SOCIAL POLICY IN THE ENABLING SOCIETY

A compendium of supporting papers

Peter Hicks, March 2015

Peter Hicks is the author of IRPPs Policy Horizons essay, *The Enabling Society*, published in March 2015 and also available on the IRPP's website (www.irpp.org). This compendium of papers provides case-studies and supporting material for sections of the essay. It describes the supporting literature and provides a fuller bibliography.

Unlike the essay, these papers have not been edited by the IRPP. The author takes full responsibility for any errors of substance or of format.

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There are seven papers:

A. ALMPs: an illustration of mature enabling society programming

B. Evolving values and expectations

C. Governance and Public Administration

D. An action plan

E. Big statistics: the technology of the enabling society

F. Olivia: an integrating framework for the enabling society

Table of contents

Table of Figures

A. ALMPs: an illustration of mature enabling society programming

The essay used pilot work on new approaches to Active Labour Market Programs (ALMPs) to illustrate several aspects of social policy in the enabling society. In the areas of service provision, the evolution towards the enabling society will likely occur earliest in here. This compendium paper uses the ALMP example to explore other aspects of the enabling society.

- Section A.1 provides background.

- Section A.2 explores the future of service provision.

- Section A.3 describes the much larger role for information products.

- Section A.4 shows how 'what works' evidence will lead to a major change in governance.

- Section A.5 describes income support associated with employability measures, including how these will simplify reform in related areas such as Employment Insurance.

A.1. Background on ALMPs

The place of ALMPs in the spectrum of program instruments

Service programming includes the formal education system, adult training, health care, family services, food banks, child care, immigrant settlement, rehabilitation and counselling programs, parole programs and many more. Transitional services are those that are intended to help people in making, for example, the transition from unemployment to employment, from dependence on institutional support to independent living, from homelessness to having decent housing, or the transition from social assistance, employment insurance and disability benefits to earnings.

Employability programs are an important subset of transitional services that include training, wage subsidies, occupational counselling and job referrals. ALMPs are usually defined to be the more costly and intensive of these employability programs such as training or targeted wage subsidies – sometimes in conjunction with counselling and employment referral services. ALMPs typically provide financial support for participants during the intervention. Often the goal is to help individuals move off unemployment insurance or social assistance. In Canada, ALMPs are mainly provided through federal-provincial-territorial agreements, with much of the funding coming from Employment Insurance with delivery of the service by the province or territory. They are currently referred to as Employment Benefits and Support Measures.

Are ALMPs effective?

Compared with most social programs, the direct effects of transitional ALMPs are relatively easy to measure. Indeed, Canada has long been a leader in the evaluations that calculate the effectiveness of training and other ALMPs in terms of increasing employability and earnings and reducing spells of time on unemployment benefit or social assistance.

Early evaluations in Canada of the first round of ALMPs that were introduced in the early days of the mature welfare state in the 60s and 70s – mainly classroom training in the quickly developing system of community colleges and make-work projects that were often seasonal in character – showed that they

probably made things worse in light of their stated objectives. On balance, they did not create permanent attachments to the work force or train for skills that were in demand. They likely reinforced patterns of part-year work and reliance on unemployment insurance and social assistance benefits. However, they did have indirect benefits in the form of community development initiatives that had social and cultural payoffs. They did provide an incentive for the rapid development of a world-class system of community colleges. And, of course, they did provide badly-needed income to those without work.

These evaluations resulted in significant improvements in approaches to employment programming. In Canada, the Canadian Jobs Strategy, introduced in the mid-80s, was perhaps the first large, multi-pronged ALMP strategy in the world to be designed to meet explicit labour market objectives in a measurable way. The results were mixed, but positive on balance.

Over the last couple of decades, evaluations here, and in other countries, have confirmed that poorly designed ALMPs make little difference and can even make things worse. For example, they can keep in people in extended periods of training or make-work when getting out on knocking on employers doors would have got better outcomes. As Box A1 shows, well-designed ALMPs do get positive results but their impacts, until now, have not often been large.

Box A1. Do ALMPs make a difference?

A recent meta-analysis by the National Bureau of Economic Research (Card et al, 2010) looked at studies that examined program impacts on specific population groups in many countries between 1995 and 2007. In terms of the effects of the programs one year later, some 40% had effects that were significantly positive, some 36% made no significant difference, while 25% made things significantly worse.

- Public sector job creation got the worse results, as has been well understood in Canada for decades.

- Among the various outcomes measured – increased employment and earnings and reduced reliance on programs such unemployment insurance – the best success came in reducing reliance on income support programs.

- Generally, results were better when measured over a longer period of 2 or 3 years, when compared with just one year. This was especially so for interventions that involved a strong human development component, such as training.

Another interesting finding was that there has not been much improvement in the success of ALMPs over the period of the study. There is no sign of 'learning' organizations in the welfare state. As well, most of these studies did not take costs into account in a way that allowed calculations of cost effectiveness. These weaknesses will be rapidly addressed as a result of the big statistics of the enabling society.

A further reassuring finding of this study is that the kind of comparison group evaluations much used in Canada gets results that are similar to the 'gold standard' that involves experimentation with random assignment.

A new generation of evidence-based ALMPs

In the mid 90's, work began in a predecessor to the federal department, currently named Employment and Social Development Canada (ESDC) on a new approach to ALMPs that made use of the data warehousing technology that was just then becoming available to produce what we referred to in the essay as 'what works best' data. Box A2 provides background on the pilot and explains why such a world-leading initiative originated in that department and why it was not continued.

The project was abandoned before the costs and benefits of full scale implementation could be calculated. However, a subsequent experiment in Switzerland gives some sense of the order of benefits that are likely. The Swiss used a controlled experiment to compare the results obtained from 'what works best' calculations to the results achieved by experienced case workers. (Lechner and Smith 2007).

Box A2. The 1990s ALMP pilot using 'what works' evidence

The main goal was to use information based on the success achieved in past interventions in order to produce tailor-made information that could be used in referring current clients to the best possible ALMP intervention that was available. A secondary goal was to use the same data base to provide business information to assist analysts and managers, e.g., to measure performance and to adjust the interventions offered.

The actual econometric equations used were crude by today's standards, but they were still capable of providing better results than referrals that were unsupported by this technology – and the management information produced was vastly superior to anything that had been previously possible.

How did it work?

Following is a description of the original design of the pilot, based on Colpitts (2002).

The initial pilot study created a 9 year longitudinal file drawn from some 19 administrative data silos (federal and provincial) which were cleansed in order to produce some 2000 variables. Of these, 250 of the most important, from over 10 million clients, were captured in the final data warehouse which was used to make 'what will work best' referrals to the 25 ALMP interventions that were available in local areas.

To develop predictive 'what works best' models at the level of the client, it was necessary to reorient standard program evaluation strategy. In a traditional quasi-experimental evaluation, the net program effect is computed in a statistical model as the difference between the labor market outcome of program participants and nonparticipants, while adjusting for differences between the two groups. In the new approach, all of the previous interventions received by a client were also included in the statistical model as independent variables, along with variables that measure standard socio-demographic variables, and various periods of elapsed time since the interventions were provided.

Four regression outcome models were specified – earnings, weeks of employment, savings in unemployment compensation, and probability of employment – and predictive models were developed for each of 25 interventions identified.

That basic technique created some difficulties in practice and

number of iterations were undertaken based on lessons learned but, by the turn of the century, they were working sufficiently well that full-scale implementation was possible.

Why did it happen in ESDC?

- It was developed by an evaluation staff which had world-leading expertise in 'what works' methodology.

- It became part of an explicit knowledge strategy which had senior leadership.

- Affordable data warehousing technology was just becoming available.

- Compared with other countries, there was unprecedented access to needed administrative data.

Why that leadership could not be sustained

The system was however not implemented. In the view of this author, the reasons for this failure lay in a combination of factors:

- There were perceived privacy concerns (largely unfounded).

- Responsibilities for ALMPs were increasingly shifted to the provinces, where technical capacity was not nearly as developed in areas such as this.

- The department struggled with its broad mandate and was in a crisis mode by the early 2000s – with little appetite for exploring new approaches.

- Operational problems occurred because the system was expected to support administrative functions for which it was not designed.

- Front line staff feared that it would be used to cut jobs.

- Program review in the 90s eroded the internal capacity, including in the area of evaluation.

- Knowledge management was no longer explicitly and separately represented at senior management tables.

- The accountability regimes of the time placed greater emphasis on matters related to service delivery and on efficient processes – with less attention paid to measuring the subsequent outcomes of the programs.

The case workers got about the same results in referring clients to interventions as did random assignment. That is, they added no value but did no harm. However, interventions based on techniques similar to those that were piloted in Canada resulted in significant gains in post-intervention employment rates – of between 7% and 15% depending on assumptions that were made. This was a large return when considered in the context of the relatively small costs of developing such 'intelligent' referral tools and in light of the fact that results will improve over time based on lessons learned from feedback about past successes and failures.

Box A2 illustrates the concepts of big statistics and 'what works' micro data that will define the entire system of national social statistics in the enabling society:

- There will be a huge underlying data warehouse of micro-level data (i.e., referring to specific individuals) that is drawn primarily from administrative data base from multiple sources that have been statistically manipulated to make them as consistent as possible including by correcting obvious errors and imputing missing data.

- The main outputs will be equations with predictive power that can be applied to project outcomes at the level of specific individuals and specific interventions. The evidence that is produced will be far richer than that which could be obtained from any of the component data sets, taken individually. Traditional cross-sectional aggregate data can also be produced, replicating anything that can be done using today's methods and techniques.

- The new statistical base will support program delivery, planning and accountability applications as well as providing rich data that can be used directly by citizens as they make their individual decisions, as will described in more detail later.

- The use of equations and statistical manipulations means that, while the source data is based on individuals, privacy need not be an issue.

- The data will be accessed in a simple, highly user-friendly format. The learning curve for using 1990s pilot data was very short. With today's technology most uses will be intuitive even though they are based a highly sophisticated methods and vast data sets. They will much simpler for most people to use than today's statistical applications, not unlike using existing commercial sites that match people with jobs or potential mates.

A.2. New approaches to the provision of services

The essay described the gradual extension of individualized, evidence-driven services along the lines of the ALMP pilot, not only in employment programming but also in education, health and other social services. It discussed the effects of this shift on the individualization and integration of services, on financing based on expenditures to financing based on returns to investment, on the growth of a stronger market for service provision and an associated new role for government in that market.

This compendium paper will not repeat the material from the essay but will provide a fuller explanation of why:

- An evidence-based system based on big statistics will be a new gold standard for service provision.

- It will be important to have a gradual implementation strategy starting with small scale experiments and pilots.

- The new system will be much more effective in reaching people who face bigger obstacles to living a full life in the labour market and society.

A new gold standard for the enabling society

'What works' data based on 'big statistics' refers to a concept that encompasses contemporary random assignment techniques and big data analytic tools – but goes far beyond them. We begin by clarifying the terminology found in the literature. The terms 'evidence-driven' or 'what works' are used in at least three senses:

- Loosely, to mean information that results from any sort of research, including research based only on correlations of aggregated data. For example, the UK has recently set up of a series of 'What Works evidence centres for social policy', that appears to use this definition.

- More tightly – to refer to data derived from random assignment techniques that assesses the effectiveness of programs taken as a whole based on the average results of that intervention. This is the area that has attracted most current attention. Clinical trials in the health care area are the main current example. American groups, such as the Coalition For Evidence-Driven Policy tend to use 'what works' in sense.

- Even more tightly, as used in this paper, where it refers to evidence based on calculations of expected outcomes for specific individuals and specific interventions[1].

The second usage, involving random assignment experiment, has long been considered as the gold standard for assessing the effectiveness of welfare state programming. The third category of 'what works data' will be the gold standard of enabling society programming.

To illustrate, traditional experiments typically compared the subsequent lives of people undergoing a particular intervention with those in a control group that did not participate. However those classic experiments and similar, but less rigorous, comparison group evaluations were not designed to produce feedback that would be useful in the day-to-day evolution of programming. The results often took many years to produce and therefore could not be used for making current incremental adjustments. Moreover they provided results only at the level of averages. For example, a typical finding was that, say, 59% of participants were employed a year after the intervention compared with 54% of those in the control group. What would be much more useful in making ongoing adjustments to program design and delivery would be current information on which individuals with which characteristics benefited most from the program and which individuals benefited least or were worse off because of the intervention.

Even in terms of average results, traditional experiments and evaluations typically describe the effects of single interventions that took place during a narrow period of time, greatly abstracting from the real world where outcomes are typically the results of a succession of different events and activities over time, including but not limited to the particular intervention being studied. As a result, traditional evaluations have a bias towards showing that the initial effects of a particular intervention, even if they are large, will tend to fade away as away as the years past. And indeed that is often the finding of experiments, such as the internationally known Canadian Self-Sufficiency Project of the 1990s.

In the new world of big statistics and 'what works' data, calculations can be based on longitudinal data covering many aspects of life. They are based on calculations of expected future results and hence can be used in current decision-making. They are available at the micro level and can be used support incremental programming changes.

A new, and more gradual, approach to program implementation

Enabling society reforms should be introduced on a gradual basis, starting with experimental, demonstration and pilot projects in those areas where the data is, or could quickly become, strong enough to make decent calculations of 'what works' data. Experience from many small projects can be used to build up the base of knowledge that will allow the evolution of a system that gradually evolves

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[1] In an attempt to avoid confusion, I once used the phrase 'smart transactions' to refer to the third application – that is, to refer not to the 'what works best' information itself, but rather to describe the decision-making processes that make use of this information. However this was not well understood and may even have added to the confusion.

based on lessons derived from what has gone before. This is a radically different, and much more effective, approach to program implementation than the abrupt across-the-board shifts that often marked the introduction of new programs in the welfare state. The transition to the new approach may be bumpy in places but, once mature, we will see less of the large, and often highly disruptive, funding shifts and sudden design changes are now so common.

Box A3 illustrates how many actors in the system will able to use an ever-growing common base of evidence to make practical improvement that will lead to steady evolutionary improvements in program design and delivery.

Greater targeting of transitional services

Evaluations have shown that untargeted transitional services programs run a high risk of simply subsidizing activities that would take place in any event as a result of market incentives. Most transitional service programs are therefore focussed on the approximately 20% of the population where they are likely to make the most actual difference. Often the programs are addressed to people with low incomes, low skill levels, difficulties in carrying out the daily activities of life or some combination of these.

In the welfare state, transitional services such as ALMPs for the unemployed are mainly directed to those nearer the upper end of this 20%. In the enabling society the focus will shift towards those who are nearer the bottom end of the tail, especially those who are most at risk of remaining in need for long periods of time or who are at transition points in their lives where interventions are most likely to make a difference. There are three reasons for this shift in emphasis.

First, some of those with lesser needs will be better served by directly accessing new 'what works best' information products discussed in the next section. However, many citizens, including many of those in this bottom 20%, will still benefit from personal dealings with a counsellor or case manager.

Second, and more important, the diagnostic tools available to serve those nearer the bottom will be greatly improved in the enabling society. The new tools will be able to calculate what is likely to work best from a longitudinal, lifecourse perspective – particularly important for assisting the large number of those who face multiple problems such as having some combination of low skills, poor housing, addiction problems, disabilities, or having few sources of caregiving.

Third, with a stronger knowledge base about the demand for particular services, and with a much more flexible and evidence-driven front end referral capacity, market forces will almost certainly lead to a larger and more varied tool kit of potential interventions that will be available, including greater choice in mixing and matching those interventions to assist people with complex and multiple needs. Today's reality is often that the case worker or counsellor is restricted to referring people to a limited range of interventions, often those that are funded by the agency that hired the counsellor.

A.3. A central role for individualized information products in the policy toolkit

Perhaps the defining feature of social policy in the enabling society will be the provision of 'what works' information directly to citizens and organizations to assist them in their own decision-making. The essay used the example of how the same type of data that will be used in ALMP service interventions can be instantaneously provided directly to citizens over the Internet.

Box A3. ALMPs as an evolving system that continuously improves based on 'what works' evidence

Continuous improvement will result from more informed decision-making by all the agents in the system:

- Those who design the ALMP intervention will know the mix of training, job experience and counselling that has worked best for different categories of jobless people in different labour markets in the past. They can incorporate this knowledge in their current designs.

- Front line teachers and counsellors will learn about subsequent experience of their clients, as well as direct feedback from current participants about their perceptions of the quality of the intervention and of any problems that were encountered.

- Those who market the program will have much more detailed information about the characteristics of those who might gain the most benefit from that training.

- Those case workers or counsellors who refer people to the intervention will have good data on likely success rates.

- Those who monitor, assess and evaluate the program will have excellent information about costs and success rates both historically and in comparison with similar interventions.

- Those who fund the ALMP interventions will have good cost-benefit data on which to base their decisions.

- And, most important, the individual participants will have a good sense of the expected results of that training, including comparisons with alternative types of interventions or actions, and will have the opportunity to provide feedback.

And the underlying data base that provides the information will steadily improve over time:

- More and more administrative files will be cleaned and become part of the whole system, resulting in more information and in allowing the creation of new knowledge based on increasingly overlapping data sets. The importance of overlapping data sets is described at length in Compendium Paper E.

- More detailed information will be captured for each new ALMP participant at the time of their original usage, while information about their subsequent experience will be collected in follow-up surveys as well as obtained from administrative records. The result will be ever-richer and ever-growing information on what is working best as well providing relevant contextual information about individuals on a longitudinal basis.

- More detailed information will be captured about individual labour market interventions, gradually resolving the 'black Box' problem. Currently there is little quantitative information about what actually happens inside the black boxes of programs such as training or any other kind of intervention. Yet we act on the assumption that things like curricula, class size, and mixes of formal training with practical experience make a difference to outcomes. Placing a priority on gathering this kind of process information should result in a significant improvement in understanding what elements of interventions are actually working best – information that is likely to be crucial in making incremental design improvements.

- Forecasts of labour supply and demand will become better, obviously so on the demand side as a result of better information on the characteristics of job seekers, including their generic and specific occupational skills as well as work and educational background. The inclusion of information about both specific and generic skill will be particularly important on the demand side. Specific occupational skills, which now form the basis of most forecasts, are important in shorter-term forecasting. However, they are less useful in medium and longer-term projections because of the effects of unforeseeable economic and business changes – related for example, to technological innovations or in the demand for natural resources.

- Traditional experimental methods can also be incorporated into basic program design. For example, an element of random assignment can be built into referrals to different types of intervention. The subsequent employment experience of individuals who participated in different interventions would be compared – providing finely-grained, experimental evidence of what is working best for whom – information that can be used to improve the calculations used in the future.

The essay also described the deep changes that will result from the eventual integration of the system of big statistics and its micro-level calculations with the current system national social statistics. This is elaborated on in Compendium Paper E

This section of the paper will;

- Expand on how the new information will be accessed.
- Explain the critical importance of having standard ways of conveying information about data quality.
- Discuss the issue of people who have difficulty in using information products, or who do not want to use them.

How information will be tailored to individual needs

Box A4 provides an expanded version of material found in the essay showing how the new system would work once it became mature.

Box A4. Micro-level labour market information: an example of the transformation of the national system of social statistics

The example takes the case of an individual who is exploring ways of improving his or her employment situation by means such as taking a training course, going back to school or changing jobs within the same city or moving elsewhere. That individual would want to know the likely success in the labour market of choosing one of these options – with that knowledge being available at the time that the choice is being made.

The individual would access a web site developed for this purpose. He or she would provide information to the site about his or her skills (defined broadly to encompass creative and team skills, work habits and a range of relevant aptitudes and abilities), employment history and employment aspirations. Using this information, the site would calculate the expected success rates attached to different alternative actions.

There could be standard ways of calculating success rates, including the probability of finding a job and a range of measures of the likelihood of future job stability and earnings. These calculations would be based on the subsequent labour market experience of people with similar characteristics and in similar circumstances who had made comparable choices in the past using administrative information sources (similar to those used in the ALMP

example discussed earlier in the text) and on much-improved projections of labour demand.

As well, the site would refer people to other sites to get information about practical options that were open. These linked sites might, for example, describe the training options open in the city in question, with that information provided by colleges and private trainers. They could include links to the private job matching sites that now exist, as well as sites that assist people in understanding their present levels of occupational competence and that guide them in job searches, that provide information on shortage occupations including those in other parts of the country or that provide students, and those contemplating major career shifts, with occupational counselling information. Many such sites are currently available; the required innovation will be to allow them to be accessed in an integrated manner.

The information would be provided to individuals in real time – similar to the kind of instant feedback received from Amazon.ca or Expedia.ca or their competitors when choosing a book or a vacation trip. The calculations involved would be more complex than those used in these examples, taking far more variables into account. However, similarly complex calculations are routinely used in existing big data and web mining applications.

On the surface, the approach outlined in the box resembles today's bulletin board type information that can be found on the Internet. And it certainly can encompass that kind of information. However it is important to underline that it represents a fundamental change.

In the latter decades of the welfare state, the internet allowed access to a large expansion of labour market information products such as labour market and health information, descriptions of social, employment and educational services, referral and job-matching sites, and a wide range of self-help information. In the labour market area, the Canadian Government's Job Bank program provides on-line access to a current list of job openings across the county. A web site offers online access to a

description of the specific job opening that have been listed by employers, as well as job openings that are listed on a number of commercial job matching sites, such as Monster and Workopolis. There is a direct link to these other sites. The national site also offers information on job outlooks and a range of other supporting information of interest to job seekers and employers. The data on the site are integrated through common use of the National Occupational Classification, which is skills-based – at least in part.

However, the information that can be currently accessed on the internet is, for the most part, the same kind of bulletin board and newsletter information that has been available for many decades: listings of vacant jobs, occupational forecasts, etc. The much deeper enabling society transformation will occur when sites such as these are directly linked to the individually-based 'what works best' estimates of projected outcomes. That new citizen-focussed information will be the heart of the system, with the other components – including tools to assess existing skill levels, self-help occupational counselling and access to relevant courses at local training institutions – tied to these calculations of expected outcomes.

The critical importance of labelling that reflects the quality of the evidence

Of course, the results of 'what works' calculations of expected results will vary greatly in quality depending on the quality of the underlying data and on the application in question. The degree of accuracy will be known and must be reflected in how the results are labelled.

