

# **Annual Meetings of the Canadian Population Society**

**Toronto, Ontario**

**May 30 – 1 June, 2002**

**University of Toronto and Ryerson University**

**PRELIMINARY PROGRAM  
AND  
ABSTRACTS  
RECEIVED**

**FEBRUARY 6, 2002**

# **ANNUAL MEETINGS OF THE CANADIAN POPULATION SOCIETY**

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**ACKNOWLEDGEMENTS:**

# **ANNUAL MEETINGS OF THE CANADIAN POPULATION SOCIETY**

**Preliminary Program**

**Toronto, Ontario  
May 30 – June 1, 2002**

**The University of Toronto and Ryerson University**

**Thursday, May 30, 2002**

**9:00 – 10:30**

**1. Demography and Life Cycles  
Lash Miller Building---Room 161**

**Chair:** Bali Ram, Statistics Canada

**Historical Trends in the Patterns of Time Use of Seniors in Canada Since the 1970s**  
Charlemaigne Victorino and Anne H. Gauthier, University of Calgary

**Historical Trends in the Patterns of Time Use of Teenagers: Canadian and  
American Comparisons**

Anne H. Gauthier, University of Calgary

**Comparison of the Labour Market Entry of Immigrant, Refugee, and Canadian-Born Youth in  
Canada**

Lori Wilkinson, University of Manitoba

**Political Dimension of Social Cohesion and the Family: Analysing the Link Using the National  
Surveys on Giving, Volunteering and Participating**

Zenaida R. Ravanera, Rod Beaujot, and Fernando Rajulton, University of Western Ontario

**10:30 – 11:00: BREAK**

**11:00 – 12:30**

**2. Mortality and Morbidity**

**Lash Miller Building---Room 161**

**Chair:** Isaac Addai, Lansing College, Michigan

**Lagged Effect of Fertility Response to Childhood Mortality in Sub-Saharan Africa**  
Stephen Obeng Gyimah, University of Western Ontario

**AIDS-Talk in Everyday Life: The Presence of HIV/AIDS in Informal Conversation in Southern Malawi, 1999-2001**

Amy Kaler, University of Alberta

**Perception and Attitudes of Teenage School Dropout Mothers in Rural Botswana Towards HIV/AIDS**

Lesego T. Chalashika, University of Botswana

**Cervical Cancer Mortality by Income in Urban Canada, from 1971 to 1996**

Edward Ng, Russell Wilkins, Jean-Marie Berthelot (Statistics Canada) and Michael K. Fung (Ottawa Regional Cancer Centre)

**Maternal Mortality in Nepal: Unraveling the Complexities**

Juhee Suwal, The University of Alberta

**11:00 – 12:30**

**Simultaneous Joint Session**

**Canadian Association of Geographers (CAG), Canadian Indigenous Native Study Association (CINSA) and the Canadian Population Society (CPS)**

**Co-Organizers:** Evelyn Peters (University of Saskatchewan) and Frank Trovato (University of Alberta)

**Location:** TBA (time and date not yet confirmed)

**Aboriginal Statistics**

**Chair:** Evelyn Peters, University of Saskatchewan

**Panelists:**

Andy Siggner, Indian and Northern Affairs Canada  
Mary Jane Norris, Indian and Northern Affairs Canada  
Dan Beavon, Indian and Northern Affairs Canada  
Lorna Jantzen, Department of Canadian Heritage

**12:30 – 1:30: LUNCH**

**1:30 – 3:00**

**3. DEMOGRAPHIC/Spatial INTERACTIONS  
Lash Miller Building---Room 161**

**Chair:** Edward Shin, Statistics Canada

**An Application of the Push-Pull Model in Local Migration Estimates**  
Zongli Tang, Auburn University

**Spatial Distribution of Suburban Ethnic Businesses**  
Eric Fong and Chiu Luk, University of Toronto

**Interprovincial Migration of Canadian Immigrants**  
Barry Edmonston, Portland State University

**Discussant:** Mark Rosenberg, Queen's University

**3:00 0 3:30: BREAK**

**3:30 – 5:00**

**4. Ethnicity, Immigration, and Health  
Lash Miller Building---Room 161**

**Co-Organizers:** Anneke Rumens, University of Toronto and Frank Trovato,  
University of Alberta

**Chair:** Anneke Rumens, University of Toronto

**Double Jeopardy: Violence Against Immigrant Women in Canada**  
Shiva S Halli and D. Brownridge, University of Manitoba

**The Racial/Ethnic Distribution of Depression: Moderator Effects of Socio-Economic Status**

Zheng Wu (University of Victoria), Samuel Noh (University of Akron), Violet Kaspar (University of Toronto), Jiajian Chen (Statistics Canada) and Christoph M. Schimmele (University of Victoria)

**Effects of Interpreter Services on Immigrants' Health Care Use**  
Sharon M. Lee, Portland State University

**Discussant:** TBA

**Friday, May 31, 2002**

**9:00 – 10:45**

**5. Population and Security: Demographic and Political Insights**

**JOINT PANEL SESSION: The Canadian Population Society (CPS) and the Canadian Political Science Association (CPSA)---May 31, 2002, 9:00 – 10:45**

**Lash Miller Building---Room 161**

**Co-Organizers:** Frank Trovato and Yasmeen Abu-Laban, University of Alberta

**Chair:** Yasmeen Abu-Laban, University of Alberta

**Panelists:**

Alan Simmons, York University

Anthony H. Richmond, York University

Hellene Pellerin, University of Ottawa

Laura Macdonald, Carleton University

Christina Gabriel, Trent University

**10:45-11:00: BREAK**

**11:00 – 12:30**

**6. Aging and Health Interrelations**

**JOINT SESSION: Canadian Population Society (CPS) and Canadian Sociology and Anthropology Association (CSAA)**

**Lash Miller Building---Room 161**

**Organizer and Chair:** Andrew Wister, Simon Fraser University

**Dual Model of Care: Complimentary and Conventional Medical Use by Older Adults with Chronic Illness**

Kristine Votova, Simon Fraser University

**Ethnic, Immigrant, and Language Dimensions of Health Status and Health Care Utilization Among Mid-Life Canadians: Findings from the 1998-1999 National Population Health Survey**

Karen Kobayashi (University of British Columbia) and Steven Prus (Carleton University)

**Mortality Among Long-Term Care Residents with Dementia: The Influence of Care Quality**

Colin R. Reid, University of Victoria

**Discussant:** Julie McMullin, University of Western Ontario

**12:30-1:30: LUNCH**

**1:30- 3:00**

**7. International Topics**

**Lash Miller Building---Room 161**

**Chair:** Ravi Verma, Statistics Canada

**Who is Worried About one's Future in Old Age? --Low Fertility and Old Age Support in China**

Jianye Liu, University of Western Ontario

**Social Policy Reforms and Daughters' Schooling in Viet Nam**

Danièle Bélanger and Jianye Liu, University of Western Ontario

**Women, Families and Intergenerational Change in Revolutionary Cuba**

Cathie Krull, Queen's University

**Religion and Women's Contraceptive Use and Method Choices**

Baffour K. Takyi, University of Akron

Contraceptive Stratification in China

Xingshan Cao, University of Toronto

**3:00 – 3:15 BREAK**

**3:15 – 4:20**

**8. Family Demography**

**Lash Miller Building---Room 161**

**Chair:** Cathie Krull, Queen's University

**Engendering Family Income: The Case of Dual-Earner Families in Montreal and Toronto**

Johanne Sanschagrin, University of Toronto

**The Anchoring of American Families to their Homes and Neighborhoods**

Darcy W. Hango, Ohio State University

**Cohabitation in Canada: Stability of Cohabiting Relationships and the Effect of Cohabitation on Marital Unions**

Ron Budinski, University of Alberta

**4:30 – 6:00: Annual Assembly**

**Lash Miller Building---Room 161**

**7:00: Annual Banquet/Presidential address**

**Greek Islands Restaurant**

10 College Street, Toronto (416) 966-5050

***Projecting the Future of Canada's Population: Assumptions, Implications, and Policy***

**Professor Rod Beaujot**

University of Western Ontario

# Saturday, June 1, 2002

**9:00 – 10:30**

**9. Population Projections and Models**  
**Lash Miller Building---Room 161**

**Chair:** Shiva Halli, University of Manitoba

**Population Projections of Registered Indians, 2000-2021**

Ravi Verma, Shirley Loh, Margaret Michalowski (Statistics Canada), Annette Vermaeten and Pierre Gauvin (Department of Indian Affairs and Northern Development)

