A CRITICAL REVIEW OF INDICATORS OF SOCIAL EXCLUSION

FOR THE CANADIAN CONTEXT

by

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An essay submitted to the Department of Economics

in partial fulfillment of the requirements for

the degree of Master of Arts

Queen's University

Kingston, Ontario, Canada

August 2010

Acknowledgements

I am deeply grateful to Huw Lloyd-Ellis, Caleb Sylvester, Robert Johnson, and Peggy Jarvie for their support.

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I. Introduction

Social indicators are tools for "evaluating a country's level of social development and for assessing the impact of policy" (Atkinson, Cantillon, Marlier & Nolan, 2002:1). Used in this way, indicators of social exclusion have the potential to improve the quality of life of Canadians, support Canadians in transition, and make Canada more competitive because the concept of social exclusion and the connected concept of social inclusion challenge us to think about differences in new ways (Cushing, 2003: 1). This critical literature review analyzes the existing research on constructing indicators of social exclusion, which has mostly occurred in Europe, and discusses how this research can be translated into the Canadian context.

So, what is social exclusion? In the 1960s, French politicians, activists, officials, journalists, and academics began making vague, ideological references to "the excluded". The first explicit use of the phrase is generally attributed to René Lenoir in 1974, then Secretary of State for Social Action in the Chirac Government. He used "the excluded" to refer to handicapped, suicidal, aged and infirm, young and abused, drug addicted, delinquent, and otherwise marginalized people who were unprotected under social insurance. Since then, the expression has spread across Europe, Australia, the USA and Canada and has been used in "ambiguous, evocative, multidimensional and elastic" ways (Silver, 1994: 536).

The concept of social exclusion represents a change in the scope of the multidimensional deprivation literature to include relational issues, for example, social ties or collective identities, along with distributional issues such as a lack of resources (Room, 1995; Atkinson & Hills, 1998; Burchardt, Le Grand & Piachaud, 2002b). Including relational issues allows us to improve our understanding of the causes of deprivation and our ability to analyze deprivation empirically (Sen, 2000).

Social exclusion is often defined as a lack of opportunity to participate in social, political and/or economic dimensions of society and sometimes simply as a process or state of relative deprivation in social, political and/or economic dimensions (Cushing, 2003). The former definition of social exclusion is more interesting and meaningful than the latter because it allows us to distinguish between voluntary and involuntary deprivation.

In the academic literature, the inverse concept, social inclusion, is understood simply as the opposite of social exclusion. However, among Canadian not-for-profit organizations, social inclusion means something more. For the Laidlaw foundation, which promotes youth development, social inclusion implies recognition, human development, engagement, proximity, and material well-being (Freiler, 2002). For the Canadian Association for Community Living, an organization that advocates on behalf of people with intellectual disabilities, social inclusion means citizenship, employment, families, and successful personal relationships (Canadian Association for Community Living, 2000).

Reducing social exclusion is a justifiable policy objective. Relative deprivation along one or more dimensions is undesirable because it decreases the excluded individual's quality of life (Berger-Schmitt & Noll, 2002). Lack of opportunity is undesirable because it conflicts with a minimal, relatively uncontroversial conception of social justice as equality of opportunity (Barry, 2002). Exclusion also creates externalities by limiting the number and strength of the productivity and quality of life enhancing relationships that are present in society and this is detrimental to people other than the excluded individuals. "Everyone is affected by the social and economic costs of exclusionary practices," (International Institute for Labour Studies, 1996, in Farrington, 2002).

Ultimately, it is necessary to develop indicators of social exclusion in order to provide targets and evaluate policies designed to address problems of deprivation and lack of opportunity. This critical review provides a resource document evaluating the appropriateness of various approaches to measuring social exclusion for the Canadian context. It addresses the following two groups of questions:

1. What approaches have been used to construct indices of exclusion/inclusion and to identify thresholds to distinguish those who are excluded from those who are included? What scientific, economic or political rationales have been used to select the indicators used in constructing existing indices?

2. What are the benefits and limitations of each of these approaches in the Canadian context? What alternatives are there?

To answer the first group of questions and identify what approaches have been used to construct indices or sets of indicators of social/economic exclusion and inclusion, we review the existing empirical studies from recognized academic, governmental or think-tank authors, and, where possible, identify the authors' rationales. Six studies that explicitly use the term social exclusion as defined by a person's lack of opportunity to participate in social, political and/or economic dimensions of society or by a process or state of relative deprivation in social, political and/or economic dimensions are included in this study. Studies that use the term social exclusion as a synonym for multidimensional material deprivation and do not include relational issues are not reviewed.

To answer the second group of questions, I critique all six approaches to constructing sets of indicators of social exclusion. In order to clearly understand social exclusion and structure my

critique, I use a conceptual framework for understanding multidimensional deprivation called the capabilities approach. The capabilities approach conceptualizes well-being and deprivation in terms of an individual's opportunities, and is discussed in more detail in section II. The capabilities approach facilitates the critique that identifies the benefits, limitations, and appropriateness for the Canadian context of each approach.

This critical literature review of indices and sets of indicators of social exclusion for the Canadian context is an original contribution. Comprehensive review of the social exclusion literature revealed only one existing review of social exclusion for the Canadian context. Cushing (2003) provides an overview of many of the relevant theoretical issues in a Canadian context, but does not comprehensively discuss the empirical work. Further, she writes from the perspective of the Roeher Institute, an organization which advocates on behalf of intellectually disabled people. Cushing does not explicitly discuss the conceptual framework that she uses to understand social exclusion, but the perspective of the Roeher Institute may influence it. Robeyns (2005) argues that it may be appropriate to analyze the outcomes, opportunities and preferences of people with intellectual disabilities differently from those of people who do not have intellectual disabilities since they may not have the same ability to make choices. So, Cushing's (2003) review may only be relevant to the special case of excluded people with intellectual disabilities, while the review presented here has broader relevance to the general case of social exclusion.

This review is organized as follows. Section II describes and justifies the capabilities approach. Section III contains the description and critique of each of the six approaches to constructing sets of indicators of social exclusion included in this review. Section IV concludes

with a summary of the recommendations for constructing a Canadian set of indicators of social exclusion that emerge from this review.

II. Conceptual Framework

Silver (1994) provides an early and widely cited discussion of conceptual frameworks for understanding social exclusion and proposes three paradigms: republican, Anglo-American liberalist, and Weberian/Marxist. The republican paradigm emphasizes citizenship. The Anglo-American liberalist paradigm emphasizes the individual's freedom to exchange among groups. The Weberian/Marxist paradigm emphasizes the individual's class membership.

