

METROPOLIS BRITISH COLUMBIA

Centre of Excellence for Research on Immigration and Diversity

Working Paper Series

No. 10-02

Revised August 2010

Social Capital Formation and Diversity in Canadian Cities:

*Impacts of Individual and Place-Related
Characteristics*

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Metropolis British Columbia

Centre of Excellence for Research on Immigration and Diversity

MBC is supported as part of the Metropolis Project, a national strategic initiative funded by SSHRC and the following organizations of the federal government:

- Atlantic Canada Opportunities Agency (ACOA)
- Canada Border Services Agency
- Canada Economic Development for the Regions of Quebec (CED-Q)
- Canada Mortgage and Housing Corporation (CMHC)
- Canadian Heritage (PCH)
- Citizenship and Immigration Canada (CIC)
- Federal Economic Development Initiative for Northern Ontario (FedNor)
- Human Resources and Social Development Canada (HRSD)
- Department of Justice Canada
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- Public Safety and Canada (PSC)
- Royal Canadian Mounted Police (RCMP)
- The Rural Secretariat of Agriculture and Agri-Food Canada (Rural Sec't)
- Statistics Canada (Stats Can)

Metropolis BC also receives funding from the Ministry of Advanced Education and Labour Market Development (ALMD) of the Government of British Columbia. Grants from Simon Fraser University, the University of British Columbia and the University of Victoria provide additional support to the Centre.

Views expressed in this manuscript are those of the author(s) alone. For more information, contact the Co-directors of the Centre, Krishna Pendakur, Department of Economics, SFU (pendakur@sfu.ca) and Daniel Hiebert, Department of Geography, UBC (daniel.hiebert@ubc.ca).

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METROPOLIS BRITISH COLUMBIA

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SOCIAL CAPITAL FORMATION AND DIVERSITY IN CANADIAN CITIES: IMPACTS OF INDIVIDUAL AND PLACE-RELATED CHARACTERISTICS

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ABSTRACT

Using structural equation modeling, we assess the degree to which the characteristics of both individuals and the cities in which they live may affect scores on three domains underlying social capital—trust, interaction, and membership. We find that diversity, both as it relates to the individual and city of residence, affects social capital formation. However, the impact of diversity is not necessarily negative. As the proportion of visible minorities in a city increases, the average level of trust decreases, suggesting that on this dimension, at least, increased diversity can have a negative impact on this aspect of social capital formation. However, as contextual diversity increases, the level of participation in organizations and trust in others increases. This suggests that bridging social capital can increase as diversity increases.

INTRODUCTION

A number of academics from Canada, the United States, and Europe have suggested that increased diversity hampers our ability to build social capital (see, for example, Putnam 2007; Portes 1998; Portes and Landolt 1996; Alesina and Ferrara 1999, 2000, 2002; Marschall and Stolle 2004). These scholars argue that cities with high proportions of minorities have lower levels of social capital than cities that are relatively homogenous. If they are correct, settler societies are faced with a particular challenge because immigration intake will increase diversity, particularly in large cities, where immigrants tend to settle. Indeed, recent projections by Statistics Canada suggest that Canada, and urban Canada in particular, will become even more diverse, both culturally and ethnically, over the next decade (Statistics Canada 2010; Statistics Canada 2005; Nakhaie 2006). If increased diversity poses a barrier to the establishment of trust (both interpersonal and institutional) and network formation, and if the future of Canada is one of increasing diversity, particularly in large cities, then our ability to support and strengthen an inclusive society may be challenged.

In this paper, we examine the impact of individual and contextual influences on the social capital attributes of residents in different municipalities. Specifically we look at three major domains underlying social capital—trust (in individuals and institutions), interactions with others, and membership in organizations. We use structural equation modeling to assess the degree to which the characteristics of both individuals and the cities where they live may affect scores in these three domains. In addition, we look systematically at validity-related issues, such as the degree to which social capital indicators relate to their respective indicators. Our approach considers not only the

structural determinants of social capital but also focuses closely on the measurement aspects, which have often been neglected in past analyses relying on single indicators of the phenomenon.

We find that diversity, as it relates to both the individual and city of residence, affects social capital formation. However, the impact of diversity is not necessarily negative. As the proportion of visible minorities in a city increases, the average level of interaction decreases, suggesting that on this dimension, at least, increased diversity can have a negative impact on social capital formation. However as contextual (city level) diversity increases, the level of participation in organizations and trust in others can increase. This suggests that bridging social capital can increase as diversity increases. Results by ethnic group are mixed. German and South Asian minorities have about the same level of trust after controlling for municipal characteristics; other minorities, however, tend to have lower levels of trust. The level of interaction with others is often higher for minorities than for majority Canadians, while results for participation in organizations are more mixed.

THEORETICAL FRAMEWORK

Social capital is concerned with how people work together to pursue common objectives and can be defined as “features of social life—social networks, associated norms and trustworthiness—that enable participants to act together more effectively to pursue shared objectives” (Putnam 2007; see also Putnam 1995; Cheong 2006; Health Canada 2002; Van Der Gaag and Snijders 2005). This is in line with Bourdieu (1986) who views social capital as “the aggregate of . . . resources which are linked to possession of a durable network” (both institutional and personal) (241). Lin (2005) more precisely

defines social capital as “the extent of the diversity of resources embedded in one’s social networks” (606).

While there are competing definitions of social capital (see Bjørnskov 2006; Reimer et al. 2008; McElroy, Jorna, and Engelen 2006), the idea of social relations through network interactions is always present. Reimer et al. (2008), for example, describe social capital as “the social networks and their associated norms that may facilitate various types of collective action” (258). Coleman (1988) describes community social capital as the social relationships that exist among people and the relationships they have with institutions in the community. To date, social capital has been shown to be positively associated with high levels of education, confidence in public institutions, and participation in social, cultural, and political activities (see, in particular, Putnam 2007, 1993, 1995 ; Granberry and Marcelli 2007; McElroy, Jorna, and Engelen 2006; Putnam et al. 1993; Van Der Gaag and Snijders 2005; Fukuyama 1995; Patulny, Lind, and Svendsen 2007).

An important distinction lies in the difference between bonding social capital (within group interaction) and bridging social capital (interaction that reaches outside the group). This distinction has resulted in a growing understanding that not all social capital is necessarily positive. In particular, if individuals’ interactions and trust in others remain within a fairly narrow range of contacts of similar individuals (bonding), increased levels of social capital may actually serve to increase distrust between groups, thereby exacerbating inequities, constraining actions, and increasing social exclusion (Babacan and Babacan 2007; Jaynes 2007; Cheong 2006; Portes 1998; Wakefield and Poland 2005). Further, Bloemraad and Ramakrishnan (2006) find that mainstream groups continue to exclude immigrants and nonwhites from membership recruitment,

which results in lower levels of civic participation and social capital formation by people from these demographics (Bloemraad and Ramakrishnan 2006).

Individual and Place-based Characteristics

Looking at the impact of individual characteristics on social capital, several authors have noted that demographic and socio-economic status have major influences on social capital attributes such as interaction with others, membership in groups, and trust in institutions. Fischer (1982), for example, argues that the acquisition of close personal networks reflects one's position in the social structure, which in turn intersects with "dimensions of opportunity and constraint" (11). Educational resources, employment status, and ethnic membership all combine to expose individuals to specific groups of contacts from whom opportunities and advantages are gained. These findings are reiterated by Glaeser et al., who observe that differences in race and nationality reduce the level of perceived trustworthiness (2000).