For example, the calculations used in the ALMP pilot described above were quite accurate when applied to the average results of the ALMP intervention when taken as a whole, better than those found through formal evaluations. These results can therefore be reasonably labelled as 'what will likely work best' information or as 'expected outcomes'. When the same data is used to make calculations about a specific participant in that ALMP intervention, the accuracy will be lower since potentially important factors such as the motivation and work habits of the individual – or the detailed characteristics of what actually happens in a particular ALMP – will initially not be measured[2]. The difference in quality must be carefully explained.

In other words, the system of big statistics and 'what works' data can be adapted to applications where the predictive power of the underlying data varies greatly. The web site in question can simply provide statistical information about the past experience of groups of people who have characteristics similar to those of the individuals accessing that information – quite similar to the traditional labour market information or health information that already exists. As the predictive power of the data gradually improves over time, for reasons outlined in Box A3, the system will gradually evolve into one that can routinely provide truly individualized calculations of expected outcomes. However, trust in the system as it develops will depend heavily on informing people about quality in ways that are easily understood[3].

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[2] In the labour market area, the best results, given existing data, would be calculations that explain about 50% of the variation in individual outcomes such as earnings, with most results being considerably poorer than that (Garnett Picot in private correspondence). Of course, the system of big statistics will have far richer data than now exists, but unobserved factors and luck will always continue to be important.

[3] For example, it might be possible to release data in the form of standard sentences or tailor-made small tables, that might range from:

- On average over the past five years, xx % of people (with user-specified characteristics) found a job within xx weeks of completing (user-specified) interventions, while xx % found a job within xx weeks, etc

Will information actually be used, even if it is tailor-made?

Providing excellent 'what works' data does not mean that it will necessarily be accessed and used by citizens, including by those could most benefit from such data. The process described is highly rational – using statistical information based on relevant past experience in order to improve one's chance of making better decisions in the future. However, the evidence from behavioural economics is making it very clear that people do not always act in this way. Many people find it difficult to interpret even quite simple statistical evidence, especially when that evidence runs counter to pre-existing beliefs or expectations. There is also a risk that the data may not be used at all, or not well understood, among those with most to gain from its use. As well, some people may be reluctant to receive tailor-made information, for example for reasons related to privacy or distrust.

The enabling society will allow better solutions to some of these problems.

Experimentation and developmental initiatives can and should be conducted to find the best ways of presenting data, including packaging the data in different ways to match the learning styles of different people and to fit into the various ways in which people make decisions. Informing people about quality, as discussed above, is an example. Such activities are likely to have high payoffs since the underlying individual-based information technology is much more intuitive and relevant than current technology which involves interpretation of aggregate statistics. The new technology is already widely used on the internet.

The use of individual level data about the past success in the labour market of people with similar characteristics in similar circumstances will sound alarm bells about privacy, which could make some people wary about using these tools. In fact, the new technology need not pose any additional privacy risks. Before it is used in 'what works best' calculations, information about specific individuals is transformed into anonymous equations within a secure environment such as that which is now provided by Statistics Canada[4]. The process is sometimes cumbersome but effective. Newer approaches discussed in the essay that use data based on synthetic, not real, Canadians will be much simpler to use in practice and will offer even greater privacy protection.

However, the reality is that not everyone will make full use of the new information. That is not a problem. A reasonable policy goal should simply be to develop arrangements that are better than anything that now exists, that improve over time, that monitor progress and assess costs and benefits. It will be particularly important to develop designs that do not discriminate against particular groups of potential users, particularly those potential users who are most in need of 'what works' information including people facing numeracy and literacy obstacles.

A.4. The new governance as it applies to ALMPs

The essay described a new approach to evidence-based governance that centred on the individual accountabilities of each of agents charged with design, delivery and assessment of the program in

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- Calculations based on the experience of people with similar characteristics* to you and in similar labour markets* suggest that the success rate in finding employment is likely to be xx, yy *et al* following participation in xxx, yyy *et al* (a series of system-specified interventions) – with the particular content of the asterisked information being provided by the system.

[4] There is also a potential privacy issue with the respect to the personal data that the individual users provide to the system during the intervention and in follow-up surveys. However, this is easily resolved by seeking informed consent for subsequent, anonymized uses of the data.

question. The goal is to gradually work towards a system that will provide micro-information about expected and actual results for each of the employees and other actors in system, and of course for the various organizational and program groupings to which these actors belong. These are the logic models referred to in the essay that are at the heart of most developed systems of performance measurement.

Box A5 shows the complexity that can be involved in a single ALMP project. There are a great number of actors doing quite different kinds of work, but with overlapping hierarchies of inputs-processes-outputs-outcomes. A full measurement system would require information to describe the logic models of each of the individual actors, of the organizational units of which they are part, and of the program as a whole. Today we are far away from having information systems that could routinely provide such data.

Box A5. Logic models as they apply to ALMPs

An evidence-driven system should provide measures that support incentives and accountability arrangements which are related to the real objectives of all of the various actors in the system, as well as to their costs. This is complex since these actors have quite different roles to play, with different, but overlapping objectives. Take the example of a training program that uses employment insurance funds to provide unemployed people with skills that are in shortage:

- The objective of the government division that provides the funding is to reduce the future costs of EI benefits. The objectives of the overall employment department, which has many programs in addition to this one, might also include reducing unemployment rates and filling skills shortages. Still higher order government objectives might be cast in terms of competitive workforce and combatting poverty and exclusion.

- The individual being trained will have varying objectives as well: finding a decent job quickly, increasing future job stability, finding a job with hours that are compatible with those of his or her spouse, or (for a recent immigrant) finding a job in an area where people who speak his or her native language live and work.

- Suppose that the training is provided under contract to a community college. The objectives of the specific teacher might be cast in terms of the numbers of students who graduate with the pre-defined skills as a percentage of the numbers of students that were originally referred to the trainer. Another would be to provide high quality training, meeting the expectations of the students. The college in question would have an immediate objective of keeping within the costs called for in the contract. However, it would likely have a higher order goal of providing training that actually resulted in the new skills being used in the labour market – in order to achieve its own goals of making a difference in its community.

- The government officials who designed the program would have several objectives, including correctly specifying the kind of skills to be received. The officials who made the contract arrangements would have overlapping objectives that included choosing the training provider that would do the best job at least cost. The employment counsellors or case workers who referred the individual to the training would have still other overlapping objectives including, for example, early savings to employment insurance, satisfying the expressed needs of the individual being referred and making sure that all the training openings that had been paid for were, in fact, filled.

- The many employees in staff positions – such as developing curricula, training the trainers, undertaking the labour market analysis to determine which skills are in shortage – will all have their own sets of objectives and constraints that they must adhere to. Many of these are system-wide such as ensuring service to the public in both official languages and gender equity in hiring practices.

However, as mentioned in the essay, pilot work in developing new forms of evidence-driven ALMPs might well be an excellent place to begin developing the kind of data and approaches that are needed to support micro-level governance based on the individual-level data for all the actors involved, regardless of organizational attachment.

- Data relating to outputs and higher level outcomes for the project taken as whole is identical to the 'what works best' information on expected outcomes that are at heart of the pilots.

- The other kind of data that is needed is micro information relating to the individual employees and other actors – what they are expected to produce and the processes they use. In many cases, this is potentially available through existing administrative data such as job descriptions and annual reports on employee performance and evaluations. However, most of these administrative records were design for different purposes and are not always consistent across different organizational within an organization, let alone across the different government and non-government agencies that are often involved in the design and delivery of services. The pilots, where special reporting arrangement are often required in any event, might be a practical way of trying out different approaches to developing consistent information of this sort.

This section has touched on only one small aspect of governance. A fuller discussion is found in Compendium Paper C which describes the more general issues of integrating horizontal and vertical governance and which points out the weaknesses of any type of quantitative approach if used in isolation. What is needed is a harmonious balance between measurement-based and values-based decision-making.

A.5. Income support during service interventions: new directions ahead?

The essay argued that income security in the enabling society will likely be based on a three pillar system: a modest minimum income guarantee, social insurance and lifetime accounts. While ALMPs are directed to service provision, not income support, they usually provide income support during the period in which an individual is participating in an ALMP intervention. This final section explores the changes that are likely to take place in this kind of income support as we move towards the enabling society.

One likely approach would be to separate the financing of the ALMP training and employability initiative itself from the financing of associated income support. The income support would be provided, instead, from a component of the emerging new lifetime account pillar described in the essay. Many design options could be considered and tested:

- For example, the government might, in some circumstances, provide additional funding available through the lifetime accounts pillar to all those undertaking full-time training, regardless of the way in which the training itself was funded or whether the individual was referred to the training or participated independently.

- In some circumstances, the additional funding could be treated as a subsidy or as an income-contingent repayable loan, or some mix depending on the characteristics of the participant or the type of intervention.

- One practical Canadian variant would be a repayable job seekers loan that would sit between Employment Insurance and Social Assistance, along the lines of a proposal of the Mowat task force on employment insurance[5]. The goal would be to situate training within the context of programming with a lifecourse context where it logically belongs, as opposed to the point-in-time

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[5] Mowat 2011. Their recommendation reflected proposals by Mendelsohn and Battle (2011) which, in turn, was based on early work by Battle, Mendelsohn and Torjman (2006). In the language we are using, the 2006 proposal was cast in terms of major realignment of the programming structure of the old cross-sectional welfare state. By 2011 the proposal had begun to shift to the new lifecourse perspectives associated with the enabling society.

insurance programming of Employment Insurance or the minimum income context of social assistance, where it has always been a convenient, but uneasy, fit.

- In some designs, the lifetime accounts pillar might provide income support for adult training in a manner that could eventually be extended to cover the whole system of leaning once people reach adulthood including, for example, graduate studies. In some designs along these lines, income support might be in the form of loans that were repayable based on subsequent earnings. Other design experiments might treat graduate students and trainees as a kind of employee and pay them a decent 'salary', similar to that which they might receive in introductory-level jobs in the market. These options might be of particular interest to young couples who wished to have enough income stability to raise a family while still be engaged in further education, or to mid-career workers who wished to finance a period of formal education as part of a change in career direction.

The essay proposed that the transition to the enabling society could be facilitated through a series of pilot 'what works' ALMP pilots and experiments. Those experiments could well be extended to test out options, not only for the content and sequencing of ALMP interventions, but also for their financing. The payoff could be large on multiple fronts, with lessons learned about the best ways of financing a wide range of adult learning activities in addition to ALMPs – as well as testing out different approaches to the design of programs in the lifetime accounts pillar.

B. Evolving values and expectations

Recent trends in thinking about the purposes of social policy were briefly summarized in the essay. This compendium paper provides more background, including references to source materials.

- Section B.1 examines recent thinking about the purposes of social policy that is taking place in academia and government.

- Section B.2 shows that public opinion and public values are consistent with this 'elite' thinking.

- Section B.3 examines the evolution in thinking as it relates to several specific social policy goals.

- Section B.4 concludes by arguing that the enabling society described in the essay is in the mainstream of contemporary thinking about the future purposes of social policy, but is perhaps ahead of the curve in taking account of the possibilities for transformative change that are opened up using ICT to create and allow access to individual-level 'what works' data.

B.1. Recent thinking about the purposes of social policy

At the highest level of generality, the goal of social policy in the democratic market economies that typify the OECD world is to support markets and families in the pursuit of a society where citizens have the resources to live a full and independent life in society and in the economy, typically associated with respect for human rights, equality, individual freedom of choice – with living standards that are reasonably consistent across the course of life and that are at least adequate for all.

When cast at this high level of generality, the purposes of social policy are reasonably timeless. However, when cast in more policy-oriented language, we do see shifts in emphasis. Themes related to human development have dominated international thinking for some decades. The capabilities approach of the welfare economist, Amartya Sen, has perhaps had the greatest influence. Gender perspectives, arising in part from the academic world, have also been growing in influence and are consistent with, and extend, the human development literature. In governmental circles, OECD[6] documents have been particularly influential. They also echo human development and gender themes.

Highlights of the capabilities and gender themes are illustrated in Box B6 while Box B7 summarizes the conclusions reached in two recent meetings of OECD Social Ministers. The messages of Box B6 and Box B7 are re-enforcing:

- A human development, capacities approach is central to both. Note how the overview statement of Ministers (opening paragraph in Box B7) mirrors the capacities approach described in Box B6.

- The lifecourse perspectives of the human development framework (to fully develop over the course of life, capacities must be nourished early in life) are spelled out quite specifically in the

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[6] The Organization for Economic Cooperation and Development is the leading international think tank representing countries with developed market economies. Its reports tend to be forward-looking, but carefully balanced – reflecting a consensus view on trends and priorities for the future.

Box B6. Welfare economics and gender perspectives on social policy goals

The goals of social policy have always been defined broadly, usually cast in terms of the adequacy and allocation of financial resources and human capital. However, when operationalized, these typically have had to be defined quite narrowly, for example with annual income being used as a proxy for goals associated with financial resources and educational attainment being the proxy for human capital.

The work on capabilities by the contemporary welfare economist, the Nobel winner, Amartya Sen, is usually identified with the current broadening of the goals that are used in policy applications[7].

Sen put the focus on what individuals are able to do – their functional capacities, their substantive freedom to develop and make use of their skills, material resources and health in ways that are of value to them. Poverty and exclusion are defined as the lack of these functional capacities or freedoms.

For example, the UN's human development index, which was influenced by Sen's thinking, puts equal emphasis on income, health and education. However, Sen's thinking stresses human diversity and is certainly not limited to three capabilities. For example, Martha Nussbaum (2000), an associate of Sen, and adding a strand of feminist thinking, developed a longer list of capabilities that democratic governments should support. In condensed form* these are:

1. *Life*. Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.

2. *Bodily health*. Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.

3. *Bodily integrity*. Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.

4. *Senses, imagination and thought*. Being able to use the senses, to imagine, think, and reason.

5. *Emotions*. Being able to have attachments to things and people outside ourselves.

6. *Practical reason*. Being able to form a conception of the good and to engage in critical reflection about the planning of one's life.

7. *Affiliation*. Being able to live with and toward others, to recognize and show concern for other humans, to engage in various forms of social interaction. Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others.

8. *Other species*. Being able to live with concern for and in relation to animals, plants, and the world of nature.

9. *Play*. Being able to laugh, to play, to enjoy recreational activities.

10. *Control over one's environment*, both the *political environment* (being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association) and *material environment* (being able to hold property and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure).

The list is illustrative, not definitive. Indeed, any list such as this has been criticized as going against the generality of the capabilities approach, which is holistic (as opposed to list-making) in spirit, and which emphasises the political values and decisions of the day as opposed to pre-set values.

Despite these criticisms, the list provides a useful insight into the broader but more finely-grained approach to social issues that is emerging – and the kinds of things that will need to be measured in the enabling society.

The list also reflects both capabilities and gender-based streams of theoretical thinking, and is entirely compatible with the lifecourse approaches that have emerged from different streams of academic thought.

The present author arbitrarily shortened the descriptions in the list.

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[7] The material in the Wikipedia article on 'Capability Approach' (accessed May 13, 2013) provided a useful starting point for the material in this –.

Box B7. A government perspective on social policy goals: the final communiqués of OECD Social Affairs Ministers in 2005 and 2011

General

Social policies must be pro-active, stressing investment in people's capabilities and the realisation of their potential, not merely insuring against misfortune. [2005]

Families, gender, generations, caregiving

1. The importance of both mothers and fathers to the long-term development of children should be recognized, and both should be encouraged to play a full and active role in family life. [2005]

2. Working-time flexibility, part-time work and appropriate parental leave schemes should be promoted to help parents maintain labour market attachment and provide children with the care they need. [2005]

3. Childcare should be widely available, offer quality and choice based on appropriate information, be affordable and offer flexibility [2005]

4. OECD countries should analyse the intergenerational distribution of public and private spending, and its impact over time on the distribution of incomes and assets. [2005]

5. Family-friendly policies and accessible, affordable quality childcare services *should be promoted more*. [2011]

Unemployment and exclusion

6. We should end the unjustified assumption that some groups such as lone parents, older workers, people with disabilities and people on social assistance for a long time cannot or should not work. [2005]

7. Policies should be tailored to individual needs and intervention should be early. [2005]

8. If the government provides the resources to overcome barriers to work and participation in society, then individuals have a responsibility to take advantage of this opportunity. [2005]

9. Work must pay for benefit recipients. This can be achieved by redesign of tax and benefit systems, through measures to provide adequate wages, and by making the non-financial aspects of work more attractive. [2005]

10. Disability benefits should also be designed to encourage employment, not prevent it. Helping people with disabilities to work will require additional commitment, and investment. [2005]

11. Most countries are strengthening their formal long-term care systems. Policies supporting informal care should be considered as complements to formal systems but should not perpetuate gender inequalities in unpaid work nor encourage carers' withdrawal from the labour force. [2011]

12. We welcome … more analysis of the drivers and measurement of poverty and social exclusion … [including for] single parents, recent immigrants, aboriginal populations, persons with disabilities, vulnerable youth and the working poor, including from gender and geographical perspectives. [2011]

13. We call (for) … new work to assess the effectiveness and efficiency of different approaches to *social housing*, including the impact of housing policies on labour market mobility and the integration and co-location of service delivery combining housing and other social policy supports [2011]

Learning and work over the lifecourse

14. Social policies should promote active aging and independence in later life. [2005]

15. Longer working lives that reflect gains in life expectancy contribute to maintaining living standards and may prevent intergenerational conflicts from arising. [2005]

16. Pension systems need to be adapted to demographic trends; longer working lives, higher employment rates and effective retirement ages would improve their adequacy and sustainability. [2011]

17. The OECD should identify how social and economic goals can be best achieved, for example by policy interventions at certain critical 'transition points' or by redistribution of income from one point in the lifecourse to another. [2005]

18. The OECD should identify which interventions alleviate and will contribute to the eventual eradication of child poverty, break the cycle of inter-generational deprivation, and develop the capacity of children to make successful transitions through the lifecourse. [2005]

19. Investing in children's well-being, rights and development, including early childhood education and care, should start as early as possible and the costs should be shared fairly among all actors in society, including all levels of governments, employers and individuals. … Vulnerable children should be identified promptly and supported throughout childhood and into adulthood. [2011]

Note. The selected passages are not in their original order and the numbering of the items has been added by the present author. At the end of each item there is an identification of the year of the relevant final communique.

OECD documents (items 14 to 17 in Box B7) where heavy weight is place on early childhood learning[8].

- In both cases, a broad view is taken in defining social goals and purposes. The capacities approach encompasses a multitude of individual capacities as is well illustrated by the list of detailed capacities in Box B6. A similarly broad scope is implicit in the Ministers' conclusions in Box B7, especially in the 2011 communiqué.

- That broadening of scope does not, however, translate into greater generality with respect to needed action. The opposite is true: the diversity of potential recipients, and the variety of their needs, is highlighted. The Sen approach is about capacities at the level of particular individuals. The Ministers are explicit about tailoring program responses to individual needs and a citizen-based policy focus is implicit in their emphasis on lifecourse perspectives and on mutual obligations.

- In all cases, emphasis is placed on the role of gender and the importance of equality in the roles of both men and women in child care and early childhood learning.

… a big shift from welfare state thinking

These themes represent a big shift in thinking about the purposes of social policy from those that were associated with development of the mature welfare state in the 60s and 70s. Then the emphasis would have been on the wellbeing of the population taken as a whole or on selected disadvantaged groups, not on citizens taken individually. Concerns about unemployment in that period were mainly cast in terms of social insurance responses; today those concerns are mainly cast in terms of human development policy responses. Human development themes are defined broadly today; in the 60s and 70s, they were mainly cast in terms of the role of the education system, particularly the importance of expanding postsecondary education. In those days, there would have been no, or only passing, reference to early childhood learning and the related need for gender equality in both work and caregiving, to citizen-tailored interventions or to the central role of developing individual capacities over the course of life.

It is not that the older welfare state objectives have become unimportant. Rather they are not prominent on current policy agendas because they are largely being met by existing policies. The older objectives will continue to be met in the enabling society, along with the newer goals.

Other streams of thought

The ideas presented above about how social policy ought to be formulated are, of course, highly selective. However, they represent trends that are now commonplace. Various United Nations agencies, the World Health Organization and the European Union have all issued documents that are similar in theme to the OECD documents referred to above – often under the headings of active aging,

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[8] Note that the reference to active aging in item 14 is a reference to lifecourse perspectives. Indeed, the phrase 'active aging' was used in 1995 by the present author when he worked for the OECD as a reference to policies that support lifecourse perspectives – as opposed to traditional life stage policies which implicitly assumed, for example, that people learned when they were young, worked until age 65 and then retired. The World Health Organization subsequently used the phrase to much greater effect as a slogan where it came to mean the importance of physical activity and engagement over life in promoting health among older people. Still later, I was told in an informal discussion that it became an advertising slogan for a Japanese cosmetic company where I suspect it referred to disguising wrinkles. The enabling society may eventually be a slogan for use in marketing erectile dysfunction aids.

human development, human capital or social inclusion. Sen's thinking about capacities has been particularly influential in UN thinking.

The literature on social gerontology, on human development and on lifecourse perspectives has long echoed themes similar to the gender and welfare economics perspectives discussed above (Marshall 2009, Mayer 2003). While much of that literature is concerned with social analysis as opposed to social policy per se, the work on lifecourse perspective has, in particular, proved to be an invaluable tool for presenting the more theoretical thinking about human development, capacities, assets and early childhood in operational policy terms. As far back as the mid-90s, lifecourse analysis was used to excellent effect in showing the institutional and biographic factors that shaped poverty over the course of life in Germany[9]. In the early 2000s, Canada took a lead in exploring the potential of lifecourse analysis for policy through the work of the Policy Research Initiative[10].

Looking ahead: the world according to Esping-Andersen

Most of the perspectives described above are familiar to those who study these things. Much of it reflects deep consensus and hence may be overly-familiar. However, we end this discussion by referring to a more recent analysis by the well-known scholar of the welfare state, Gosta Esping-Andersen who provides a particularly rich synthesis – one whose logic pushes us forward into the newer territory that is likely to shape future social policy thinking, particularly its focus on the importance of gender equality in families and early childhood learning. His analysis is set out in more detail in Box B8. My own analysis has been influenced by his, although I have placed more attention on the potentially large policy implications of changing patterns of work and retirement[11] and of the role of micro level 'what works' data in shaping social behaviour and policy-making.