Each of Silver's paradigms conceptualizes social exclusion in terms of a limited range of relationships. The republican paradigm views social exclusion solely in terms of the relationship of the individual to the state, without reference to relationships among individuals. Conversely, the Anglo-American liberalist paradigm focuses on economic relationships among individuals at the expense of the relationship between the individual and the state. The Weberian/Marxist conceptualization is limited to relationships among socioeconomic classes. Since social exclusion is a multidimensional phenomenon, an appropriate conceptual framework should address political, social and economic relationships (Bhalla & Lapeyre, 1997).

Researchers at the European Observatory on National Policies to Combat Social Exclusion and the European Poverty 3 Programme adopt Silver's republican paradigm as the conceptual framework for their work at an ideological level by interpreting social, economic, and political relationships as citizenship rights that should be guaranteed by the state (Berger-Schmitt & Noll, 2002). This conceptualization allows political relationships to dominate economic and

social relationships and this creates an understanding of social exclusion that is not truly multidimensional.

Other empirical researchers (for example, Burchardt, Le Grand & Piachaud (2002), Hills (2002), and Gordon et al. (2000)) have applied an alternative conceptual framework to social exclusion. This conceptual framework, called the capabilities approach, was developed by Amartya Sen in the 1980s and is summarized by Robeyns (2005). Within the capabilities approach, well-being and its inverse, deprivation, are understood in terms of an individual's substantive opportunities to achieve the particular multidimensional bundle of functionings (working, resting, being healthy, being respected, etc.) that he or she values. The individual's substantive opportunities are called capabilities.

The capabilities approach, like Silver's (1994) Anglo-American liberalist paradigm, is consistent with the liberal tradition in political philosophy in the sense that it values individual freedom. The fundamental importance that the capabilities approach places on individual freedom echoes the definition of social exclusion as a lack of opportunity to participate in social, political and/or economic dimensions of society. As mentioned in the introduction, this definition makes the concept of social exclusion more meaningful than the alternative definition of social exclusion as process or state of relative deprivation in social, political and/or economic dimensions. To illustrate the usefulness of the concept of opportunity, compare an individual who has the opportunity to be lucratively employed and chooses not to be with another who has more limited job opportunities. The former cannot be considered excluded in the same sense as the latter even if their actual earnings are the same.

Defining social exclusion as a lack of opportunity and conceptualizing it in terms of freedom also fosters the interpretation of social exclusion in a way that allows for diversity among the excluded. The capabilities approach respects the fact that different people have different ideas of what constitutes a good life and what constitutes deprivation (Robeyns, 2005). This feature of the capabilities approach is especially important given the diversity in the Canadian ethnocultural landscape. Excluded individuals would have a common subset of capabilities, but they would not all have to have the same entire set of capabilities, and they would definitely not all have the same bundle of achieved functionings.

Unlike Silver's (1994) Anglo-American liberalist paradigm, the capabilities approach does not limit the conceptualization of social exclusion to the context of economic relationships. It is a flexible framework for understanding multidimensional poverty. In fact, one critique of the capabilities approach is that Sen does not provide a fixed list of capabilities. Nussbaum (2003) argues that without a list of relevant capabilities, the capabilities approach is *too* flexible: any capability could be asserted to be valuable, including ones that have a significant negative impact on other people.

Sen does discuss various lists of capabilities that are relevant to social development, but is unwilling to commit to one list of capabilities that is invariant across social contexts. He also argues that the exact list used in any instance should acknowledge the purpose of the measurement exercise. For example, the purpose of the Human Development Index measure of well-being/deprivation is to create a basic measure of quality of life that could be easily calculated from existing statistics and that would complement the information given by GNP. (Sen, 2004)

Another critique of the capabilities approach is that it is too individualistic to be relevant for relational issues (Gore, 1997). This is refuted by Robeyns (2005), who argues that the capabilities approach is ethically individualist (individuals are the unit of moral concern) but *not* ontologically individualist. That is, the capabilities approach conceptualizes human beings as social in nature, such that societies are more than the sum of the individuals involved in them. The capabilities approach also explicitly incorporates the influence of social institutions on capabilities and preferences. Further, many relevant capabilities are relational. For instance, the capability to be respected derives its meaning from the context of social interactions.

The following diagram presents a graphical representation of the capabilities approach to understanding social exclusion. The interaction of preferences (via choice) and constraints (via capabilities) determines the actual functionings of an individual. Preferences and constraints are influenced by social factors, for example, institutions and norms, and economic factors like income and non-market productive activities as well as personal characteristics, such as ability.

Figure 1: Conceptual Framework
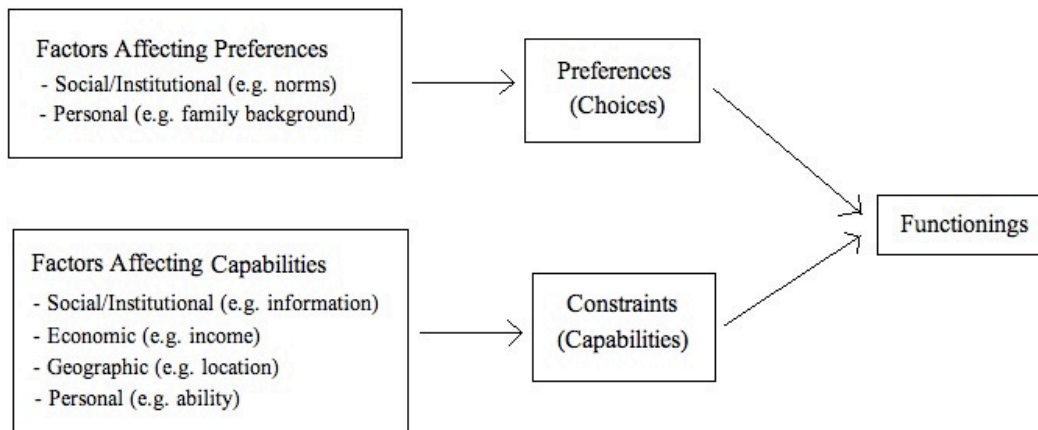
Capabilities are difficult to measure because it is impossible to confirm the existence of unrealized opportunities. However, capabilities can be understood by combining information about whether or not important functionings are achieved with information about the social, economic, and personal factors which are likely to influence capabilities and preferences.

Further, indicators of social, economic and personal influencing factors should be categorized according to whether they influence capabilities, preferences or both. This categorization is useful from the perspective of policy and program design and evaluation because it clarifies which indicators could be reasonably expected to change in response to policies or programs related to specific functionings. Take, for example, the functioning of political engagement, which could be considered relevant to social exclusion. Location could be a factor that influences capabilities related to political engagement. Living in an isolated rural area could prevent an individual from voting (in the absence of mail-in ballots). In contrast, the attitudes of people in the individual's peer group could influence his or her preferences related to political engagement.

