0.1997	0.8003
Brockton_MA_PMSA	US	US		0.0913	0.9087
Chicago_IL_PMSA	US	US		0.0165	0.9835
Dallas_TX_PMSA	US	US		0.1594	0.8406
Detroit_MI_PMSA	US	US		0.0412	0.9588
Florence_AL_MSA	US	Canada	*	0.9415	0.0585
Hartford_CT_MSA	US	US		0.0334	0.9666
Hickory-Morganton-Lenoir_NC_MSA	US	Canada	*	0.7168	0.2832
Houston_TX_PMSA	US	US		0.3191	0.6809
Lancaster_PA_MSA	US	US		0.1678	0.8322

Los_Angeles-Long_Beach_CA_PMSA	US	US		0.1155	0.8845
Louisville_KY-IN_MSA	US	US		0.2752	0.7248
Miami_FL_PMSA	US	Canada	*	0.5910	0.4090
Minneapolis-Saint_Paul_MN-WI_MSA	US	US		0.0534	0.9466
Nashville_TN_MSA	US	US		0.3237	0.6763
New_York_NY_PMSA	US	US		0.0732	0.9268
Philadelphia_PA-NJ_PMSA	US	US		0.0433	0.9567
Phoenix-Mesa_AZ_MSA	US	Canada	*	0.5013	0.4987
Racine_WI_PMSA	US	US		0.1074	0.8926
Spokane_WA_MSA	US	Canada	*	0.9455	0.0545
Springfield_MO_MSA	US	Canada	*	0.8654	0.1346
Washington_DC-MD-VA-WV_PMSA	US	US		0.0077	0.9923
Saint_Johns_NF	Canada	Canada		0.7001	0.2999
Halifax_NS	Canada	Canada		0.8361	0.1639
Saint_John_NB	Canada	Canada		0.8548	0.1452
Chicoutimi-Jonquiere_PQ	Canada	Canada		0.9451	0.0549
Quebec_PQ	Canada	Canada		0.9625	0.0375
Sherbrooke_PQ	Canada	Canada		0.9940	0.0060
Trois-Rivieres_PQ	Canada	Canada		0.9857	0.0143
Montreal_PQ	Canada	Canada		0.9517	0.0483
Ottawa-Hull_ON-PQ	Canada	Canada		0.5261	0.4739
Oshawa_ON	Canada	US	*	0.0518	0.9482
Toronto_ON	Canada	US	*	0.1790	0.8210
Hamilton_ON	Canada	Canada		0.5866	0.4134
Saint_Catharines-Niagara_ON	Canada	Canada		0.8021	0.1979
Kitchener_ON	Canada	Canada		0.6705	0.3295
London_ON	Canada	Canada		0.8398	0.1602
Windsor_ON	Canada	Canada		0.7594	0.2406
Sudbury_ON	Canada	Canada		0.6881	0.3119
Thunder_Bay_ON	Canada	Canada		0.7172	0.2828
Winnipeg_MB	Canada	Canada		0.9360	0.0640
Regina_SK	Canada	Canada		0.8318	0.1682
Saskatoon_SK	Canada	Canada		0.9528	0.0472
Calgary_AB	Canada	US	*	0.4282	0.5718
Edmonton_AB	Canada	Canada		0.7097	0.2903
Vancouver_BC	Canada	Canada		0.5069	0.4931
Victoria_BC	Canada	Canada		0.7946	0.2054

* Misclassified observation

The DISCRIM Procedure
Classification Summary for Calibration Data: G350.ZSTAND
Number of Observations and Percent Classified into country

From country	Canada	US	Total
Canada	22	3	25
	88.00	12.00	100.00
US	6	17	23
	26.09	73.91	100.00
Total	28	20	48
	58.33	41.67	100.00
Priors	0.5	0.5	

Error Count Estimates for country

	Canada	US	Total
Rate	0.1200	0.2609	0.1904
Priors	0.5000	0.5000	

Model 2 SAS Code

```
proc discrim data=g350.zstand out=g350.disc2 crosslist;
        class country;
        id metro;
        var cr96 crchg imr96 imchg;
        Title "Crime Rates and Infant Mortality";
        run;
```