B.2. Enabling society directions are supported by public values and opinions

The preceding section examined high level academic and government perspectives on the way in which social policy directions and goals should be cast in the future. This runs the risk of providing an elite perspective, out of touch with popular opinion. This, happily, proves not to be the case.

Box B9 shows that there is symmetry between public opinion and the 'elite' literature. The Box provides examples drawn from Canadian opinion research companies, as well from the international

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[9] Leisering and Leibfried, (2001). The European strand of lifecourse thinking has been particularly relevant for policy purposes as described in Marshall (2009).

[10] The Olivia framework, described in Compendium Paper F originated in this PRI exercise. The present author directed much of this work while working at the PRI. For a more recent Canadian review of lifecourse analysis for policy purposes, see McDaniel and Bernard (2011).

[11] The Esping-Andersen argument against later retirement as a big solution is that it would be unfair to people at the bottom because they presumably would find it harder to work longer and, once retired, die at a younger age – with less time to make use of pension benefits. This is a real concern, but one that can be readily addressed by other means. For example, pensions could be adjusted to be more progressive, providing a higher base pension for those with lower incomes. This would allow them to take an actuarially-reduced, but still adequate, pension at a younger age, if they so choose. See Wolfson 2013.

Box B8. The social policy drivers identified by Esping-Andersen

Economic prosperity in a competitive global economy requires heavy investments in human capital. The knowledge revolution requires high levels of human capital throughout the economy. Higher human capital is created by formal and informal education and by experience. Growing evidence suggests that early childhood learning remains a major gap in the system.

Income inequality is growing because of mutually-reenforcing trends that could lead to polarization, undermining the central value of equality of opportunity:

- *Changes in the labour market.* Human capital growth has not kept up with the demands of the knowledge economy, creating inequality. Those who have the needed skills are paid a premium; those without those skills face labour market difficulties.

  Young workers are most disadvantaged since they have less experience, especially those with lower educational attainment; this disadvantage occurs during the period of life when people are most likely to have children.

- *Changes in family formation* re-enforce market-based inequality. This is the result of increased employment by women, high female educational levels and marital homogamy (where marital unions tend to consist of men and women with similar educational levels). At the top are well-off couples both with high education, good jobs and earnings. At the bottom, are couples with lower education and greater job vulnerability and resulting low-incomes.

These vulnerabilities of people at the bottom are further increased by the growth in divorce and single parenthood, which occur more often among those with lower education. Educational achievement scores are particularly low for the children of single parents.

Incomplete gender equality has reinforcing effects. There has been progress in gender equality in the education system, in some areas of the work force and, to a lesser extent in the allocation of time to household work and caregiving. Gender inequalities are greatest among those with less education and lower income. For those near the top, gender equality is becoming the norm.

In better educated families, the father plays a larger role in child-raising, reflecting in part the greater use of external, often costly child care. (The intensity of involvement increases as the duration of caregiving decreases.) In lower-income families, adherence to traditional gender roles is also strongest. The mother raises the child with less help, and is consequently more likely to take more time off work – lowering income and, some evidence suggests, with lower wage rates (since employers are likely to pay lower wages in occupations where many people leave work to look after children).

Low investment in the human capital of young children. Past investments in human capital have improved prosperity, but not equality of opportunity. Most investment has gone to the formal education system, which is not designed to increase equality. People in most countries still have about the same relative educational status as their grandparents (although durations of schooling have grown). The needed skills and capabilities to increase life chances and equality are mainly formed in the pre-school years, where there has been under-investment in most countries.

There is strong evidence that good early learning leads to children's subsequent success in school and in adulthood. Inequality of access to early learning therefore results in a perpetuation of low income status across generations. The spiral becomes even more entrenched if, as seems likely, homogamy in marital unions continues in the next generation.

Fertility is also affected by the above trends in ways that run counter to people's preferences and could affect economic well-being. Fertility, gender equality, and early childhood learning are related:

- Women in advanced countries have a preference for two child families, but actual fertility has fallen in part because of the delayed birth of first children which, in turn, reflects difficulties in reconciling work and non-work activities and women's wish for men to do domestic tasks.

- While once negative, fertility in Scandinavia is now higher among women with higher educational attainment and who are employed. What is needed is the opportunity for the mother to leave work for a period of about a year to care for the baby, and then return to work, being able to rely on quality child-care and pre-school education, as well as a larger role of the father in child-care.

Population aging. Lower fertility results in a population with many older people relative to younger people. This reinforces the need for more investment in the human capital of young people both to support the economic well-being of a relatively larger number of older people in retirement and frailty, and to maintain prosperity in a competitive knowledge economy. Yet continued investment along existing lines will result in a polarized economy and society, for the reasons given.

Later retirement can only be a partial solution since life expectancy is also linked to income and education; delayed pension benefits would therefore disproportionately hurt those with lower incomes. The only effective longer-run solution to retirement income problems therefore consists in investments in human capital in early childhood!

This summary of Esping-Andersen (2009) was made by the present author, not by Esping-Andersen himself.

Box B9. Public values and transition to the enabling society

A world-wide shift in values: from constraint to choice

Analysis (Welzel 2011) based on the World Values Survey shows a long-run international trend towards secular-rational values and towards self-expression values. The weak poles of the two dimensions overlap on a common emphasis on *human constraint*; the two strong poles overlap on a common emphasis on *human choice*.

Consistent with human capabilities and human development thinking, moving from constraint to choice (i.e., becoming unchained from survival communities) makes people mentally free, motivating them to develop, unfold, and actualize their inner human potentials.

On average, all the countries, developed and undeveloped, moved towards self-expression values between 1981 and 2006, with a less pronouced shift toward stronger secular-rational values. This has been particularly the case in the Anglosaxon countries such as Canada and in protestant Europe, countries where self-expession values are highest.

Strong support for active social services and somewhat less support for passive income transfers

Analysis (Harrell et al 2008) of data from Environics, a Canadian opinion research company, shows continued support for some kind of social safety net. From 1993 to 2006, in response to the question "The government should: (a) see to it that everyone has a decent standard of living, or (b) leave people to get ahead on their own," roughly 65 percent of Canadians agreed with the former.

Preferences for government spending reveal widespread support across a number of social assistance policy domains. However, welfare and employment insurance receive less support than do employment programing, services for the poor, homelessness and child poverty.

Services – whether they are directed at the poor or at specific segments of the population – are viewed as a positive incentive to reintegrate. Services benefit those who "deserve" to be helped – that is, those who are actively trying to use those services to join the main stream workforce and society. Highest support for cash transfers is directed to those whose poverty is clearly not their fault (such as children).

New , more effective, directions are supported

Analysis (Ekos Politics 2013) of data from Ekos, another Canadian research firm, reinforces the theme of continued public support for big social spending by governments. However, that does not represent support for existing welfare state programming. When given clear choices about their preferences for future trajectories, the responses almost entirely involve profound shifts away from the status quo.

When asked about choices that would lead to a better future, 70% answered 'more active government' and only 26% answered 'less active government'. This was a call, not for big government or more spending but for more effective, government. There is a clear conviction that the state should have a bigger, not smaller, a role in designing and delivering a better future.

One notable finding, which mirrors recent European research, is that the youngest citizenry are more muted in their support for active government. The newest cohorts may be the most progressive ever in terms of social values, but they are more individualistic and less receptive to the notion that the state can solve their problems. (Present author's note: this is consistent with the transition to the enabling society with its greater focus on the citizen and individual choice.)

The *wording above closely follows the wording of the three documents in question, quoting directly where possible.*

World Values Survey, which show that general trends in public opinion and values are consistent with the shift to the enabling society:

- A world-wide trend towards valuing self-expression and human choice over authority and human constraint. This corresponds to Sen's focus on human capabilities and to the citizen-centric focus of the enabling society – with governments increasing being seen as facilitating individual lifecourse choices, not constraining those choices as is often now the case.

- The increasing value attached to individual choice does not diminish support for a basic safety net or, perhaps surprisingly given much current rhetoric, for a larger governmental role in social policy. The shift is towards valuing active but effective, citizen-centred policies. People are not rejecting the welfare state, but looking to its further evolution. The essay provides examples of Canadian opinions on particular topics

- People place higher value on services, including transitional services such as ALMPs, over incomes support in isolation such as social assistance or employment insurance – again a trend that is consistent with the changes in program instruments that were identified in Compendium Paper A.

B.3. A closer look at the particular goals of social policy

To this point, we have been examining trends in thinking about the goals of social policy at a high level of generality. This section expands on the material in the essay about the more particular goals that social policy seeks to achieve:

- Supporting those in need.

- Helping all individuals allocate resources over the course of their lives.

- Helping all individuals build their skills and human capital for social, cultural and economic ends.

- Fighting income inequality.

- Addressing generational sustainability and fairness.

Supporting those in need

Recent years have seen both a broadening of the definition of those who need to be supported by social programming and a greater recognition of the diversity of those who need support. As described earlier, in the mature welfare state the emphasis was on supplementing low incomes, with low income seen as a proxy for a range of other deficits. In the decades since the maturation of the welfare state, the concept has broadened to encompass a wider range of deficits. The broader term 'poverty', or more recently, 'exclusion' has been used to signal this broadening of the concept.

Similarly, exclusion is now understood to arise from multiple sources (lack of income, lack of skills, lack of jobs, lack of health, lack of housing, disability, addiction, family break up, lack of social networks or, often, from a combination of these). One-size-fits-all income support programming makes no sense given this diversity – although the existence of low income is still a common symptom of many dysfunctions. Accordingly, a basic guaranteed annual income is sometimes seen as almost the main goal of social policy in some strands of welfare state thinking, while – in the enabling society view – it is seen as an important, but mainly residual, role.

The broadening also involves a shift from a point-in-time perspective to a lifecourse perspective, including recognition that, in some cases, exclusion is short-term and in others it is persistent. It is consistent with Sen's capacities approach, with exclusion being defined in terms of asset deprivation (lack of financial, human and social capital) as well as in terms of income flows.

Taken together, these factors have resulted in a shift towards:

- Active programming. Ever-increasing attention is being paid to ALMPs and a variety of welfare-to-work initiatives, and less attention to income support used in isolation. The shift is reflected in slogans such as 'a hand up, not a handout', 'workfare' and 'mutual obligations'.

- Independent living in homes. Much more so than in the past, efforts are made to provide more people with disabilities with the tools needed use to live in their own dwellings and to participate in community and in the labour market. Providing homes for the homeless has been a growing priority for many years.

- Efforts to cut across the silos. There have been many attempts to cut across the silos of individual programs and agencies in order to provide co-ordinated services aimed at the real needs of people, often local initiatives. This can be seen in the growth of actors with titles such as co-ordinators or case managers. The effort is real, but success rates are not high for reasons described in Compendium Paper C.

Supporting the allocation of resources over the lifecourse

Another goal of social policy is to help people allocate resources over the course of life – not only for people in greatest need, but for everyone. Recent decades have seen two shifts in thinking and analysis related to lifecourse allocation goals: individualization and active lifecourses. The trend towards individualization has already been discussed at length in the essay. It is a direct reflection of trends in policy thinking towards supporting human development by enabling people to develop their skills and capabilities in ways that make sense to them.

While the goal of individualisation is to support an individual's life course choices, public policy is not entirely neutral as to which choices are supported. For example, choices involving criminal activity are obvious not supported by public funds while choices that involve society-wide payoffs are given a priority, especially those that involve active lifecourse participation in work and human development. Parallel to the shift in transitional programs discussed earlier, policies directed to lifecourse reallocation increasingly put a priority on shortening periods of joblessness, as opposed to simply providing income support during those periods. For example, recent decades have seen unemployment insurance benefits tightened up to remove work disincentives, early retirement benefits reduced or eliminated, and pension rules adjusted to encourage people to work longer in life.

More recently, child care and parental leave programming has been expanded in countries such as Canada, partly to encourage mothers to return to work after a period of caring for their babies at home. As well, ALMPs are becoming common in unemployment insurance programming (with some calling for them to be mandatory, as seen Box B10 below) and not restricted only to those in greatest need.

Learning, human capital and prosperity

High skill levels result in increased self-sufficiency, more real choice in making lifecourse decisions, good jobs and material well-being. A skilled workforce fosters a competitive, prosperous economy. Learning and skills development have therefore always been key purposes of social and labour market policies. Box B6 and Box B7 illustrate recent thinking about this objective:

- A steady growth in the importance attached to learning and skills over the entire course of life, including in early childhood and during adulthood, particularly ALMPs that are tailor-made to individual circumstances. This builds on the huge expansion of the system of post-secondary education that occurred during the maturation of the welfare state. In Canada the percent of the population with a post-secondary education is still increasing, but the rate of growth has tapered off quite sharply since the mid 90's, particularly for people aged 25 to 44.

- Emphasis on generic skills – the 'learning to learn' skills that help individuals navigate the full course of life, not only for their next job.

- Making full use of the human capital of the whole population in the economy, including previously under-represented groups such as women, people with disabilities, those who previously would have lost skills as a result of prolonged periods of joblessness, and older people who in the past would have retired earlier.

- The shift from social expenditure to social investment that was discussed in the essay is implicit in the calls for effectiveness and making a difference in the subsequent lives of people.

OECD thinking has been particularly influential in human development topics that cross the boundaries of social, educational and economic policy, as can be seen in three initiatives: Babies and Bosses, the revised Jobs Strategy and the Skills Strategy.

Babies and Bosses

The title of a series of studies on early childhood policies, *Babies and Bosses* (OECD 2007) gives a good signal of current thinking that crosses these traditional policy silos. It refers not only to the main theme of the document (working time arrangements that are consistent with good early childhood care and learning) but it also suggests that good early learning today will have high employment payoffs for the next generation – when the babies join the labour market.

Revised Jobs Strategy

A particularly important initiative that drew on both social and economic thinking took place in the mid 90's when the OECD set out its influential Jobs Strategy to provide a comprehensive framework for job growth and a healthy labour market. The strategy was reviewed a decade later and the revised version (OECD 2006) still dominates thinking in this area. Critical actions identified in the revised Job Strategy are listed in Box B10.

Note that, even in this government-wide, economically-oriented agenda, a high priority has been assigned to lifecourse perspectives such as interspersing schooling with working, later retirement, and family policies that support a full role of women in the labour market. Note also the importance that is attached to effective ALMPs. ALMPs are now considered to be mandatory: governments must offer them to all who need them and, once offered, there is an obligation on the part of beneficiaries of social programs to make use of them.

Skills Strategy

The most recent strand of OECD thinking and research has focussed on perhaps the central human development issue – the acquisition and use of skills, aptitudes and abilities over the course of life. Success here simultaneously meets goals of:

- Economic prosperity (a skilled, competitive workforce).

- Individual well-being (there are strong correlations between skills and income, health and participation in social networks).

- Social wellbeing (skills are linked to participation in civil society, social inclusion, equality, political engagement and trust).

The OECD Skills Strategy[12] reinforces, and provides a strong evidence base for, many of the themes that have already been discussed. Moreover, the OECD has taken strong steps to measure skills and their use. The most recent initiative is the Survey of Adult Skills carried out in many countries,

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[12] OECD 2013. This publication describes the results of the recent survey adult skills and relates them to the policy directions of the Skills Strategy which was launched in 2011.

Box B10. Selected actions called for by the updated (2006) OECD Jobs Strategy

The Job Strategy called for detailed government-wide action on many fronts. The selected items below are those that relate most directly to the subject matter of this paper. Other topics include macro-economic policy (which has become even more central in recent years) and the promotion of healthy product markets.

Remove work disincentives in social benefit programs and stress effective ALMPs.

- Unemployment insurance … and social assistance, should be set at levels that do not discourage job search excessively and, especially where they are relatively generous, be made conditional on strictly enforced work-availability criteria as part of well-designed 'activation' measures.

- Participation in effective ALMPs should be compulsory after a certain length of joblessness that may differ across groups (*e.g.* immigrants facing integration difficulties, disadvantaged youth and older jobseekers).

- ALMPs should be regularly assessed in a rigorous way to ensure that inefficient programmes are terminated, and that the mix of programmes is adjusted to suit the needs of jobseekers and the labour market.

- Public early retirement schemes should be gradually phased out[a], and public and private pensions as well as other welfare systems reformed so as to remove incentives for early labour market exit.

Implement family-friendly policies, including childcare support, as well as working-time arrangements which help reconcile work and family life, so as to remove barriers to employment for those with family commitments.

- Tax and social security provisions should not discriminate against part-time work or other flexible arrangements which help reconcile work and family life and promote gradual work-to-retirement transitions.

- Employment should be made financially attractive vis-à-vis benefit receipt, notably through tax-benefit reform and the provision of targeted in-work benefits to make work pay, without creating excessive tax distortions or compromising public finances.

Promote high-quality initial education and … set conditions likely to improve labour force skills to support the key role of human capital accumulation for the achievement of economic growth and social objectives[b], by:

- Establishing a system of recognition of new competencies gained by adults through training and work experience, including foreign credential recognition of new immigrants.

- Ensuring that training is more demand-driven and responds effectively to firms' changing skill requirements, and encouraging greater quality of training provision, including through performance monitoring of providers.

- Supporting training programmes – *e.g.* training vouchers, training leave or schemes that help workers alternate between work and training – which include co-financing from private agents and address existing training inequalities by providing effective learning opportunities for disadvantaged groups, notably the low-educated.

- Ensuring that some employment programmes are targeted to the specific needs of disadvantaged people, including through second-chance schools.

- Reducing early exits from education and ensuring that young people acquire skills relevant to labour-market requirements, including by broadening vocational programmes, strengthening links between general and vocational education and improving career guidance.

- Combining education with work, notably through improved apprenticeship systems or more informal channels.

[a] Early retirement programs have not played a major role in Canada, although earlier versions of older worker adjustment programming once did provide income support for older displaced workers.

[b] The revised job strategy did not highlight issues related to older worker adjustment. However at about the same time, the OECD published a series of country reports entitled *Live Longer, Work Longer,* including a Canadian study that indicated that Canada was in comparatively good shape here. The main recommendations relate to greater inclusion of older workers in ALMP-type programming.

including Canada[13]. The surveys assess the proficiency of adults in literacy, numeracy and 'problem-solving in technology-rich environments'. These are key information-processing skills that are:

- Necessary for fully integrating and participating in the labour market, education and training, and social and civic life.

- Transferable, in that they are relevant to many social contexts and work situations.

- 'Learnable' and, therefore, subject to the influence of policy.

The data explore a range of characteristics related to the acquisition and use of the generic skills that are most relevant to the knowledge economy. The central message that emerges is that what people know (as measured by their generic skills), and what they can do with what they know, has a major impact on their life chances. While this seems obvious, it is nevertheless a consideration that could not be easily taken into account in traditional point-in-time welfare state programming.

The survey sheds much empirical light on a long list of factors of direct policy interest. There are surprisingly large differences in the skill levels of even those with same levels of educational attainment, even among those with degrees and diplomas. Large numbers of people have skill levels that are significantly too low to live a full life in the knowledge economy. There are many mismatches between the skills of workers and the skills required by their jobs. There are large pools of skills not currently being used in the workforce.

Comparisons of the relative success of countries (and of different provinces in Canada) in dealing with these issues (and there are large cross-country and cross-province differences) show that they can be effectively addressed by policy action. Especially through the work of DataAngel[14], Canada has taken a lead in using microanalysis to explore these policy implications by linking literacy data to other census and administrative files.

Addressing inequality

Equality is a principle, or rather a set of principles as can be seen in Box B11, that guides the design of social programs and that provides criteria for assessing their effects. The essay addressed five themes that are emerging in recent policy thinking about desirable future direction in fighting inequality. Here we elaborate on two of these: the growing gap between the rich and the poor, and generational equality and sustainability.

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[13] Statistics Canada 2013. This publication provides results for Canada. An interactive tool for accessing and comparing country data is also available on the OECD web site. Generally, Canada came up about average on many of the assessments – better than countries such as Italy and Spain but not nearly as good in some areas as countries that have invested heavily in human capital such as Korea, Japan, Finland and (in some cases) Australia.

There are large differences among the provinces in Canada but, overall:

- Literacy – Canada ranks at the OECD average in literacy. However, Canada shows a larger proportion of its population at both the highest and lowest levels of literacy.

- Numeracy – Canada ranks below the OECD average in numeracy, and the proportion of Canadians at the lower level is greater than the OECD average.

- Problem-solving in technology-rich environments – Canada ranks above the OECD average. Only Sweden exceeds Canada in the proportion of its population at the highest level of proficiency.

- A higher proportion of Canadians engage with information and computer technologies than the OECD average.

[14] See various papers on http://www.dataangel.ca/

Box B11. Equality and inequality: confusion in the welfare state

Equality is a principle that applies to social policy as a whole

Equality is a fundamental principle of social policy. Some principles (such as respect for human rights, accountable financing, and high service quality) provide criteria that can be used in assessing individual social programs. Most equality principles provide criteria that are best applied to social policy taken as whole.

A set of different equality principles

Equality is really a heading for a set of quite separate but overlapping principles addressed to questions of equality of what, equality for whom and equality of how. For example,

- Equality of outcomes or status or result – e.g., equality with respect to actual incomes or resources.

- Equality of opportunity – i.e., where everyone starts life with a fair and equal opportunity.

- Equality of autonomy, a variation of equality of opportunity which reflects Sen's capabilities approach discussed earlier. Here equality refers to equality to develop one's capacities as one wishes, to have equality across society in how people make their life choices.

- Equality of treatment (providing access to similar benefits and services in similar circumstances) and the absence of discrimination.

- Equality between different population groups, with respect to either outcomes or opportunities or autonomy – e.g., equality of men and women, or of Aboriginal and non-aboriginal people.

- Equality across generations – again with respect to outcomes, opportunities or autonomy.

While different, the various equality principles overlap. For example, success in achieving equality of opportunity for the next generation is related to success in achieving reasonable equality of outcomes in the present generation (Corak 2013).

Nevertheless the concepts are different and require different measures. In all the cases, it is quite difficult to find completely satisfactory practical measures as the concepts, on closer examination, are far more complex than they appear on the surface (Burchardt 2006). Much the easiest to measure in practice is equality of outcomes, particularly with respect to income.