The capabilities approach is appropriate for understanding social exclusion because it provides a comprehensive, nonhierarchical framework that encompasses political, social and economic relationships. It is consistent with the more meaningful definition of social exclusion because it values freedom and opportunity, and it is appropriate for the Canadian context because it accommodates diversity. It provides a clear basis for analyzing sets of indicators of social exclusion in that it outlines the following questions. What is the purpose of the set of indicators? What is the social context for it/them? What capabilities (i.e. freedoms or opportunities) are identified as important by this index or set of indicators? Does the information about

functionings and influencing factors contained in the set of indicators satisfactorily capture the capabilities identified as important? Are the capabilities identified as important consistent with the definition(s) of social exclusion?

III. Description and Critique of Approaches

This section describes the approaches that have been used to construct sets of indicators of individual social exclusion by recognized authors who define social exclusion as a lack of opportunity to participate in social, political and/or economic dimensions of society or as a process or state of relative deprivation in social, political and/or economic dimensions. I critique the sets of indicators from the perspective of the capabilities approach, as described in the previous section.

I begin with the Eurostat approach as described by Mejer (2000) because it is an early and influential study of potential indicators of social exclusion that could be derived from a pre-existing Europe-wide survey, the European Community Household Panel (ECHP). The approach taken by Burchardt, Le Grand & Piachaud (1999, 2002a) is presented next because it is similarly early, and also somewhat crude because it is based on a limited definition of social exclusion. The approach to constructing a set of indicators of social exclusion used in the Poverty and Social Exclusion (PSE) Survey of Britain study follows chronologically. It is a more sophisticated approach based on the definition of social exclusion as a lack of opportunity. Saunders & Adelman (2006) attempt to compare the level of social exclusion in Australia with the level of social exclusion in Britain, as reported by the PSE study, by creating a set of indicators of social exclusion which are comparable across both countries. Raileanu Szeles &

Tache (2008) and Jehoel-Gijsbers & Vrooman (2006) take a very different approach to constructing a set of indicators, using data characteristics to construct a set of indicators of social exclusion. Of these two similar studies, I discuss Raileanu Szeles & Tache (2008) first because it is limited by the use of a pre-existing data set. Jehoel-Gijsbers & Vrooman (2006) address this limitation by collecting their own survey data.

The Eurostat Approach (Mejer, 2000)

For Eurostat, the European statistical bureau, social exclusion prevents integration and full participation in society. This somewhat vague definition alludes to a conceptualization of the excluded as people who want to participate, but are unable to do so for reasons outside their control. This is consistent with the useful and interesting definition of social exclusion as a lack of opportunity to participate in social, economic and political dimensions of society. Employment is emphasized as a core constituent of inclusion because it "provides the income on which a person/household lives but also because it is the core of the social tie, and is interpreted in society as giving social identity, status, contacts, satisfaction and protection of the family from long term poverty," (Mejer, 2000: 4). The treatment of employment as constituent of social exclusion reflects a value judgment and, in fact, Levitas (2006) finds preliminary evidence from the results of the Poverty and Social Exclusion (PSE) Survey of Britain that, when not accompanied by poverty, non-participation in paid work is not associated with social exclusion.

Eurostat proposes that social exclusion can be identified by combining the labour market status of an individual with indicators showing I. the resources available to him or her; II. his or her perceived position in society; and III. his or her overall confidence/satisfaction. From a pre-

existing data source, the first two waves of the European Community Household Panel (ECHP), Eurostat researchers identified 37 potential indicators of social exclusion. As possible indicators of available resources, they identified:

- access to a telephone;
- access to a colour TV;
- access to a car;
- access to a video recorder;
- access to a microwave;
- access to a dishwasher;
- accommodation rented from a public or non-profit agency;
- less than one room per person;
- presence of shower or bath in dwelling;
- having a place to sit outside;
- highest level of completed education;
- living in a non-working household;
- living in a household where unemployment benefits are the main source of income;
- personal position on the labour market;
- coverage by medical insurance;
- hospitalization in past year; and
- membership of a club or organization.

As possible indicators of perception of social position, the Eurostat researchers identified:

- household ability to afford adequate diet;
- household ability to afford to buy new clothes;
- household ability to afford to keep home adequately warm;
- household ability to afford to have friends or family over for a drink/dinner;
- household ability to afford a week holiday away from home;
- subjective shortage of space, inconveniences from humidity;
- inconveniences due to rot;
- perceived risk of crime or vandalism in the area;
- self-reported health status;
- limitations in daily activities dues to a chronic health problem or disability;
- frequency of contacts with family of friends;
- frequency of contacts with neighbours;
- household ability to "make ends meet";
- household ability to pay scheduled utility bills; and
- household ability to save regularly.

As possible indicators of overall confidence and satisfaction, they identified:

- satisfaction with the housing situation;
- satisfaction with work or main activity;
- satisfaction with amount of leisure time; and
- satisfaction with financial situation.

Many of these potential indicators of social exclusion are echoed in the Poverty and Social Exclusion (PSE) Survey of Britain. The Eurostat researchers suggest a process for selecting indicators from among the potential ones listed above, but the results are not reported by Mejer (2000) or any other author to my knowledge. The key selection criteria the Eurostat researchers propose is the association between the each potential indicator and low income. Low income is the core constituent of exclusion in that the Eurostat researchers do not consider individuals who suffer deprivation in terms of labour market status or any of the other potential social exclusion indicators to be socially excluded unless their net household adjusted for the number of adults and children in the household is less than 60% of the median in the European Community. This conceptualizes the excluded as a subset of the income poor, which conflicts with the useful and interesting definition of social exclusion as a lack of opportunity to participate in social, political and economic dimensions of society. The conflict occurs because this definition arguably implies that the lack of opportunity to participate may be for any reason, including but not limited to financial constraints. Selecting indicators based on their association with low income conflicts with even the limited definition of social exclusion as relative deprivation in social, political and economic dimensions, since it privileges the economic dimension.

Burchardt, Le Grand & Piachaud (1999, 2002a)

For Burchardt, Le Grand & Piachaud (1999, 2002a), an individual is socially excluded if he or she is geographically resident within a society and does not participate in the normal activities of citizens of that society. This is a version of the definition of social exclusion as a state of multidimensional deprivation in economic, social and political dimensions presented in the introduction section of this critical review. Burchardt, Le Grand & Piachaud choose this definition of social exclusion because of data limitations, but they justify it in two ways. First, they argue that voluntary non-participation is unlikely to be a concern when thresholds for participation are set very low. The argument that voluntary non-participation is unlikely to be a concern is a strong assumption and the distinction between voluntary and involuntary non-participation is a key consideration within the framework of the capabilities approach, which measures well-being in terms of freedom. Second, Burchardt, Le Grand & Piachaud justify the limited definition they use by arguing that even if non-participation in the political dimension is voluntary, it may still be problematic for the state. This is inconsistent with the capabilities approach, which establishes individuals, not the state, as the unit of moral concern. Burchardt, Le Grand & Piachaud acknowledge that a more useful definition would incorporate information about opportunity, but hope that the set of indicators they construct might still be useful to establish a baseline and evaluate subsequent policy impact.