**An Alternate Strategy for Generating Censal Estimates**

Rejean Lachapelle (Statistics Canada), Don Kerr (University of Western Ontario) and D. Morissette (Statistics Canada)

**Stationary Population as Vision for the Future: An exercise in Normative Projection**

M.V. George (Statistics Canada and University of Alberta) and Anatole Romaniuc (University of Alberta)

**Perils and Pitfalls of Aboriginal Demography: Lessons Learned from the Royal Commission on Aboriginal Peoples Projections**

Don Kerr (University of Western Ontario), Eric Guimond and Mary Jane Norris (Indian and Northern Affairs Canada)

**Diffusion Models in Demography**

Fernando Rajulton, University of Western Ontario

**10:30 – 11:00: BREAK**

**11:00 – 12:30**

**10. Population, resources, and sustainability**  
**Lash Miller Building---Room 161**

**Chair:** Eddie Ebanks, The University of Western Ontario

**Analyzing Food Shortages: Classifications and Demographic Effects**

Alison Yacyshyn, University of Western Ontario

**Are Declining Populations Sustainable?**

Tom Wonnacott, University of Western Ontario

**Population Crisis in Sub-Saharan Africa: The Case of Botswana and Ethiopia**

Hadgu Bariagaber, University of Botswana

**Discussant:** T. R. Balakrishnan, University of Western Ontario

**12:30 – 1:30 LUNCH**

**1:30 – 3:00**

**11. Health and Reproductive issues**

**Lash Miller Building---Room 161**

**Chair:** Tabitha Langeni, University of Botswana

**Social Class and Malaria in Ghana**

Kwame Boadu, University of Alberta

**Patterns of Knowledge of Breast Cancer and Breast Self-Examination Among Women in Botswana**

Serai Daniel Rakgoasi, University of Botswana

**Religious Involvement and Maternal and Child Health in Africa**

Baffour K. Takyi (University of Akron) and Isaac Addai (Lansing College, Michigan)

**A Study of Extramarital Relations in a South Indian Village**

Shiva S. Halli, University of Manitoba

**Religion and Fertility in India - Experience of Two States**

K.V. Rao, Bowling Green State University

**3:00 – 3:30: BREAK**

**3:30 – 5:00**

**12. Immigration**

**Lash Miller Building---Room 161**

**Chair:** Gustave Goldmann, Statistics Canada

**Immigration and Low-income Trends in Canada, 1980 to 1995**

Feng Hou and Garnett Picot (Statistics Canada) and John Myles, University of Toronto and Statistics Canada)

**Who is Staying and for How Long: Re-Migration of Immigrants to Canada During the 1990s**

Margaret Michalowski and Claude Grenier, Statistics Canada

**Trends in the Occupational and Earnings Attainments of Women Immigrants to Canada, 1971-1996**

Richard A. Wanner and Michelle Ambrose, University of Calgary

**Discussant:** John De Vries, Carleton University

**CANADIAN POPULATION SOCIETY  
2002 ANNUAL PROGRAM**

**ABSTRACTS**

**1. Religion and Women's Contraceptive Use and Method Choices**

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The contraceptive use behavior of women in sub-Saharan Africa has become increasingly salient in discussions of overall reproductive-related behavior. Although recent evidence suggests that birth rates have started to decline and contraceptive use rates have also increased in some countries in the region, overall, Africa has one of the lowest contraceptive use levels in the world. Moreover, significant variations still exist in use levels among women of different social groupings. For example, most contraceptive prevalence studies find higher levels of contraception among urban, as well as educated women as opposed to those in the rural areas where most Africans live. To date, research on the determinants of contraceptive use point to institutional structures, particularly culture, which is often defined in many different ways (e.g., ethnicity, religion, male differentials between men and women, etc.) to explain variations in use rates. Although a growing body of research has examined some aspects of religion in fertility and contraceptive behaviour in the region, not many have examined the links between religion and women's contraceptive decision-making. This paper extends the literature on contraception by examining the influence of religion and women's current contraceptive use and method choices in the region.

**2. Analyzing Food Shortages: Classifications and Demographic Effects**

Alison Yacyszyn  
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The formal definition of famine is multifaceted and can be classified according to climate, environment and socio-economic factors. No matter which classification the famine falls under, a famine is a unique demographic experience that effect not only migration, but mortality and fertility rates of a population as well. One of the most documented famines is that of Ireland's potato famine of 1846. This famine experienced in Ireland is used as a case study to demonstrate how food shortages affect demographic variables. Using data collected by the Centre for Research on the Epidemiology of Disasters (CRED), famine data between the years 1900-2000 illustrate the number of people affected globally by food shortages according to different variables. Variables used in the analysis include: the year of famine, the country/ region where the famine

occurred, the number killed, as compared to the number of people affected, and how the famine itself is classified (crop failure, food shortage, conflict, or drought). Famines can be deemed a non-curable event and the awareness of famines and how they affect population dynamics is important in understanding food consumption patterns and the relationship to population studies.

### **3. Religious Involvement and Maternal and Child Health in Africa**

Baffour K. Takyi

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Isaac Addai,

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During the past three decades, research on the health needs of sub-Saharan African women and children have featured prominently in the demographic and health literature. Part of this development reflects the realization that maternal and child deaths in the sub-Saharan region are relatively quite high. Because healthy women and their children are vital to socioeconomic development in Africa as a whole coupled with the fact that most of the deaths to women and children are preventable, most governments in the region have put in place initiatives aimed at improving maternal health and child survivorship. Our contention is that, the benefits of these initiatives and intervention programs may be jeopardized if policy makers ignore the many factors, some of which are personal, others cultural and religious that exert considerable influence on health behaviour and outcomes. In the context of sub-Saharan Africa where previous studies have shown that cultural and religious processes exert considerable influence on overall reproductive-health behaviour, the examination of the connection between religion and maternal and child health may provide insights into the development of effective intervention programs for reducing maternal and child health-related morbidity and mortality. Thus, in this paper, we use data from Ghana to examine the relationship between religious affiliation and several aspects of maternal and child health outcomes, including the use of prenatal care and tetanus immunization.