Model 2 Output

Crime Rates and Infant Mortality
Posterior Probability of Membership in country

metro	From country	Classified into country		Canada	US
Atlanta_GA_MSA	US	US		0.0120	0.9880
Boston_MA-NH_PMSA	US	Canada	*	0.8041	0.1959
Brockton_MA_PMSA	US	Canada	*	0.9846	0.0154
Chicago_IL_PMSA	US	US		0.0028	0.9972
Dallas_TX_PMSA	US	US		0.1866	0.8134
Detroit_MI_PMSA	US	US		0.0016	0.9984
Florence_AL_MSA	US	Canada	*	0.6873	0.3127
Hartford_CT_MSA	US	US		0.2019	0.7981
Hickory-Morganton-Lenoir_NC_MSA	US	US		0.0037	0.9963
Houston_TX_PMSA	US	US		0.1247	0.8753
Lancaster_PA_MSA	US	US		0.0831	0.9169
Los_Angeles-Long_Beach_CA_PMSA	US	US		0.3331	0.6669
Louisville_KY-IN_MSA	US	US		0.0731	0.9269
Miami_FL_PMSA	US	Canada	*	0.7167	0.2833
Minneapolis-Saint_Paul_MN-WI_MSA	US	Canada	*	0.5872	0.4128
Nashville_TN_MSA	US	US		0.2368	0.7632
New_York_NY_PMSA	US	US		0.0044	0.9956
Philadelphia_PA-NJ_PMSA	US	US		0.0098	0.9902
Phoenix-Mesa_AZ_MSA	US	US		0.1284	0.8716
Racine_WI_PMSA	US	US		0.0432	0.9568
Spokane_WA_MSA	US	US		0.3430	0.6570
Springfield_MO_MSA	US	US		0.3611	0.6389
Washington_DC-MD-VA-WV_PMSA	US	US		0.0164	0.9836
Saint_Johns_NF	Canada	Canada		0.9437	0.0563
Halifax_NS	Canada	Canada		0.9614	0.0386
Saint_John_NB	Canada	Canada		0.7350	0.2650
Chicoutimi-Jonquiere_PQ	Canada	US	*	0.1926	0.8074
Quebec_PQ	Canada	Canada		0.9376	0.0624
Sherbrooke_PQ	Canada	Canada		0.9601	0.0399
Trois-Rivieres_PQ	Canada	US	*	0.3885	0.6115
Montreal_PQ	Canada	Canada		0.9238	0.0762
Ottawa-Hull_ON-PQ	Canada	Canada		0.9778	0.0222
Oshawa_ON	Canada	Canada		0.9693	0.0307
Toronto_ON	Canada	Canada		0.8999	0.1001
Hamilton_ON	Canada	Canada		0.9675	0.0325
Saint_Catharines-Niagara_ON	Canada	Canada		0.9324	0.0676
Kitchener_ON	Canada	Canada		0.9699	0.0301
London_ON	Canada	Canada		0.8640	0.1360
Windsor_ON	Canada	Canada		0.6122	0.3878
Sudbury_ON	Canada	US	*	0.4099	0.5901
Thunder_Bay_ON	Canada	Canada		0.9802	0.0198
Winnipeg_MB	Canada	Canada		0.8978	0.1022
Regina_SK	Canada	US	*	0.0610	0.9390
Saskatoon_SK	Canada	Canada		0.9058	0.0942
Calgary_AB	Canada	Canada		0.8830	0.1170
Edmonton_AB	Canada	US	*	0.3757	0.6243
Vancouver_BC	Canada	Canada		1.0000	0.0000
Victoria_BC	Canada	Canada		0.9187	0.0813

* Misclassified observation

Number of Observations and Percent Classified into country

From country	Canada	US	Total
Canada	20	5	25
	80.00	20.00	100.00
US	5	18	23
	21.74	78.26	100.00
Total	25	23	48
	52.08	47.92	100.00
Priors	0.5	0.5	

Error Count Estimates for country

	Canada	US	Total
Rate	0.2000	0.2174	0.2087
Priors	0.5000	0.5000	

Model 3 SAS Code

```
proc discrim data=g350.zstand out=g350.disc2 crosslist;
      class country;
      id metro;
      var den96 ppchg;
      Title "Density and Population Change";
      run;
```