Burchardt, Le Grand & Piachaud (1999) use the first five waves of the British Household Panel Survey (BHPS), 1991-1995. This data set is large, containing information on roughly ten thousand adults, and is longitudinal, facilitating the study of social exclusion over time. The

main limitation of this data set, other than its lack of information relevant to opportunity, is that institutionalized people, many of whom seem likely be excluded, are not included in the sample.

Burchardt, Le Grand & Piachaud (1999) operationalize the normal activities of society in five dimensions: consumption, savings, production, political, and social. Using their judgment and the data available in the BHPS, they construct a set of five indicators reflecting non-participation in each of these dimensions:

Dimension	Indicator
Consumption	equivalent income less than half of the mean
Savings	not an owner-occupier, not contributing to or receiving a pension, and having no savings over £ 2 000
Production	not in employment or self-employment, full-time education/ training, looking after children, or retired over pensionable age
Political	did not vote in 1992 general election and not a member of a political or campaigning organization
Social	lacking someone who will offer support in at least one of five respects: listening, help in crisis, can relax with, really appreciates you, can count on for comfort

Burchardt, Le Grand & Piachaud (1999) recognize that their five dimensions of normal social activity are interrelated, but are unable to specify the nature of these relationships. Further, they find little evidence of statistical correlation among the five indicators. So, they argue that individuals excluded according to each indicator should be considered as separate groups, rather than one combined category of socially excluded people.

Burchardt, Le Grand & Piachaud (2002a) used 1991-1998 BHPS data and dropped the savings dimension of their operationalized normal social activity because they came to regard it as a subset of the consumption dimension. Burchardt, Le Grand & Piachaud (2002a) also present

a count index of total social exclusion based on the four remaining indicators. The count index is defined as the number of indicators according to which the individual is excluded, from zero to four. Roughly 30% of the sample is excluded according to one indicator; 0.1% is excluded according to four indicators. The authors are careful to point out that this index cannot be considered a linear model of the intensity of exclusion. Being excluded according to two indicators is not necessarily twice as bad as being excluded according to one. Rather, the proportions of individuals excluded according to zero, one, two, three and four indicators gives an indication of the degree of overlap among the groups of people who are excluded in each dimension.

Clearly, the Burchardt, Le Grand & Piachaud (1999, 2002a) approach to constructing a set of indicators of social exclusion has the benefit of covering economic, social, and political dimensions of participation in society and the convenience of requiring relatively limited data. Comparable Canadian cross-sectional data is readily available in the recent General Social Surveys. However, their approach is only consistent with the limited definition of social exclusion as a process or state of relative deprivation in social, political and/or economic dimensions. In addition to this overall limitation, the individual indicators have strengths and weaknesses with respect to the outcomes they are meant to represent.

The strength of the indicator of non-participation in the consumption dimension is its simplicity. Its main drawback is that it reflects ability to consume rather than actual consumption. If social exclusion were defined as a lack of opportunity for this study, this would be a strength, but here the authors want to measure actual non-participation in consumption activity. The indicator of non-participation in production activity, while including childcare as an alternative

to paid work, discounts any other form of unpaid work that also has productive value. Additionally, retired persons may or may not be involved in productive activities, and it may be useful to capture that.

Not voting or being a member of a political or campaigning organization seems like a strong general indicator of political engagement, as long social as advocacy groups are included in the definition of a political or campaigning organization. Voting in an election for any level of government might better capture a minimal level of political engagement, but voting in the general election could be justified if there is empirical evidence of strong pairwise correlation between voting in the general election and voting in elections for other levels of government. Support is an important dimension of social relations, but further research into the correlation between lacking support and other dimensions of social non-participation would be necessary to justify measuring social non-participation solely in terms of support.

The Poverty and Social Exclusion (PSE) Survey of Britain

The 1999 PSE Survey of Britain was the first data gathering exercise motivated by specific interest in social exclusion. It was designed by a group of academic social policy researchers and funded by the Joseph Rowntree Foundation, a large non-profit nonpartisan social research organization in the United Kingdom. The PSE researchers felt that the economic policy, tax system, and benefit system reforms of the 1980s contributed to increased polarization between the rich and the poor and to 50% more households living in poverty (Pantazis, Gordon & Levitas, 2006). Subsequent redistribution by the Labour governments of the 1990s may have slowed but did not reverse these trends. This motivated the PSE research, which aimed to inform

future British social policy and facilitate the adoption of clear government targets for reducing social inequality. The PSE researchers also questioned the emphasis placed by successive governments in Britain and the rest of Europe on the role of paid work in reducing poverty and social exclusion (Pantazis, Gordon & Levitas, 2006).

The PSE researchers drew inspiration from a previous set of studies of multidimensional poverty, the Breadline Britain Surveys. They adopted the consensual method of measuring standard of living (described in the Appendix), pioneered in the Breadline Britain studies, and refocused on social relations (Pantazis, Gordon & Levitas, 2006). The PSE used data on individual socioeconomic situations from the 1998-1999 General Household Survey. A sub-sample of 1,534 General Household Survey respondents were interviewed in 1999 for a follow-up survey on poverty and social exclusion. The PSE also incorporated information about what the general population of Britain considered to be necessities from the 1999 Omnibus Survey. (Pantazis, Gordon & Levitas, 2006)

For the PSE researchers, social exclusion has four dimensions: impoverishment, labour market exclusion, service exclusion, and exclusion from social relations (Levitas, 2006 - concept and measurement of se). They developed a set of eight indicators to capture these four dimensions of social exclusion. The set of indicators is summarized in the table below and clarified and critiqued in the following paragraphs.

Dimension	Indicator
Impoverishment	PSE poor (see Appendix), equivalized income of less than 60% of the median, or reported income "'a lot below' the income needed to avoid poverty"
Labour Market Exclusion	not in paid work

Dimension	Indicator
	in a jobless household
Service Exclusion	not using three or more out of 28 services
Exclusion from Social Relations	not participating in 5 or more common social activities for any reason
	no friend or family member with whom the individual reports daily contact
	would expect "not much support" or "no support at all" in 4 or more of 7 situations: needing help because of illness; needing help with heavy household/gardening tasks; needing help looking after dependents; needing someone to take care of possessions while away; needing advice about important life changes; feeling depressed and needing to talk; feeling upset about problems with spouse/partner
	not involved in voting, campaigning, or standing for office currently or in the past three years

To capture impoverishment, the PSE researchers propose an indicator identifying those who are poor by at least one of three measures. The first measure of poverty, which we refer to here as PSE poverty, uses the consensual method of measuring deprivation (see Appendix for more detail). It is constructed by determining a set of items and activities that 50% or more of people surveyed considered "necessary", identifying those who lack those socially perceived necessities because they are unable to afford them, and establishing a threshold distinguishing those who are PSE poor from those who are not. (Gordon, 2006).