Several authors have suggested that an individual's immigrant background and ethnocultural characteristics can drive attitudes and behaviours (see, for example, Johnston and Soroka 2001). In this view, social capital is a cultural attribute that is inherited or learned, and not easily shed. As a result, some groups have more or fewer "civic" qualities than others, and these qualities present themselves in personal attitudes and behaviours that remain constant across generations, and even oceans (see Putnam 1993; Inglehart 1988, 1990; Fukuyama 1995; Verba, Schlozman, and Brady 1995; Rice and Feldman 1997; and Black 1982, 1987). Individuals are more disposed to trust others like themselves and less likely to trust those they perceive to be different, resulting in bonding social capital (Uslaner 2002). In this view, ethnocultural homogeneity produces a more smoothly functioning society into which the

insertion of diverse elements creates friction and stress. Homogeneity facilitates trust, and in turn, cooperation, because “like” individuals share cultural values and expectations, or what Granovetter called “strong ties” (1973; see also Coleman 1988). Conversely, diversity creates real or perceived barriers in communication and understanding among people and leads to apprehension among so-called “unlike” individuals (see Miller 1995,). Majority groups in particular are believed to be negatively affected by diversity because the presence of “difference” threatens individual or collective identities (Wilton 1998). The results are reduced senses of trust and lower levels of cooperative activity.

The impact of diversity at the individual and geographic level on social capital formation is up for debate. Past research suggests that as city size and the level of diversity in a city increases, aggregate levels of social capital will decrease (see Cheong 2006; Alesina and Ferrara 1999, 2000; Marschall and Stolle 2002; Putnam 2007). However as the individual’s education increases, levels of community trust and institutional involvement increase (see Aizlewood, Bevelander, and Pendakur 2006; Cheong 2006; Hooghe et al. 2006; Letki 2006). In the same way, being active in the labour force is seen as associated with higher levels of social capital.

With respect to place characteristics, there is an undercurrent in the literature that suggests the larger and more diverse a city, the lower the levels of social capital. Several authors have suggested that increased community-level diversity, above and beyond individual characteristics, is actually detrimental to social capital formation (see, for example, Putnam 2007; Marschall and Stolle 2002). A number of authors, both in Canada and the United States, have looked at the issue of social capital and minority status and have concluded that minorities score lower on measures such as trust and participation (see

Cheong 2006; Saguaro Seminar 2000; Takhar 2006; Glaeser et al. 2000). If group identity is threatened, it may lead to the withdrawal of formerly dominant groups from participation in the community and, in turn, lower the level of social capital formation. In this context-based line of reasoning, it is the diversity surrounding an individual or group on a micro- or macro-scale that influences attitudes, and in turn, behaviours. Granted, these findings are most common in the United States, where geographic concentration of minorities (i.e., Black and Latin American populations) is more common (see Cheong 2006; Alesina and Ferrara 1999, 2000; Marschall and Stolle 2002; Putnam 2007); however, research conducted in Canada shares similar conclusions (Johnston and Soroka 2001; Soroka et al. 2006).

Not all research conducted on diversity and social capital has been so pessimistic. Past work by Aizlewood and Pendakur (2005) suggests that minority status has little impact on social capital characteristics (see also Aizlewood, Bevelander, and Pendakur 2006; Cheong 2006; Hooghe et al. 2006; Letki 2006). Rather, they find that the biggest drivers of participation and trust within urban areas are city size, education, income, and other socio-economic factors. Further, some studies in Mexico (Malpica 2008; Aguilera 2003; Aguilera and Massey 2003) and Sweden (Behtoui 2007) suggest that bonding social capital amongst co-ethnics help immigrants integrate economically (see also Nakhaie 2007). In contrast, lack of social capital can have substantive long-term negative effects in the labour market (Loury 1995).

It appears, therefore, that the jury is still out regarding the impact of diversity on social capital; that is, it is difficult to say whether the level of diversity in a city or being an immigrant or a minority is associated with higher or lower scores on interactions with others, trust, and participation in community institutions.

SOCIAL CAPITAL AS TRUST, INTERACTION AND PARTICIPATION (TIP)

While the benefits of social capital are related to an individual's willingness to cooperate, the underpinnings of social capital rest on three key individual-level constructs—an individual's willingness to trust others (T), to interact with others (I), and to participate in community organizations (P). Trust is essentially an attitudinal attribute, that is, people hold particular views that encourage or discourage the formation of trust. Interactions with others and participation as indicated by membership in organizations are behavioural attributes and are reflected in actions. These constructs bring to bear two major questions. The first question refers to the validity of the constructs—should social capital be viewed as a single construct (the sum of trust, interaction, and participation) or are these constructs separate entities? The second question speaks to the effect of broader societal influences on these constructs, specifically the impact of size and level of diversity of an individual's community.

Many studies of social capital have not sufficiently looked at issues related to the uni-dimensionality or multi-dimensionality of its related constructs and/or the specific relationships established between indicators and constructs. Often, a single indicator, construct, and/or ad-hoc scale comprising relatively heterogeneous measures has been used as a proxy for social capital and its purported domains. In this empirical analysis, we use exploratory and confirmatory factor analysis (EFA and CFA) and Multiple Indicators Multiple Causes (MIMIC) structural equation models both to establish the validity of social capital constructs (e.g., factor loadings associated with the constructs and validity coefficients) and to identify relevant individual and place-related influences on the constructs (structural coefficients). This last stage has two distinct advantages over standard OLS and factor analytical models used sequentially. First,

in multilevel MIMIC models, measurement and structural parameters are calculated simultaneously. Second, given that individuals cluster by city, unobserved heterogeneity is present in the data violating one of the central OLS assumptions. Treating cities as separate entities, a multilevel MIMIC model allows us to distinguish individual from contextual effects, thereby increasing our confidence in the parameter estimates.