### **4. Interprovincial Migration of Canadian Immigrants**

Barry Edmonston, Director

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Data from the 1991 and 1996 censuses of Canada provide direct evidence on the migration experience of immigrant cohorts in the five years prior to the census. They also provide indirect evidence on the provincial redistribution of those immigrants who arrived in Canada between 1986 and 1991, prior to the 1991 census, and between 1991

and 1996, prior to the 1996 census. This paper shows that shifts in populations at the provincial level are strong, with important short-term trends among the foreign born. The paper reports comparisons of inter-provincial movements for the native born and foreign born, noting differences by province of origin and destination for the two five year periods prior to the 1991 and 1996 censuses. Foreign-born and native-born inter-provincial migration is similar in three ways: (1) Migration tends to be out of the Atlantic and Prairie Provinces and into Ontario, British Columbia, and Alberta. (2) Migration tends to be from less to more populated provinces. (3) Migration appears to respond to differences in employment growth, wage rates, and labour force size. Nevertheless, there are differences. The native born tend to move from provinces with a higher proportion of foreign-born population, taking other factors into account, while the foreign born are more likely to remain in provinces with a higher proportion of the foreign born of the same ethnicity as themselves. Analysis of the migratory behaviour of recent immigrant cohorts provides some evidence that there are distinct patterns of higher and lower migration levels for different ethnic-origin groups. Moreover, ethnic groups vary in their response to the proportion of the foreign born of the same ethnicity in the provinces of origin and destination.

## **5. Cohabitation in Canada: Stability of Cohabiting Relationships and the Effect of Cohabitation on Marital Unions**

Ron Budinski

Department of Sociology, University of Alberta

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Cohabitation as a form of nuptiality has enjoyed widespread growth and popularity in recent decades, while at the same time marriage rates have declined and divorce rates increased. Much of the research on cohabitation has focused on the stability of cohabiting relationships, and how premarital cohabitation may affect the stability of marriages. This study asks the following questions: (1) is cohabitation only meant to be a temporary union, leading cohabitators into marriage or back into singlehood? and (2) is premarital cohabitation associated with marital instability, and in what way? Using data from the 1995 General Social Survey, Cox proportional hazard models were used to examine the stability of cohabitations without subsequent marriage, cohabitations with subsequent marriage, and marriages not preceded by cohabitation. Results generally support previous findings that cohabitation is a short-lived state, and most cohabitators experience a transition either into marriage or back to singlehood within a short time. Cohabitators who choose to marry tend to have more unstable marriages than non-cohabitators, but only after ten years into the marriage. Prior to that time, there is no difference in marital stability between cohabitators and non-cohabitators.

## **6. Women, Families and Intergenerational Change in Revolutionary Cuba**

Cathie Krull

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Preliminary results will be discussed from an ongoing study that assesses intergenerational differences among women living in “Old Havana”, Cuba. This area has recently been designated by the Cuban government, in conjunction with UNESCO, as a site for the social project of community redevelopment. The nature, direction and success of that development will depend strongly upon the ways in which different women, deeply affected by the diversity of their experiences over the past forty years, have engaged in the struggle for independence, security and democracy. The “woman's question” has been central to the development goals of the ongoing Cuban Revolution. The challenge to understand the situation of women in Cuba involves the dialectical relationship between their gendered identity in Cuban history and the ways in which they have utilized concepts of self-identity, resistance (to patriarchal systems, traditional family practices, poverty) in order to develop the capacity to makes decisions in their own interests

## **7. Social Class and Malaria in Ghana**

Kwame Boadu

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This study investigates differences in social class and health status in Ghana. Data utilized is taken from the 1997 Core Welfare Indicators Questionnaire (CWIQ) survey of Ghana. The survey collected information on households covering a variety of topics including education, health, employment, household assets, household amenities, poverty predictors, and child anthropometry. A total of 14,514 households were interviewed, of which 9,162 were rural households and 5,352 urban households. The research method employed in this study involves the construction of a composite index of social class from six indicators namely, education, dwelling ownership, heads of cattle, modern household items, main source of cooking fuel and type of toilet facility. Following this, logistic regression procedure is applied to measure the influence of social class on malaria, a proxy measure for the dependent variable health status. Marital status and personal hygiene are examined together with social class as the predictor variables, while sex, age, place of residence and ecological zone, are introduced as the control variables. The study reveals that social class has no influence on the incidence of malaria. On the other hand, marital status is seen as a very important predictor of malaria.

## **8. Perception and Attitudes of Teenage School Drop-out Mothers in Rural Botswana Towards HIV/AIDS**

Lesego T. Chalashika

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There is a high incidence of teenage pregnancy in many countries of Sub-Saharan Africa. In Botswana teenage pregnancy contributes to some 30-35% of the total fertility. Of more concern is the fact that these pregnancies occur mostly among secondary school girls. Girls who become pregnant have limited opportunities to complete their education after childbirth, which tends to ruin the girls' chances of developing a good career. An in-depth survey is conducted on a purposive sample of returning school dropouts in two public schools in the village of Mochudi in Botswana. First, the study attempts to describe the situation of pregnant students, their motherhood as well as the social environment in which they live with a view to establish the socio-economic and cultural factors that influence their pregnancies. Second, the study highlights student perceptions and attitudes towards the HIV/AIDS pandemic and related sexually transmitted infections, given the fact that school drop-outs continue to soar even though the country experiences the highest prevalence of HIV/AIDS in the world today. This is despite the widespread Information Education and Communication programmes targeting school-age population. Third, the paper attempts to assess the effects of pregnancy and motherhood on the returning students. This can help to identify policy measures that can be put in place to facilitate the rehabilitation of such girls back into the school system. The methodology employed is qualitative, using in-depth interviews and focus group discussion. For comparative purposes, provision is made to interview the counterparts of these school drop-outs who go to English medium private secondary schools in the city of Gaborone, where cases of pregnancy related drop-outs are very minimal, if not non-existent. This approach is based on the assumption that reality, perceptions and understanding of the students cannot be divorced from their upbringing and social environment.

## **9. Population Crisis in Sub-Saharan Africa: The Case of Botswana and Ethiopia**

Hadgu Bariagaber

Department of Population Studies, Faculty of Social Sciences  
University of Botswana

Sub-Saharan Africa, consisting of 46 countries (excluding 5 North African countries and small Islands), has some common demographic and socioeconomic problems but differs in many aspects as compared with the so-called Third World Countries. It is sparsely populated as related to South East Asia; less urbanized compared with Latin America and has been experiencing the slowest rate of economic growth, which was as low as 1.8 percent during 1980-1992. During the same period, countries that performed the lowest were Zambia, Ethiopia and Rwanda and others that performed the highest included Botswana, Mauritius, Lesotho and Chad. The Sub-Continent has been experiencing rapid population growth since its emergence after the Second World War. Its population size has increased from 181 million in 1950 and jumped to 793 million in the year 2000 and is estimated to reach 1.5 billion by the year 2020. The Sub-Regional growth rate ranges

between 3.0-3.6 percent for East Africa; 3.3-3.5 for Middle; 3.3-3.8 for Southern and 3.2-3.3 percent for West Africa.

The high fertility performance, with a TFR 6.7 for East Africa; 6.0 for Middle; 6.8 for West and 4.7 for Southern Africa, accompanied by moderately declining mortality rate in the 1990's, contributed to youthful population and high growth potential. This high population growth has not been commensurate with the low pace of social and economic development in most Sub-Saharan African countries. Even after the introduction of population policies, there has not been any evidence of significant harmonized growth between population and development. In spite of all efforts of implementation of the Global Recommendation of the "Structural Adjustment Programmes" and the "Social Dimension of Adjustment Programmes" for social, economic, and environmental management and political democratization and trying to influence the demographic factors through various implicit and explicit Population Programmes and Projects, the Sub-Continent couldn't break the "Vicious Circle of Poverty".