The second measure of impoverishment is an income measure: an individual is income poor if they belong to a household with an equivalent income of less than 60% of the median. Income is defined as receipts of a regular and recurring nature, from employment, self-employment, rentals, property income, and net transfers. Equivalent income calculations to take

into account the composition of the household use the PSE scale, which differs slightly from other common household equivalence scales (see Gordon, 2006: 51). The third measure of impoverishment used by the PSE researchers is general subjective poverty. Respondents are generally subjectively poor if they reported that their income was "'a lot below' the income needed to avoid poverty," (Gordon, 2006: 52). Being poor by at least one of these three measures is the PSE indicator of social exclusion by impoverishment.

The PSE indicator of impoverishment attempts to identify people who do not have the material capability of enjoying a standard of living which is perceived as minimally acceptable by others in society. Lacking the opportunity of minimum acceptable standard of living may be associated with intangible capabilities such as a dignity. A strength of the definition of the impoverishment indicator as income poor, subjectively poor, or deprived of two more items that at least 50% of the Omnibus Survey respondents deemed necessary is that it is sufficiently broad to capture people who are falling into poverty, currently in poverty, and rising out of poverty.

The PSE researchers use two simple indicators of the labour market exclusion dimension of social exclusion. The first is "not in paid work". Earlier European policy and research, including the Eurostat guidelines (Mejer, 2000) made the assumption that participation in the labour force has "intrinsic benefits in providing an arena of social contact and interaction and as the basis of self-esteem and social recognition, as well as the instrumental benefit of affording a (potential) route to an adequate income," (Levitas, 2006: 136). This argument identifies social contact, self-esteem, recognition, and adequate income as important capabilities. However, the link between these capabilities and being in paid work is weak conceptually and empirically. Many jobs are isolated, menial, undervalued, and/or underpaid; and there are many other sources

of recognition, self-esteem, and social interaction. For 25% of the adult population represented by the PSE sample, paid work interferes with social contact and the (relatively small) group of individuals who are not in paid work and not living in a poor household reports the best practical and emotional support (Levitas, 2006: 148-9). These preliminary findings suggest that non-participation in paid work, when not accompanied by poverty, may actually promote social inclusion.

There are extremely high levels of non-participation in paid work (43% of all adults) among the PSE Survey respondents. It is not clear that these people, many of whom are retired, engaged in caring activities, sick or disabled, do not have the capabilities of social contact, self-esteem, recognition, and adequate income. "In a jobless household" suffers from the same limitation, but it is a somewhat stronger indicator of social exclusion in a labour market dimension because it acknowledges intrahousehold decisions about allocation of income earning and household responsibilities.

Some people may indeed seek paid work because it represents the capabilities of social contact, self-esteem, recognition, adequate income and/or others. Among them, those who are unable to obtain paid work may be said to be excluded. A more traditional definition of unemployment, actively seeking paid work, might thus be more useful as an indicator of labour market exclusion.

An indicator which accounted for under-employment would be even more insightful because people whose paid work is not challenging or reflective of their qualifications are unlikely to be deriving self-esteem or recognition from their paid work. An indicator which identifies people who do not participate in at least one paid or unpaid productive activity which

is appropriate for their skills and qualifications would more accurately capture people who do not have the capabilities of self-esteem and recognition. The capabilities of social contact and enjoying a minimum acceptable material standard of living are more clearly captured by other indicators in the PSE set, and the set as a whole would benefit from reduced overlap among the indicators.

The single PSE indicator of exclusion in the service dimension is more complex than the indicators of exclusion in the labour market dimension. Individuals may not have access to a given service because it is not provided in the relevant area, because they are ineligible to access the service, or because the service is unaffordable. So, the PSE researchers define the indicator of service exclusion as not using three or more of the 28 services addressed by the survey because the services are unavailable or unaffordable. The set of 28 services includes those that are usually provided publicly:

- libraries;
- sports facilities;
- museums/galleries;
- bus services;
- doctors;
- dentists;
- optometrists;
- hospitals;
- post offices;
- community centres; and
- adult evening classes.

For families with children:

- childcare;
- play facilities;
- school meals;
- school buses; and
- youth clubs.

And for elderly people:

- home help;
- meals on wheels; and
- special transport.

The PSE also addressed some privately provided services:

- pharmacies;
- supermarkets;
- banks;
- corner stores;
- gas stations;
- pubs;
- cinemas/theatres;
- trains; and
- places of worship.

The PSE indicator of service exclusion, not using three or more of these 28 services because the services are unavailable or unaffordable, would benefit from application of the consensual method. This would involve determining a set of services that 50% or more of people consider "necessary", identifying those who lack those services because they are unable to afford them, and establishing a threshold. The list of relevant services includes pubs and cinemas/theatres, services which less than 30% of Omnibus Survey respondents deemed necessary, and these receive the same weight as more essential services in the current construction of the indicator. An important strength of this indicator is that by specifying that the reason for not using the services must be that they are unavailable or unaffordable, this indicator clearly shows the relationship among constraints, preferences and outcomes, allowing us to infer that individuals who are service excluded lack the capability to make use of three or more services.

The PSE researchers use four indicators of exclusion from social relations. The first is "non-participation in social activities". This is defined as not participating in 5 or more common

social activities for any reason. These common social activities are a subset of the 53 items that

PSE Survey respondents were asked if they lacked. The set of common social activities contains

all 13 activities (15 for families with children) included in the PSE Survey, both those activities

that 50% of Omnibus Survey respondents deemed necessary:

- visiting friends or family in hospitals;
- visits to friends or family;
- celebrations on special occasions;
- visits to school, e.g. sports day,
- parent's evening;
- attending weddings, funerals, etc;
- a hobby or leisure activity;
- collect children from school;
- friends or family round for a meal, snack or drink; and
- a holiday away from home for one week a year, not with relatives;

and those activities that less than 50% of Omnibus Survey respondents deemed necessary:

- an evening out once a fortnight;
- a meal in a restaurant or pub once a month;
- holidays abroad once a year;
- coach or train fares to visit family/friends in other parts of the country four times a year;
- going to the pub once a fortnight; and
- attending a place of worship.

Clearly, non-participation in five or more common social activities for any reason is not

constructed using the consensual method. As with the service exclusion indicator, the PSE

researchers did not justify the decision not to use the consensual method and it effectively

defines the excluded as those who do not participate in five or more of the activities that the

focus groups thought might be considered necessities by a majority of people. Using the

consensual method to create the list of social activities relevant for identifying deprivation in the

appropriate social context would define excluded individuals in a more convincing way: those

who do not participate in five or more activities that a 50% majority of their peers deem

necessary. This would allow public consensus, rather than small groups with no special qualifications, to identify the activities comprising the core social activities which all people should have the capability to participate in.