FIGURE 1: TIP MODEL OF SOCIAL CAPITAL FORMATION IN CITIES

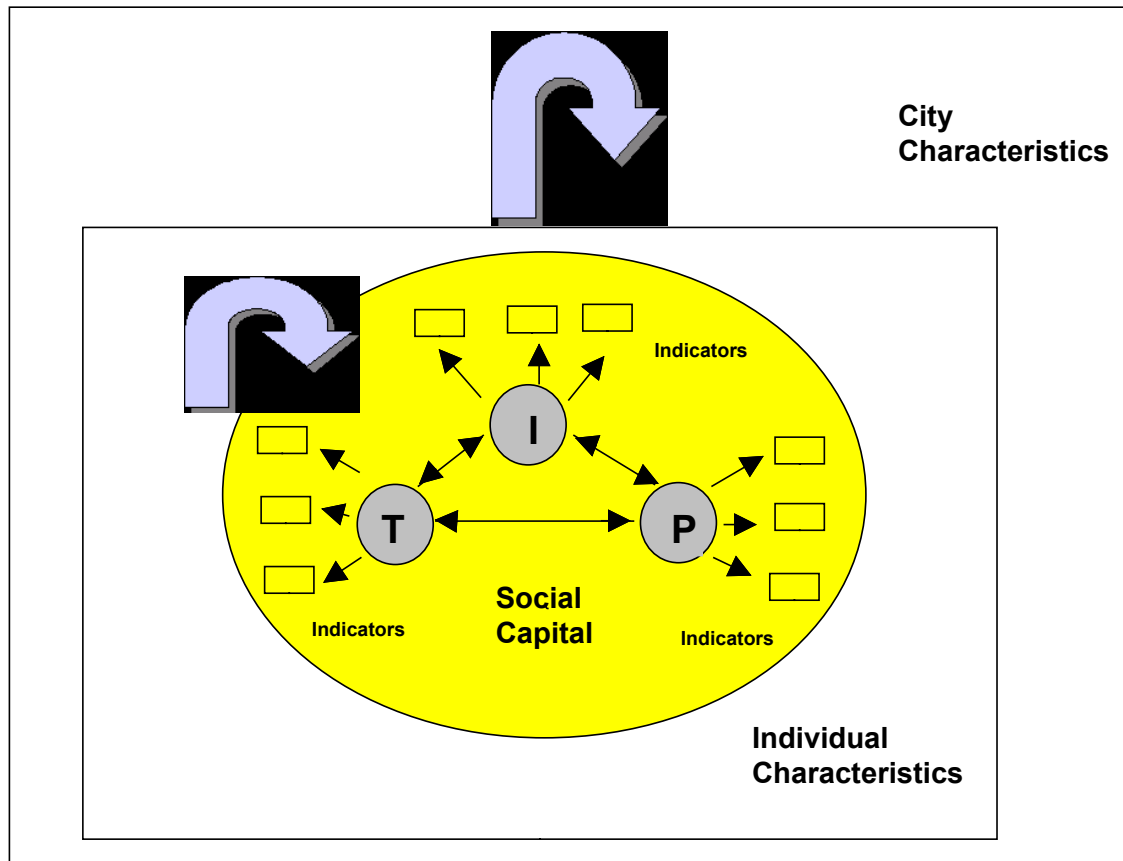


Figure 1 posits that the concept of social capital includes three fundamental constructs: Trust (T), Interactions (I), and Participation (P). These are presented as small circles within the broader circle of social capital, which can have a large set of indicators. The three constructs are regarded as latent variables that are not directly observable and can only be approximated by selected indicators. The three constructs are theorized to be positively inter-

related (indicated by the double-headed arrows linking the circles) and not related in a causal way. Thus, we do not see trust and interaction necessarily resulting in participation. Rather, all three constructs are mutually interrelated, forming a social capital construct. Though a precise causal structure among the three may not be fully anticipated (e.g., trust leading to participation and vice-versa), we expect that they are mutually reinforcing.

In the TIP model, the levels of the constructs are seen as being influenced by two types of elements: a) specific characteristics of individuals and b) characteristics of the place where individuals reside. Individual characteristics comprise a variety of socio-demographic, economic, occupational, and diversity-related attributes of individuals (e.g., ethnic origins, immigration status, etc.). Place-related attributes comprise characteristics such as city size, the level of diversity, and the proportion of resident visible minority members.

The proposed TIP model of social capital allows us to address the following central questions:

1. Are there single or multiple dimensions underlying the TIP measures?
2. How consistent are those dimensions and how are they interrelated?
3. To what extent we can we explain these dimensions by individual attributes?
4. Controlling for other socio-demographic factors, is an individual's ethnicity relevant in explaining variations in TIP dimensions?
5. What is the role of city-related attributes in determining TIP attributes above and beyond individual attributes?

METHODOLOGY

The methodological approach adopted here is to explore the relationships between individual characteristics, city characteristics (including level of diversity), and TIP social capital constructs by fitting a structural equation MIMIC (multiple indicator-multiple causes) model. Statistically, MIMIC models provide a flexible approach to latent-variable/structural equation models (SEM) and can be used to examine the effect of measured covariates at different levels (e.g., individual and city) on social capital and ethnic and socio-economic characteristics as well as offer an alternative to multiple group models where there is more than one grouping variable and/or where small sample size limits the ability to analyze complex multi-group models (Bollen 1989; Muthén 1989).

Analysis is conducted in four stages. The first stage involves exploratory factor analysis (EFA) on the items measuring trust, interaction, and participation to determine patterns of association and measure the validity of defining one overall construct. In the second stage, we conduct confirmatory factor analysis, comparing different EFA models to determine measurement invariance and the statistical significance of measurement parameters as well the degree to which social capital is reflective of the three constructs. The third stage involves fitting a MIMIC model of individual social capital attributes with individual level predictors comprising selected demographic, socio-economic, ethnic, and immigrant characteristics. In the final stage, we fit a multilevel MIMIC model incorporating structural coefficients representing impacts of municipal characteristics (size and diversity) on both the structural and measurement parameters identified in stage three.

DATA AND VARIABLES

Our data are drawn from a pooled sample of the Canadian Social Capital and Well-Being Surveys (SCWB) of 1999 and 2002. These surveys were administered as part of a five-year multi-university SSHRC-funded project entitled "Equality, Security and Community." The SCWB surveys provide information on a broad range of indicators related to participation, trust, interactions with others, well-being, ethnic origins, and immigrant status. The two surveys offer a wealth of information on bridging and bonding activity within both formal organizations (i.e., membership in different types of organizations) and informal situations (interactions with friends and neighbours). In addition, an oversample in ethnically diverse census tracts in Montreal, Toronto, and Vancouver makes the sample ideal for analyses of diversity, social capital, and issues related to social and economic outcomes. Pooling the two waves of the SCWB survey creates a total sample of 7,537 individuals, with 6,616 available for the analysis (after removing cases with missing values).

Dependent Variables: TIP Indicators

We include fifteen social capital variables broadly divided into trust, interaction, and participation groupings. The chosen indicators reflect major preoccupations present in the literature. The SCWB survey taps into all three construct domains. One four-part question was designed to assess levels of trust in others asking:

If you lost a wallet or a purse that contained two hundred dollars, how likely is it to be returned with the money in it if it was found by:

1. Someone who lives close by
2. A clerk at the nearest grocery store
3. A police officer, and

4. A complete stranger

Would you say not at all likely, somewhat likely, or very likely? (Scale of 1–3).

Three questions ask about frequency of interaction with people who are fairly close to the respondent (family members, friends, and neighbours). Responses are on a 7-point scale ranging from never to daily. Eight questions provide information on whether or not the respondent is a member of different types of organizations (religious, ethnic, service, political, youth, cultural, health, or recreational). Interactions with friends, family, and neighbours can be broadly defined as bonding activity, while membership in organizations (particularly non-ethnic or non-religious organizations) is more likely to involve bridging activity.

Independent Variables: Individual and Place Characteristics

We include eight sets of variables related to personal characteristics: age (a continuous variable), sex (two dummy variables), marital status (four dummy variables: single, married, divorced/separated, or widowed), labour force status (two dummy variables: not employed or employed), level of schooling (seven dummy variables), ethnicity (thirteen dummy variables),¹ and whether the respondent was born in Canada (one dummy variable).

We include three place-related or contextual variables—that is, variables that describe characteristics of the city a respondent lives in:²

1 The SCWB allows respondents to provide up to four ethnic origins as well as a probe question if the respondent identified as Canadian. We used responses from the first two origins to create sixteen mutually exclusive categories, which take into account thirteen single origins (British, French, Canadian, German/Austrian, N. European, S. European, E. European, S. Asian, Chinese, E. Asian, Caribbean/Latin American, Aboriginal, and Other) as well as three multiple origins (majority origins, majority with European, and visible minorities with more than one origin).

2 Data on municipal characteristics were drawn from the 2001 census of Canada and then matched to the respondent's city of residence.