Besides, since African Society is characterized by familial burden-sharing relationship, the effects of the HIV/AIDS have been felt in all segments: individual, household, community and national levels. The pandemic and its intimacy with other "opportunistic illnesses" and STD's, appears to spread quickly with no sign of slowing down, with a narrowing trend in the gap between urban and rural prevalence rates. Every Sub-Saharan African country has been experiencing the pandemic in varying degrees and dimensions. For example, the expectation of life for Ethiopia is estimated to decline from 51 years in 1998 to 41 years in the year 2010 and for Botswana, it is estimated to decline from about 62 years in 1998 to 38 years in the year 2010, jeopardizing the modest improvement in the health sector since 1970's. In view of the high rate of population growth potential and unemployment, accompanied by meager income level, the prevailing socio-economic poverty and backwardness, and political turmoil, the Sub-Saharan African Nations couldn't even address the major and longstanding health problems and manage the economic hardships, environmental degradation, and civil wars and conflicts and the consequential increasing refugee problems. The paper elaborates the above major components of the crisis, taking Botswana and Ethiopia as contrasting case studies.

## **10. Mortality Among Long-term Care Residents with Dementia: The Influence of Care Quality**

R. Colin Reid  
University of Victoria

This study assesses the effect of care quality on the risk of mortality among long-term care residents with dementia. Data were drawn from the Intermediate Care Facility Project, conducted by the Centre on Aging, University of Victoria. The study involved 510 residents in 77 facilities throughout British Columbia. Mortality data were obtained from BC Vital Statistics for the twelve-month observation period. Care quality was measured along five dimensions: physical environment; non-use of restraints; staff education and training; flexibility of care; and pre-admission and admission procedures.

Data for these dimensions were collected at admission and again after twelve months. Given the hierarchical and longitudinal nature of the data, analyses were undertaken using a mixed model involving hierarchical linear modeling and survival analysis. Results show no relationship between care quality and risk of mortality during the period of observation. A discussion of the meaning of care quality in relation to mortality follows. It is concluded that measurement of the concept “quality of care” requires substantial refinement, and, in concert with other researchers in this area, that care quality will be found to have some effect on mortality once measurement of these concepts has evolved to a higher level.

## **11. The Anchoring of American Families to their Homes and Neighbourhoods**

Darcy W. Hango, Ohio State University  
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Longitudinal data from the US National Longitudinal Survey of Youth linked mother-child files are combined with data from the 1990 US census to assess the salient factors that predict mobility between 1988 and 1994. Rossi’s (1955) pioneering work established that families move because of key life cycle and demographic factors such as age, marital status, and the presence of children. More recently the work of South and Crowder (1997a, 1997b) South and Deane (1993), and Massey, Gross and Shibuya (1994) suggest that, in addition to family migration in the United States being influenced by various life cycle factors, it is also affected by the racial concentration and/or the poverty level of the neighbourhood in which a family lives. For example, black families are less likely than white families to leave poor neighbourhoods, and more likely to leave non-poor ones.

Specifically, this paper is part of a larger project looking at how neighbourhoods affect children, and how family migration may act as a mediator between neighbourhood and child well-being. The broader premise of this project draws heavily on Elder’s life course perspective that emphasizes the importance of continuity and change during the life span, as well as on the importance of cumulative life events (Elder 1995). Residential moves in childhood may serve as markers for upward family social mobility. In addition, the life course framework also recognizes the importance of human agency and the notion of “linked lives”. Elder (1998) suggests that parents make choices and engage in effective adaptations within available options and constraints that best serve the interests of their family. One such adaptation for greater social mobility is to move to a more prosperous community/neighbourhood, or to a better home. The choices parents make impact upon their children such that their lives are ultimately linked.

Thus, for purposes of this project the specific unit of analysis is children within families. The sample is essentially composed of American children age one to eight in 1988 who are assessed until they are age seven to fourteen in 1994. The NLSY linked mother-child files contain rich demographic, socio-economic, and other salient household factors relevant for studying residential mobility. In addition, my employee status at the Center for Human Resource Research has allowed me access to the geographic identifier

information of each respondent (at the level of the census tract). This allowed me to merge 1990 US census information with individual level information by census tract.

## **12. Social Policy Reforms and Daughters' Schooling in Vietnam**

Danièle Bélanger and Jianye Liu  
Department of Sociology and Population Studies Center,  
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Over the past 15 years, Vietnam has undergone dramatic social and demographic changes. Prior to the transition to a market economy -initiated with 'doi moi' in the mid-1980s, education and health care were subsidised by the State. As a result, education was nearly universal and life expectancy high, considering the low per capital income of the country. But the State has gradually withdrawn from public services and user-fees have been introduced over the past decade, putting more financial pressure on families. In parallel to these changes, Vietnam's demographic transition took place, with fertility declining from 4.8 in the mid-1980s to 2.3 in 1997. In spite of this rapid decline, son preference has been identified as a factor slowing down fertility decline. As in other countries of the region, the demand for children has declined while the demand for sons remains high. Given these important contextual elements, this paper examines girls' schooling. Our hypothesis is that girls' schooling is vulnerable due to recent policy changes and the higher status of sons over daughters. Our analyses use the 1997-98 Living Standards Living Survey conducted by the World Bank and the Vietnamese Government. We focus on the schooling of children aged 11 to 18. Our unit of analysis is the child and our sample includes 5,319 boys and girls. We use a logistic regression to examine the factors affecting school attendance at the time of the survey.

We ran our model for all children and separately for boys and girls. Sex remains a significant variable of school attendance, after the control of independent variables. Results for girls only suggest that girls' schooling is sensitive to number of siblings, family structure, parents' work, parents' education and region of residence. In contrast, boys' schooling is not affected by most factors included in our model. The household socio-economic group is significant for both boys and girls, indicating that socio-economic differences affect children's probability of attending school, regardless of their gender. In the conclusion, we discuss daughters' vulnerability and the problem of the increasing gap between the rich and the poor. If Vietnam wants to maintain its high achievement in the realm of education, policies should protect both the poor and female children.

## **13. Cervical Cancer Mortality by Income in Urban Canada From 1971 to 1996**

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The reduction of socioeconomic inequities in health is an important aspect of population health in Canada. We examined the overall trend of cervical cancer mortality, as well as the rate differentials by income quintile from 1971 to 1996, based on death data for urban Canada coded to census tract through postal code. Our results showed a decline over the entire 25-year period in cervical cancer mortality per 100,000 (from 6.1 to 2.3) accompanied by a decrease in rate ratios (poorest over richest quintile, from 2.7 to 1.6) and rate differences (poorest minus richest, from 5.3 to 1.1). Among the poorest neighbourhoods, the rate per 100,000 declined from 8.5 in 1971 to 2.9 in 1996 (-5.6) while in the richest neighbourhoods, it declined from 3.2 to 1.9 over the same period (-1.3). The diminishing disparity in rates may reflect the differential impact of cervical cancer screening programs. To further reduce cervical cancer mortality rates, it may, however, be necessary to target high-risk women who are not yet being reached by the screening programs. We also provide an overview of the cervical cancer patterns in selected countries as a comparison.

#### **14. A Study of Extramarital Relations in a South Indian Village**

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Research on the study of extramarital relations in India is lacking, as this has been a “taboo” topic. While existing research has identified several social, political and cultural barriers that hinder collecting information on extramarital relations, to date, no study has been conducted in the state of Karnataka. Using a combination of methods, the extent of extramarital relations in a village in Northern Karnataka is described and many insights are provided to substantiate the prevalence of such relations. The analysis of the data suggests that at least one in four eligible adults are involved in an extramarital relationship in the village. There are variations not only by age and sex, but also by socioeconomic factors. There are a variety of reasons provided for the pervasiveness of extramarital relations. The paper concludes with implications for intervention programs in the face of the AIDS epidemic and identifies questions for further research.