Non-participation in five or more of these common social activities for any reason is also a problematic indicator because it measures only outcomes rather than incorporating information about constraints and/or preferences in order to illuminate relevant capabilities. The PSE researchers justify excluding reasons for non-participation from the construction of the indicator by arguing that "the reasons people give for their (in)actions cannot straightforwardly be treated as causes. Shame is also a likely factor..." (Levitas, 2006: 150). People may also learn not to want things they are habitually unable to afford. One finding of the PSE study is consistent with this: younger people are significantly more likely than older people to cite lack of money as a reason for non-participation (p.150). Shame and learning not to want unaffordable things are important considerations in interpreting data on reasons for non-participation, but they may not be cause to uniformly discard information on reported reasons. If shame is invariant over time, then it does not significantly limit the usefulness of an indicator of social exclusion for the purpose of tracking changes over time or measuring policy impact. Panel data would allow researchers to control for unobserved individual effects like shame. With respect to the issue of learning to be poor, one response could be to control for reported reasons for non-participation for age.

The second indicator of exclusion from social relations attempts to capture social isolation. An individual is socially isolated according to this indicator if they report that they have no friend or family member with whom they have daily contact. The PSE researchers do

not give a clear rationale for selecting "no daily contact with a friend or relative outside the home" as an indicator of social isolation. Daily contact suggests a high level of intensity to the relationship. Perhaps the PSE researchers choose daily contact because, an alternative, no weekly contact with a friend or relative outside the home, would identify only just over 1% of the population represented by the PSE sample as excluded according to this indicator. However, PSE Survey provides plenty of data that could accommodate other definitions of social isolation such as reporting weekly contact with fewer than three friends or relatives outside the home. This indicator would have the benefit of reflecting more balanced social contact.

The third indicator of exclusion from social relations measures social support. PSE Survey respondents were asked how much support they would expect to receive in each of seven situations:

- needing help because of illness;
- needing help with heavy household/gardening tasks;
- needing help looking after children or dependent adults;
- needing someone to take care of possessions while away;
- needing advice about important life changes;
- feeling depressed and needing someone to talk to; and
- feeling upset about problems with spouse/partner.

The PSE researchers classified individuals as having poor social support if they reported that they would expect "not much support" or "no support at all" in four or more of the seven situations.

The act of obtaining support is a form of participation in social dimensions of society, and self-assessed social support is a good indicator of an individual's capability of participating in this way. The measurement error inherent in self-assessment is a limitation of this indicator. However, physical and emotional support is usually something that individuals must seek out,

and they are not likely to seek it out where they do not believe they will get it. So, the impact of the measurement error in self-assessed support may be minimal with respect to capturing the relevant level of social support.

The PSE researchers include self-assessed social support as an indicator of social exclusion as much for information about sense of integration and belonging as for information about actual support available. The PSE researchers assert that a feeling of belonging is an essential capability of the included. (Levitas, 2006: 143) Further, physical and emotional support may be important in enabling individuals to participate in other dimensions of society. Thus, self-assessed social support may additionally or alternatively be a factor influencing capabilities and/ or preferences. Future research could clarify this.

Finally, the fourth indicator of exclusion from social relations gauges political engagement. An individual is disengaged if s/he is not currently involved in voting, campaigning, or standing for office and has not been involved in any of these activities in the past three years. Like several others, this indicator has the limitation of only addressing outcomes, without incorporating information on constraints or preferences in order to address opportunity. A more useful indicator of exclusion from political engagement would identify those who do not vote, campaign, or stand for office involuntarily.

Disengagement, poor social support, social isolation, non-participation in common social activities, service exclusion, "in a jobless household", "not in paid work, and impoverishment make up the PSE set of indicators of social exclusion. This set of indicators does successfully cover participation in economic, social and political dimensions of society. Approximately 76% of the population represented by the PSE survey sample is excluded according to one or more of

these eight indicators. About 22% of the population is excluded according to four or more of the indicators. However, the indicators are far from independent. Being in paid work decreases participation in common social activities. The impoverishment indicator contains some information on service exclusion within the home, for example, heat and telephone service. It would be useful to investigate these relationships more fully and potentially incorporate them into the set of indicators, controlling non-participation for work status, et cetera.

Application of the consensual method to the construction of list-based indicators of social exclusion is an important contribution of the PSE study. The consensual method uses decision rules to identify capabilities relevant to measuring social exclusion that may be more inclusive and decentralized than the decision rule of applying expert judgment. Canada is geographically diverse compared with Britain, and Canadians vary significantly with respect to culture and ethnicity. In this context, a 50% majority rule for establishing consensus on the items/activities representing a minimum acceptable living standard may not be appropriate. Alternative approaches include using a larger majority to identify common items/activities, and combining demographic information with assessments of necessities to place survey respondents within an appropriate geographical and cultural group. The items included in the PSE list are for the most part general enough to be interpreted differently across cultural groups and still capture the necessities of life.

Saunders & Adelman (2006)

Saunders & Adelman (2006) assert that, at the time of publication, Australian policy makers and researchers had paid little attention to social exclusion. In their study, they attempt to

compare the level of social exclusion found in Britain by the PSE Survey to the level of social exclusion in Australia. Since the primary purpose of the study is comparison, I assume that they use a definition of social exclusion that is similar to the opportunity-based definition used by the PSE researchers, although Saunders & Adelman do not explicitly define social exclusion in their paper. The Australian data came from the 1998-1999 Household Expenditure Survey (HES), a survey which collected some information relevant to social exclusion, but whose primary purpose was unrelated.

Saunders & Adelman (2006) define a set of six indicators of social exclusion which can be constructed from both the Australian data and the PSE Survey:

- one week holiday away from home per year unaffordable
- a night out once a fortnight unaffordable
- friends/family over for dinner once a month unaffordable
- a special meal once a week unaffordable
- buys secondhand clothes most of the time
- no hobby or leisure activity because unaffordable

Saunders & Adelman consider an individual generally socially excluded if at least one of the above applies.

Saunders & Adelman selected these six indicators based on their comparability with British data. They have a relationship to the limited definition of social exclusion as a process or state of deprivation in social, political, and/or economic dimensions. However, all six of them capture primarily economic capabilities. This is not surprising since the motivation for the survey module design was to understand financial hardship not to understand social exclusion (Saunders & Adelman, 2006: 562). Not only does the Australian data set contain only information about economic dimensions of social exclusion, it does not include information that would allow for an application of the consensual method to select indicators based on a consensus that they

reference necessary items or activities. Interestingly, two of the activities referenced in their set of indicators were not considered necessary by 50% of the British survey respondents. Here, the consequence of the twin limitations of the pre-existing data set and the international comparability consideration is a very unsatisfactory set of indicators.