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TABLE 1: CORRELATION MATRIX OF OBSERVED INDICATORS

	TRUST				INTERACTION			PARTICIPATION					CITY CHARACTERISTICS						
	Neighbour	Clerk	Police	Stranger	Family	Friends	Neighbours	Religious org	Ethnic org	Service org	Recreational org	Political org	Youth org	Cultural org	Health org	Index of diversity	Log of city size	% Vismin	
Trust	Neighbour	1.00																	
	Clerk	0.38	1.00																
	Police	0.30	0.40	1.00															
	Stranger	0.40	0.32	0.24	1.00														
Interaction	Family	0.04	-0.01	0.01	0.03	1.00													
	Friends	0.01	-0.02	0.02	0.03	0.71	1.00												
	Neighbours	0.07	0.01	0.03	0.04	0.67	0.74	1.00											
Participation	Religious org	0.05	0.05	0.03	0.04	-0.06	-0.10	-0.05	1.00										
	Ethnic org	-0.03	-0.06	-0.02	0.00	0.56	0.63	0.57	-0.04	1.00									
	Service org	0.07	0.05	0.03	0.06	0.00	0.01	0.01	0.11	0.03	1.00								
	Recreational org	0.03	0.01	0.02	0.04	0.03	0.05	0.03	0.08	0.03	0.16	1.00							
	Political org	0.03	0.03	-0.02	0.05	0.00	0.03	0.03	0.11	0.04	0.17	0.16	1.00						
	Youth org	0.08	0.09	0.07	0.07	-0.05	-0.04	-0.03	0.12	-0.04	0.16	0.28	0.12	1.00					
	Cultural org	0.07	0.06	0.04	0.07	0.00	0.03	0.02	0.12	0.04	0.16	0.20	0.16	0.21	1.00				
	Health org	0.07	0.09	0.05	0.06	-0.02	-0.01	0.00	0.16	-0.01	0.21	0.22	0.13	0.25	0.21	1.00			
City Characteristics	Index of diversity	-0.16	-0.11	0.01	-0.01	0.05	0.11	0.09	0.06	0.13	-0.03	0.03	0.03	-0.04	0.03	-0.01	1.00		
	Log of city size	0.00	-0.17	-0.07	-0.06	0.06	0.12	0.09	0.00	0.14	-0.05	0.05	0.02	-0.06	0.00	-0.02	0.75	1.00	
	% Vismin	-0.17	-0.13	-0.03	-0.03	0.08	0.14	0.12	0.05	0.16	-0.03	0.02	0.01	-0.06	0.01	-0.04	0.67	0.68	1.00
Statistics	Means	2.30	2.39	2.61	1.69	2.11	2.40	2.23	0.34	0.60	0.12	0.46	0.12	0.27	0.16	0.30	55.99	11.18	16.72
	s	0.71	0.69	0.60	0.64	1.62	1.82	1.77	0.47	0.49	0.33	0.50	0.32	0.45	0.37	0.46	18.95	2.42	18.15
	N's	7,347	7,356	7,374	7,332	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537	7,537

Averages for personal characteristics	GENDER	AGE	MARITAL STATUS			SCHOOLING			EMPLOYED?		ORIGIN			IMMI-GRANT STATUS	Born in Canada		
			Single	Married	Divorced/Separated	It univ	BA	MA plus	not employed	Employed	British	French	Canadian			European	Non-Eur (vismin)
Male																	
0.46		44.36	0.33	0.56	0.12	0.73	0.19	0.08	0.39	0.61	0.22	0.09	0.17	0.29	0.15	0.03	0.81

- The log of the city population,
- The percent of the city population which is a member of a visible minority population, and
- The index of diversity for the city of residence. The “index of diversity” variable measures the chance that two randomly selected cases within the CSD will differ.

Sample and Descriptive Statistics

Means, standard deviations, and inter-correlations of the observed dependent variables are presented in Table 1. Looking first at personal characteristics (lower panel of Table 1), we see that our respondents have a median age of 44 years. The majority are employed (61%) while one quarter (27%) obtained a bachelor degree or higher level of post-secondary education. One fifth of respondents (19%) are foreign-born and about half report ethnic origins other than British, French, or Canadian.

On average, respondents are more likely to believe that their wallets would be returned by a police officer as compared to a clerk or neighbour (mean=2.61, 2.39, and 2.29 respectively). Respondents are more likely to interact with friends than with family or neighbours. Memberships in ethnic, recreational, and religious organizations are the most frequently reported types of formal participation. Sixty percent of respondents report membership in an ethnic organization, 46% report belonging to a recreational organization, and a third (34%) report belonging to a religious organization.

Looking at correlations within constructs, we see that the average correlation of the four trust items is 0.34, while the average correlation of the three interactions items and the eight institutional participation items is 0.14.

The lower correlation for the participation items may reflect some degree of heterogeneity in institutional involvements because individuals display preferences for certain types of associations rather than a universal desire to participate in all types. The average correlation of the place-related attributes was 0.70, revealing that larger city populations have relatively higher levels of diversity as well as higher visible minority populations.

Exploratory Factor Analysis

The first phase of our analysis assesses the presence of TIP-dependent measures using exploratory factor analysis (EFA).³ Table 2 reports the factor solutions and loadings for the dependent variable TIP measures. The top panel of Table 2 provides information on the factor tests, the middle panel, results for a three-factor solution drawn from a Varimax rotation, and the bottom panel, the correlations between factors drawn from a Promax rotation. The first point of note is that a single social capital construct does not exist—the single factor solution yielded a poor Root Mean Square Error of Approximation (RMSEA) (.09), which is much higher than the admissibility criterion of .05.⁴

A three-factor solution however, is statistically significant (at an RMSEA of 0.03). The factor loadings obtained through the orthogonal Varimax solution show the presence of three distinct factors underlying the TIP indicators, which aligned themselves with characteristics associated with trust, interaction, and participation. The loadings are strongest for the Trust and Participation factors. Loadings for Trust-related variables range from 0.52 to 0.64, while loadings

³ EFA is used to discover the factor structure underlying selected measures and to examine its internal reliability. EFA solutions vary in terms of the desired number of factors explaining the patterns of associations, the choice of the extraction method (orthogonal or oblique), and the choice of the rotation method.

⁴ The comparative fit index (CFI) is also much lower than its required level of .95 or above (.27). The three interaction items and the item measuring membership in ethnic organizations show non-significant factor loadings around .02 ($p > .05$), and thus, fail to constitute a harmonious cluster with the remaining indicators. This latter finding suggested the need to conceptually separate these concepts through a formal Confirmatory Factor Analysis and align indicators to their respective constructs.

for the Participation factors range from 0.30 to 0.60. Loadings for interaction-related variables are weaker, ranging from 0.29 to 0.52. A promax solution produced similar results but also revealed moderate correlation between factors (see lower panel of Table 2).

TABLE 2: EXPLORATORY FACTOR ANALYSIS RESULTS

Factor Solutions			RMSEA		
One factor Solution			0.09		
Two factor Solution			0.04		
Three factor Solution			0.03		
Four factor solution			0.02		
THREE FACTOR SOLUTION: VARIMAX ROTATED LOADINGS					
FACTOR	INDICATORS		TRUST	INTERACTIONS	PARTICIPATION
Trust	Wallet returned by:	Neighbour	0.61	0.21	0.09
		Clerk	0.64	0.09	0.03
		Police	0.54	0.05	-0.05
		Stranger	0.52	0.03	0.11
Interactions with		Family	0.06	0.29	0.00
		Friends	0.04	0.28	0.12
		Neighbours	0.11	0.52	0.12
Membership in		Religious org	0.06	0.04	0.41
		Ethnic org	-0.04	0.05	0.30
		Service org	0.10	0.05	0.60
		Recreational org	-0.01	0.06	0.47
		Political org	0.01	0.04	0.53
		Youth org	0.01	0.15	0.44
		Cultural org	0.09	0.10	0.54
	Health org	0.10	0.12	0.54	
PROMAX FACTOR CORRELATIONS					
		TRUST	INTERACTION	PARTICIPATION	
Trust		1.00			
Interaction		0.30	1.00		
Participation		0.19	0.32	1.00	

Confirmatory Factor Analysis

Exploratory factor analysis results point to a three-factor solution (trust, interaction, and participation). The goal of Confirmatory Factor Analysis (CFA) is to determine if the number of factors and the loadings of measured (indicator) variables conform to what is expected on the basis of an EFA and/or pre-established theoretical assumptions.⁵ In the context of CFA and following the standard terminology of Structural Equation Modelling, three types of coefficients are of interest in the multivariate TIP model testing:

- a) lambda's denoted by λ : factor loadings associating indicators to their respective TIP constructs;
- b) gammas denoted by γ : structural coefficients associating constructs with their respective individual, place, and diversity covariates; and
- c) rho's denoted by ϕ : structural coefficients representing correlations between the TIP constructs.