As well, there are different criteria for what constitutes success. For example, the goal in fighting discrimination is to have no discrimination. The goal with respect to equality of opportunity or autonomy is usually to have current trends in the direction of reduced inequality. With respect to equality of outcomes no one argues that everyone should have the same income, but many feel that the gap between the top and bottom is too large. However, there is no consensus on

what would constitute a 'successful' degree of inequality.

The wrong measure is used in welfare state policies!

At the end of the day, equality principles can only make a difference to the policy process to the extent that they are measurable and measured. The problem is that:

- At a conceptual level, much the most important of the equality principles in welfare state thinking is equality of opportunity – or, more recently, the equality of autonomy variant of it.

- Yet nearly all the practical measures that have been available until recently relate to equality of outcomes, usually income inequality.

This discrepancy between the real goals and what is actually measured causes confusion and a rift between the public discourse on equality issues and what policy can do to make things better.

The problem is not only a question of measures. It arises from the very nature of welfare state policies. The most important principle was always equality of opportunity, a longitudinal, lifecourse concept. However the only practical tools for program design were point-in-time ones and, accordingly, nearly all the practical measures of inequality that have been available are based on are point-in-time readings of the way in which outcomes are distributed, usually measures of income inequality.

Even for purposes of signalling the need for policy action with respect to the secondary goal of inequality of outcomes, traditional measures are highly imperfect:

- Assets are at least as important as income in policies directed to redistributing income and wealth from the top to the bottom, yet assets are excluded from most measure of inequality.

- Policies directed to 'equality of whom' often focus on groups such as people with disabilities, Aboriginal populations, or single mothers. Yet the traditional cross-sectional measures ignore some fundamental realities, such as the heterogeneity within these groups or the reality that most periods of poverty are relatively short.

- Nor do most traditional measures recognise the importance of the combined roles of labour markets, families and policies. For example, because poverty is defined in relation to average incomes, the trend towards two earner families means that single-earner families make up a growing portion of the poor, even though their income circumstances may not have changed. Even the statistical techniques (equivalence adjustments) for converting data to a family basis are crude and arbitrary.

Gap between the very rich and the rest of us

In very recent years, increasing attention is being paid to equality of outcomes. This reflects a concern that growing income inequality, especially a growth in the resources of the very rich, may result in a polarization in society, including the worry that large inequalities in income will be passed on across generations, undermining equality of opportunity – and creating self-perpetuating downward generational spiral (Corak 2013). There is also a concern that such large inequalities cannot be justified on the ethical grounds. The high incomes of those at the very top do not appear to result in any benefits to those at the bottom[15].

There has always been a balance in social policy between equality of outcomes (e.g., equality with respect to actual incomes or resources) and equality of opportunity (i.e., where everyone starts life with a fair and equal opportunity, for example with educational opportunities being the same for the children and of rich and poor parents). The balance between the two varies by country and by political values, but the dominant emphasis in the welfare state – at least at the level of aspirations – has been on equality of opportunity, even though, as shown in Box B11, the actual programming and measures of the welfare state are more suited to equality of outcomes. The present concern about high income inequality but lack of consensus about what might constitute appropriate policy response is a reflection of this basic ambiguity – as has been so clearly demonstrated by Occupy Wall Street movement, both in its successful turnouts and by its lack of a concrete agenda for change. Indeed, the Canadian debate on growing income equality tends to be a reflection of the situation in the United States rather than one based on Canadian evidence. However, the evidence for growing income inequality in Canada is not all clear[16].

In terms of policy responses, there has been relatively little success in curbing the growing inequality. It has proven difficult to change the tax system so that the rich pay a fairer share. In any event, the numbers are so small that a reallocation from the very rich would have little effect on the overall income distribution. Policies directed to raising the incomes of those that bottom are already in place, with relatively little room for much further progress using existing techniques. The essay argues that progress can be made by increasing the child tax credits and earnings supplementation of the proposed residual guaranteed minimum pillar of income support in the enabling society – but also by shifting away from these point-in-time approaches to addressing equality and towards lifecourse and generational approaches.

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[15] Perhaps the most influential social theories today are based on the work of the late John Rawls who, among many other contributions, argued that, in a just society, inequality could be justified only to the extent it resulted in gains to those at that bottom. For example, the income gap between the rich and poor can only be justified to the extent that higher incomes for those at the top result in a more productive and prosperous society that improves the living standards of everyone, including those at the bottom.

[16] Analysis by Heisz and Murphy (2014) shows that there were increases in market income inequality during the 1980s and 1990s recessions but that these were completely offset by a tax and transfer system which became more redistributive, such that there was no increase in after-tax income inequality up to 1995. During the second half of the 1990s, the tax and transfer system became somewhat less redistributive, and after-tax income inequality increased. A recent rise in market income inequality (2009-2010) was offset by rising transfer redistribution.

Analysis by Heisz (2014) shows that, in terms of the share of income held by the 1% with the highest income, Canada and the US had similar rates in the up to around 1980. After 1980, both countries saw an increase in the concentration of income in the top 1%, but the increase was faster in the US. The share held by the top 1% in Canada is still lower than it was in the early decades of the last century – raising fundamental questions about what would constitute an appropriate share of income for those at the very top.

Generational equality and sustainability, a signature theme of the enabling society

Generational equality is used in two senses. One refers to equality of outcomes – that people ought to leave their descendants at least the equivalent of what they received from the previous generation. The other is equality of opportunity – that all people of the next generation have at least as good a chance of succeeding in life, of developing their capabilities, as did the present generation. This latter concept, often referred to as generational fairness, is the primary one used in policy applications, although the two are closely related[17].

Generational issues are difficult to deal with, both in concept[18] and in measurement. Consequently, in welfare state policy thinking, they are mainly treated exogenously. That is, they are usually not incorporated directly into current thinking about the immediate design of social programs, but rather are considerations or concerns about the indirect or external effects of those designs. The empirical evidence is simply not there for generational concerns to be integrated into routine policy debate and program design.

In more recent years, two intergenerational issues have received particular attention: a concern for treatment of the current generation of younger people and a concern about generational sustainability.

Is the current generation of younger people being treated fairly?

The first issue relates to the extent to which a combination of demographic factors (population aging that arises as a result of reduced fertility) and the introduction of collectively-funded welfare state programming has resulted in gains to the babyboom generation at the expense of succeeding generations. Are the baby boomers leaving fiscal debts that will impoverish succeeding generations? Are current investments in the next generation large enough, considering the huge investments that were made when the baby boomers were young, for example in the form of massive increases in the size of the postsecondary education system? Or more generally, will the next generation face lower standards of health, security and economic well-being compared with their parent's generation?

In part the concern reflects a misunderstanding of the effects of population aging. Many of the alleged negative generational effects of population aging would disappear if older people decided to work significantly later in life – a theme that was discussed at length in the essay.

In part, the concern also reflects a widely-held view that younger people today may be worse off than were the younger people of a few decades ago. The facts, however, are not so clear.

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[17] Equality of outcomes is usually treated under the heading of sustainability, where it is closely related to issues of generational equality of opportunity, as discussed in the text. However, it can be seen as a separate goal, where it reflects an expectation, almost certainly an unrealistic expectation, that each generation should be significantly better off than its parent's generation, with the benchmark being the very large gains made by the baby boomers when compared with preceding generations who grew up in the 30s and 40s – the depression, war-time and immediate post-war years. However, wars, long-term economic cycles, technological changes and demographic shifts mean that equality of outcomes across generations cannot be an achievable goal of public policy.

[18] For example, to what extent should generation fairness issues go backwards in time as well as forward? If present generations should not harm the rights and resources of future generations, should they not also provide compensation to people in the present generation for harms that arose in previous generations? In Canada this has taken the form, for example, of compensating those who were harmed by the Indian Residential Schools program. And, how far back should one go in making such compensations, and how many generations in the future should be taken into account when looking to future sustainability? In terms of measurement, this becomes a question of how one calculates time discounts – a problem whose solution requires that value judgements be made.

… if there is a problem, it may have more to do with gender than generation

It seems likely that the deterioration which is seen has more to do with gender than with generation. The relative deterioration is mainly limited to young men. The educational attainment of young women has increased compared to that of young men. Especially in areas where the demand for labour is not strong, younger women have got the jobs and higher wages. That is, we may be observing the side effects of a basic success story – gains in gender equality, as much as a story about generational fairness.

According to a recent Statistics Canada study (Galarneau et al 2013), young women are doing better in the labour market than was the case a few decades ago and the losses that did occur, mainly among young men and among those under age 24 more generally, took place mainly in 80s and 90s with conditions improving in the 2000s. The study points out that unemployment rates among younger people are always higher than the average, but that the unemployment rates for young people in the recent recession were lower than was the case in the recessions of the 80s and 90s. More generally, over the last three decades, the employment conditions of young people changed differently according to sex, age, and place of residence. Some groups, such as women age 25 to 34, experienced improved employment conditions, while young people under age 24 suffered worse employment conditions but less so in the oil-producing provinces where labour demand is high. Real wages for young people did fall during the 80s and 90s, but rose in 2000s, with the deterioration greatest for young men, with the young women making the largest gains.

Is the system sustainable?

The second issue relates to the increased attention being paid to sustainability more generally, particularly the sustainability of natural resources and issues associated with global warming. Can existing social and labour market programs and policies, especially pensions, be sustained by coming generations? Are we providing the next generation with the financial, human and social capital, as well as the climate and natural resources, which will be needed so that they will be at least as well off as their parent's generation? Will they have the capacity to leave their children's generation with an equally strong heritage?

Often the issue of sustainability has been framed in terms of programs taken one by one. For example, much attention has been paid to the generational sustainability of public pensions. This however, makes little sense. It is the net effect on future generations of all programs that is of real interest[19]. More important, the proper measure is not just the effect of government programming on future generations, but the effect of all resource flows in society, including both inside families and through government transfers and services. The goal of government programs should be to make the whole system of generational transfers fair and sustainable.

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[19] Some decades ago, there was much interest in generational accounting that looked at the net effects of government programming on future generations. However that technique had a huge flaw. Its calculations were based on the assumption that existing program financing and existing behavioural patterns would remain unchanged for decades into the future, when the reality is that financing arrangements and human behaviour are continually changing and adapting – and properly so. For example, as noted in the essay, most fiscal projections in Canada out to 2031 are implicitly based on no change in existing retirement patterns; they are wildly wrong when one takes account of recent and likely future trends to later retirement. Apart from some technical 'what if' exercises, the only thing that generational accounting tells us is that things cannot remain the same forever. But we already knew that.

... existing generational transfers may be sustainable: a distressing possibility

Inside families, there has likely been a huge increase in transfers from the baby boomers to their children as a result of having fewer children (with relatively larger inheritances and support going to relatively fewer children) and more support to children during much longer periods of schooling and living in the parental home. A full picture would need to take account of transfers to children later in life though gifts, including from grandparents, help in home buying and inheritances. On balance, it seems reasonable to think that the generation following the baby boomers are the beneficiaries of large generational transfers within families, partially compensated for by reduced market income and social benefits from government – a shift, which if true, may meet the criteria of sustainability narrowly defined. However, the result is a long delay in the transition to full independent adulthood, which is probably one of the least satisfying outcomes that one could imagine based on any other criteria.

New evidence is needed

The real issue is that we do not have the evidence to actually measure these generational transfers in a satisfactory manner. We don't know what is really happening.

The big statistics of the enabling society will allow an evidence-based approach to generational issues. As will be explored Compendium Paper E, big statistics will allow integrated analysis of:

- Resource flows to and from government and within families.

- Assets, which are critical to discussions of sustainability, as well as of these resource flows.

- The distributive effects of social policy within and across generations.

- Different dimensions of sustainability such as environmental sustainability, the sustainability of the urban infrastructure as well as sustainability in the generational sense being discussed here.

Such statistics will not tell us what constitutes an appropriate level of generational equality or fairness. However, they will show what is actually happening and they will show how different program design options are likely to impact on different generations – and to monitor the generational impacts of existing programs in the context of all the generational flows that are taking place in families and in society at large.

Policy changes are also needed

It is not only a matter of statistics and analysis. The actual shift in program content towards individualization, towards use of assets and toward the guaranteed lifetime accounts will make it far easier to adjust policy to take account of generational issues. In particular, programming that allows individuals to have greater choice in the way in which their lives unfold also addresses many generational issues. For example, removing artificial policy-based constraints on work-retirement transitions will almost certainly lead more people to retire later than they do now, and this in turn may well prevent some intergenerational issues from arising. This is also the conclusion of the OECD as shown in Box B7.

The payoffs from a focus on generations

More generally, a case can be made that, once the enabling society system of big statistics and new program instruments becomes mature, the main equality focus of social policy could be on the generational dimension. If the next generation has an equal chance to fully develop their capabilities in ways they so choose, that implies that things are moving in right direction on the equality of opportunity (or equality of autonomy) front for the present generation and also on the equality of outcomes front (given the link referred to earlier between equality of outcomes and opportunities).

Putting the emphasis on the next generation has the advantage of being consistent with the life-course, human development perspectives of the enabling society. The alienation of welfare state programming (which can only address outcomes at a point in time) from welfare state principles (equality of opportunity) will come to end.

… especially so in Canada

A focus on generational issues makes particular sense in a country such as a Canada that relies so heavily on immigration and that values bilingualism and multiculturalism. Often the goal of immigrants is cast not in terms of their own incomes compared with other Canadians or even their own chances of developing their own capacities, but rather in terms of the opportunity of their children and grandchildren to lead a full and rich life of their own choosing. A test of the success of bilingualism and multiculturalism is the extent to which the next generation maintains and passes on their mother tongue and their cultural traditions.

B.4. Consistency with recent thinking

The analysis of changing values and expectations found in the essay and elaborated in this paper is similar to that found in much of the academic literature. There are differences of emphasis however. As one example, while the desirability of a shift towards citizen-centric policy is found in nearly all of the recent literature, the consequences for programming in the form of individualization is not as pronounced in the literature as it is in my argument. This is almost certainly because much of the current literature does not see the potential of 'what works' evidence that can flow from the use of ICT technology. Implicitly, much of the literature, and much public opinion, assumes a future marked by evolutionary changes in existing instruments of policy and tools of analysis. I argue, on the other hand, that major, transformative change is quite possible in the foreseeable future.

For example, the emphasis on the citizen and individual choice in much of the literature seems to be cast mainly in traditional terms such as putting the needs of citizen first in service delivery, or greater citizen involvement in the policy process or in co-production, or in making service programming more flexible in meeting diverse individual needs, or of finding ways of 'joining-up' existing programs, or making it easier to communicate with the existing governmental structures by using 'e-government'. In other it words, it is mainly about making the existing infrastructure more citizen-friendly.

On the other hand, the enabling society foresees a much more radical shift. The use of 'what works' evidence will allow a transformation of social programming and it's supporting governance structures and knowledge base such that informed citizens can actually be at the centre of social policy in the not too distant future. The transition period will not be simple but it could be reasonably quick. The transformed system will address the evolving purposes of social policy in a much simpler, more direct and effective manner than is implied in much of literature.

C. Governance and Public Administration

The essay argued that the system of big statistics that produced evidence of what was working best for the participants of a program could also provide integrated information about the performance of:

- The individual employees involved in the design and delivery of the program in question.

- Actors working in partnership arrangements.

- The organizational groupings to which these employees and actors belonged.

- The program taken as a whole.

This would be done by using micro-level information about the logic models of each actor in the system, i.e., detailed and overlapping hierarchies of inputs, processes outputs and outcomes. Such a strengthened, evidence-driven system would work in harmony with value-based approaches to produce simpler, and far more effective, governance arrangements.

Readers familiar with the public administration literature will be well aware that our argument that radical improvement and simplification of governance is likely in the quite near future is out of synch with most current thinking. On the other hand, readers who are not familiar with public administration may well have difficulty understanding the nature and severity of the problem that is being addressed. The present paper attempts to provide needed context for both these audiences.

- Section C.1 provides a highly selective history of key issues and trends in public administration over the past 60 or so years.

- Section C.2 shows how a micro-based information system can help reconcile the horizontal and vertical dimensions of administration, a problem that has plagued the administration of welfare state programing.

- Section C.3 describes a more harmonious balance between evidence-based and value-based governance.

C.1. A brief history of public administration in the post-war era

To oversimplify things, we can say that the main approach to public management during the decades before the 1960s (i.e., prior to mature welfare state programming and prior to widespread use of computers) was to divide up the tasks to be performed by policy into a series of mutually exclusive programs that would be independently managed by separate bureaucracies. Within each program, control was maintained through rules related to the prudent uses of resources and the use of standard processes that were judged to be efficient, often following the assembly line model used in the private sector. There were particularly tight controls around financial resources, the rules for using human resources and even the prudent use of pencils.

In other words, to use today's terminology of logic models, management controls centred on inputs and processes. Decisions that went beyond the prudent management of inputs and the efficient management of processes – that affected higher level outputs and outcomes – were based on common sense and judgement which, in turn, reflected shared values about how things should be done and a common understanding of the policy goals to be achieved. This meant referring large or delicate decisions to the political level whose function it is to mediate among conflicting goals or, in the great

majority of cases, by relying on the values, judgment and common sense of public servants who were assumed, correctly in the main, to be able to act in both the public interest and in the interest of the government.

We usually associate values-based governance in those years with a small elite corps of senior public servants. However some front line staff, such as those who set up job creation or training projects, exercised far more personal discretion in doing the right thing to meet local needs than is the case today.

With the arrival of the computer age and mature welfare state programming, things changed:

- First was a large expansion of middle management and staff functions inside governments. The management cadre was no longer a small elite. One could no longer automatically assume that the bureaucracy was driven by shared values – and a shared understanding of what was in the public interest and of the priorities of the government of the day. New approaches were needed that would define and assess what constituted good performance throughout the whole hierarchy.

- Second were new pressures to work not only through separate programs, but also through partnerships arrangements, greater co-ordination across programs and jurisdictions, and taking 'whole of government' approaches. We refer to this as adding a horizontal dimension to the traditional vertical dimensions of management.

There have been many efforts over the past fifty years to respond to these pressures, through both reforms to measurement systems and in more systemic approaches to values and expectations.

How measurement systems responded to the new pressures

The basic response in measurement systems was to supplement the reliance on input and process controls with an attempt to develop new management information systems that also monitored outputs and, in some cases, outcomes. This aspiration is generally referred to as a shift to results-based management.

Management information systems during the years of the mature welfare state have attempted to provide information based on the kind of logic model approach described in essay – measuring the relationship among inputs and various levels of outputs and outcomes. These efforts were present at during the early years of the mature welfare state and the computer age in the form of output budgeting systems. The United States introduced PPBS (Planning, Programming, and Budgeting System) in the 60s.

The goal was to use the new power of computerized records to monitor performance at all levels of the bureaucratic hierarchy in terms of efficiency (the ratio of inputs to outputs) and even effectiveness (the ratio of inputs to outcomes). In principle at least, this would open up the possibility of initiatives to do good things at all levels of the hierarchy – while still maintaining the principle of ministerial accountability for all decisions.

Canada took a lead in developing government-wide planning and performance system based on the logic model approach. In the Main Estimates, the federal government now reports to Parliament in a manner that shows how a department's program architecture lines up with its expected results and the higher level strategic outcomes that the programs are designed to support.

Over the years, there has also been much effort, and some modest success, in developing the underlying data bases that could feed such performance-based management information systems, both

administrative data from mainline programs and the data needed to support particular functions such as the management of financial or human resources.

For example, the Government of Canada has made many efforts over the years in the direction of computerization and the integration of data bases related to the different dimensions of human resource management. There have been major improvements, but we are still far from being able to produce consistent real-time indicators related to staffing, compensation, setting and following up on performance expectations or of employee engagement.

Similarly, management information systems related to the operation of the programs, particularly service operations, could not consistently draw on reliable, integrated bases of outputs or even processes – let alone outcome data. As noted earlier, for much of the period, administrative data about the provision of services provided little information about the black box of the processes that took place within those services. Progress has been much stronger in income transfer programs where outputs are easier to measure and where outputs are often closely related to at least lower level outcomes.

In the last two decades, important steps have been taken in cleaning a number of program databases and making them suitable of analytic uses such as performance measurement[20]. However, in most areas we are still far away from having the warehouses of integrated administrative data that are needed to build performance-based management information systems.

Resulting weaknesses of performance management based on logic models

As a consequence of the lack of integrated measures of outputs and outcomes, mainline expenditure management systems tend to rely on a few selected measures of higher level outcome which can be measured from often exogenous sources such as surveys. For example, one of the selected strategic outcomes for Employment and Social Development Canada is *a skilled, adaptable and inclusive labour force and an efficient labour market.* The programs that support this outcome include labour market information, programs that support employment among potentially excluded groups such as persons with disabilities, student loans and grants and, of course, EI (Employment Insurance). EI includes the labour market development agreements that fund provincial ALMPS. Each of these component programs is assigned an 'expected result' (mid-level in the outcome hierarchy) which is in turn is associated with a selected performance measure.

In case of Employment Insurance, the statement of expected results that is most closely associated with the labour market agreements is that *workers have the flexibility and support to pursue employment opportunities or labour market transitions.* The associated performance measure is *the proportion of regular Employment Insurance claimants who receive benefits and are not frequent claimants,* a measure would seem distant for many of those in the ALMP business, but that makes sense from an EI funding perspective.

Although there have been many improvements in this expenditure management reporting system, it still faces the basic problem that any changes in strategic outcomes (and expected results and performance indicators) cannot be directly linked in an integrated way with the actual operation of programs. The system does not provide the information that would be needed to make incremental improvements in the programs or to hold those who designed and delivered the programs accountable for their effects. Later in this paper, Box C14 addresses the limitations of logic models even if better data were available.

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[20] Examples can be found in Compendium Paper E which describes the new system of big statistics.

…evaluations and experiments were a potential solution that did not work (until now)

These weaknesses were of course well understood in the early days of performance-based measurement. Much weight was therefore placed on traditional evaluations (for ongoing programs) and experiments (for new or revamped programs). These tools did have the potential to provide direct measures of inputs, processes, and hierarchies of outputs and outcomes. They could measure effectiveness because they could examine what would likely happen in the absence of the intervention. It would still be necessary to create current proxy measures, but experiments and evaluations could provide periodic benchmarks that could hold a performance-based system together.