#### **15. Immigration and Low-income Trends in Canada, 1980 to 1995**

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Low income, or poverty, and the economic performance of immigrants are two important social issues in Canada and each has separately stimulated a substantial body of research literature. Yet few studies have paid attention to the changing patterns of low income among immigrants and the impact of immigrant-related low income on low-income trends in Canada.

Based on census micro-data (20% sample) for 1981, 1986, 1991 and 1996, the present study examines the low-income trend among immigrants at the national, provincial and census metropolitan area level. Using a simple accounting approach, we explore the impact of immigrant-related low income on the growth of the low-income population in Canada. Finally, we evaluate the extent to which changes in the composition of immigrants in terms of source countries and other socio-demographic characteristics contributed to the low-income trend among immigrants. We show that the gap in low-income rates between immigrants and the Canadian born increased continuously between 1980 and 1995. Immigrants and the Canadian born had very similar low-income rates in 1980. Between 1980 and 1995, the low-income rate of the Canadian born remained relatively stable, while the low-income rate among immigrants increased, especially in the 1990s. Consequently, the low-income rate of immigrants was about 40% higher than that of the Canadian born by 1995. The rise in immigrant-related low income accounted for close to half of the increase in the size of Canada's low-income population between 1980 and 1995. In particular, recent immigrants (those who arrived within 10 years) accounted for about 34 percent of the increase in the size of Canada's low-income population.

The rise in low income among immigrants could result from changing characteristics of immigrants or changing macroeconomic conditions. Our results indicate that only about 10 percent of the increase in the low-income rate among immigrants is associated with the changes in their composition in national origins, recency of migration, education, language, age and family structure.

## **16. Historical Trends in the Patterns of Time Use of Teenagers: Canadian American Comparisons**

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The literature on the transition to adulthood has documented the growing fragmentation and individualization of individual trajectories (Shanahan 2000). From a historical perspective, the transition from school to work, the transition to independent living, and the transition to cohabitation or marriage, have all been postponed and no longer follow a strict normative script (Buchman 1989). While several of these transitions occur when young people are in their 20s or even 30s, the teenage years are germane to these subsequent transitions. And while numerous recent studies on the historical changes in the transition to adulthood have focused on trends in young adulthood (Rindfuss 1991), fewer have examined the trends in "teen-hood". In this paper, I ask the question of: What have been the changes in the patterns of time use of adolescents since the 1970s? Are they investing more or less time in school and other human-capital building activities today as compared to 30 years ago? Are they spending more or less time with their parents? Are they devoting more or less time to socializing with peers? Are their lives more or less structured than they were in the past?

To answer these questions, I use time use surveys carried out in Canada and the United States since the 1970s. Time use surveys are wonderful windows into the world of teenagers as they record information on the type of activities that they carried out, the duration of each activity, with whom the activity was carried out, and where. Thus, time use surveys provide richer information on adolescents' lives than do other types of cross-sectional surveys. Since the 1970s, Canada and the United States have both carried out five-time use surveys, with the latest one having been carried out in 1998. The diary instrument used in all these surveys is highly comparable, thus providing a very rich historical data set (Gershuny 2000).

The analysis presented in this paper is restricted to teenagers aged 15 to 17 years old (note, however, that not all surveys covered this age group). It examines trends in the allocation of time to some major activities such as school and homework, paid work, watching television, socializing with friends, etc. The analysis also examines trends in with whom the activities are carried out, namely family members and non-family members. The results are expected to bring evidence as to whether or not the way teen-hood is experienced, in terms of allocation of time, has changed over time.

### **17. Stationary Population as Vision for the Future: An Exercise in Normative Projection**

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No longer do we speak of the *stationary state* dear to John Stuart Mill and many economists prominent in the second half of 19<sup>th</sup> century. Nor, hardly do we make any reference to *zero growth* population fashionable in the 1960s when the rapid population growth, both in developing and developed countries, has been seen as serious threat to world's ecosystem. Since then, the population growth has slowed down considerably in the Third World, while in some developed countries growth came not only to a halt but a real or virtual population implosion is possible in the near future. The underlying factor of the demographic deceleration is obviously the sharp and sustained decline in fertility. Around six births per woman was the norm of the traditional demographic regime and close to three-children was the norm of the post war prosperity in Europe and North America, according to Norman Ryder and Charles Westoff. Many expected the birth rate will settle somehow at the replacement level of two births per woman. To no avail, since about 1975, the fertility rate has settled at the sub-replacement level. A rate closer to one child rather than two children seems to emerge as a norm. More countries, some still economically lagging, join the growing cohort of societies with a sub-replacement fertility. If left to its own device, the sub-replacement fertility seems to be an irreversible process. So the concern of *ever-growing* population is replaced by the concern of *ever-diminishing* population. Some bank on immigration but such an option is not without problems. It is clear that a continuous, large scale immigration to a country whose population no longer reproduces itself is bound to radically change its cultural and ethnic composition with potential consequence for its national identity and social cohesion. So, maybe it is time to revisit the concept of stationary population as theoretical proposition

and, in the longer run, maybe even as a policy option. The virtue on the concept is that it places a lesser demand on childbearing performance of a modern consumer-oriented society, on the one hand, and lessens the need for a sustained large scale migration. (While a generous pro-natalist policy aiming at producing one full additional child may be beyond the means of economy, a third or a quarter of a child may be a realistic expectation. The shortfall may then be compensated by immigration). Such a vision, if attainable, could alleviate concerns for the national survival while allowing for a better integration of a smaller and more selective immigration.

The first part of the paper will be a brief review of the literature on the subject. This will be followed by developing theoretical and policy rationales, such as referred to in above paragraphs. Then, simulation will be performed for Canada to illustrate the combination of (sub-replacement) fertility and immigration levels required in order to achieve stationary population in the long run. What we propose here is an exercise in what may be called *normative* projections. With the goal being the stationary population, what does it take in terms of fertility and immigration to attain it? The fundamental assumption is that in Canada, a below-replacement fertility regime is inescapable. A generous pro-natalist policy may move fertility up by a small amount (we will be looking at the payoff of some of the pro-natalist policies in Canada and elsewhere to demonstrate the point) but under the best conditions, an increase in fertility to the replacement level is unlikely. So for the balance, in order to achieve a zero growth (in the long run), the country would have to rely on immigration.

### **18. Political Dimension of Social Cohesion and the Family: Analysing the Link Using the National Surveys on Giving, Volunteering and Participating**

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This study examines the effects of family and community attachment on pattern of civic engagement (through voting, giving, volunteering, and participating) of the young, the adults, and the elderly. This uses data from the 1997 and 2000 National Survey of Giving, Volunteering and Participating (NSGVP), which collected information on personal and family variables such as age, sex, household size, marital status, and presence of children. The effects on political participation of factors such as parental volunteer work and the length of stay in the community (used as indicators of social capital) are examined. The study makes use of a life course perspective on the assumption that the amount of time, motives, and nature of giving, volunteering, and participating vary according to the life stage of individuals.

### **19. Lagged Effect of Fertility Response to Childhood Mortality in Sub-Saharan Africa**

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Many developing countries have undergone a remarkable demographic change since the 1950s, experiencing unprecedented decline in mortality and in most cases, a significant transition to controlled fertility. In sub-Saharan Africa, however, fertility remains high and despite the extensive social scientific research, there are still unanswered questions regarding the persistence of high fertility in the region.