Both standardized and non-standardized coefficients are used in the assessment of covariate effects on TIP constructs.

⁵ In this analytical phase, the goodness of fit measures for CFA models rely on three measures traditionally used in structural equation models—RMSEA, CFI, and TLI indices. Goodness of fit refers to the ability of a model to reproduce the data such as through a variance-covariance matrix (Bollen and Long 1993). Although the χ^2 statistic is a starting point to determine discrepancies between the observed and proposed model, it is affected by sample size and observed correlations between the included variables. It is necessary to use other fit measures such as the RMSEA, the CFI, and TLI. The RMSEA is a measure of discrepancy and ranges between 0 and 1. Acceptable models have an RMSEA of .06 or less. Models whose RMSEA is .10 or higher are deemed to have a poor fit (see Hu and Bentler 1999). The Comparative Fit Index (CFI), which ranges from 0 to 1, measures the adjusted degrees of freedom χ^2 differences between the null and the proposed model as a proportion of the differences of the null model. CFI pays a penalty of one for the parameters estimated. Model acceptance is generally regarded to be at the .85 mark or above. The TLI index (Tucker Lewis) is similar in nature to the CFI, where values close to 1 indicate a good fit.

TABLE 3: TIP MIMIC MODEL: MEASUREMENT RESULTS

GOODNESS OF FIT STATISTICS			
RMSEA		0.03	
CFI		0.94	
TLI		0.94	
χ^2		487.71	
df		72.00	
sig		0.00	
N		6,883	
STRUCTURAL MODEL		STANDARDIZED Φ	T STATISTIC
LATENT VARIABLES			
Interactions, Participation		0.13	10.90
Interactions, Trust		0.09	11.49
Trust, Participation		0.07	10.46
MEASUREMENT MODEL			R SQUARE
(λ , STANDARDIZED LAMBDA)			(explained by construct)
		STANDARDIZED λ	T STATISTIC
Trust	Returned by neighbour (Reference)	0.65	
	Returned by grocery clerk	0.64	23.98
	Returned by police	0.50	22.50
	Returned by stranger	0.53	25.57
Interaction	Family interactions (Reference)	0.38	
	Friends interactions	0.27	10.32
	Neighbour interactions	0.45	12.10
Participation	Member of youth org. (Reference)	0.65	
	Member of religious org.	0.37	16.66
	Member of ethnic org.	0.27	9.45
	Member of service org.	0.58	21.34
	Member of recreation org.	0.57	23.33
	Member of political org.	0.46	17.84
	Member of health org.	0.64	25.46
	Member of cultural org.	0.60	23.59
			0.427
			0.411
			.250
			0.277
			0.074
			0.141
			0.204
			0.421
			0.136
			0.074
			0.337
			0.321
			0.213
			0.413
			0.364

CFA Measurement Model

The basic CFA measurement model for the fifteen TIP dependent indicators results is presented in Table 3. The table is divided into three parts. The top panel shows goodness of fit statistics for the overall model, the middle panel provides information on the degree to which factors are related, and the bottom panel provides loading information for each factor. Overall, results

from the CFA analysis reveal the conceptual separability of the TIP constructs and variability in terms of bonding and bridging processes taking place in Canadian cities. The rho values are low, ranging from 0.13 for the correlation between interaction and participation, to 0.07 for the correlation between trust and participation. This suggests that frequent interaction with family, friends, and/or neighbours has little bearing on community attachment in the form of interpersonal trust and/or participation.

In terms of factor loadings (as indicated by lambda coefficients), the fifteen indicators have moderate and/or high loadings on their constructs. The four trust indicators display statistically significant lambda's ranging from .50 to .65 and thus reveal the presence of an overall dimension of trust. The construct explains substantial portions of the indicator variances of expected wallet return by neighbours and clerks (43% and 41%, respectively) and somewhat lower results for those referring to police and strangers (25% and 28%, respectively). The Interaction indicators display the lowest loads, ranging from 0.27 to 0.38. The loadings of Participation indicators are moderate in size and range from between 0.27 and 0.64. Membership in bonding organizations (religious and ethnic) tend to have lower loadings (0.37 and 0.27, respectively) compared to other memberships. More than 20% of the bridging indicators' variance is explained by the membership construct, while bonding indicators (membership in religious and ethnic organizations) explain less than 14%.⁶

⁶ Modification indices that could be used to improve the model are presented in Appendix Table 1A. The freeing of parameters associated with the greater indices suggested that changing the model substantively was not necessary.

MIMIC Models

The next stage of the analysis involved running Multiple Indicators–Multiple Causes models (MIMIC). These structural equation models are multivariate techniques that seek to determine how constructs or latent variables (formed by selected indicators) are influenced by a number of relevant covariates.⁷ In our case, we have individual predictors (gender, age, education, ethnicity, and immigrant status) and place-related variables (city size, diversity indices, and proportions of resident visible minorities in municipalities). This part of the model can be construed as simultaneously fitting two multiple regressions: regressing indicators on the three constructs while regressing constructs on their covariates (e.g., socio-demographic and place variables). For example, a negative coefficient for any TIP construct on the variable “males” would indicate that males have lower underlying TIP social capital than females. So, we have multiple indicators, which reflect the underlying factors, and we have multiple causes, which affect the underlying factors.

a) MIMIC Model with Individual Covariates:

Table 4 shows results from our MIMIC model. Looking at the individual level coefficients, we see that age has a positive effect on interactions and trust constructs but a negative impact on participation. Older individuals have higher levels of social capital related to interaction and trust but lower levels of participation. Being male lowers trust construct scores by a small amount (0.033 standard deviations) compared to females and increases interaction but does not affect participation. As compared to people without a university degree, higher education (bachelor or MA plus degrees) lowers interaction construct scores but increases trust and participation. Being an immigrant di-

⁷ MIMIC models contain both measurement and structural parts and can be made more complex by incorporating additional variables, which are assumed to influence the latent factors.

minishes trust by a small amount (-0.065 standard deviation points) but does not have a significant effect on participation or interaction scores.

The table reveals some interesting relationships by ethnic origin. With few exceptions, reporting an origin other than British, including French or Canadian, results in lower scores on trust, but the effects are uneven for the interaction and participation constructs. As compared to respondents reporting British as an ethnic origin, people reporting French, East Asian, and Caribbean have the lowest trust scores; people reporting French, Chinese, East Asian, and Caribbean have the lowest interaction scores; and people reporting South Asian and Chinese have the lowest participation scores. It appears, therefore, that visible minorities often have lower scores on social capital attributes related to trust and interaction, but not necessarily participation. European minorities also often display lower trust scores (as do those reporting French and Canadian), but interaction and participation attributes tend to be insignificantly different from the British comparison group. These findings are broadly in agreement with those of Putnam and others. However as was pointed out earlier, minorities in Canada tend to concentrate in large cities, where social capital formation tends to be lower. For this reason, the following analysis controls for personal characteristics and the characteristics of the city.

b) MIMIC Model with Place Covariates:

Table 5 shows results from a multilevel MIMIC model that adds place covariates to our previous model. The three panels provide information on the relationship between individual and city characteristics for each of the three factors. This analysis is based on 1,278 clusters, each containing an average number of 5.5 individuals as members. The goodness of fit statistics