However large scale traditional experiments proved too costly and cumbersome, with results only available many years later. Traditional evaluations were more useful. For example, they were used to reshape ALMP programming in the 1980s when the predecessor department to ESDC used the results of earlier evaluations to construct the world leading Canadian Job Strategy suite of training and employment programs.

However, evaluations also proved unhelpful in the context of current performance measurement systems. The results also came too late to be useful and, in any event, did not provide kind of information that would be of real value the ongoing work of most actors in the system, namely which aspect of a program worked best for people with different characteristics. Given the technology available, all they could do was produce aggregate data about the success of program taken as whole, which was of little use in monitoring the performance of actors within the system or in making the incremental changes that are within the actual mandates of the huge majority of employees.

In consequence, far less emphasis has been placed on evaluations in recent decades and most have become much less ambitious – morphing into something more like a comprehensive audit with an eye more on success in meeting stated outputs and low level outcomes, rather than an exploration of effectiveness and cost benefit in meeting higher order outcomes.

The cycle is beginning to reverse once again, in part because of the new power of big statistics to create real time calculations of expected outcomes – as discussed in the essay. The tools developed by program evaluators can, in the reasonably near future, become embedded in the operational systems of 'what works best' programming of the enabling society. Experimental methods will similarly become integrated in the normal way in which programs are designed and implemented.

The consequent proliferation of single-purpose performance measurement systems

Since the mainline results-based expenditure management system is not, in itself, very useful in monitoring performance and ensuring accountability, it has been supplemented over time by a range of additional tools. For departments taken as whole, the Government of Canada carries out an annual assessment of management practices and performance based on a framework known as the MAF (Management Accountability Framework). For individual employees, there is an annual performance management cycle where performance expectations are set at the beginning of the cycle, reviewed midway through the year and assessed at year end. For programs, the ongoing expenditure management system is supplemented by in-depth program reviews, currently conducted every four years, that use a variety of assessment tools to review a program's relevance and effectiveness.

In addition, there are many reporting systems related to monitoring adherence to the rules governing the management of human, physical, financial and information resources and to other central policies related to areas such as use of official languages. Some of these are imposed centrally, but many others have been created by departments themselves. The number of rules and associated reporting requirements has fluctuated over the decades. The large growth of middle management and staff

functions has created a strong underlying pressure to increase rules and reporting in order to justify its existence. This has been moderated by periodic efforts to decentralize and reduce paper burden.

The lack of information about processes in mainline reporting systems has led to more emphasis on surveying the satisfaction levels of program participants (to support improvements in the quality of service delivery) and of employees. Measures of employee engagement are useful in themselves in identifying problem areas in human resource management and, even more centrally, in assessing overall performance, since measures of engagement are thought to be a partial proxy of an employee's performance and productivity.

The underlying problems in summary

In summary, the history of measurement-based governance since the 1960s has been characterized by three problems.

The first is that, while the potential for using result- and outcome-based measures for monitoring performance in an integrated manner has been long recognised in principle, it has not yet been possible to translate this into practice, especially in programs that provide services. A key reason has been the inability to devise practical proxies for outcomes, along the lines of the 'what is expected to work best' prospective information that was discussed in the essay. We have known how to produce such information since the 1990s but it was never used in mainline programming.

One of the reasons, in turn, for the failure to routinely use technology to produce information on expected outcome was that the computerization during the years of the welfare state was mainly limited to automating existing ways of doing business, respecting existing organizational boundaries – as opposed to rethinking the nature of the work based on the potential of the new technology. We identify this kind of sub-optimal reform as the second big problem. Territorial borders were reinforced, not broken down. This is clear only in hindsight however; at the time there was little choice but incremental change.

The third, and related problem, is that empirically-based governance initiatives have related almost entirely to the vertical dimension of management, and have largely ignored the horizontal dimension which has been growing in importance. We return to this topic in Section C.2.

Trends in value-based approaches since the 1960s

As noted, a values-based approach, supported by input controls made much sense in the much smaller bureaucracies of the pre-computer age, with its expectations that most programs would be delivered independently and not jointly with others, and with the program recipients seen as passive clients or beneficiaries as opposed to citizen partners. Over the intervening years, reforms have been introduced to value-based approaches in response to the growing of expectations about working in partnership and in response to the increased size of the bureaucracy.

There have been many overlapping strands of reform. We will quickly review four of these: the formalization and dissemination of values and expectations, employee engagement surveys, participatory policy-making and open government.

Formalization and dissemination of values and expectations

The growth in the size of the bureaucracy since the 1960s has made it imperative to formalize the values and expectations that were once considered to be implicit and to find new ways of disseminating

them throughout a much a larger bureaucracy with many more people performing internal overhead functions than directly serving the public[21].

In the case of the Government of Canada, a formal statement of values and ethics was introduced in 2003. A revised version issued in 2012 dealt with values and ethics under five headings: respect for democracy, respect for people, integrity, stewardship, and excellence. There have been proposals for broader statements that correspond to more recent challenges, including those related to the boundaries between the bureaucratic and political levels. For example, Ralph Heintzman[22], a key figure in the development of the earlier values codes, has proposed a Charter of Public Service that would cover, in addition to the values and ethics of public service, a strengthening of the deputy minister's role as accounting officer, reforming the process for the appointment of deputy ministers; and new rules for government communications.

There has also been much development over the years in the techniques used to disseminate common expectations about the outputs and outcomes that are to be achieved. These include annual planning cycles linked to the performance measurement cycle discussed earlier, the development of formal statements of vision, mission and mandate, the creation of strategic planning functions, the annual process for setting and reviewing expectations for individual employees as again described earlier. Many of these borrow initiatives that were first introduced in the private sector.

When I was a public servant, I participated in many of these exercises of over a period extending from the 1960s to the 2000s including in many retreats, training sessions and a variety of other organizational development and renewal exercises. It was easy to be cynical. Often there was little link between what happened in a retreat setting and what happened when one went back to one's office. The same basic substance often seemed to be endlessly recycled over the decades but under a different logos. Often topics that were closely related in reality were treated in quite separate exercises, without any obvious cross-linkage. However, observers are not good critics in the sense that they cannot see what would have happened in the absence of such exercises. In the absence of hard evidence to the contrary, I then, and still do, think that they were necessary and beneficial on balance. What they did not do was make systematic improvements built on experience of what had worked best in past exercises.

Employee engagement surveys

Employee engagement surveys have been an important exception to the general approach of treating values/expectations in a separate compartment from empirical measures. These surveys are sensitive and have been introduced only cautiously, but they hold considerable potential for better approaches to program administration.

In setting up a recent OECD conference on the subject[23], the OECD reported that employee engagement levels across OECD countries have been dropping significantly. It argued that low levels of employee engagement threaten to erode important organisational performance outcomes including efficiency and productivity, public sector innovation, and ultimately public trust. There is now good

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[21] While I quarrel with the argument of Donald Savoie's book, *Whatever Happened to the Music Teacher?* (Savioe 2013) in its nostalgia for a past golden age and its listing of only negative examples (omitting success stories such as improvements in service delivery), nevertheless it gives a graphic and I think generally realistic description of the relentless growth of bureaucracy over recent decades with no real gain in providing services to the public and using reporting systems and evaluations that exhaust the time and energy, that are deeply flawed conceptually and that are not used in practice – "turning cranks that are not attached to anything".

[22] Heinzman 2014

[23] OECD 2015

evidence that engagement affects both employee well-being and performance. Current attention, according to the OECD, needs to focus on developing better follow-up approaches that can make effective use of survey results in improving engagement and performance.

Canada has been a leader in the area of employee engagement, including work in British Columbia which shows a clear link between employee engagement and citizen satisfaction with public sector service delivery[24].

We see these surveys, which go to the heart of employee values, satisfaction and trust, as being key elements in the future system of big statistics as it relates to governance applications. The data will overlap and greatly enrich the operational data about the logic models for individual employees that will gradually also become part of the system of big statistics – allowing a micro level (but anonymous) assessment of how the values and expectations of individual employees (and work groups, including among partners eventually) align with the values and expectations that are set out in corporate statements.

Participatory decision-making

Especially in the 1990s and early 2000s, much attention was placed on another, quite different strand of activity, one that did not relate to the values and expectations of those who designed and delivered the programs, but rather to ensuring that policies and program themselves reflect the values and expectations of the citizens who are the potential beneficiaries and who pay for them through taxation. A continuum was seen that ranged from old style one-way communications approaches designed to inform the public to new two-way tools of public engagement that were to make citizens and stakeholders full partners in policy and program development. The goal was to both strengthen the democratic process and increase program effectiveness – to better meet real needs. Once again, Canada was a leader in many of these initiatives[25].

In 2009, the OECD published a cross country review[26] comparing progress against the principles of 'open and inclusive policy making' that it had set out in 2001. The conclusion was that not enough had been done. In most countries, insufficient resources had been assigned to undertake effective engagement exercises. Many worries were reported by countries, particularly about the delays in decision-making that could result from full-scale engagement exercises and that special interests could hijack the policy process. Little evaluation had taken place of the exercises that were undertaken and, indeed, the tools of evaluation had not been sufficiently developed. New interactive web-based tools seem ideally suited to support citizen engagement exercises but they have been rarely used for this purpose by governments, at least as reported in a 2007 OECD survey.

In consequence, most public participation initiatives were isolated and faddish, resulting in little changes in mainline decision-making processes. Part of the reason was the lack of a conceptual framework that included both the horizontal and vertical dimensions of management, including the role of ministerial accountability. Another problem was the lack of good empirical measures of the success of most of these initiatives, i.e., whether broad participation actually improved measured effectiveness.

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[24] Heintzman 2009

[25] In Canada, many initiatives were launched using a variety of techniques of engagement. The state of the art was captured well in a 2008 handbook on citizen engagement (Sheedy 2008).

[26] OECD 2009.

In social policy, an even deeper problem is that public engagement and partnership exercises are not well suited to the current context where most issues on the policy agenda involve incremental fine-tuning of mature welfare state programming. Citizen engagement and partnership works best for new, independent initiatives that can have simple, measureable objectives. They are less suited to incremental changes which are often quite technical in nature and with effects that are often indirect. In addition, when larger changes have been on the table – such as in periodic program reviews – they are usually at least partially driven by cost considerations. Most participation strategies are similarly not well suited to changes that are centred on cutting budgets, or to large reform exercises where those who lose in one program might be receive compensatory gains in a quite different program that is not on the agenda in question, such as a new tax break.

Today, there is still interest in good public consultations and engagement, but typically cast at a much less ambitious level than formerly. More recent attention has shifted to a precondition of participatory policy-making, namely openness in government.

Open government

A precondition for having policies and programs that are aligned with the values and expectations of citizens and stakeholders is a system of open government where the public has practical access to information held within government relating to the design, delivery and assessment of the programs and policies in question.

The earlier years of the mature welfare state were marked by setting up the basic rules of the game: which information could be released and what could not for reasons such as national security or privacy. At the federal level in Canada, privacy came first with the enactment in 1977 of Part IV of the Canadian Human Rights Act which provided for the protection of personal information in federal databanks. Access to information legislation came next in 1983. Subsequent years have seen a series of refinements to the rules both for access and privacy protection.

More recent decades have also seen the introduction of more active steps toward developing the practical means of opening up of government information holdings within this established the framework of rules. In 2011, for example, the Government of Canada announced its commitment to an open government initiative composed of three main streams: open information, open data, and open dialogue.

World-wide, perhaps the most interesting steps towards open government have been e-government initiatives that use computer technology to improve the flow of information to and from program participants in the course of delivering programs and that, in principle, create large digitized data bases which can, in turn be accessed by citizens and interested group, once the data have been rendered anonymous.

E-government initiatives have been in play in many developed countries over the past two decades. However when compared with original expectations, the results have been disappointing and costly. With only a few exceptions, all that has happened is that electronic tools have been used to disseminate pre-existing information more broadly and to allow people to use the internet to apply to pre-existing programs or to complete tax forms. This is useful without question, but it amounts to doing things that have always been done in a more efficient way. A 2005 OECD document[27] reviewed the state of e-

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[27] OECD (2005c) describes progress that had been made in e-government and analyses what needs to happen next, including basic changes in the governmental 'back offices', in ways of service delivery and in measuring the business case for reform. One of its observations is that the path towards overcoming internal silos has been inconsistent. Early attempts to provide common services and common business practices were put off the rails in some cases by New

Government at that time. It argued that that future success in e-government implies far deeper reforms across government than have been seen to date in the mainly program-by-program approach that has been taken to computerization. As is so often the case, Canadians influenced OECD and world thinking in this area[28].

A more recent OECD document on m-Government[29], referring to the use of mobile ICT technology, came to similar conclusions, ones that mirror those of this paper as it relates to role of big statistics and governance.

Box C12 argues that at least in countries such as Canada, the reforms needed to ensure full openness (and hence public participation) would need to be very deep indeed and are most unlikely to occur if approached only from the perspective of openness. Openness goes against the very nature of much welfare state social programming and decision-making.

Openness will, however, as also argued in Box C12, be compatible with the programming of the enabling society, That is, the payoffs from e-government will only occur when programs themselves are re-designed to have clear objectives and when they will be supported by a system of big statistics that will enable deeper partnership relationships among citizens, governments, researchers, companies and a range of voluntary organizations, all based on mutual self-interest. All parties contribute information to the big statistics system. That information is transformed within the system into anonymized new kinds of information. This new information is, in turn, used by the different parties in real-time to improve the decisions that they are making in the social and employment domains of life.

C.2. Reconciling horizontal and vertical decision-making

As noted, a key governance trend during the years of the welfare state has been an been increasing expectation that much work be undertaken horizontally – in partnership, in collaboration, in a joined-up way that cuts across the borders of existing programs, departments and jurisdictions. Manifestations can be seen in calls for shifting from hierarchies to networks, for governments to steer not row, an emphasis on local initiatives that draw on programming from different departments and jurisdictions in a way that meets locally determined priorities, and a stress on horizontal communications across departments.

Public Management reforms that worked in the direction of increased decentralization and autonomy – i.e., fortifying the silos, including the way in which information was communicated with the public.

[28] A paper by Donald Lenihan (2002) provided background to OECD thinking. It argued that e-government, as it was then conceived, had to be put in the broader of context of what he called e-democracy. This required a much deeper understanding of interrelationship relationship among ICT technology, public participation and governance – going well beyond the automation of existing processes.

[29] OECD 2011c. In terms of policy formulation, this paper argues that the priorities should be for governments to become citizen-centric (which has not yet happened), for government to be restructured (to better with work with other actors) and to have public services that are participatory, transparent and measurable (providing citizens with the capacity to measure the outcomes and impacts of those services and to participate in their development.)

Box C12. Why open government is unlikely to succeed in the welfare state

Openness was not valued in welfare state programming

The recent interest in open government, and its current manifestation in calls for better e-government, mainly relate to providing access to existing data and information held by government. Success has been limited, however, especially in Westminster systems of government and especially in federations such as Canada.

First, as noted in the text, decisions are increasingly being taken at more senior levels where rules related to cabinet secrecy prevail.

Second, as also noted in the text, the federal-provincial arrangements the lie behind many social programs are labyrinthine. For example, for good constitutional reasons, the effectiveness of much provincial social spending funded by federal fiscal transfers, cannot be directly linked to the receipt of those transfers. While some joint programming, such as labour market agreements or child benefit arrangements, are more open in principle, they fall far short of providing the kind of performance measures that one would normally find in a program within a single order of government

Third, and especially since the 80s and 90s when social programming was characterized by the need for smaller incremental adjustments often in response to budgetary pressures, governments found they could make the changes that they felt were needed by using techniques that were difficult to understand and oppose. Ken Battle (Battle 1990) famously coined this as *social policy by stealth*. Examples include the use of budget processes to introduce policy changes and the use of budgetary techniques such as restraining the growth of escalation clauses in benefit programs and clawing back benefits using the income tax system.

Finally, and most important, much welfare state social programming has multiple objectives, including redistributive objectives, that are difficult to disentangle in practice. For example, it was once argued that there was a merit in having universal programs with blurry distributive objectives – ones that provide something for everyone. Such programs, it was argued, would gain more public support than separate programs that explicitly transferred money from one group to another – even though the net redistributive effects are the same when taken across all the programs. Politicians, it was argued, could more easily introduce difficult reforms and defend programs with murky objectives than ones that were more transparent in their effects.

Such thinking sounds paternalistic and undemocratic today, but it made some sense in the early days of the welfare state. In hindsight, it is best seen as making a virtue of necessity. We were then at a stage of history when progress in social programming required a standardized determination of the normal life stage that required public support and standardized responses within those categories – e.g., education when young or income to support people during periods of unemployment, time off to raise children, and in retirement. In that kind of world, universal multi-purpose, point-in-timing programming made some sense. It is only when we shift to citizen-centric policies, where individuals are expected to take greater control over the course of their own lives, that the need for clarity and transparency about the assumption behind the programming becomes a high priority.

Looking ahead

The program instruments of the enabling society will have objectives that are much clearer than those of today, particularly in the area of income security where many programs now have a mix of redistributive, lifecourse and social insurance objectives that are difficult to disentangle. From the perspective of enabling society goals and values, such clarity is positive. The enabling society is based on evidence of what is working best and one must be clear about objectives to know what is working best. It is also based on working in partnership with the citizens; clarity about what is actually happening is a prerequisite to the trust and accountability that is required to work in real partnership. As well, a lifecourse perspective makes it essential that human development and lifetime income allocation objectives be seen as separate from the point-in-time objectives associated with social insurance or helping those who are in need today.

The desire to move in horizontal directions is based on real needs and pressures. Social programs often have effects that touch on many goals, such as those related to human development, equality of opportunity, fostering human capabilities, and lifecourse choice or simply reducing government expenditures on EI or social assistance. This simply reflects the reality that the determinants of both health and social well-being are closely intertwined as are the determinants of successful learning and labour market outcomes.

The desire to work horizontally also reflects a wish to address social problems using the combined strengths of different actors, different programs and different jurisdictions. It is also an attempt to reduce the gap between government and citizen.

Trends in horizontal arrangements

This subsection reviews trends in horizontal approaches since the 1960s.

In deliverying service

Since long before the welfare state, it has been normal practice for third parties to deliver services that had been designed and funded by a government department. These are usually carried out through contractual and other formal agreements with non-profit organizations in the health, education and social services sector, and sometimes with private sector organizations. These arrangements will continue to be a common way of doing business in the enabling society. However, their contractual basis means that they are more properly thought of as extensions of vertical management arrangements rather than being horizontal partnerships.

In working with stakeholders

Stakeholders who will be potentially affected by program changes have long been consulted by means such as establishing commissions and tasks forces with a mandate to consult, as well as through the ongoing consultation practices of Ministers and their departments. As already noted, in the 80s and 90s there was much new interest in moving beyond consultation to more active engagement.

For example, ESDC and its predecessor departments have long experimented with active engagement and partnership initiatives. Initiatives have included establishing advisory boards at the level of local employment centres, sectoral partnerships that represented business and labour at sectoral and national levels, and local community development committees. Many variations were tried, including bodies with independent mandates and resources to support, for example, sectoral human resource development or community renewal.

It was always a challenge to sustain support for these initiatives over long periods, in part because of the lack of evidence on their effectiveness and, in part, because of the greater priority that became attached to federal/provincial/territorial linkages in the 2000s. Sectoral councils still remain however. Evaluations suggest that they are successful in meeting their mandated outputs, although there is still only limited data on their success in making a real difference in the labour market, i.e., in attaining intermediate, yet alone higher level outcomes[30].

Within an order of government

Similarly, within government, the importance of co-ordination and cooperation across departments is certainly not new. At the highest level, cabinet is responsible for this kind of co-ordination, supported by central government agencies. Prior to the years of the welfare state that role was quite light. However, the 60s and 70s saw the growth of much more structured cabinet processes with increasing specialization in the work of cabinet committees and supporting central agencies. The 80s saw a particularly heavy central structure in the Government of Canada with, for example, the creation of a central Ministry of State for Social Development. These arrangements proved too cumbersome and were replaced in the 90s by somewhat lighter ongoing coordination and more emphasis on periodic, and more substantive, program reviews[31]. More recent years have seen a shift towards a concentration of decision-making, both here and abroad, in the offices of Prime Ministers and Presidents.

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[30] ESDC 2010

[31] It would be a mistake to conclude that the changes in the cabinet system during this period were driven only by horizontal management issues. The focus was equally on vertical management – to find better ways of ensuring

Within government departments and agencies, the pressures to work in a co-ordinated, joined-up way has resulted in decision-making being shifted upward in the hierarchy to more senior levels where people have the authority to deal with other organizations. It has been estimated[32] that Deputy Ministers in the Canadian public service now spend a third of their time on interdepartmental matters.

There has, however, been an asymmetry between the increasing role of horizontal issues in public administration and the attention paid to techniques for better horizontal management. Lindquist (2012) argues that, in Canada, interest in the development of the tools of horizontal management peaked well over a decade ago. He concludes that, with very few exceptions, little of the more recent work has produced new formulations or empirical information to support better management of horizontal initiatives. Recent work, he argues, tends to rely heavily on contributions and frameworks originating in the 1990s and early 2000s'[33].

While Lindquist offers a set of reasonable explanations for this recent fading of interest, in my reading it is best seen as one aspect of a vicious cycle in management styles that has marked public administration throughout the entire period of the mature welfare state. This has involved periodic shifts in the emphasis in the vertical dimensions of management between risk-aversion and central control on the one hand, and innovation and decentralization on the other hand.

- Pressures related to accountability and probity usually work in the direction of centralization, including the use of often elaborate systems of reporting and monitoring. These control systems are often fragmented as a result of the increasing specialization of staff functions (related for example to the management of finances, of human resources, of information, etc.) and absorb increasing amounts of time and energy to maintain.

- Working in the other direction are pressures towards meeting the government's objectives efficiently, effectively and providing good service to the public and to local communities. These usually point in the directions of decentralization, moving decision-making to the front lines, letting the managers manage and even take risks, as well as reducing overhead and the burden of feeding diverse internal reporting schemes.