Although fertility behaviour depends on a multiplicity of factors, childhood mortality is regarded as one of the most important. The effect of declining childhood mortality on fertility occupies a central place in demographic research. Within the framework of the classical demographic transition theory, for example, declining childhood mortality is perceived as a significant impetus for fertility decline. It has thus been recognized that policies and programs aimed at reducing fertility in the developing world would be more effective if parents are confident that the children they bring forth would survive into adulthood. However, while the theoretical pathways through which infant and child mortality affect fertility are well understood, the empirical evidence has been inconsistent, particularly the long term effect. While the short-term effects of fertility response to childhood deaths are explained through physiological factors, not much has been done on the lagged effect. This study contributes to this effort by examining the lagged effect using DHS data from Ghana and Kenya. Specific questions to be addressed are: What are the long term implications of childhood mortality on reproductive behaviour? Does the death of the first child, for instance, affect the risk of a higher order birth?

## **20. Double Jeopardy: Violence Against Immigrant Women In Canada**

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Using a theoretical synthesis based in Nested Ecological Theory, the study fills a gap in the literature through an investigation of the prevalence and causes of violence against immigrant women in Canada. Based on a representative sample of 7,115 women, the results show that immigrants from developing countries have the highest prevalence of violence against women. The analyses demonstrate that several variables operate differently in the production of violence for immigrant women from developed and developing nations. However, the key difference in explaining the higher prevalence of violence among those from developing countries is the sexually proprietary behaviour exhibited by their partners. The results further show that sexual jealousy interacts with high female education and low male education levels in the prediction of violence among immigrant women from the developing countries. The paper concludes with a discussion of the results and their implications.

## **21. Maternal Morality in Nepal: Unraveling the Complexity**

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Maternal mortality has, recently, been recognised as a public health problem in developing countries. The situation of maternal mortality in Nepal remained unexplored and vague until the early 1990s. A few research questions on maternal mortality were included for the first time in the 1991 national level survey of Nepal Fertility, Family Planning, and Health Survey (NFHS). By using 1996 Nepal Family Health Survey, this study discusses the maternal mortality situation in Nepal and analyses the differentials in maternal mortality by place of residence, region, ethnic and religious groups, age at death, and parity. Almost 26 % of deaths of women in reproductive age is accountable to maternal causes in the country. Logistic regression analysis shows 'ethnicity,' 'age at death,' and 'number of births' as strong factors affecting women's mortality due to maternal causes. Being a Mongoloid woman and a mature in age woman were found to be advantageous in lowering maternal deaths. It is also indicated that women have high risk of dying after the first birth. A number of recommendations for policy implications are suggested to help improve women's health and consequently to lower maternal mortality.

## **22. Who is Worried About One's Future in Old Age?: Low Fertility and Old Age Support in China**

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China's population policy has been remarkably successful in lowering fertility. In a record period of 20 years, the demographic transition was completed. As a result, population aging is a salient social and demographic issue. Yet, as a developing country, China still has no comprehensive social pension and health care system. The traditional family-based system of old age care has been eroded because of two reasons. First, the coercive family planning policy limits the family size, and parents do not have enough children to support them in the future. Second, Western life style and culture, which has a strong influence since the transition to a market economy and the opening of the country, makes increasing numbers of young couples prefer to establish a nuclear family rather than co-reside with their parents. Old age security has become a serious social issue. In this paper, people's attitude towards their future as elderly is examined. More specifically, we use data from a question asking adults whether they worried or not about their future in old age. The data used are from the 'Family Planning and Women's Status' research project, which was implemented by the China Population Information and Research Center and the U.S.A. Family Health Institute in 1996. We focus on respondents near the end of their reproductive and childbearing ages, that is adults 35 years old and over. We examine whether the number of children people have is related to their attitude towards their own future as elderly. We use a logistic regression to study what social, familiar, and individual conditions might determine people's attitude towards

their old age support. We argue that socio-economic level, family planning policy, sex, age, family income, and education level are all key indicators that strongly affect people's attitude to the old age support. Based on our results, some policy issues about old age security are discussed in the conclusion.

### **23. An Alternate Strategy for Generating Censal Estimates**

Ron Lachapelle, Statistics Canada

Don Kerr, Department of Sociology and Population Studies Centre,  
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D. Morissette, Statistics Canada

The errors of closure associated with Statistics Canada's post-censal estimates program were higher than anticipated in 1996. The current paper shows that factors beyond biases in Statistics Canada's administrative record based estimates of population growth may have been responsible for this increase, at least at provincial level. It has been suggested to use a composite estimator to reduce the errors of closure. Such composite estimates could combine direct estimates of census net undercount (from coverage studies) with alternate demographic based estimates of the extent of coverage error.

### **24. Religion and Fertility in India - Experience of Two States**

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This paper explores fertility differentials between two major religious groups in India – Hindu and Muslim employing the latest National Family Health Survey conducted in 1999. Andhra Pradesh in the South with considerable Muslim population and Uttar Pradesh in the North with similar population composition are examined in the study. The parliament in India recently passed legislation freezing the number of seats at the 1971 population level in an effort to address that having more population numbers does not really give more seats in the lower house. However, religion continue to play a dominant role in family planning efforts and urban areas are more likely to show demonstrated differences between religious groups than the rural areas. The NFHS provides an excellent data set to examine these differentials at two time points – 1991 and 1999.

### **25. Population Projections of Registered Indians, 2000-2021**

Ravi Verma, Shirley Loh, Margaret Michalowski, Annette Vermaeten

and Pierre Gauvin  
Statistics Canada and Department of Indian Affairs and Northern Development

The second updated population projections of the Registered Indian population for Canada and regions were prepared by Statistics Canada for the Department of Indian Affairs and Northern Development. The projections were produced for a 21-year horizon (2000-2021) and for four scenarios, namely high intra-regional migration, low intra-migration, average of the two, and zero migration. The assumptions on the other components of growth, fertility, mortality, Bill C-31 reinstatements, miscellaneous additions and status inheritance, are the same across the four scenarios. The adjusted 2000 population estimates were used as the base. The base population was taken from the Indian Register and adjusted for the late reporting and underreporting of vital events. The purpose of this paper is to present the component assumptions used in the projections and major projection results. This paper will also discuss the non-status on-reserve projections and the relationship that this population has to the Registered Indian population.

## **26. A Comparison of the Labour Market Entry of Immigrant, Refugee, and Canadian-born Youth in Canada**

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This presentation compares the first jobs and initial labour market experiences of immigrant, refugee and Canadian-born youth. While much is known of the characteristics of immigrant and refugee youth when they first enter the country, little is known about what happens to them once they become adults. What are their labour market experiences? Are they similar, better or worse than youth born in Canada? This presentation focuses on their first jobs in Canada. The main objective of this study is to gain a better understanding of their initial labour market experiences, as it is a crucial aspect of integration for which there is little information. Data for immigrant and Canadian-born youth are obtained from the 1997 Labour Force Survey and information for refugee youth was collected in the “Resettlement of Refugees in Alberta, 1992-1997” project (Abu-Laban, Derwing, Krahn, Mulder, and Wilkinson, 1999). As there are newcomers and native-born Canadian youth involved in this research, two research literatures will guide the data analysis. The school-to-work transitions framework supplies indicators such as educational attainment, gender, and family socioeconomic status, while the immigration/integration literature provides such indicators as years in Canada, age at arrival, appropriate grade placement, ethnicity, and refugee camp experience. This research is the first phase of a project on the labour market transitions of refugee youth, funded by the Metropolis project.

Previous research into the occupational aspirations of these three youth groups indicates that many of their occupational aspirations overlap, but because their educational attainment differs, they are likely to have very different labour market outcomes.