TABLE 4: TIP MIMIC MODEL: INDIVIDUAL COVARIATE EFFECTS RESULTS-CANADA

GOODNESS OF FIT STATISTICS

RMSEA	0.03
CFI	0.79
TLI	0.78
χ^2	2192.53
df	265.00
sig	0.00
N	6,616

				TRUST		INTERACTIONS		PARTICIPATION	
				γ -Gamma	t stat	γ -Gamma	t stat	γ -Gamma	t stat
Demographic	Gender	(female)	Male	-0.033	-2.525	0.109	4.277	-0.021	-0.934
	Age			0.005	10.742	0.003	3.168	-0.002	-2.590
	Marital Status	(single)	Married	0.092	6.196	-0.073	-2.492	0.042	1.570
			Divorced/ Sep	-0.028	-1.265	-0.123	-2.903	-0.050	-1.232
Socio-economic	Schooling	(< BA)	Bachelors deg	0.067	3.864	-0.101	-3.002	0.285	9.845
			MA+	0.054	2.093	-0.249	-5.249	0.407	9.860
	Employment Status	(not employed)	Employed	0.017	1.228	-0.110	-3.933	0.039	1.527
Ethnicity		(British)	French	-0.354	-14.992	-0.332	-7.300	-0.226	-5.465
			Canadian	-0.154	-8.226	-0.031	-0.863	-0.116	-3.598
			German	0.056	1.443	-0.078	-1.043	0.000	-0.005
			N. Europe	0.023	0.490	0.021	0.228	-0.061	-0.831
			S. Europe	-0.245	-6.825	-0.156	-2.084	-0.130	-1.892
			E. Europe	-0.114	-3.134	-0.087	-1.244	0.090	1.428
			S. Asian	-0.111	-2.980	-0.233	-2.994	-0.186	-2.559
			Chinese	-0.187	-5.794	-0.609	-8.943	-0.183	-2.969
			E. Asian	-0.340	-7.106	-0.484	-5.407	-0.002	-0.026
			Caribbean / Latin Amer.	-0.352	-5.992	-0.513	-4.569	0.076	0.621
Immigrant Status	(Canadian-born)		Aboriginal	-0.192	-5.545	-0.089	-1.432	-0.143	-2.175
			Other	-0.299	-10.895	-0.333	-6.153	-0.206	-4.147
Immigrant Status	(Canadian-born)	Immigrant		-0.065	-4.311	-0.031	-1.064	-0.050	-1.852

Note: comparison group in parentheses

for this model indicates a strong level of significance (RMSEA=.03, CFI=.79 and TLI=.80).

This model reveals the substantial impact of place-related characteristics across all three factors. The size of the city in particular has a strong negative impact on all three factors. In fact, city size is one of the most powerful variables in our model with a standardized gamma of -0.22 for trust and -0.15 for interaction. The impact on participation is much lower, but still significant at -0.07. The impact of the visible minority population is only significant for interaction (standardized gamma of -0.07) but insignificant for the other two factors. The index of diversity is positive for trust and participation (standardized gamma of 0.06 and 0.05 respectively) and insignificant for interaction.

While the place-related variables absorb a great deal of the impact of minority status, being a minority is still often associated with lower levels of trust. It should be noted, however, that reporting French and Canadian show the strongest negative effects (standardized gammas of -0.23 and -0.13 respectively). With the exception of German, Northern European, and South Asian groups, all other minority groups have lower trust effects (-0.03 to -0.08). Being an immigrant is also found to be negatively associated with the trust construct (statistically significant standardized gamma of -.06).

Being a minority is not, generally, correlated with lower impacts on interaction with others. While French, Chinese, East Asian, and Caribbean respondents display lower levels of interaction, other groups have roughly the same levels of interactions with others as compared to British origin respondents.

TABLE 5: ITP MIMIC MODEL: INDIVIDUAL & PLACE COVARIATE EFFECTS RESULTS-CANADA

			γ -	T	γ - STANDARDIZED	
			GAMMA	STATISTIC	GAMMA	
Factor: Trust on	City characteristics	Index of diversity	0.001	2.61	0.06	
		Log of city size	-0.04	-8.97	-0.22	
		% visible minorities	0.00	-1.49	-0.03	
	Demographic	Gender	Male	-0.03	-2.48	-0.04
			Age	0.00	10.48	0.16
		Marital Status	Married	0.06	4.12	0.07
	Divorced/Sep		-0.03	-1.48	-0.02	
	Socio-economic	Schooling	Bachelors deg	0.09	5.46	0.08
			MA+	0.10	3.76	0.06
		Employment Status	Employed	0.02	1.47	0.02
	Group Status	Ethnicity	French	-0.34	-14.53	-0.23
			Canadian	-0.15	-8.11	-0.13
			German	0.04	1.08	0.02
			N. Europe	0.04	0.84	0.01
			S. Europe	-0.17	-4.94	-0.07
			E. Europe	-0.08	-2.38	-0.03
			S. Asian	-0.02	-0.49	-0.01
			Chinese	-0.10	-2.97	-0.04
			E. Asian	-0.26	-5.49	-0.08
			Caribbean / Latin Amer.	-0.27	-4.74	-0.06
Aboriginal			-0.17	-4.95	-0.07	
Other	-0.23	-8.79	-0.13			
	Immigrant Status	Immigrant	-0.06	-4.00	-0.06	
Factor: Interaction on	City characteristics	Index of diversity	0.000	-0.28	-0.01	
		Log of city size	-0.04	-4.88	-0.15	
		% visible minorities	0.00	-2.68	-0.08	
	Demographic	Gender	Male	0.13	4.72	0.09
			Age	0.00	2.17	0.05
		Marital Status	Married	-0.16	-5.01	-0.12
	Divorced/Sep		-0.16	-3.47	-0.07	
	Socio-economic	Schooling	Bachelors deg	-0.06	-1.61	-0.03
			MA+	-0.18	-3.67	-0.07
		Employment Status	Employed	-0.12	-3.94	-0.08
	Group Status	Ethnicity	French	-0.38	-7.78	-0.16
			Canadian	-0.05	-1.22	-0.03
			German	-0.09	-1.16	-0.02
			N. Europe	0.06	0.58	0.01
			S. Europe	-0.06	-0.70	-0.01
			E. Europe	-0.02	-0.26	-0.01
			S. Asian	-0.05	-0.61	-0.01
			Chinese	-0.45	-6.08	-0.13
			E. Asian	-0.35	-3.68	-0.07
			Caribbean / Latin Amer.	-0.39	-3.29	-0.06
Aboriginal			-0.06	-0.88	-0.02	
Other	-0.25	-4.28	-0.09			
	Immigrant Status	Immigrant	-0.02	-0.55	-0.01	

TABLE 5: CONTINUED

			Y - GAMMA	T STATISTIC	Y-STANDARDIZED GAMMA	
Factor: Participation on	City characteristics	Index of diversity	0.002	1.94	0.05	
		Log of city size	-0.02	-2.68	-0.07	
		% visible minorities	0.00	-1.20	-0.03	
	Demographic	Gender	Male	-0.02	-0.86	-0.01
			Age	0.00	-2.78	-0.05
		Marital Status	Married	0.03	1.05	0.02
			Divorced/Sep	-0.05	-1.25	-0.02
	Socio-economic	Schooling	Bachelors deg	0.30	10.19	0.17
			MA+	0.43	10.28	0.16
		Employment Status	Employed	0.04	1.54	0.03
	Group Status	Ethnicity	French	-0.21	-5.07	-0.09
			Canadian	-0.11	-3.45	-0.06
			German	-0.02	-0.26	0.00
			N. Europe	-0.06	-0.82	-0.01
			S. Europe	-0.10	-1.49	-0.02
			E. Europe	0.09	1.50	0.02
			S. Asian	-0.14	-1.91	-0.03
			Chinese	-0.13	-1.99	-0.04
			E. Asian	0.03	0.35	0.01
			Caribbean / Latin Amer.	0.11	0.89	0.02
Aboriginal			-0.14	-2.07	-0.03	
Other	-0.18	-3.60	-0.06			
	Immigrant Status	Immigrant	-0.05	-1.78	-0.03	
Factor: Participation with	Factor: Interaction		0.19	13.65	0.39	
Factor: Trust with	Factor: Interaction		0.07	9.94	0.22	
	Factor: Participation		0.05	9.12	0.17	

Reference Categories: females, single, degree below bachelor, not employed, British ethnic origins, Canadian-born

Aside from French and Canadian ethnicity, the effects of ethnicity on participation are either insignificant or very low (ranging from a standardized gamma of -0.03 to -0.04).⁸

CONCLUSION

Using a pooled sample of the SCWB surveys carried out in 1999 and 2001, we assess the impact of diversity on three social capital constructs: trust in others, interaction with others, and participation. These dimensions fall across both bridging and bonding social capital, as well as across attitudinal and behavioural dimensions. Trust in others is attitudinal. We measure respondents' trust in people who are relatively close to them (people in the neighbourhood) as well as in people who are unknown (a complete stranger) or linked to an institution (the police). The interaction construct is a behavioural bonding activity—these interactions are broadly within groups, measuring interaction with friends, family, and neighbours as well as participation in ethnic and religious organizations. Participation in organizations is behavioural and linked to bridging—it is an activity that is more likely to connect respondents to someone from a different community.