Raileanu Szeles & Tache (2008)

Raileanu Szeles & Tache (2008) define social exclusion as a state of multidimensional deprivation. Taking a radically different approach from the other studies critiqued in this review, they perform a factor analysis of all the deprivation variables available in the 1996-2000 waves of the Socio-Economic Panel/ Liewen zu Lëtzebuerg (PSELL) of Luxembourg. The results of this analysis identify the factors (linear combinations of variables) that explain the most variance in the data. They identify five factors in all five waves and interpret them as indicators of social exclusion. The factors are all economic ones: income, unemployment, housing conditions, affordability of living conditions, and subjective appraisal of financial situation.

Raileanu Szeles & Tache (2008) identify a sixth factor by analyzing each cross-section of the 1996-2000 PSELL data separately. For the 1997-2000 cross-sections, they called the sixth factor durable goods. For the 1996 cross-section, the sixth factor is social relations, a linear combination of responses to "Are you a member of any club, such as a sport or entertainment club, a local or neighborhood group, a party etc.?", and "Do you ever feel alone?".

The important limitation of this analysis is that the PSELL survey was not designed to gather information on social exclusion. Since the factors identified by this analysis are all economic ones and the researchers interpret these factors as indicators of social exclusion, this

set of indicators is inconsistent with even the limited definition of social exclusion as deprivation in social, political and economic dimensions. However, this study makes an interesting contribution by suggesting that data characteristics could provide the basis for defining indicators of social exclusion. Using factor analysis has the additional benefit of defining indicators of social exclusion that are orthogonal to one another.

Jehoel-Gijsbers & Vrooman (2007)

Jehoel-Gijsbers & Vrooman (2007) use an analysis similar to Raileanu Szeles & Tache (2008) to measure social exclusion in the Netherlands, but they base it on a survey of their own design. Jehoel-Gijsbers & Vrooman define social exclusion in a way that is equivalent to a lack of opportunity to participate in social, political, and economic dimensions of society. They proposed four dimensions of social exclusion: material deprivation, social rights, social integration, and cultural/normative integration and designed their questionnaire to capture them. The survey was administered to 860 Dutch households in 2003. The survey had two limitations: it covered a small sample and it was voluntary. The researchers felt there was a significant risk of selective non-response bias generating a sample where excluded groups were under-represented. So, they sampled heavily from neighbourhoods with low mean incomes and high proportions of people with low incomes, people with low education levels, and unemployed people (results were weighted to reflect this). Additionally, respondents were offered a reward of 10 euros.

Jehoel-Gijsbers & Vrooman applied categorial principal components analysis to each of the four groups of questionnaire items. Similar to factor analysis, categorical principal components analysis identifies the linear combinations of variables, in this case questionnaire

items, that explain the most variance in the data. The categorical principal components analysis of the social rights group of questionnaire items resulted in the identification of two components, which Jehoel-Gijsbers & Vrooman interpret as access to institutions/provisions and adequate housing/safe environment. The categorical principal components analysis of the 11 cultural/ normative integration questionnaire items discovered that only four of the questionnaire items, all related to trespassing the law, were consistent with each other. The results of the analyses are presented in the following table.

Dimension	Questionnaire Item	Weight
Material Deprivation	payment of fixed expenditures is very hard	0.77
	has payment arrears	0.58
	worries often/continuously about financial situation	0.77
	has difficulty making ends meet	0.88
	finds it more difficult to make ends meet than 2 years ago	0.66
	lacks consumer durables due to financial deficits	0.76
	cannot afford basic expenditures	0.80
	membership of (sports) club is too expensive	0.67
	has difficulties obtaining a loan	0.65
Social Rights: Institutions/Provisions	often treated badly by public agencies	0.86
	often long waiting periods for appointments/treatments at public agencies	0.84
	often problems with public agencies	0.81
	refused by commercial service organizations, e.g. banks	0.58
	benefit wrongfully refused or terminated according to respondent	0.71
Social Rights:	frequent disturbances in neighbourhood	0.64

Dimension	Questionnaire Item	Weight
Housing/Safety	wants to move house within 2 years	0.82
	has/expects a long search period in finding a new house	0.78
	little social cohesion in neighbourhood	0.62
	unsafe feeling in neighbourhood	0.42
	unsafe feeling if home alone	0.39
	often a victim of crime over the last 5 years	0.38
Social Participation	feels left out of society	0.53
	does not/hardly go out for amusement	0.67
	experiences lack of social contacts	0.45
	has no/few people to discuss intimate matters	0.55
	has little social support	0.72
	no/little membership of clubs, societies	0.60
	no/little diversity of social contacts	0.81
	social contacts hampered by health	0.44
Cultural/Normative Integration	false testimony is allowed if a friends faces trial	0.72
	trespassing the law is no problem if one does not get caught	0.73
	people with a paid job may moonlight for up to 150 euros a month	0.64
	people on social assistance may moonlight for up to 150 euros a month	0.62

The results reported in this table are the questionnaire items that, in linear combination, best represent the various dimensions of social exclusion, and the weights appropriate for combining them. So, for example, Jehoel-Gijsbers & Vrooman find that the best indicator of exclusion from social participation is 0.53×(feels left out of society) + 0.67×(does not/hardly go

out for amusement) + 0.45×(experiences lack of social contacts) + ... + 0.44×(social contacts hampered by health).

Jehoel-Gijsbers & Vrooman also construct a general index of social exclusion, using a nonlinear canonical correlation analysis, which also tests if the indicators they propose are appropriate. They find that the first four indicators reported above are appropriate, and further, that they are coherent with one another, providing some evidence that the first three dimensions (with the social rights dimension split into access to formal institutions and access to adequate housing and a safe environment) are indeed dimensions of the same phenomenon. The indicator for cultural/normative integration did not fit very well, suggesting either that norms around trespassing the law are not relevant to the same kind of exclusion that the other dimensions are relevant to, or that the questionnaire items do not satisfactorily capture cultural/normative integration. So Jehoel-Gijsbers & Vrooman dropped the indicator of normative integration from the general social exclusion index, instead estimating an individual's total or general social exclusion as 0.68×(material deprivation indicator) + 0.48×(housing/safety indicator) + 0.53×(institutions/provisions indicator) + 0.55×(social participation indicator).

Similarly to Raileanu Szeles & Tache (2008), Jehoel-Gijsbers & Vrooman use data characteristics to define indicators of social exclusion, and their analysis is much more convincing because it relies on a data set that was designed to capture information about social exclusion. Thus, the indicators they identify are relevant to the interesting and useful definition of social, and there is a convincing rationale for choosing among indicators which seem potentially relevant.