These conflicting pressures are made even more complex when horizontal issues are added:

- For example, at the planning, policy development and assessment stages of the policy process, increased horizontal coordination works in the direction of centralization. As already noted, this has resulted in more decision-making in the hands of senior managers of the various components that are being 'joined up', in central agencies with intergovernmental responsibilities and in the offices of Prime Ministers and Presidents.

- On the other hand, at the level of program delivery, horizontal issues typically lead in the direction of decentralization, for example with front line managers and staff at the local level getting together with their counterparts in other departments, other levels of government and the private sector in order to bring various streams of programming and other intervention together in a way that can sensibly meet local needs. Front line employees should be able to adapt their programs so that they work in harmony with those of their partners. However such flexibility will

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ministerial accountability for the management of program expenditures in an increasingly complex administrative environment.

[32] Savoie 2013, p 118

[33] Lindquist 2012, page 30.

often run counter to the systems in place to ensure vertical accountability in their home organisations.

We simply do not have management tools to address to reconcile these issues in a simple, rational manner. Bourgon, formerly the highest ranking public servant in Canada, has cast it in stark terms: we lack the 'systems, practices and policies to facilitate the coexistence of [vertical] hierarchies and [horizontal] networks'[34]. The result has been repetitive cycles in management styles and controls that have not learned much from past experience and where some of the worst features of each phase of the cycle persist into the next – paper burden and counterproductive overhead functions being examples.

The terminology of vicious cycles may well be too harsh, possibly a hangover from the occasional frustration experienced when I was a public servant. My rhetorical intention is to draw attention to the real possibility of a virtuous cycle emerging in the near future.

With other orders of government

The big trend over the decades since the 1960s has been in the direction of a smaller federal role in social programming. Accountability requirements were removed from federal fiscal transfer to the provinces and territories, shared costs programming was ended and, more recently, the administration of active labour market programming was mainly shifted to the provinces. It not that simple of course, since there has always also been strong continuing support for national, or pan-Canadian, dimension in health, employment and other social programming. As well, some key tools of social policy are unambiguously within federal jurisdiction, notably EI, much of the retirement income system and, increasingly initiatives based on the income tax system. Many social policy topics must inevitably be addressed by programming arising in both federal and in provincial/territorial jurisdictions.

The history of federal/provincial/territorial relations in these areas has largely been driven by constitutional factors, not those related to social policy. This paper will not attempt to discuss the labyrinthine arrangements that have resulted, but will once again mention the example of ALMPs.

Most ALMPs were designed and delivered by the federal government until the 2000s, when new partnership arrangements were negotiated with provinces and territories. Under these, funding typically comes from both the federal level (EI) and the provincial-territorial level (where programming can overlap provincial adult education and training systems). The programs themselves are designed and delivered by the provinces, but there are agreed approaches for reporting on plans for the coming year, for information sharing and monitoring based on agreed performance indicators, and for periodic evaluations.

While it would be a mistake to think that these arrangements meet the same standards of accountability that would exist if those programs came under a single jurisdiction, the arrangements do work reasonably well considering the difficulties involved. In my reading, it is the periodic evaluations that have done most to hold system together, even those these could be strengthened[35] . The most promising avenue for the future – as set out in the essay and in Compendium Paper D – involves

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[34] Bourgon (2011), p 49.

[35] These agreements are now up for renewal. Many of the organizations and individuals appearing before a recent Parliamentary Committee (HUMA 2015) that examined options for renewal were generally favourable in their assessment of existing arrangements but called for enhanced accountability mechanisms, as well as a better labour market information system and greater employer involvement in training programs, and for LMDAs. They suggested establishing labour market partners' forums at the federal, provincial and territorial levels so that information can be shared on the actual needs of industry, best practices in training, and training outcomes.

building on the considerable strength of these arrangements to develop a system of big statistics, including the experimental development of ways of providing 'what works best' data directly to citizens.

With citizens

A more recent trend, and one that is likely to continue in the enabling society, is closer partnership between governments and citizens, not only in the greater citizen participation in the policy-making process as discussed in the previous subsection, but also in the actual design and delivery of programs. This is often referred to as co-production, where individuals are seen as active, equal partners in the design and delivery of the social programs in which they participate.

Co-production arrangements try to recognise the full range of resources available to people, including their family and other social networks, their skills and particularly needs and aspirations and places particular policy-based interventions within that broader context. Bourgon[36] provides several examples, including a Danish example where seniors were treated as partners in determining their requirements for care. The results were greater quality of life for the seniors, often involving less care than would be the case in a traditional program and at reduced cost.

However, co-production of this sort is still quite rare, and is difficult to put in place as a normal practice under traditional welfare state programming. We lack the tools to scale up horizontal initiatives of this sort into mainline programming.

While the spirit of co-production will continue in the enabling society, it is unlikely to survive as separate field of innovation – at least in the narrow sense of the term as referring to two-way arrangements that involve an individual and a public body, usually in the context of service provision. Rather, the same aspiration to involve citizen directly in collaborative ventures will be treated as one dimension of new synthesis thinking, described below, where partnership arrangements will include, but extend beyond, individual-government relationships to also include participation by families and non-government bodies – and where the partnership role of government will lie at least as much in the provision of 'what is likely to work best' information for use by these other parties as it is in the co-provision of services.

With multiple partners: new synthesis thinking

Perhaps the broadest view of likely future trends in horizontal management and governance, one that simultaneously encompasses multiple forms of partnership, has been called a 'new synthesis' of public administration by Jocelyn Bourgon and her colleagues. In a recent book[37], she reports on the findings of an international network of practitioners and scholars whose work to date has concluded that 'the role of public institutions and public organizations is to enhance the collective capacity to achieve results of higher public value and at a lower cost to society, in all circumstances, across systems and across generations.' This is a radically different conception than the pre-computer age view of the government's role as being one of administering of a collection of independent, top-down programs.

In this new view of governance, everything is intertwined and co-evolving over time: embracing the public, private, civic spheres and including policy responses in the social, economic, and environmental domains. It encompasses the theme of co-production – with government and citizens, or governments and civil society, acting independently but harmoniously.

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[36] Bourgon (2011), pp 114 and 115.

[37] Ibid

In order to support the breadth and complexities of this new kind of governance, Bourgon argues that four inter-related subsystems or functions will need to be actively nurtured:

- The compliance function is most similar to the existing arrangements. It provides an organized, accountable way of setting priorities and making choices. It includes constitutions, rules and controls.

- The emergence function which helps improve the capacity of government to anticipate emerging issues and opportunities and reap the benefits of social innovation.

- The performance function which helps governments think across systems and works across boundaries, sectors and disciplines.

- A resilience function that builds the collective capacity for better results through co-production and the active participation of citizens, communities and societies.

Bourgon's analysis is particularly helpful in understanding the challenges and difficulties that we need to tackle, e.g., as it relates to experimentation, to learning feed-back loops, to the use of ICT technologies, to need for a combination of values-based and empirically based approaches and to the changing roles of citizens and the public, private, and civil sectors.

These are all points that are consistent with the argument of my essay. There is a difference, however, at least on the surface. The systems she proposes to support the new governance appear complex, at least on first reading. On the other hand, the big statistics that we see as the foundation of the enabling society will bring a new simplicity and even an integration of these supporting systems[38]. The additional functions that are listed will simply be incorporated into the main stream processes for doing business and will be not be seen by users as separate sub-systems.

Moving to simpler future, where the horizontal and vertical will be integrated

Partners will inevitably have different goals and ways of doing business. The goal is not to eliminate the consequent horizontal and vertical tensions, but to manage them productively. The core problem in doing this has been the lack of a common information base on which to base integrated, evidence-driven management in either horizontal or vertical directions, let alone both. The solution proposed in the essay is to gradually develop a system of big statistics that can provide predictive, micro-level information to simultaneous support both the content and governance of social programming – and to simultaneously support both the vertical and horizontal dimensions of governance.

With such a system users can create measures that are flexible enough to support analysis and decision-making in a whole range of quite different contexts, including in both line and partnership arrangements. What holds the system together is the reality that the logic models of the different actors in partnership arrangements and in hierarchical structures, while not identical, do overlap considerably – and these differences and overlaps can be measured.

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[38] My reading is that the difference in tone with the Bourgon perspective is one of time frames, not of substance. Her analysis, in this view, primarily deals with the transition period in which the old and new technologies and policy expectations must live together in ways that are inevitably complex and difficult. The analysis in the essay, on the other hand, attempts to look beyond these transitional complexities and to examine governance in the much simpler world that will exist in a mature enabling society built on contemporary technologies. The Bourgon prescriptions make sense as we go through the transition to the enabling society, but they will be redundant once we get there.

A short description of the new approach can be found in the essay. More detailed discussion of its various dimensions can be found in other compendium papers.

As a convenience to readers of this paper, Box C13 provides a summary.

Box C13. How big statistics support governance, with references to sources of more detailed information

In the enabling society, the same system of big statistics would support both program and internal administrative functions. The underlying data base would reflect the standard logic model conceptual framework of inputs-processes-outputs and higher levels of outcomes. That data would be drawn from multiple sources:

- In terms of measures at the level of the citizen being served, much of the information will come from administrative sources associated with the operation of the program and from tax and related files (in an anonymized form), supplemented by a variety of surveys, including those related to satisfaction with service quality. These sources will become much richer over time as citizens increasingly participate in internet sites that provide them with the tailor-made calculations of expected outcomes. (See the discussion in the essay and the illustration in Paper A).

- In terms of measures at the level of program hierarchies, input measures relating to financial resources inputs are readily available now. In income transfer programs, output and some outcome measures are readily available from administrative files, as is information on the processes used in producing those outputs. In service programs, standard ways of measuring processes will need some time to develop, as will the 'what works best' calculations of projected outcomes.

- In terms of measures at the level the employees and other actors within the program, much of the needed information will come from the administrative data related to the programs, supplemented by information on expected outputs and processes found in job descriptions, annual performance reports, and responses to surveys, including those related to employee engagement.

It will take time to develop consistent data of this sort, especially for people who work for different agencies engaged in partnerships. Although even here data gathered from pilots will provide a useful starting point. (See discussion in Papers A and D.)

These various data sources would be integrated and analyzed using powerful information processing tools, including the increasing availability of longitudinal and microsimulation statistical tools. (The essay uses the example of LifePaths microsimulation, while Paper E describes what must seem, to those less familiar with the power of current computing technology, to be the miraculous power big statistics in extracting new knowledge from large, overlapping data sets.)

Gradual implementation

It would, obviously, be disastrous if one tried to move to such system too quickly or attempted to do everything at the same time. However the normal approach to program implementation in the enabling society is gradual development based on experiments and pilots that allow us to learn from experience. (See discussion in Paper A). That gradual approach also applies to the development of big statistics. (Paper E explains that a system based on micro data does not require comprehensive data sets at the outset; it can start with the information that already exists and make gradual improvements). The Action Plan described Paper D outlines first steps.

A critical first step would be the development of a conceptual framework that defines all the data in the new statistical warehouse and shows how they relate to each other – together with a plan for gradually adding new sets of micro-level data in ways that are consistent with that framework, including data from both administrative and survey sources. Paper F proposes such a framework.

The box explains that implementation should be gradual, indeed must be gradual. That is a strength of big statistics; useful information is produced even with partial data. For some applications, partial data or data obtained from a sample will be more than adequate, provided that users are fully aware of the quality of that data. And, as is the case for data provided to individual citizens, the system of big statistics will routinely inform internal users about the quality of the data being requested.

- In some cases, where the data are based on complete administrative data sets, the quality will be sufficient to support analysis at the level of individual employees (such as information related to pay and benefits or numbers of clients served).

47

- In other cases, the data will be of sufficient quality to produce measures related to service quality and efficiency at the various levels of the program architecture.

- In other cases, the data could be used to produce measures of low level expected outcomes at the level of the program as a whole, and hence produce current measures of effectiveness and cost-benefit.

- In other cases, only approximate readings would be possible similar to those that are now found in statistical analysis. These might, for example, show past correlations (but not future projections) between program outputs and higher levels of outcomes.

This point is that the system can, from the outset, produce at least as much useful information as do existing systems and, because they are based on consistent concepts and are part of an integrated base of big statistics, they will continually improve over time, supporting an ever-growing number of applications in ever more powerful ways. However, it is essential to also understand that empirical measures, no matter how complete or sophisticated, will never be sufficient. They can only support good judgment, not replace it, on most matters that are of real importance. That is the subject of the next section.

C.3. A better balance between measurement-based and value-based governance

We continue to use the common distinction between a measurement-based approach that relies on quantitative measures and a values-based approach that relies on common sense and a shared culture. This is a simplification of course. In all cases, we are referring to sets of expectations and rules about how people will behave in carrying out their activities, what processes they will follow, and the results that are expected of them. The real distinction is between:

- Those expectations that are described and monitored in a quantitative manner, using measurement tools such as those provided by management information systems or statistical analysis.

- Those expectations that are not measured and where decisions and action are based on qualitative factors such as judgement, common sense, reference to statements of values, and the culture of the work group in question. Controls are mainly on an exceptional basis, such as detailed investigations in cases when wrong-doing has come to light or through periodic audits.

In large bureaucracies, measures play a central role. They are needed to see whether things are getting better or worse and hence to make improvement, to compare the performance of different individuals, groups or processes with respect to efficiency and, in some cases, effectiveness, to control abuse and support accountability.

However, we have argued that the years of the welfare state have seen many problems with measurement systems:

- They tend to be based on a handful of performance indicators that apply vertically throughout the whole bureaucracy and do not take account of the often quite different, but overlapping expectations of different actors within the system, from deputy ministers to front-line staff to people in a variety of overhead functions. As well, the measures tend to focus on inputs, processes and outputs that are, especially in the case of service provision, often poor proxies for the higher order outcomes that are intended. They can provide useful information about

selected aspects of program. However, in a big bureaucracy, top-down control systems are hard to ignore and they tend to drive the whole system in ways that are sub-optimal or even negative.

- Most measures are cast in the form of averages or changes in trends. For example, a good ALMP training program might be supported by two kinds of measures: one related to efficiency (such as number of people who complete the training and the average cost of providing the training) and the other related to the satisfaction expressed by program participants regarding the quality of the service provided. These are both useful measures that can indicate problems that need to be addressed. However what is really needed in finding solutions to those problems would be micro-level information that indicated the combined effects on cost and quality of different elements of the program. Then we could introduce regular feed-back loops where the program would systematically improve over the course of its life.

- The really big problem however is that most measures are designed to work in the context of vertical hierarchies with top-down controls. Yet our broader expectations have been shifting in quite the opposite direction, towards partnerships and networks and towards putting the individual citizen at the centre of things, not the central agencies of government.

These are huge problems and, unfortunately, ones that cannot be solved by simply relying more on a qualitative, values-based approach, although some of literature would seem to imply that this would be possible[39]. Let us take the points above in reverse order:

- As we have already discussed, a value-based approach can, in the absence of measurement, result in useful small collaborations and pilot studies. However, these cannot be scaled up to be a normal way of doing business in the absence of measures.

- A qualitative approach such as a careful case study can provide a reasonably good understanding of how different elements within a program interact to result in improvements on multiple fronts. It is possible to build up sets of best practices. However, it is difficult to generalize from particular cases, or to benchmark other initiatives to such good practices, in the absence of systematic measures. It is certainly not possible to introduce a systematic approach to self-learning based on past experience in the absence of measurement.

- A values-based approach based on good judgement within a common culture could result in particular decisions that are better than those based only on existing measures. But without measures, accountability would quickly break down. Measures are inevitable and bad measures will, over time, drive out good judgment. A solution that has some initial appeal would be to use only reliable measures, particularly those relating input controls and surveys of user satisfaction, and to leave outputs and, especially outcomes, in the territory of values and judgment. However, this would mean that we could not assess the effectiveness of programs – of whether they are making any real difference in the society and economy[40]. And values-based approaches are even worse than quantitative approaches in assessing high level outcomes.

Box C14 expands on the final sentence in the point above. It shows that neither judgment and good sense, nor empirical measures are very useful in taking account of higher level outcomes, if taken in isolation.

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[39]At times, the Savoie book (2013) cited earlier seems to be pointing in this direction – a return to the values-based golden age before computers and before big bureaucracy.

[40] Again, this applies mainly to service programing, including the provision of internal services. Outputs as well as lower and intermediate level outcomes are often easier to measure in income transfer programs.

Box C14. Weakness of both measurement and values approaches, if taken in isolation from each other

Measurement-based decisions	*Values-based decisions*

Measurement-based decisions

The logic models that are the basis of most performance measures are weak when dealing with higher level outcomes. To use the training program example of Compendium Paper A, the output might be the acquisition of specified skills by people who were previously unemployed. That can be measured reasonably well. However, when one moves to higher levels of outcomes, different hierarchical chains in the logic model start branching upwards in many possible directions:

- One chain might focus on the employability of the trainee as result of the newly acquired skills, and measure the extent to which the trainee subsequently became employed or had improved earnings – and upward in the hierarchy to measures of individual well-being.

- Another chain might relate to the improved productivity in the local labour market that resulted from having a more skilled labour force and work up, through various steps, to the achievement of increased economic output and national prosperity.

- Still another chain might relate to the reduced subsequent need for unemployment insurance and welfare – and work upwards through fiscally-related hierarchies at both federal and provincial levels.

Further, at nearly every higher level step in the hierarchy, there can be ever more upward branching chains. The higher the outcome level, the less likely it is that we can make a definitive link to the effects caused by any particular program. There is no equivalent to the private sector's bottom line of profits to integrate the whole system at the highest levels.

Further, many of the actors within the system that designs and delivers the program will have separately but overlapping hierarchies. And, perhaps most important, the achievement of any higher order outcome will be determined not by this program only, but by many programs and by a whole range of market and family considerations that affect the individual trainee.

This problem would exist even if there were a perfectly complete system of big statistics. It could produce an almost infinite number performance indicators with no way, based on the measures themselves, of choosing the manageable sets of indicators that will be most relevant to different actors in the system, at different times, as they make their decisions and carry out their tasks.

And, of course, while new micro measures of expected outcomes will be much better than anything that now exists, they will always be incomplete, especially for higher level outcomes and for projects that are based on partnership.

Values-based decisions

Reference to qualitative values will therefore always be needed to determine which higher level outcomes should receive priority in different applications, and to fill in when quantitative measures are missing.

However, values-based approaches, by themselves, are even weaker than quantitative measures in understanding higher level outcomes. By using measures, we can obtain at least a few proxies for higher level outcomes. That is seldom possible with value-based approaches taken alone.

Particularly in programs that provide services, outcomes typically refer to the effects of the service intervention on the subsequent lives of participants. And that is unknowable at the time of the intervention since it requires an understanding of what happened to people in similar circumstances who did not receive the service.

Since values-based approaches are anchored in real, observable situations, this means that they will, in the absence of evaluations and other quantitative assessments, invariably focus on the observed inputs, processes and outputs, rather than higher level outcomes that are the real purpose of the program. Long experience with ALMP evaluations shows that success in achieving outputs is a poor proxy for success in meeting higher level outcomes.

A second problem is that a multitude of different values and expectations come to play in making not-trivial decisions, and these will differ for different actors in the system. Box A5 in Compendium Paper A showed the major differences in the immediate priorities of different players, particularly in partnership arrangements.

These differences in values and expectations will often lead to different conclusions about what is the best decision in particular cases.

- In some cases, resolution could be achieved by pushing decisions up the organizational hierarchy to a level where it is easier to see the bigger picture and make to make reasoned compromises – i.e., a pressure towards centralization which can have the negative side effects that are discussed in the text.

- In other cases, it leads to resolution based on those values and expectations that are held in common and that are supported by existing information systems that measure performance and support accountability. The result is a system that will focus heavily on the prudent management of resources and encourage risk adverse behaviours, exactly the opposite of the creative solutions that are needed and that are a main reason for having partnership arrangements in the first place.

Looking ahead

The literature seems to suggest that no big breakthroughs are likely in the short term. A 2009 article by Ralph Heintzman[41] , which I quote below in Box C15, seems to me to capture the sense of much of the literature on the subject. I would argue that his proposed approach to treating measures as an aid to conversation will make even more sense as we make the transition to the new world of measures based on big statistics. We will be then in a position where public managers will have much better tools in their continuous and creative search 'for rigorous ways to measure their *own* outcomes, especially the outcomes of those things over which they can exercise sufficient influence'.

Box C15. Heintzman's view on the use of existing measures

Measurement is clearly not a panacea for public management. In fact, … it should be used with some considerable care and even circumspection. But can public management dispense with results measurement? No, it can't. Despite all its drawbacks and weaknesses, we could never get along without performance measurement entirely, and should never wish to do so. In a sense we're damned if we do, and damned if we don't. It's sometimes difficult to live with, but from now on we can't live without it.

If anything, as I already suggested, public sector management suffers at the moment from a dearth of intelligent measurement, *not* an excess (Heintzman, 2007). The relative slowness and reluctance with which we have devised and embraced intelligent measures of management performance – and our preference for process and output measures at the expense of genuine result or outcome measures – have slowed our progress in key areas of organizational performance that are critical to our role in upholding the public good. The best public managers in future will be those who seek, continuously and creatively, for rigorous ways to measure their *own* outcomes, especially the outcomes of those things over which they can exercise sufficient influence: the leadership,

management and performance of their own public organizations *qua* organizations.

Remember what Christopher Pollitt (Pollitt 2000) said: it's necessary "to examine the limits and common problems of measurement as a way of knowing about the character of public services, but not to deny either its fundamental usefulness or the scope for its further development. It should be readily acknowledged that it is usually much harder – if not impossible – to form a reliable judgment as to the quality of public services without measurement."

So our only choice in public management is to *do* measurement as intelligently as possible, and to *use* it as intelligently as possible. Public management – like much else in life – can perhaps best be thought about *not* as an exercise in technocratic manipulation and control but rather as a *conversation* (Paquet, 1999: 238; 2004: 109; Paquet, 2005a: 149; 2005b: 3, 6). Intelligent measurement intelligently employed can make the conversation richer, better informed, more grounded, more constructive, and more promising.

The above is a direct quote from Heintzman, 2009, p 14.

Basing governance measures on big statistics principles will mark the beginning of a new harmony between the qualitative and quantitative making dimensions of governance. It will allow and encourage actors throughout the system to devise their own sets of measures related to their own contexts – and to do so in a way that can be fully integrated with various system-wide reporting and control systems that will always be needed, including the differing reporting systems of the various partners in an enterprise.