Furthermore, some of the theoretical frameworks used to examine the occupational attainment and occupational aspirations of Canadian-born youth simply cannot explain the experiences of immigrant and refugee youth. In the school-to-work transition research, for example, hallmark variables such as family income and father's occupation, do not have significant effects on the multivariate analysis of the occupational aspirations of refugees despite their strong influence on Canadian-born and immigrant youth. Does this trend continue their first jobs are examined? The immigration/integration literature also fails to explain the transitions of refugee youth given such factors as English language ability and age at immigration do not have a significant impact on educational attainment and occupational aspirations. Will this pattern apply in the analysis of first jobs for refugee youth? These questions are addressed in the presentation.

There are several practical, theoretical, and policy implications that can be derived from this research. On a practical level, the findings would help front-line service providers by providing additional information about the employment-related needs of refugee and immigrant youth. Theoretically, this research aims to develop a better understanding of one aspect of the integration, as current information does not adequately account for the employment experiences of immigrant and refugee youth. On a policy level, one of the main operating assumptions of the Immigration Act is that newcomers, both immigrants and refugees, contribute to Canada's economy. It is assumed that these youth integrate and become full and functioning members of the labour market. We currently lack the ability to test this assumption. Finally, possible policy implications include the possibility of funding labour market transition programs that specifically target immigrant and refugee youth that may ease their integration into the Canadian labour market.

## **27. Who is Staying and For How Long? Re-migration of Immigrants to Canada During the 1990s**

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This paper analyses levels and structure of secondary international migration of the immigrant population in Canada. Studies conducted for mid-1980s have demonstrated significant levels of re-migration, especially among the most recent immigrants (Michalowski, 1991). In light of immigration becoming the driving force of the growth of Canadian population in the 1990s, the issue of re-migration of immigrants needs to be studied in a greater detail. The paper attempts to answer questions such as: What proportion of Canadian immigrants re-migrates to their country of origin or to another country? Is Canada used as a stepping stone on the road to the United States? Do trade agreements and opening of economies outside North America change the picture? Which groups are more likely to re-migrate? The study uses the 1981 to 1996 censuses and administrative data.

## **28. Perils and Pitfalls of Aboriginal Demography: Lessons Learned from the Royal Commission on Aboriginal Peoples Projections**

Don Kerr, University of Western Ontario

Eric Guimond, Department of Indian and Northern Affairs Canada

Mary-Jane Norris, Department of Indian and Northern Affairs Canada

Population projections are probably the most frequently requested application of demographic knowledge as requested by government and non-academic organisations. For this reason, demographers have been repeatedly contracted by government departments to generate Aboriginal population projections. This paper takes a second look at one of the most widely publicised sets of projections of Aboriginal populations, as published by the Royal Commission on Aboriginal Peoples in the early 1990s. Basing these projections on 1991 Census and the Aboriginal People Survey, considerable energy went into dealing with many of the shortcomings that have characterised demographic data on Aboriginal populations in the past. Despite this fact, after only a relatively short period more recent data on the size of Canada's Aboriginal population indicate serious shortcomings in these projections. The current paper provides a critical appraisal of these projections, which in fact applies to all past attempts to project the size and characteristics of the Aboriginal population in Canada. Of the problems highlighted include serious data quality issues, shifts in the manner in which people report their ethnicity across censuses, an absence of quality time series data on the components of demographic change, difficulties in delineating the impact of intermarriage on projected births, and considerable uncertainty as to the assignment of ethnicity in projecting births of mixed marriages.

## **29. Patterns of Knowledge of Breast Cancer and Breast Self-Examination Among Women in Botswana**

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Cancer of the breast and cervix are among the major causes of cancer related ill health and mortality among women in Sub Saharan Africa. The World Health Organization estimates that more than 40 percent of all cases of breast cancer worldwide occur among women in developing countries. However, despite its prevalence, awareness of breast cancer remains low, especially among poor women in developing countries. For a majority of women in developing countries, lack of knowledge, inaccessibility of services, cultural taboos and fear of husband's reaction are just some of the factors that prevent women from either examining their bodies or seeking appropriate services. Thus, the challenge for most developing countries is that of creating awareness about breast cancer and establishing screening programs and national guidelines on diagnosis and management of cancers. These steps will facilitate early detection of breast cancer, a necessary prerequisite for successful management and treatment of breast cancer.

Although its efficacy in reducing mortality from breast cancer remains to be empirically proved, breast self-examination (BSE) is an inexpensive health behaviour that encourages women to take responsibility for their own breast cancer detection (Mahloch, 1993).

This paper examines patterns knowledge and level of awareness and breast cancer and breast self-examination among women in Botswana, the factors associated with such knowledge and practices and their implications for early detection of breast cancer. The paper ultimately discusses the findings and their policy implications, and makes recommendations based on the findings.

### **30. Engendering family income: The case of dual-earner families in Montreal and Toronto CMAs**

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Over the past few decades, dual-earning has become the norm among husband-wife (and common-law) families in Canada. Fuelled by the increasing presence of wives and mothers with young children, dual-earners families now constitute close to one-third of all husband-wife families. Dual-earner families exhibit not only major differences in spouse's share of family income but also in the sources of these incomes. In urban social geography, little attention has been given to these differences. Based on demographic and statistical analysis at the city level, this paper focuses on these differences in the light of other socioeconomic characteristics.

### **31. Effects of Interpreter Services on Immigrants' Health Care Use**

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This paper reports findings from a study of the effects of interpreter services on health care use by immigrants. Many immigrants experience language and cultural barriers in their daily activities. The health care system is one area where language barriers can be particularly serious. The study compares health care use of a sample of immigrants who are limited English proficient two years before, and two years after, professional interpreter services were made available by the health maintenance organization (HMO) that they belong to. Data from the HMO, based in Portland, Oregon, are analyzed. The study period is from mid-1995 to August 1999. Various hypotheses are evaluated, including changes in total health care use, use of emergency and urgent care facilities, and cancellations of appointments. General implications of the findings for limited English proficient immigrants' health and health care are discussed, and recommendations are offered for responding to immigrants' distinctive health care needs.

### **32. Spatial Distribution of Suburban Ethnic Businesses**

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The analysis expands the study of ethnic economy by analyzing the spatial distribution of suburban ethnic business. Based on a unique data set from the planning department of the City of Toronto and census data from 1986 and 1996, we studied suburban Chinese business in Scarborough, Ontario. We explored the determinants of the spatial distribution of suburban ethnic business by drawing on literature from the human ecological perspective, the economic sociological perspective, and the organizational ecological perspective. Our results show that suburban ethnic business does not relate to most of the factors suggested by the human ecological perspective. The results also clearly indicate the importance of the economic sociological perspective of ethnic economy and organizational ecology in understanding the spatial distribution of ethnic business.

### **33. Are Declining Populations Sustainable?**

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“Sustainability” has been defined by the Nobel Laureate Robert Solow as, “we leave to the future the option or capacity to be as well off as we are.” That is, our capacity for happiness in the broadest sense should be undiminished in future generations. One dimension of our happiness is material prosperity- having enough food, fuel, and other things based on natural resources. In this, we have grown generally better off over many generations and we can reasonably expect this to continue into the future. Another important dimension, however, is that there must be people around in the future to enjoy this happiness. What value is it to command great wealth -- including of course environmental wealth of pure air and water – if there is nobody to enjoy it? To the extent our numbers drop our capacity for happiness drops. We will argue, therefore, that one of the greatest threats to sustainability is the below-replacement fertility of developed countries.