IV. Recommendations

From the above critique of approaches used to construct sets of indicators of social exclusion, several considerations emerge. First, the construction of a set of indicators of social exclusion for the Canadian context that accurately reflects the meaning of social exclusion will require a new, carefully designed data set. This data set would be based primarily on a new survey. A key challenge involved in designing this Canadian survey would be to acknowledge the value of difference. Another important challenge would be to design survey questions that gather the appropriate information about unemployment and underemployment. The treatment of labour market variables is a weak point of all but one (Jehoel-Gijsbers & Vrooman, 2007) of the approaches critiqued in this review. From from the new Canadian survey data, researchers would need to construct indicators of social exclusion. Statistical techniques like factor analysis and categorical principal components analysis are the only methods identified by this review that generate indicators that have clear, independent relationships among them. The following paragraphs elaborate on these considerations.

The pre-existing data sets designed primarily for purposes other than studying social exclusion used in the studies critiqued in this review do not have the scope to satisfactorily capture economic, political, *and* social dimensions of participation in society. Pre-existing data sets also do not satisfactorily combine information about constraints with information about outcomes and thus are unable to illuminate opportunities to participate. Existing sources of Canadian data also have these two limitations. Together, these limitations mean that any set of indicators composed solely of variables from pre-existing data sets will not adequately reflect the definition of social exclusion as a lack of opportunity to participate in social, political, and/or

economic dimensions of society. So, a new data set designed explicitly for studying social exclusion would provide the foundation for constructing a Canadian set of indicators of social exclusion. This data set would be primarily based on survey responses, and would require careful questionnaire design.

The PSE Survey of Britain and the Dutch survey designed by Jehoel-Gijsbers & Vrooman (2007) were both explicitly designed to gather data for studying social exclusion. Jehoel-Gijsbers & Vrooman used expert judgment alone to decide on questionnaire items. In contrast, the consensual approach taken by the PSE researchers used the input of experts, focus groups, and a sample of the general population to identify relevant variables. Canadian survey design should draw inspiration from the consensual approach of the PSE researchers because it incorporates more information that the approach taken by Jehoel-Gijsbers & Vrooman and because it is inclusive and decentralized.

Diversity is an important concern in the Canadian context. Compared with most European countries, including Britain and the Netherlands, Canada is very geographically heterogeneous. One consequence of this geographical diversity is that the lifestyles of Canadians vary extremely widely. Canada is also ethnically diverse with immigrants from all over the world making up a significant proportion of the population and a sizable minority of aboriginal peoples. This geographical and ethnic diversity is connected with cultural pluralism, and it is important to make sure that difference is valued and respected throughout the process of constructing a set of indicators of social exclusion. Valuing and respecting difference is the key challenge inherent in identifying the variables relevant for constructing a set of indicators of social exclusion for the Canadian context.

One option might be to identify geographic, ethnic or cultural groups and construct indicators of social exclusion using different variables for each. This option has the limitation of preventing analysis of geography, ethnicity or culture as risk factors for social exclusion. An additional drawback of this option is that ethnicity and culture are fluid in the sense that many people identify with more than one ethnic or cultural group. Geography is also fluid in the sense that individuals often spend their formative years in one location and choose to live elsewhere as adults. Constructing indicators of social exclusion using different variables for different geographic, ethnic or cultural groups would not have the flexibility to accommodate the fluidity of ethnicity, culture, and geography.

An alternative option is to use a majority larger than 50% of the sample group as a decision rule for identifying relevant variables. Another alternative option is to define variables, and corresponding survey questions, so that they represent general capabilities that can be interpreted differently across ethnic, cultural and geographic groups. Defining variables that correspond to general capabilities that can be interpreted differently is facilitated by the fact that the purpose of constructing a set of indicators of social exclusion is to capture deprivation (rather than conformity), so the relevant capabilities are quite basic. The variables used by the PSE researchers and by Jehoel-Gijsbers & Vrooman provide a useful starting point for this exercise.

Within the Canadian survey design, labour market variables, and corresponding survey questions, merit extra attention. Paid work may or may not represent the capabilities of social contact, self-esteem, recognition, and/or adequate income. A traditional definition of unemployment, actively seeking paid work, should be considered as a relevant variable. Variables that capture under-employment should also be considered.

One final recommendation related to survey design and variable selection merits comment. Comparisons with other jurisdictions are useful for motivating policy. Saunders & Adelman (2006) international comparability as a key consideration in choosing indicators of social exclusion. The consequence of their approach was a highly inadequate set of indicators. So, the data set for studying social exclusion in Canada should not be designed using international comparability as a key consideration. This recommendation is especially appropriate because relatively few countries have developed indicators of social exclusion and still fewer have developed adequate ones.

Factor analysis and categorical principal components analysis, two techniques that rely on slightly different assumptions but that are otherwise almost identical, generate indicators of social exclusion that have clear (orthogonal) relationships among them. Well-defined relationships among indicators make the set of indicators as a whole more informative than it would be if the relationships among the indicators were ambiguous. So, factor analysis and/or categorical principal components analysis should be used as an element of the approach to constructing a set of indicators of social exclusion for the Canadian context. However, the quality of the indicators generated via these techniques directly reflects the quality of the data set to which the techniques are applied.

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VI. Appendix: Construction of PSE Poverty Measure

Drawing on focus groups, the PSE researchers developed a list of 53 items, material goods or activities. Respondents to the 1999 Omnibus Survey were asked to indicate which items they felt were necessities that no one should have to do without. 50 percent or more of the respondents indicated that 35 items were necessary. The list of necessary items was refined in several ways. First, the PSE researchers calculated the correlation between each item and six criterion validity variables, two related to health and four related to perceived poverty. Second, they tested the reliability of each item using a classical test theory model. Items which were both unreliable and uncorrelated with two or more of the criterion validity variables were removed from the list. The PSE researchers refined the list further by testing each item for additivity, making sure that someone with a deprivation score of three would be poorer than someone with a deprivation score of two. (Gordon, 2006)

The final valid, reliable and additive deprivation index contained 29 items (compiled using Appendix 2.1 of Gordon, 2006 and Table 4.2 of Pantazis, Gordon & Townsend, 2006):

- heating to warm living areas
- damp-free home
- visiting friends or family in the hospital
- two meals a day
- fresh fruit and vegetables daily
- a warm waterproof coat
- replace broken electrical goods
- visits to friends and family
- celebrations on special occasions
- money to keep home decorated
- visits to school, e.g. sports day
- attending weddings, funerals
- meat, fish or vegetarian equivalent
- insurance of contents of dwelling
- a hobby or leisure activity
- collect children from school

- telephone
- carpets in living rooms and bedrooms
- regular savings for rainy days
- two pairs of all-weather shoes
- friends or family round for a meal
- leisure equipment
- money to spend on self weekly
- a roast joint/vegetarian equivalent weekly
- presents for friends/family yearly
- a holiday away from home
- replace worn out furniture
- a dictionary
- an outfit for social occasions

The PSE researchers used ANOVA and logistic regressions to calculate the deprivation score that maximized the differences between the PSE poor and non-PSE poor groups and minimized the within-group differences. This deprivation score, deprived of two or more socially perceived necessities is the PSE poverty threshold.