By opening up the possibility of producing an almost infinite number of measures, including those that do a much better job of analysis at the level of higher level outcomes, the system will invite – indeed require – a much tighter link between the quantitative and qualitative ways in which we set and monitor expectations about how the actors in the system should behave when carrying out their work and of the results expected of them. For practical reasons, only a handful of measures can actually be used in

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[41] Heintzman 2009. Gilles Paquet's (2007) call for 'intelligent accountability' is in a similar but harsher ironic vein. However he, and other critics, also put emphasis on changing the top-down way we now conceptualize accountability.

making decisions or choosing among courses of action. Choosing the most important of these for use at different times and contexts will always involve values and judgment. And the set of topics that we must consider in discussions about these values and rules will grow and become richer along with the increasing flexibility in our choice of measures.

Again borrowing Heintzman's words, the enabling society will open up a new kind of conversation that truly is 'richer, better informed, more grounded, more constructive, and more promising.'

D. An action plan

The essay proposed an action plan to undertake modest work over the next several years in order to facilitate the transition to the enabling society. Preparatory work could be undertaken on two fronts:

- Experiments and pilots to develop 'what works' ALMPs and web sites that offer similar information directly to individuals.

- Developing the supporting system of national social statistics based on big statistics principles, including a consultation process designed to build not only support and consensus for the content of social statistics, but also understanding and support for the general transition to the enabling society.

Section D.1 discusses the rational for transitional work along these lines. Why do we need any preparatory work if the transition to the enabling society is, eventually, inevitable? Alternatively, would not a more ambitious action plan get quicker results and larger payoffs?

Section D.2 discusses the experimental ALMP stream.

Section D.3 discusses the statistical development stream.

Section D.4 discusses organizational matters.

D.1. The need for, and scope of, preparatory work

The argument of the essay suggests that the transition to the enabling society is almost inevitable over the very long-term. The benefits of using 'what works' evidence in terms of improved outcomes, reduced costs and improved governance will be too large to ignore. But when will the transformation take place? From the perspective of today's largely incremental approach to social policy it is hard to see an easy or rapid pathway to move from today's point-in-time, highly-siloed welfare state programs to the lifecourse perspectives and evidence-driven partnerships of the enabling society. For example, in Hicks 2008b I described how I have been over-optimistic in the past about the timing of the transition to the enabling society, not taking full account of some practical obstacles that must be overcome.

We can, however, foresee the opportunity for a major acceleration in the timing of the transition to the enabling society starting in the reasonably near future, provided that modest preparatory work begins soon. Starting in about five years from now, we can we can foresee a kind of threshold take-off point, where major changes in many programs could take place on many fronts – similar to the pace of change that took place in the years around Canada's centennial year, 1967, when the mature welfare state was put in place.

In that time frame, there is likely to be much greater public acceptance of the need for deeper, concerted policy changes. This will result from both a crisis in pensions programming and a huge opportunity for win-win solutions through deeper reforms in many areas of social policy. The pension crisis will not be fiscal, but will result from the large shift in providing pension benefits to those who are still working, as discussed in the essay. The result will be a serious misallocation of public funds – away from people who are a stage of life where they most need a decent income and towards those who are often at their peak lifetime earnings levels. Since the effects of pension changes typically take

many years to be fully felt, there is likely to be greater public willingness to consider compensating changes in a range of programs. Those changes can be win-win on multiple fronts as a result of the one-time payoffs that could result from better use in the labour market of the skills of older baby-boomers, often in their 60s. The largest win-win gains will be possible in the period from about 2017 to 2022.

In other words, there is urgency to begin work now. The next several years will open up a wonderful, but one-time, window of opportunity for Canada to take a world lead in moving to the enabling society – enjoying its many benefits before other countries, building the national energy and pride that comes with taking the lead, while minimising the transitional costs that inevitably accompany any large change in policy. The window for action will be open for only a short period, but there is time to do the necessary preparatory work.

The proposed preparatory work is, happily, modest and can be based on the following criteria:

- It should demonstrate the power of big statistics and 'what works' evidence in short-term.

- It should lay the ground to support the more dramatic escalation of development that is possible in a five to ten year time horizon, both in terms of developing the needed data base and in terms of building public support.

- It should nevertheless take account of the reality that enabling society concepts are still unfamiliar and that the needed support and consensus does not yet exist. Preparatory projects should therefore make sense quite independent of their role in speeding the transition to the enabling society. They should not result in significant opposition, as might occur if they ran counter to existing interests and ways of doing things.

- The various initiatives should build on existing arrangements that are known to work well.

Many potentially important projects do not meet these criteria and are therefore not proposed for inclusion in the preparatory work (although they would be most useful if they were justified and undertaken on other grounds). Examples include:

- Major new funding of academic research in this area, or for big new longitudinal surveys[42].

- Consultations around the substantive policy content of the enabling society. There is not enough understanding and consensus for that to be a useful exercise at this time. However the low-key consultations around priorities for the development of new big statistics which is included would have similar results and would help build consensus.

- Developing enabling society concepts in the areas of health and education. As discussed in Compendium Paper G, the payoffs from the introduction of 'what works' technology will be eventually be very high here, but it would be difficult to mount new 'enabling society' initiatives in the short-term.

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[42] The author is convinced that both independent research and new longitudinal surveys are important. However, the priorities for establishing which research and which longitudinal surveys should arise from the normal process of consultation and decision-making that takes place in these areas – and the proposed strategy would greatly strengthened these channels of consultation. Moreover, the spirit of the enabling society is one where decisions are based on evidence. It seems best to start with projects where there would be clear evidence of payoffs in the medium-term, including net saving to government treasuries. For example, longitudinal data is obviously critical – but the new question will be how longitudinal surveys will fill gaps left by administrative data (the main source of longitudinal data in the future) and how such surveys will support the 'what works best' information needs of individuals. It will take time to develop thoughtful proposals along these lines.

However, two streams of preparatory work do meet these criteria: experimental work in applying existing 'what works' evidence in the employment policy area and the further development of the social statistics to routinely produce new 'what works' data covering all areas of social policy.

D.2. The experimental stream: practical uses of existing 'what works' data

The first stream of the proposed preparatory work would include experiments and pilots that demonstrate the power of 'what works' evidence in the employment area and that would lay the ground for a more rapid future expansion of these kinds of interventions in other areas of social policy. Two types of initiatives would have high payoff. One is the resurrection of pilot work in 'what works' ALMPs that was started in the 90's. The other would be to experiment with ways of making that 'what works' data available directly to citizens via the internet. Both were described in the essay and in Compendium Paper A.

Early results are possible by building on existing labour market agreements between the federal government and selected provinces and territories. (Both types of project are primarily in provincial jurisdiction but would require the use of data that is only available at the federal level).

Ideally, only a few provinces or territories would initially take the lead, by-passing the need for the time-consuming negotiations of standards and operating mechanisms that would be needed for a comprehensive pan-Canadian initiative. Several provinces are already starting to think about 'what works' in the context of labour market and welfare policy reforms – notably British Columbia, Manitoba, and Ontario.

Consistency and integration would not be a problem provided that nationally-produced 'what works' micro data was used throughout – and provided that a single body (presumably ESDC) were to provide the leadership in developing a consistent methodology and set of practical tools to be used in all the experiments. Such an approach would also build on world-class Canadian strengths[43].

Other provinces and territories could come on board later, at their own choosing – making use of the early lessons that had already been learned.

There should be good support for, and no major opposition to, development along these lines – since it involves only experiments and, at least initially, does not threaten the structure of main line programming. As well, it only involves partners who wish to participate. The design involves no threat to privacy.

A potential problem with this strategy lies in its narrow focus on employment policy, ignoring other areas such as health and education that are on slightly slower track in terms of timing but where 'what works' technology will eventually have far bigger payoffs. Section D.4 discusses solutions.

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[43] The government of Canada has long experience in funding such innovative exercises, and in monitoring their success. A program called 'Innovations', established by the ESDC predecessor in the 1980s, had similar objectives and, through a series of intermediate steps, was transformed in the Social Research and Demonstration Corporation, a not-for-profit world-leading organization that conducts social experiments. Employment Insurance has often been used as a means of funding innovative approaches that could shorten the time spent in receipt of employment insurance benefits.

D.3. Developing the new system of social statistics based on big statistics principles and 'what works' evidence

The most important step in laying the foundation for a rapid transformation to the enabling society would be major progress in developing the new system of big statistics. An insufficiently large body of 'what works' micro data has been a major impediment to reform in the past. There could be significant progress in a five year time period, provided there was a serious acceleration of existing initiatives.

It may at first seem perverse to propose using the development of the national statistical system as a key tool for transforming the entire world of social policy. At the best of times, statistics are supposed to support policy-making, not lead it. Statistical planning is usually far away from the tables where Ministers make policy decisions. At the worst of times – and some think that is where Canada now is – national social statistics are seen by governments as costly, lacking relevance, and intrusive.

Nevertheless, the time may be ripe for a review of the Canadian approach to social statistics, including those related to the labour market. Everyone will gain from a better system of social statistics and there would be no sources of opposition or resistance, provided that the work was low-key and not costly. The existence of a central statistical agency means that there is a potential governance structure in place that can make the needed changes without infringing on the interests and mandates of other organizations and without infringing on individual rights, including the right to privacy.

Policy-makers and their advisors would certainly not welcome any suggestion that statistical planners were implicitly dictating policy directions through their choices of data to collect. However, they would welcome a system that would allow them to communicate their priorities to the statistical system in a way that met both present needs and that supported the longer-term evolution of social policy in agreed directions. The Olivia conceptual framework, described in Compendium Paper F, provides a tool that will make this possible.

Three main tasks are involved:

- Planning, and gaining support for, the content of a mature system of micro-level 'what works' statistics in the social area.

- Identifying the multiple sources of administrative data originating in many programs and jurisdictions that will be the heart of the new system, and continuing work on cleaning and otherwise preparing those sources for statistical uses. Recent history suggests that the most difficult challenge is likely to be in persuading the many current owners of administrative files to share that data, in an anonymized fashion, for use statistical uses. Section D.4 discusses solutions.

- Planning and gradually introducing changes to existing census and survey sources of data so that they play their new role of filling the critical gaps in a system where administrative sources of data play a much larger role.

There has been much background development work in all these areas, in Statistics Canada, in federal departments such as Employment and Social Development Canada and in federal/provincial/territorial working groups. All of the ideas presented here are familiar territory to experts in the area. However, practical progress has been slow and, in at least one important case (the replacement of the long form

census by a huge household survey), has not been undertaken in the order suggested here[44]. The reasons for the slow progress for this are discussed in the essay and, especially in Compendium Paper E. Paper E also provides a layman's guide to the operation of the new system of big social statistics.

Planning the content of the new system

What needs further explanation here is the stream of work that involves planning the content of the new statistical base.

The task of transforming the content of the system must be incremental, with high weight given to preserving the continuity of existing measures. For that to happen there will need to be a master plan that describes the future end state structure of the new statistical system. Existing data can be adjusted so that it continues to meet existing needs and also fits into its proper slot in the new system. Similarly, new research initiatives and the collection of new administrative data can similarly be designed to simultaneously fit into the new end state structure as well as meeting immediate research or administrative purposes. That master plan will in turn require the development of a kind of map to both the filled and the as-yet-unfilled cells in the new warehouse of micro-level social data – as explained in Compendium Paper E. The proposed 'map' is the Olivia Framework described in Compendium Paper F.

The Olivia framework (or some other conceptual device) will also provide the consistent vocabulary that is needed in the consultations that will take place about the content of the new system of social statistics. These consultation will involve many government departments in different jurisdictions, people in many academic disciplines, including those who use qualitative as well as quantitative analysis, many interest groups and individual citizens who will be central users of the new 'what works' evidence.

As noted, the framework provides a consistent language of both words and numbers for use in the governance, planning, design and delivery of social policies and programs, as well as in the statistical system itself. The boundaries of the new system of big statistics will be very close to the boundaries of the content of social policy itself. In other words, consultations on the content of the statistical system will act a low-key way of building understanding and consensus around the actual content of enabling society social policies and programs.

The framework can play this role because it provides a 'behind the scenes' language that shows how all parts of the social system are inter-related. It would be of interest to experts but would not necessarily be visible to ordinary citizens or even to many people in the policy community. All that would be seen are a set of consistently defined words and numbers that people could use in an integrated manner when discussing social policy topics. So, while the framework itself would not require broad support, its results in the form of a consistent, simple social policy language would be generally welcomed. Experts would certainly not welcome an attempt to unilaterally impose a new conceptual framework on their disciplines, but they would welcome a common language to communicate their statistical

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[44] Ideally the content of the census, and of any large sample surveys that supplement the census, should be taken in the context of their role in filling gaps in a future system of social statistics. It would be reasonable to expect that, in the context of such a long-term plan, a quite different role for the traditional census would emerge. (The main function of a traditional census – to provide a point in time reading of key demographic and social characteristics once every five or ten years – may seem antiquated. However, in the absence of reliable administrative data, it has continued to play an important role in providing historical continuity especially given the continuing importance of point-in-time concepts in current welfare state policies.)

needs to the statistical system and their findings to the policy makers. The Olivia framework has been carefully designed to be consistent with the existing language used in various academic disciplines and to support, not conflict with, a wide range of social and economic theories. It is a descriptive framework only, not a replacement for different theoretical structures.

D.4. The organization of the preparatory work

Many factors outside scope of this essay will determine the best approach to organizing the preparatory work. Many options are open in addition to the approach suggested here.

Our suggestion is that experimental and statistical development streams of preparatory work could operate on separate organizational tracks, with experimental track being handled under the governance and financial arrangements of existing Labour Market Agreements and Labour Market Development Agreements. As noted earlier, there is a potential problem in that such arrangements might not be sufficiently generalized in their design, making it more difficult to learn lessons that can be later applied in other areas such as health and education. However, this seems to be a relatively minor shortcoming in light of the benefits of simply tagging on to existing mechanisms that work well. As well, Employment and Social Development Canada, who will necessarily play a key role in the experimental stream, will play a strong role in organization of the broader statistical development stream and can therefore ensure the necessary linkages take place.

The more complex challenge will be in the organization of the statistical development stream. Many parties must be involved.

The Government of Canada and Statistics Canada must obviously be involved as the managers of system of national social statistics. However, the provinces also play a central role, both as users and suppliers of administrative data. And, as already indicated, consultations must be inclusive.

Statistics Canada would not likely want to take the lead, however. Statistics should follow not lead policy and, in this case, policy planning and statistical planning are tightly intertwined. It is essential that the central statistical office be, and be seen to be, neutral and technical in character. In addition, the shift of the system of social statistics away from its current primary purpose of providing aggregate data mainly for analytic uses to one of providing 'what works' that will be directly used in micro-level decision-making is profound, although seemingly inevitable[45] in the longer-term. Nevertheless, there will almost certainly be initial resistance to having 'what works best information' produced by the same organization that produces traditional national statistics and it will be difficult for Statistics Canada, by itself, to gain acceptance for such a radical shift in the way it does business.

At federal level, ESDC must necessarily be involved since it holds much of the needed administrative data, has the needed federal-provincial-territorial arrangements in the employment area, has sources of

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[45] On the surface, the two types of uses (i.e., aggregate data for analysis and micro data for decision-making) seem to have quite different audiences and to rely on different data sets. And yet, in the future, exactly the same data will feed both types of uses. The underlying methodologies used (sampling, data cleaning, modelling, the task of integrating data from different survey and administrative sources, etc.) are essentially the same. Especially in a federal country such as Canada where data sources come from different orders of government, the new system will require the privacy protection, professional competence and perceived political neutrality that can be best provided by an organization such as a national statistical agency that is separated, at least to some extent, from the day-to-day operations of government. In the longer-term, some form of organizational integration seems inevitable.

funding to support the needed ALMP development and has a mandate and expertise in producing labour market information. However, the goal is to lay the ground for the transition to the enabling society in all areas of social policy, including health. The UK model of central agency leadership might therefore be relevant.

The province and territories must play a key role as well. They have the main mandate in many areas of social policy, and the inclusion of their administrative data is essential. Federal-provincial-territorial governance arrangements have not had much practical success in managing practical initiatives of this sort in the past, but some form of advisory/steering body that involved different orders of government might be useful. Such an advisory body could include representatives from the academic community and representative interest groups. The Council of the Federation might have a role to play.

Two challenges require that the preparatory work has leadership at a high level. These relate to the changing mandate of the national statistical agency that is implicit in this work, a transformation that should ideally have high-level buy-in from many constituencies. Perhaps even more difficult is the challenge of persuading many independent bodies in different jurisdictions to share their administrative data for statistical uses. Experience has suggested that active co-operation in data sharing is only likely when addressed at very senior levels within government, including at the level of central agencies.

This would seem to suggest that some temporary commission or Task Force might be set up to oversee the preparatory work as it relates to statistical development. It might be headed by a person who was respected by all the many stakeholders. However, many variations are possible.

The work of a temporary body in looking to longer-term directions

Should a decision be taken to set up such a temporary commission or task force, its main mandate would related to consultations and development work surrounding the creation of the system of big statistics as just described. In addition, it might take on additional work in laying the ground for a smooth transition to enabling society. This might involve examining possible longer-term policy directions in a more systematic and quantitative manner than was possible in the essay.

The essay argues that social policy and programs will, through a process of quite rapid evolution, become transformed into something quite new: the transformation from today's welfare state policies to tomorrow's enabling society policies. The essay described the main features of the enabling society and how the process of change might unfold. However, apart from an example of the effects on lifetime income of delayed retirement, it did not attempt to describe the changes in quantitative terms. To do that well, given the many uncertainties about what the future might hold, would have involved a scenario building exercise that would have been well beyond the scope of the essay. Nevertheless, good strategic planning does require some sense of the magnitude of the changes that are likely. This note sets out some thoughts on how such a scenario-building exercise might be undertaken.

Especially in social policy, it is important to have some sense of what the longer-term future might hold. Strategic planning in the area of pensions, for example, needs to look many decades into the future, since programming changes made now will have effects that are often many decades in the future. As well, discussions about what the longer-term future may hold help develop a sense of common purpose that can encourage policy action by many parties on many topics to work in a more harmonious manner.

More generally, it is easy to base our thinking, often unconsciously, on assumptions that aspects of the future will be unchanged from today, with those status quo assumptions also becoming embedded in our tools of analysis. An articulated vision of what the longer-term future might hold may help avoid the trap of being locked into status quo assumptions. For example, in related work (Hicks 2013), I

showed why most current macroeconomic models, which are significantly driven by status quo assumptions about the timing of retirement, are quite misleading about the pressures on pension policies – even in the medium-term. Realistic planning needs to take account of different assumptions about what the future will hold at the macro level, and apply those scenarios to the micro level.

It is reasonably straightforward to make projections about the shorter and medium-term effects of the enabling society, particularly the likely first round effects that will arise as a result of using ICT technology to produce 'what works' evidence. However, that technology is truly transformative in its effects, meaning that their longer-term effects on social policy cannot be easily predicted, especially since that technology is also reshaping the economy, the labour market and the health care system in ways that could profoundly affect the social environment.

The importance of economic and labour market factors

Particularly important, the future will be greatly shaped by macroeconomic conditions and the state of the labour market. For example, the enabling society social instruments are designed to facilitate greater choice by individuals on how their lives unfold over time. That assumes that employers and other institutions will be able to provide the needed flexibility – such as allowing extended periods of absence from work or allowing people to work non-standard hours. However, in an economic downturn, the priority will be on creating jobs, not making them more flexible. On the other hand, in more prosperous times with job shortages, employers will more readily adjust their workplaces to provide the kind of flexible work arrangements that are in demand in order to attract needed workers.

Similarly, if there is a serious continuing mismatch in the demand and supply of skills – with the skills being demanded by the economy being higher than the skills of potential employees – then there is a risk of polarization. That is, employers may provide the needed flexibility in the high skilled jobs that are in demand, but not for the lower skilled jobs.

It is not possible to think sensibly about the future of labour market policy without taking these economic considerations into account. And longer-term economic projections are even more uncertain than those on the social side since they are affected by global and environmental shocks and cycles that often have large effects that cannot be easily foreseen or controlled.

The familiar solution is to construct a range of different scenarios about what the future may hold, taking account of both social and economic uncertainties. However, building such scenarios is difficult and is not often undertaken because of the complexities involved.

The implicit scenario used in the essay

When the essay discussed the likely shape of a mature enabling society, the following assumptions were made:

- Labour markets would remain strong for some years in the future, similar to the demand and supply conditions that currently exist and that have existed, with the usual cyclical ups and downs, for many years.

- Human behaviour in organizing time across the course of life will change in light of changing economic, program and cultural pressures.

The essay gave many examples of pressures that could lead to greater lifecourse flexibility, with greater freedom for individuals to develop and use their capacities over life. Examples include the individualization of social programming and the elimination of policies that discourage work such as

Box D16. Some thoughts on building scenarios about life in the enabling society

Scenarios present alternative views about what the future might hold. They are especially useful in thinking about the longer-term future and for dealing with complex topics such as social policy and social well-being. Standard tools for making shorter term forecasts and projections based on past trends are inappropriate here – as are 'what if' models that deal with only one or several variables at a time. Projections based on past trends, or models that implicitly assume no change in many social variables, are particularly unreliable given the transformative effects of the technology that will be used.

In policy-making applications, a common approach is to construct scenarios based on different assumptions about the pressures that will shape the policy in question, such as strengthening or weakening labour markets, or growing or shrinking inequality.

However, in related work some years ago (Hicks 2002), the present author found that approaches based on policy pressures or drivers proved to be unhelpful in identifying priorities for policy action. What worked better was the construction of a range of scenarios that reflected different, but feasible, visions about the kind of society and economy that governments might wish to shape through their policies.

Accordingly, the goal might be to develop a set of scenarios such that a hypothetical future government, regardless of political stripe, would find that at least one of them to be compatible with their values and priorities. As well, the scenarios should reflect a range of reasonable assumptions about social, economic and technological trends. In the 2002 exercise, three such scenarios were constructed:

- A baseline *life is learning* scenario with a heavy emphasis on human development themes.