### **34. Historical Trends in the Patterns of Time Use of Seniors in Canada Since the 1970s**

Charlemagne Victorino, University of Calgary  
Anne H. Gauthier, University of Calgary

In this paper, we examine trends in the patterns of time use of seniors in Canada since the 1970s. In particular, we ask the question as to whether today's seniors devote more, or less, time to productive activities than 30 years ago, and whether they spend more, or less, time alone. Our inquiry is motivated by two claims: the claim that today's seniors are not actively engaged in "active aging" (OECD 2000), and the claim that there has been an increasing tendency for people to be pursuing activities on their own, the so-called "bowling alone" effect (Putnam 2000). In this paper, we use data from a series of time-use surveys carried out in Canada since 1971 to empirically test the validity of these claims. Using both descriptive and multiple regression analyses, our results suggest a remarkable stability in patterns of time use of seniors. Today's seniors retire earlier than in the past and live longer, but the resulting lengthening of the post-retirement period has not significantly altered the patterns of time use of seniors.

### **35. Dual Model of Care: Complimentary and Conventional Medical Use by Older Adults with Chronic Illness**

Kristine Votova  
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The purpose of this paper is to quantify and characterize Complimentary and Alternative Medicine (CAM) use for older Canadians with chronic illness and to analyze the extent to which these CAM users also use the conventional medical system. An exploration of concurrent utilization rates over time using the National Population Health Survey (1994-1996-1998) will contribute to a better understanding of health care trends for older adults. For many, chronic illness management begins within the conventional medical system. Some older adults stay within the mainstream, others however turn to CAM creating a dual model of care: concurrent use of CAM and conventional systems. Network models propose that an interaction between network ties (strong vs. weak) and the illness career are strong influences on which model of care the individual utilizes. In all likelihood, the illness context (pain, illness duration and functional limitations) is a better predictor of CAM use than network characteristics due to the variable nature of many chronic illnesses. Findings lend support for the belief that the illness context predicts CAM use, despite substantial socio-demographic differences between CAM users and non-users. A number of additional associations with CAM were also uncovered in the quantitative and qualitative components of this paper. The results are discussed in terms of their implications for a dual model of health care.

### **36. Trends in the Occupational and Earnings Attainments of Women Immigrants to Canada, 1971-1996**

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In response to the early work of Porter (1965), a large research literature in sociology has accumulated on the occupational and earnings attainments of Canada's immigrant population. However, much of that research is based on data collected in the 1970s or early 1980s and is now seriously dated in view of the shifting country of origin composition of immigrants to this country combined with dramatic changes in the Canadian economy over the past three decades which saw the decline of manual work and the rise of the service economy, as well as the entry of women into the labour market in unprecedented numbers. As well, with some exceptions, this literature concentrated mainly on men. Using a data file created by merging public-use microdata files from Censuses of Canada between 1971 and 1996, we first examine the experience of a female immigrant cohorts as they age to determine the extent to which the effects of ethnicity on occupational status and earnings change over the careers of women age 20 to 29 immigrating to Canada in the years prior to 1971, 1981, 1986, 1991. Second, we study changes in country of birth effects on occupational status among women aged 20 to 29 immigrating prior to each of the five census years to estimate the consequences of labour force changes for their opportunities in Canada as well as the effect of growing numbers of visible minority immigrants from less developed countries. In both cases we focus particularly on the labour market advantage of being educated in Canada compared to being educated in the country of origin. Using this design, which holds cohort constant in the first instance and age constant in the second, we are able to separate age, period of immigration, and cohort effects on occupational and earnings attainment. Models are estimated using OLS (in the case of earnings) and logistic regression (in the case of occupation) methods and include controls for educational level, language ability, work experience in Canada and abroad, marital status, number of children, size of place. We also use Heckman-style methods to adjust for any sample selection bias introduced by using only currently employed women in our models. Results suggest that Canada's "vertical mosaic" is largely a system of ethnic inequality among adult immigrants educated before arriving in Canada.

### **37. The Racial/Ethnic Distribution of Depression: Moderator Effects of Socio-Economic Status**

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Research has shown that race/ethnicity contributes to health inequalities in Canada and other developed countries. This study contributes to this literature by investigating how

and why racial/ethnic status affects the mental health of Canadians. Using the 1996-97 National Population Health Survey (N = 70,538) and the stress process framework, we compare the psychological well-being of Canadians from 20 racial/ethnic groups. Although we find that there are significant differences in mental health among these groups, this variation is primarily attributable to differences in social structure (gender, age, education, income, employment) and social processes (social support, social involvement, social contact). However, some group differences remain even after other risk factors are taken into account. We find that Chinese-Canadians tend to enjoy better mental health than other Canadians, and Jewish-Canadians, First Nations, and Canadians with multiple ethnic origins tend to have poorer mental health. Overall, members of visible minority groups are not disadvantaged in terms of mental health. Indeed, some visible minority groups even enjoy above average psychological well-being.

### **38. Contraceptive Stratification in China**

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Coale (1973) once listed three preconditions of fertility decline: 1) when most individuals were conscious of calculating the value of fertility, 2) when most of them knew some method of birth control, and 3) when they perceived there to be an advantage to do so. One of the most important concepts implied in Coale's paradigm is the contraceptive motivation. Contraceptive motivation leads to fertility regulation. Although China has very high level of contraceptive prevalence, which makes great contribution to the Chinese fertility decline, to what extent the contraceptive prevalence is based on woman's own contraceptive motivation keeps unknown. This essay is intended to analyze Chinese women's contraceptive motivations from the national level. Based on the 1997 Chinese Demographic and Reproductive Health Survey data, two measurements of contraceptive motivation, woman's first time of using contraception and the way woman choosing current contraception, are analyzed through multivariate statistical models. The results reveal that Chinese women's contraceptive motivations are highly stratified, and women's contraceptive stratification is consistent with their socio-economic stratification. The stratified contraceptive motivations among Chinese women makes demographers rethink about the unmet need of contraception and the undergoing demographic transition in China.

### **39. An Application of the Push-Pull Model in Local Migration Estimates**

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A principal challenge in small area population estimation is to find adequate data and appropriate methods for estimating domestic migration. Tax return data collected by the Internal Revenue Service (IRS) are employed by the Census Bureau to conduct population estimates at the county level. For certain reasons, the IRS data are not available for cities/towns. As an alternative, the housing-unit method has been used by the Bureau to estimate population at the sub-county or the MCD level. However, this method requires a vast amount of information that is not always easy to acquire. Data provided by various agencies are often found to be incomplete and inaccurate. In addition, the data collected for this method do not provide any information concerning race, sex, and age. This method is especially problematic when applied to areas with a large population of minorities, immigrants, and college students. Moreover, the method is too complex to manage and too costly in time and financial resources when collecting and analyzing data on an annual basis. In preparing the 1991-98 population estimates for Massachusetts at the state and the sub-county levels, I have developed an Attraction-Model, attempting to propose a new strategy for producing local migration estimates. This model is based on the pull-push theory, which was first raised by Ravenstein. The basic idea of the model is that the migration pattern in an area is determined by the relative attraction factor in the area, which is actually a compound function of a series of push and pull factors. The pattern would vary with the annual changes in local socioeconomic environment. By an operationalization, we could measure the local migration pattern along with annual changes using the census data, annual group quarter and school enrollment data, IRS data, and other data. The IRS data would be employed as a control variable at the county level, and the other data, including group quarter and school enrollment data, would be available annually at the sub-county level. This model is capable and flexible to incorporate new information and official geographic boundary changes, enabling us to produce timely population estimates by race, sex, and age at the sub-county level in an efficient and economical manner. We can also generate estimates at the state and county levels using the bottom-up method. This method could be employed in migration estimates in all areas, especially in the New England region.