Model 3 Output

Posterior Probability of Membership in country

metro	From country	Classified into country		Canada	US
Atlanta_GA_MSA	US	US		0.3698	0.6302
Boston_MA-NH_PMSA	US	US		0.4997	0.5003
Brockton_MA_PMSA	US	US		0.4654	0.5346
Chicago_IL_PMSA	US	US		0.2337	0.7663
Dallas_TX_PMSA	US	US		0.4400	0.5600
Detroit_MI_PMSA	US	Canada	*	0.5390	0.4610
Florence_AL_MSA	US	Canada	*	0.6684	0.3316
Hartford_CT_MSA	US	Canada	*	0.6687	0.3313
Hickory-Morganton-Lenoir_NC_MSA	US	Canada	*	0.5667	0.4333
Houston_TX_PMSA	US	US		0.4484	0.5516
Lancaster_PA_MSA	US	Canada	*	0.5754	0.4246
Los_Angeles-Long_Beach_CA_PMSA	US	US		0.4630	0.5370
Louisville_KY-IN_MSA	US	Canada	*	0.6131	0.3869
Miami_FL_PMSA	US	US		0.4663	0.5337
Minneapolis-Saint_Paul_MN-WI_MSA	US	Canada	*	0.5190	0.4810
Nashville_TN_MSA	US	US		0.4799	0.5201
New_York_NY_PMSA	US	US		0.0416	0.9584
Philadelphia_PA-NJ_PMSA	US	Canada	*	0.5804	0.4196
Phoenix-Mesa_AZ_MSA	US	US		0.3786	0.6214
Racine_WI_PMSA	US	Canada	*	0.5865	0.4135
Spokane_WA_MSA	US	Canada	*	0.5284	0.4716

Springfield_MO_MSA	US	Canada	*	0.5029	0.4971
Washington_DC-MD-VA-WV_PMSA	US	US		0.4683	0.5317
Saint_Johns_NF	Canada	Canada		0.6188	0.3812
Halifax_NS	Canada	Canada		0.5990	0.4010
Saint_John_NB	Canada	Canada		0.6760	0.3240
Chicoutimi-Jonquiere_PQ	Canada	Canada		0.6753	0.3247
Quebec_PQ	Canada	Canada		0.5715	0.4285
Sherbrooke_PQ	Canada	Canada		0.5527	0.4473
Trois-Rivieres_PQ	Canada	Canada		0.6108	0.3892
Montreal_PQ	Canada	US	*	0.3353	0.6647
Ottawa-Hull_ON-PQ	Canada	US	*	0.4541	0.5459
Oshawa_ON	Canada	US	*	0.3557	0.6443
Toronto_ON	Canada	US	*	0.2935	0.7065
Hamilton_ON	Canada	Canada		0.5009	0.4991
Saint_Catharines-Niagara_ON	Canada	Canada		0.5919	0.4081
Kitchener_ON	Canada	US	*	0.4273	0.5727
London_ON	Canada	Canada		0.5703	0.4297
Windsor_ON	Canada	US	*	0.4947	0.5053
Sudbury_ON	Canada	Canada		0.6502	0.3498
Thunder_Bay_ON	Canada	Canada		0.6663	0.3337
Winnipeg_MB	Canada	Canada		0.6169	0.3831
Regina_SK	Canada	Canada		0.6641	0.3359
Saskatoon_SK	Canada	Canada		0.6123	0.3877
Calgary_AB	Canada	US	*	0.4787	0.5213
Edmonton_AB	Canada	Canada		0.6284	0.3716
Vancouver_BC	Canada	US	*	0.1860	0.8140
Victoria_BC	Canada	US	*	0.4618	0.5382

* Misclassified observation

The DISCRIM Procedure
Classification Summary for Calibration Data: G350.ZSTAND
Cross-validation Summary using Linear Discriminant Function

Generalized Squared Distance Function

$$D_j^2(X) = (X-\bar{X}_{(X)j})' \, COV_{(X)}^{-1} \, (X-\bar{X}_{(X)j})$$

Posterior Probability of Membership in Each country

$$Pr(j|X) = \exp(-.5\, D_j^2(X)) \,/\, SUM_k \exp(-.5\, D_k^2(X))$$

Number of Observations and Percent Classified into country

From country	Canada	US	Total
Canada	16	9	25
	64.00	36.00	100.00
US	11	12	23
	47.83	52.17	100.00
Total	27	21	48
	56.25	43.75	100.00
Priors	0.5	0.5	

Error Count Estimates for country

	Canada	US	Total
Rate	0.3600	0.4783	0.4191
Priors	0.5000	0.5000	

Your Job

If you choose this project, you should undertake a comparison of metropolitan areas in Canada and the United States. The quantitative analyses used by Mercer and Agnew, and then by Zolnik, offer one route to understanding the similarities and contrasts between U.S. and Canadian urbanism; but the qualitative discourse analysis of planning documents and press coverage illustrated by Lees and Demeritt is also extremely valuable.

You should first read through Zolnik's article, as well as the Lees and Demeritt article, to get their perspectives on the "North American City" and "Continentalism" debates.