Individual and place attributes play different roles in explaining our three social capital constructs. Among individual predictors, higher education plays a prominent role in explaining trust and participation though little in terms of interactions. Being a minority is correlated with lower levels of trust in others. However, being a member of a minority group is not always bad for social capital formation. Levels of interaction and participation for European, South

⁸ It could be argued that the insignificant results for ethnic groups are because of the low cell counts. To test this hypothesis, we ran a model in which we replaced the ethnicity variables with a three category variable with markers for white, visible minority, and aboriginal respondents. This model yielded similar results, with the impact of ethnicity being low or insignificant.

Asian, and Aboriginal groups are about the same as for those with British origins, and higher than those reporting French origins.

While many authors talk about social capital as a single construct, we find that our three tested constructs vary independently. Thus, the relationship between the level of diversity in a city and the level of social capital formation varies by construct. As diversity increases, trust in others and participation in organizations increases. Interaction with others is somewhat negatively affected by diversity—as the proportion of visible minorities increases, interaction with others decreases. This suggests that bonding and bridging social capital are orthogonal, or independent—lack of bonding activity in one area (interaction with others) does not negate the possibility of bridging activity in another (participation and trust). This last set of findings runs counter to those suggestions made by Putnam (2007) and Marschall and Stolle (2004) (see also Johnston and Soroka 2001 and Soroka et al. 2005 for research in Canada). Perhaps increased levels of diversity are not necessarily the threat to our ability to work together that has been posited by a number of authors.

Results from this study suggest that the diversity of cities in combination with individual characteristics are leading to novel pathways of social capital accumulation. This is particularly true in the case of large cities such as Montreal, Toronto, and Vancouver, where bonding activities are essential mechanisms of social and economic survival for many minorities. Regardless of socio-demographic traits and SES characteristics, minority members (immigrant or not) are developing networks with family and friends that provide them with various forms of cultural capital, a sense of well-being, and economic security.

While we are not able to fully test these facets of social capital, it is possible that all these elements provide the individual with an adequate level of resources for satisfying basic needs and wants if circumstances were to suddenly change. Socially and economically “secure” individuals will have greater advantage in terms of strengthening the size and composition of the social capital networks already created (i.e., “bonding” and “linking” types of relationships). Higher levels in these constructs may counteract possible deficiencies in financial and human capital that individuals may have in their resident communities. Additional research with a broader set of social capital constructs offers promising avenues to better understand social capital formation in Canadian cities

We find that while minorities may have lower levels of trust, the collective level of trust is not affected by level of diversity. Furthermore, the level of interaction and participation is positively correlated with the level of diversity. These results are markedly different from those put forth by Putnam (2007). We therefore hedge out bets the other way. Contextual level diversity does not appear to be a threat to social capital formation. However, if we want to continue to work together, we should find ways to incorporate minorities and allow trust, in particular, to grow.

REFERENCES

- Aguilera, Michael. 2003. The impact of the worker: How social capital and human capital influence the job tenure of formerly undocumented Mexican immigrants. *Sociological Inquiry* 73(1): 52–83.
- Aguilera, Michael B. and Douglas S. Massey. 2003. Social capital and wages of Mexican migrants: New hypotheses and tests. *Social Forces* 82: 671–701.
- Aizlewood, A., P. Bevelander, and R. Pendakur. 2006. Recreational participation among ethnic minorities and immigrants in Canada and the Netherlands. *Journal of Immigrant and Refugee Studies* 4(3): 1–32.
- Aizlewood, A. and R. Pendakur. 2005. Ethnicity and social capital in Canada. *Canadian Ethnic Studies* xxxvii(2): 77–102.
- Alesina, A. and E. La Ferrara. 1999. Participation in heterogeneous communities. *Quarterly Journal of Economics* 115(3): 847–904.
- . 2000. The determinants of trust. NBER Working Paper No. 7621. Cambridge, MA, National Bureau of Economic Research.
- . 2002. Who trusts others? *Journal of Public Economics* 85(2): 207–34.
- Babacan, H. and A. Babacan. 2007. Achieving social cohesion: Impact of insecurity, fear and racism on migrant integration. *International Journal of Diversity in Organisations, Communities & Nations* 7(5): 213–22.
- Behtoui, A. 2007. The distribution and return of social capital: Evidence from Sweden. *European Societies* 9(3): 383–407.
- Bjørnskov, Christian. 2006. The multiple facets of social capital. *European Journal of Political Economy* 22(1): 22–40.

- Black, J. H. 1982. Immigrant political adaptation in Canada: Some tentative findings. *Canadian Journal of Political Science* XV(1, March): 3–27.
- . 1987. The practice of politics in two settings: Political transferability among recent immigrants to Canada. *Canadian Journal of Political Science* 22: 731–53.
- Bloemnraad, I., and S. Ramakrishnan. 2006. Civic invisibility? The civic and political stratification of immigrant and mainstream community organizations. Paper presented at the American Sociological Association 2006 Annual Meeting, Montreal. <http://web.ebscohost.com.proxy.bib.uottawa.ca/ehost/pdf?vid=2&hid=101&sid=e48002dd-ad7e-41e6-9f94-82d60493a9bf@sessionmgr102#db=sih&AN=26641870> (accessed June 3, 2009).
- Bollen, K. and I. Long. 1993. *Testing structural equation models*. Newbury Park, CA: Sage Publishers.
- Bourdieu, P. 1986. The forms of capital. In *Handbook of theory and research for the sociology of education*, ed. John Richards, 241–58. New York: Greenwood Press.
- Cheong, P. 2006. Communication context, social cohesion and social capital building among Hispanic immigrant families. *Community, Work & Family* 9(3): 367–87.
- Coleman, J. 1988. Social capital and the creation of human capital. *American Journal of Sociology* 94: 95–120.
- Eisenberg, A. 2006. Equality, Trust, and Multiculturalism. In *Social capital, diversity, and the welfare state*, ed. F. Kay and R. Johnston. Vancouver: UBC Press.

- Fischer, C. S. 1982. *To dwell among friends: Personal networks in town and city*. Chicago: University of Chicago Press.
- Fukuyama, F. 1995. *Trust: The social virtues and the creation of prosperity*. New York: Free Press.
- Glaeser, E., D. Laibson, José Scheinkman, and C. Soutter. 2000. Measuring trust. *Quarterly Journal of Economics* 115(August): 811–46.
- Granberry, P. and E. Marcelli. 2007. In the hood and on the job: Social capital accumulation among legal and unauthorized Mexican immigrants. *Sociological Perspectives* 50(4): 579–95.
- Granovetter, M., 1973. The strength of weak ties. *American Journal of Sociology*, 78(6): 1360--80.
- Health Canada. 2002. *An inclusion lens: Workbook for looking at social and economic exclusion and inclusion*, by M. Schookner. Halifax: Health Canada, Population and Public Health Branch, Atlantic Region.
- Hooghe, M., T. Reeskens, D. Stolle, and A. Trappers. 2006. Ethnic diversity, trust and ethnocentrism and Europe: A multilevel analysis of 21 European countries. Paper presented at the 102nd Annual Meeting of the American Political Science Association, Philadelphia. <http://soc.kuleuven.be/pol/docs/0608-APSA.pdf> (accessed June 17, 2009).
- Hu, L. and P. Bentler. 1999. Cutoff criteria in fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling* 6(1): 1–55.
- Inglehart, R. 1988. The renaissance of political culture. *American Political Science Review* 82: 1203–30.

- . 1990. *Cultural shift in advanced industrial society*. Princeton: Princeton University Press.
- Jaynes, G. 2007. Migration and social stratification: Bipluralism and the Western democratic state. *Du Bois Review* 4(1): 5–17.
- Johnston, R. and S. Soroka. 2001. Social capital in a multicultural society: The case of Canada. In *Social capital and participation in everyday life*, ed. P. Dekker and E. M. Uslaner, 30–44. London: Routledge.
- Kazemipur, A. 2009. *Social capital and diversity: Some lessons from Canada*. New York: Peter Lang.
- Letki, N. 2008. Does diversity erode social cohesion? Social capital and race in British neighbourhoods. *Political Studies* 56(1): 99–106.
- Lin, N. 2005. Social Capital. In *International Encyclopedia of Economic Sociology*, ed. J. Beckert and M. Zafirovski, 604–12. New York: Routledge.
- Loury, G. 1995. The social capital deficit. *The New Democrat* 7(3): 28–29.
- Malpica, D. 2008. Social capital within ethnic communities: The case of indigenous Mexicans in Los Angeles. Paper presented at the American Sociological Association 2008 Annual Meeting, Boston. <http://web.ebscohost.com.proxy.bib.uottawa.ca/ehost/pdf?vid=2&hid=103&sid=01f74a1c-3a2c-4c85-b861-b2360a1d0d24@sessionmgr103#db=sih&AN=36954559> (accessed June 2, 2009).
- Marschall, M. and D. Stolle. 2004. Race and the city: Neighborhood context and the development of generalized trust. *Political Behavior* 26(2): 125–54.

McElroy, M. W., R. Jorna, and J. Engelen. 2006. Rethinking social capital theory: A knowledge management perspective. *Journal of Knowledge Management* 10(5): 124–36.

Miller, D. 1995. *On Nationality*. Oxford: Clarendon.

Muthén, B. 1989. Latent variable modeling in heterogeneous populations. Presidential address to the Psychometric Society, July 1989. *Psychometrika* 54: 557–85.

———. 1997. Latent variable modeling with longitudinal and multilevel data. In *Sociological methodology*, ed. A. Raftery, 453–80. Boston: Blackwell Publishers.

Nakhaie, R. 2007. Ethnoracial origins, social capital, and earnings. *Journal of International Migration & Integration* 8(3): 307–25.

Patulny, R. V., G. Lind, and H. Svendsen. 2007. Exploring the social capital grid: Bonding, bridging, qualitative, quantitative. *International Journal of Sociology and Social Policy* 27(1/2): 32–51.

Portes, A. 1998. Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology* 24: 1–24.

Portes, A. and P. Landolt . 1996. Unsolved mysteries: The Tocqueville files II: The downside of social capital. *The American Prospect* 7(26). http://www.prospect.org/cs/articles?article=unsolved_mysteries_the_tocqueville_files_ii_511996_ap_pl

Putnam, R. D. 1993. *Making democracy work: Civic traditions in modern Italy*. Princeton: Princeton University Press.

———. 1995. Bowling alone: America's declining social capital. *Journal of Democracy* 6(1): 65–78.

- . 2007. *E pluribus unum: Diversity and community in the twenty-first century*. The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies* 30(2): 137–74.
- Reimer, B., T. Lyons, N. Ferguson, and G. Polanco. 2008. Social capital as social relations: The contribution of normative structures. *Sociological Review* 56(2): 256–74.
- Reitz, J., R. Breton, K. Dion, and K. L. Dion. 2009. *Multiculturalism and social cohesion: Potentials and challenges of diversity*. New York: Spring Publishing.
- Rice, T. and J. Feldman. 1997. Civic culture and democracy from Europe to America. *Journal of Politics* 59(4): 1143–72.
- Saguaro Seminar. 2000. *Social Capital Community Benchmark Survey: Executive Summary*. Cambridge, MA: Harvard University. John F. Kennedy School of Government.
- Soroka, S., K. Banting, and R. Johnson. 2005. Ethnicity, trust and the welfare state. In *Social capital, diversity and the welfare state*, ed. Fiona Kay and Richard Johnston. Vancouver, BC: UBC Press.
- Statistics Canada. 2005. *Population projections of visible minority groups, Canada, provinces and regions 2001–2017*, by A. Bélanger and É. Caron Malenfant, with L. Martel, Y. Carrière, C. Hicks, and G. Rowe. Catalogue No. 91-541-XIE. Ottawa: Statistics Canada.
- . 2010. *Projections of the Diversity of the Canadian Population 2006 to 2031*, by É. Caron Malenfant, A. Lebel, and L. Martel. Catalogue No. 91-551-X. Ottawa: Statistics Canada.

Takhar, S. 2006. South Asian women, social capital and multicultural (mis) understandings. *Community, Work & Family* 9(3): 291–307.

Uslaner, E. 2002. *The moral foundations of trust*. Cambridge: Cambridge University Press.

Van Der Gaag, M. and T. Snijders. 2005. The resource generator: Social capital quantification with concrete items. *Social Networks* 27(1): 1–29.

Verba, S., K. Schlozman, and H. Brady. 1995. *Voice and equality: Civic voluntarism in American politics*. Cambridge: MA: Harvard University Press.

Wakefield, S. and B. Poland. 2005. Family, friend or foe? Critical reflections on the relevance and role of social capital in health promotion and community development. *Social Science & Medicine* 60(12): 2819–32.

Wilton, R. D. 1998. The constitution of difference: Space and psyche in landscapes of exclusion. *Geoforum* 29(2): 173–85.

APPENDIX TABLE 1

TABLE 1A: MODIFICATION INDICIES FOR CONFIRMATORY FACTOR ANALYSIS IN DESCENDING X^2 ORDER

			E.P.C.
Trust	BY	See Friends	-0.38
	BY	See Neighbours	0.46
	BY	Member ethnic org	-0.16
	BY	Member religious org	-0.21
Interaction	BY	Trust someone who lives closeby	0.15
	BY	Member religious org	-0.27
Participation	BY	See family	-0.20
	BY	See friends	0.37
	BY	See neighbours	-0.26
Trust clerk	WITH	Trust someone who lives closeby	-0.06
Trust police	WITH	Trust a clerk	0.07
Trust stranger	WITH	Trust someone who lives closeby	0.05
See Friends	WITH	Trust someone who lives closeby	-0.06
See Neighbours	WITH	Trust someone who lives closeby	0.16
Member ethnic org	WITH	Member religious org	0.13
Member religious org	WITH	Trust someone who lives closeby	-0.04
Member religious org	WITH	Trust a clerk	-0.05
Member religious org	WITH	See Friends	0.11
Member religious org	WITH	See Neighbours	-0.14
Member religious org	WITH	Member religious org	-0.09
Member political org	WITH	Trust police	-0.05
Member political org	WITH	See Family	-0.10
Member political org	WITH	Member Service org	0.10
Member youth org	WITH	Member Service org	-0.11
Member youth org	WITH	Member religious org	0.15
Member youth org	WITH	Member political org	-0.11
Member cultural org	WITH	See Friends	0.09