Then you should gather evidence to develop your own understanding of U.S. and Canadian urban contrasts. If you're interested in the quantitative route, one way to begin is to look through some of the output from the discriminant models above, and then use these results as a way of choosing which cities to compare and explore. There are several options you may want to consider. You could systematically compare the mis-classifications from two or three of the models above: why do some cities get mistaken with one set of measures, and not another? Or you could identify one of the mis-classifications from either of the models that seems to stand out as unique on one or more of the raw variables used in the analysis. Then investigate why this metropolitan area is unique on that measure, and what it implies for the Continentalism debate. You could also use Google News, Canadian Newstand, or another news search index to investigate local press sources and planning/policy documents to see if people in that city are actively discussing contrasts between their city and U.S. cities; this works best for U.S. and Canadian cities near the border, but it sometimes appears in more distant cities as well.

A related option is to work on the assumption that the measures Zolnik chose to measure relevant contrasts in U.S./Canadian urban 'quality of life' are actually capturing something much deeper and essential in the accumulated histories of the two colonial / national histories. This is, indeed, a major assumption -- there are many ways to measure cities and experiences of quality of life, and Zolnik's study only included a subset of indicators he was able to make comparable across the different settings. But if these indicators do in fact capture contrasts in the 'essence' of urbanism in the U.S. and Canada, then consider the meanings of the columns of numbers under "Canada" and "US" in the model output shown above. These are scaled so that the closer the number gets to 1.00, the more the statistical model is telling us that it's absolutely certain this city is ... American, or Canadian. Look through the cities, and look at the probability numbers, and based on what you know or are interested to find out about any of these cities, decide on one or more studies to investigate as "truly" American, or "truly" Canadian. Then search the press archives of media outlets based there, and see how they represent urban issues **in the other country**. Do press outlets in Atlanta, Georgia, which one of the models is 98 percent sure is "truly American," pay any attention to Canada? If so, what does the press coverage seem to focus on? Or consider Ottawa, which one of the models tells us is 97 percent Canadian; how does press coverage of the United States in Ottawa news outlets compare with press coverage of Canada from media outlets based in Washington, DC?

There are other possibilities that go beyond Zolnik's analysis. One possibility is to engage with the history of the 'North American City' concept and the construction of binary oppositions in

relation to contemporary public opinion on issues that shape cities and urban life. As one example, consider the importance of immigration to net population growth of metropolitan areas in both the U.S. and Canada; with few exceptions, those places without international immigration are fated to slow growth or to absolute population decline. But the contemporary history of immigration policy at the federal level diverges sharply between the two countries, and this shapes different experiences at the urban and metropolitan scale. It also shows up in contrasts in public attitudes and anxieties. When a random sample of adults in the U.S. and Canada are asked, "Generally speaking, do you think immigration including bringing in foreign workers is a good thing or a bad thing for this country?)," 42.3 percent of Canadians respond 'Good,' 30.3 percent 'Bad,' and 27.3 percent 'Neither Good nor Bad.' For Americans, the corresponding percentages are 26.6, 47.4 and 26.0. Remarkably, almost half of all Americans have a negative view of the very process that created the nation now called the United States. This does not mean, however, that we can regard the higher share of 'Good' responses in Canada as automatically, inherently emancipatory: immigration in both Canada and the United States involved a process of colonialization and violence that dispossessed the original, first nations of indigenous North America -- and these processes of dispossession continue to shape inequalities today. Still, the sharp divergence in public opinion between the U.S. and Canada on a major factor that drives contemporary urbanism is intriguing. You may want to explore these contrasts in public opinion, and interpret them in light of the 'North American City' debate, by diving into some of the surveys conducted by the Gallup polling firm. One of their regular surveys is called *Voice of the People End of the Year Survey*, and is conducted in more than fifty countries to solicit views on a wide range of social and political issues.[29] On the Geography 350 Projects Page, I've extracted the data for the U.S. and Canada for one of the recent annual surveys, and have prepared some simple cross-tabulations; for the figures cited above on attitudes towards immigration, see the responses to Q4 at the bottom of page 2 of the output.[30]

There are other possibilities, of course. Be creative, and enjoy the chance to explore the North American City, the Myth of the North American City, and the evolving discourse of Sin City and Sim City!

Finally, you should draft a paper presenting your findings and interpretations. **Make sure your paper conforms to the General Guidelines at**

http://www.geog.ubc.ca/~ewyly/guidelines.html

[29] See Gallup International (2012). *Voice of the People End of the Year Survey, 2011*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research, Study No. 33504.
[30] See http://ibis.geog.ubc.ca/~ewyly/Private/g350/gallup2011.pdf