- A *life is a job* scenario, which was a variation on the *life is learning* that placed more emphasis on the role of the economy and labour market, with a smaller role for government and a more traditional approach to governance.

- A *life as citizenship* scenario, which was a variation on *life is learning* that placed more emphasis on policy in supporting the roles of community and family, on the importance of importance of individual choice in the allocation of work, leisure, learning and care-giving over life, and with a greater emphasis on service provision over life – with lesser attention to income support.

The scenarios were not mutually exclusive. Many elements such as the emphasis on learning and human development, were – and still are – so universally accepted that they were present in all scenarios. The other scenarios highlighted areas where priorities may differ.

The 2002 exercise was much narrower and shorter-term than one that would be required for the enabling society. As well, much has happened over the past decade. For example, in 2002, I had not fully recognized the transformative power of ICT technology. Nor did the earlier work include governance considerations or equality issues. A quite new set of scenarios would almost certainly have to be constructed for the enabling society. The 2002 scenarios may, however, provide an example of one kind of approach that could be explored today.

Each new scenario would be assessed in terms of:

- Its consistency with the various trends, pressures, values and governance arrangements discussed in this paper – as well as with broader economic and environmental trends. Particular attention would be paid to assessing the effects of strong, weak and polarized labour markets.

- Radical versions of key lifecourse trends would be explored along the lines set out in the essay, along with more conservative versions. For example, lifecourse reallocations might change more dramatically if the long-term future is assumed to be marked by strong labour demand.

- Its implications for individuals, families and other institutions, including government finance.

- The kind of policy action that would be needed to make it a reality. Or, during a first round, the kind of data and R&D that would be needed to support the implementation of the scenarios. As will be discussed later, the priorities for new data and the priorities for new policies are quite similar. An exercise directed to the former could be a less contentious proxy for the latter.

This analysis would allow the identification of those policy actions that would be useful in supporting all scenarios, and those actions that would support some scenarios but would work against the achievement of others. This knowledge should help build consensus around priorities for action, and identify those areas where political choices are needed. In the more immediate future, it would help identify priorities for developing the system of big statistics.

fixed ages of pension entitlement. And, of course, the key 'what is likely to work best' information will gradually extend to more domains of life, considerably reducing the risk to individuals that is associated with big life choices.

Accordingly, the essay assumed that quite radical changes in lifecourse patterns and associated policies were possible in the foreseeable future, including the end of standard ages of retirements.

Of course, other visions of the future are possible. The future might look quite different in scenarios that assume high levels of joblessness or polarization – or deep environmental change. Box D16 offers some thoughts on how this might be done, although there are many possible approaches. Such a scenario-building exercise could be incorporated, for example, into the much broader scanning and foresight activities already underway through the work of Policy Horizons Canada, an internal Government of Canada think tank with a mandate to help the federal public service anticipate emerging policy challenges and opportunities in a rapidly changing and complex world.

E. Big statistics: the technology of the enabling society

The essay emphasized the importance of a transformed system of national social statistics in the enabling society, with its new focus on individual-level 'what works best' evidence. Such a central role for statistics needs further explanation since we are allegedly living in an era where research-based evidence is given low weight in policy-making and where national statistics are under attack.

Section E.1 examines the current base of social statistics, with a view to distinguishing real from perceived weaknesses.

Section E.2 describes the changes that are already underway to make social statistics more relevant.

Section E.3 describes the structure of the new system of big social statistics that will eventually emerge.

Section E.4 concludes by summarizing how the use of big statistics will transform social policy.

E.1. Social statistics today: useful but losing policy relevance

Everyone applauds policies that have been designed based on evidence of what is likely to work best, and that have proved to work based on evidence of their results. However, at least in Canada, doubts have been expressed about the extent to which national social statistics can provide that evidence. At times, policy-makers do not appear to be even interested in the evidence that exists. Cutbacks to both surveys and censuses and to social research based on those statistics have become a dominant theme.

A number of factors lie behind this seeming paradox. The good news is that existing statistically-based evidence is, rhetoric notwithstanding, heavily used in policy-making today – although those uses are not always visible to the public. Further, as will be discussed, the demand for relevant evidence is strong. The problem is that the existing statistical base was developed for a different era and is becoming increasingly less relevant to today's needs.

Statistical evidence is used, but those uses are not always visible

Statistical evidence is used extensively throughout the policy cycle as described in Box E17. However, it plays a relatively smaller role at the most visible and crucial stage of the policy cycle, the stage when politicians make final decisions. This smaller role has been interpreted cynically, namely that decisions are taken on grounds of political expediency or values, even if the evidence clearly points in another direction. That has not been the experience of this author. In his understanding, evidence is nearly always used in decision-making when it is relevant. The problem is that, all too often, relevant statistical evidence is missing. The Canadian debates about the introduction of early learning and childcare[46] shown at bottom of Box E17 provide an example.

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[46] The most recent large scale debate took place in period from 2004 through 2007 and involved dropping a plan for federal financial support for early learning and childcare that had been negotiated with some provinces in favour of an allowance directed to mothers and adjustments to federal/provincial/territorial financial arrangements. The government changed during this period with the incoming Conservative government favouring a different approach to both the substance of child care policy and in dealing with provinces than had the outgoing Liberal government. During most of this period, the present author was Assistant Deputy Minister of policy of the federal department concerned.

Box E17. Uses and limitations of evidence at different stages of the policy cycle

Identifying social issues that may require action

The initial stage of the policy cycle involves examining the extent to which social problems are becoming more or less severe. Here a range of social indicators are routinely used and much effort has gone into their improvement. Most indicators today are based on cross-sectional readings that are repeated at regular intervals, such as monthly unemployment rates.

Assessing the effects of possible government interventions

At this stage, an assessment is made of the extent to which different types of government interventions might make things better or worse. This stage is also well supported by quantitative evidence. 'What if' modelling is a common tool. These are cross-sectional models that can predict the costs of a possible program design and its immediate consequences in terms of gains to society and numbers of individual winners and losers. They typically do not take account of the effects of any longer-term changes in behaviour that may result from the intervention.

Assessing the support for possible interventions

A parallel assessment of the acceptability of various policy alternatives in different population groups is often carried out, using opinion surveys and focus groups – often by the political side of government.

Choosing among policy and program options

Choosing among the options that are open, and explaining why that decision was taken, is the most visible stage of the policy cycle. It also the stage where value judgements typically play a more critical role than empirical evidence. For example, analysis at earlier stages of the policy cycle typically finds that many potential solutions would not be effective or efficient.

Such options are typically taken off the policy agenda. Most of the alternative actions that do reach the political level for final decisions are those where the empirical evidence does not point to only one policy solution and where values and political judgement must necessarily play important roles in decision-making.

Designing operational systems

Modelling and benchmarking sometimes provide evidence that is used in the design of practical service delivery systems. Behavioural economics, experimentation and feedback loops are starting to play a role. However, for the most part, program designs today are simply adaptations of pre-computer age designs that were put in place a half century ago. The evidence-driven, self-learning designs discussed in the essay are still rare.

Monitoring and evaluation

Quantitative analysis is heavily used in monitoring the operations of programs – as indicated by the mountains of reports produced, if seldom read.

Empirically-based audits reach a wider audience, although that may not be immediately welcomed by the government of the day.

Evaluation of outcomes is based on a strong empirical methodology and is currently the best way of obtaining 'what works best' information. However the results are usually produced too late to be useful. Findings are often available only after the program in question has ended or been significantly revised. The real payoff will come in the future when the 'what works best' techniques of evaluation are used to calculate expected outcomes in real time.

Early learning and childcare: an example of the limits of empirical information when key policy choices are made at the political level

Canadian policy debates about childcare provide an example of the strengths and weakness of existing empirical evidence. This is a particularly interesting case study since it involves a critical lifecourse issue that was discussed in the essay. As well, the statistical evidence in question was based on longitudinal human development research – exactly the sort of evidence that the essay has argued will be key to the evolution of the enabling society.

Advocates of high quality child care with universal coverage used lifecourse evidence to support their case, namely research which showed that high quality childcare is associated with positive outcomes, especially for low-income families where the quality of care is currently low (Japel et al 2005).

Yet the reality was that, in the actual policy discussions at the national level, none of the proposals on the table were remotely rich enough to allow the creation of a universal

system of high quality childcare over the medium term.

That is, the research did not directly address the real issue on the table, namely the balance between high coverage and high quality over a very extended development period.

Nor was the research relevant to the views of those who saw expanded childcare not in its role in human development but rather in its role as a way of providing a form of 'family allowance' aimed at supporting mothers, especially those who stay home to raise their children.

In summary, the evidence was useful in the early stages of examining the possible need for policy action and even in some aspects of the design of policy alternatives. However, it was not useful at the later and more important (and public) stages of choosing among practical alternatives; here decisions were based, necessarily in the circumstances, on political judgement.

Statistical evidence is losing relevance

The argument to this point it that there is a demand for good empirically evidence at all stages of the policy cycle. Data will be used when it is relevant. The worrying trend is that, when taken as a whole, national social statistics are becoming less relevant. They have not been keeping up with the evolving expectations for social policies that were described the essay. For example:

- Most statistical data today are cross-sectional in character, as opposed to the longitudinal lifecourse approaches that will be needed in the future. Indeed, in Canada, there has been a move backward in this area with the cancelling of longitudinal surveys.

- They deal primarily with transactions and flows, as opposed to an integrated approach that takes account of both flows and assets, such as financial and human capital.

- Most analysis is still based on pre-grouped aggregate data, rather than the micro data needed for finely-grained analysis and individually-tailored 'what works best' data.

- Most statistical data are obtained from surveys and censuses and, with a few notable exceptions, ignore the potential richness of administrative sources of data.

- Most statistical information today describes what happened in the past, only a month ago in the case of employment statistics, but often a year or more in the past – or much longer in the case of information about the subsequent effects of programs as determined by traditional experiments and evaluations. What is needed is information in real time that can be used when decisions are being made.

- Most current analysis is directed to examining a limited number of characteristics in a single domain of life, such as employment. What is needed is analysis that looks at combinations of characteristics and activities, including those arise in different domains of life such family, community, employment and school.

- Statistical data operate in separate silo from qualitative research which is needed for policy to be attuned to the richness and diversity of everyday life.

- The tools for using statistics are designed for governments and researchers, not citizens.

The data that exist today were designed for use in the decades when the welfare state was being put in place and fine-tuned. Today, as we are shifting away from welfare state perspectives to enabling society perspectives, analysis based on existing statistics seems to be embellishing old stories, without much current relevance apart from justifying positions taken on other grounds.

E.2. The system is evolving

The essay explained that welfare state programming was based on pre-computer technology and was supported by statistical information that was similarly developed before the information age. Social statistics are losing relevance because they still mainly reflect those origins.

For example, social statistics are still mainly drawn from the same sources: cross-sectional surveys and censuses. The underlying data are still planned, structured and accessed in the same way: survey by survey, and census by census. Analysis has become more sophisticated but is still mainly based on pre-computer techniques – either based on tabulated, aggregate numbers (often time series of point-in-time readings such as unemployment rates or the incidence of sickness, crime or poverty) or on regression and related analyses that can probe the relationships among these point-in-time readings. Users can

now access rich statistical information quickly over the internet. However, for the most part, the data that are accessed are similar to those which have appeared in print publications for decades.

Even much of the explicit demand for new data is still based on pre-computer assumptions. For example, the essay referred to the recent Drummond report on labour market information in Canada (Advisory Panel on Labour Market Information 2009) which, reflecting the views of people it consulted, identified a set of data gaps that were about the same as those that were identified a half century ago[47]. The very fact that the focus was on filling gaps is telling; the gaps are those that exist in a system developed in the pre-computer age – and the solutions suggested are, unsurprisingly, mainly extensions of those pre-computer technologies. There is not even a hint of the kind of solution that makes use of current information technology such as the 'what works best' information discussed in Chapter 2.

However, the system has started to evolve, slowly, in new directions as shown in Box E18.

The earlier pilot work on 'what works best' information has already been discussed. New longitudinal surveys have been developed to supplement the traditional point-in-time perspective of welfare state policies, as has a potentially powerful microsimulation capacity, although neither appears to have high priority in terms of continuing budgets. Statistics Canada and ESDC have started using knowledge planning approaches that take a cross-vehicle perspective. While Canada lags behind many other countries, including the United States, in the use of administrative records for statistical purposes, development work is underway on these fronts as well, but with relatively low visibility[48].

The coming years are likely to see even larger changes on three inter-related fronts.

First will be the shift to the 'what works best' data described in the essay. Eventually this kind of data will be the main product of the system of social statistics, with key uses in research and analysis, and at all stages of the policy cycle. Most important, real-time uses of this data directly by citizens will become the primary audience for social statistics.

Second, the boundaries of the national social statistics system will expand to encompass most of the social data that will exist, including data from many administrative sources arising in many jurisdictions that are currently not used for statistical purposes[49].

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[47] The present author has direct experience with these pre-computer discussions. He started his career in the Labour Division of the then Dominion Bureau of Statistics (now Statistics Canada) in the mid-1960s when punch cards and mechanical calculators were the dominant technology. The discussions that he participated in some 45 years ago on ways of filling gaps in labour statistics were eerily similar to those that he hears today when he is occasionally asked to participate in similar discussions. These include filling gaps related to job vacancies, finely-coded industrially-based occupational data, job turnover and labour market dynamics, identification of skill shortages and the need to integrate skill and occupational concepts.

[48] For example, tax records have been used for many years within government for statistical purposes. A search of Statistics Canada's web site related to record linkage approvals shows a large increase in the use of a wide variety of administrative files for statistical purposes. For example, a Longitudinal Workers File has been recently constructed to examine employment dynamics. It is a 10 percent random sample of all Canadian workers, with longitudinal data going back to 1983 – constructed by integrating data from four sources: the Record of Employment files of ESDC (on worker separations), the T1 and T4 files of the Canada Revenue Agency, and the Longitudinal Employment Analysis Program (which in turn is created using administrative data).

[49] There will, of course, always be separate data bases about programs that are held by the agency responsible for that program and used for internal administrative and monitoring purposes. However, much of the data in those separate data bases will also be fed, often in an adjusted form, into the national statistical system.

Third is the shift to 'big statistics' – the new way in which data drawn from both administrative and survey sources are organized and analysed. The power of big statistics is, however, largely unknown in social policy circles. Accordingly the next section will provide a kind of laymen's guide.

Box E18. Important individual statistical advances, but weak progress overall

The transition to a system of big statistics – in principle

The enabling society will require much richer data at the level of the individual. This will need to bring together a complex chain of social, economic, health and community datasets that can capture the various pathways that individuals follow, together with sources of longitudinal data in order to track individuals over their lives.

To get to this end point, a rational strategy for shifting to the data architecture of the enabling society data might have consisted of four steps:

- Enriching the content of existing survey data to include more integrated cross-sectional data.

- Gradually building up new longitudinal surveys.

- Using new computing technology to develop administrative data to supplement and replace survey and census data.

- Developing microsimulation and other data linkage techniques that can use data from these multiple sources in a consistent manner.

…And in practice

In reality, things have worked out quite differently. While there have been important data developments on all fronts, there have been large setbacks as well. Let us consider how this has worked out in the area of labour market data.

Surveys were indeed enriched, including collecting new cross-sectional data on many important health and social topics using vehicles such as the Canadian General Social Survey. The latest trends are, however, towards fine-tuning and cutbacks, not expansion.

- New longitudinal surveys have been launched, including the Survey of Labour and Income Dynamics and a National Longitudinal Survey of Children and Youth. We are, however, now in period of retrenchment; in 2011 the SLID's longitudinal component was discontinued.

- Tax files have been exploited to replace some employment data from surveys and to better link these with administrative files. Canada has seen many recent initiatives in the use of administrative files that are low profile but of considerable potential for the future development (e.g. the creation of the Longitudinal Worker File).

- Perhaps surprisingly, there was – as is described in the text – early and sophisticated development in the area of microsimulation modelling, developments that were, unfortunately, largely ahead of their time in terms of practical policy applications.

Potential for major progress ahead

Overall the gains made in the area of labour market statistics are not as large as might be expected, or hoped. The content of the 2009 Drummond Report on the state of Canada's labour market information system, is strangely similar to diagnoses that took place in the 1960s and 70.

Critically absent is any comprehensive roadmap from Statistics Canada that articulates a long-term vision about what the statistical system is to become in the future, and how to get there.

An anonymous reviewer of an earlier draft of this paper provided a useful reminder that many academics are sceptical about the speed with which administrative data are likely to replace survey and census sources as the main source of national social statistics. Most of the use of administrative data has been taking place within government where privacy risks can be most effectively managed; academics have struggled to get any access to this kind of data. Inside government, only moderate priority has been attached to this kind of activity and, at current rates of progress, it will take some time before the changes described in this section will be implemented. However every sign suggests that there will be an explosion in the use administrative data over the next decade.

E.3. The new system of big social statistics – a step beyond 'big data'

The phrase 'big statistics' is an analogy to the recent growth of analysis based on 'big data' that involves searching enormous data sets – such as all the data found on Facebook or data sets related to genomes or meteorology – in order to produce new, meaningful information. In 2012, for example, the United States government launched a $200 million initiative (White House 2012) to 'improve the tools and techniques needed to access, organize, and glean discoveries from huge volumes of digital data [in order to] to help solve some the Nation's most pressing challenges.' New, and increasingly user-friendly, tools for analysing big data sets are becoming available from companies such as Google.

Big statistics is the next stage of evolution, building on big data but moving far beyond big data in terms of social policy implications and making a transformative difference in people's lives[50].

As with big data, big statistics draws its information from many data sets and uses micro-level analysis rather than the aggregate statistics that dominate today. However, big statistics are different in the sense that all the data which enter the system are consistently described with a resulting data base that is highly integrated. This allows extremely rich analysis and the creation of quite new types of information. The following paragraphs describe how this integration is achieved and the resulting payoffs.

The structure of big statistics: the honeycomb analogy

Today, policies and programs are supported by a series of largely independent data sources. Statistical agencies mainly draw on their own the surveys and censuses. Program administrators use data collected as part of the operation of their programs. Separate reporting systems are often established to support accountability initiatives. Some attempt is made to ensure comparability across these various data sets through the use of common concepts and definitions to the extent possible, but most analysis is done using a single data source or a limited number of comparable sources.

In the enabling society, in contrast, the use of ICT technology will allow us to plan, store, and analyze micro data (i.e., data about particular individuals or organizations or program components) drawn from many sources in an integrated way. While actual systems designs will be more efficient than this, for purposes of exposition it is simplest to envision a future where there will be a giant warehouse that contains all available data that are of even potential interest to social policy, regardless of their source. This data base will be much larger than anything we have today and will be mainly fed from administrative data sources, although traditional surveys and censuses will continue to play an important, if somewhat different role.

A beehive analogy is useful in thinking about the structure of the new social data base. The data base structure consists of a huge number of originally empty honeycomb cells – each cell representing a tiny bit of potentially useful social data, say the employment status of one specific individual on a specific day.

- Each such cell has a unique identifier, consisting of the concepts and definitions that describe the variable in question – the labour force survey definitions of employment and unemployment in this case.

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[50] Big data (such as exploring the terminology and context of internet applications related to social problems) will not disappear and will continue to be an important supplement its more powerful big statistics successor in policy applications such as marketing the need for new programs or monitoring awareness of existing initiatives.

- There would be separate cells for all Canadians, for every day of their life[51], with many thousands of variables for each individual each day (including the characteristics of the workplace she worked in, or the activities in classroom where she attended school, her own demographic and family characteristics and the characteristics of the dwelling where she lived and of her neighbourhood).

- There would always be enough cells so that they could be accumulated to create every piece of actual data that might be useful, including the all-important variables that allow the lifecourse analysis discussed in the next chapter.

Of course, information from actual surveys, censuses and administrative records could fill only a small fraction of these empty cells with real data – the honey in our analogy. The question is how to fill as many cells as possible with accurate data in an efficient manner.

- Many cells can be filled from administrative sources, increasingly so as administrative data is cleaned and adjusted for use in statistical uses applications and as many programs will themselves make use of 'what works best' statistics in their internal operation.

- Surveys and censuses will fill many other cells – increasingly to fill gaps in the administrative sources and increasingly to provide independent control totals and overlaps as discussed below[52].

- Many more cells can be filled by automatic imputation. For example, if information about a certain characteristic is available only annually, a daily equivalent can sometimes be automatically assigned to each day of the year. The characteristics of a neighbourhood can be imputed to all who live in that neighbourhood and the characteristics of a workplace can be imputed to all who work there.

- In many cases the actual data will be missing or will not meet the exact specification set out in descriptor of the vacant cell to which it is destined – for reasons of sampling and other errors or slight difference in the concepts used. In many cases, the missing data can be imputed and erroneous data cleaned, using sophisticated computerised techniques.

- In still other cases, it may be possible to impute data that were not collected in any of the source material, again as described below.

The cells in the honeycomb or data base will require two kinds of descriptors: a description of the holding cells and description of the data that are entered into those holding cells.

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[51] An hour, rather than a day, might be more appropriate in this example, since time allocation during a 24 period plays an important role in some social statistics. Note again that the beehive is an analogy only; actual computing systems would have far more efficient designs than suggested by the analogy. For example, there would likely be separate but inter-related data bases relating to individuals, to firms and other institutions, and to geographic entities and government programs. Nor would redundant data be recorded. For example, date of birth would only need to be recorded once, not for every day of life.

[52] That is, survey data would be increasingly used as a complementary way to supplement administrative data or census data. For example, as described later, data from adult literacy surveys would be imputed onto employment insurance and social assistance files, or student files, or small area census data – in order to better understand the supply and demand for generic skills and how these relate to specific occupational skills in different industries, occupations and localities. Also note that the subjects covered by survey data are likely to expand considerably over time as suggested by the lengthy listing of capabilities found in Box B6. A lifecourse-based longitudinal survey would be a powerful force in allowing administrative data to be linked to survey data in way that would have high policy payoffs. An earlier proposal along these lines was associated with the work of the late Paul Bernard (Bernard et al 2007).

All cells, whether empty or containing actual data that have been collected, would be described in terms of the concepts and definitions that should ideally apply to the data in that cell – or that may eventually be in that cell. A framework, or map, will be discussed in the Compendium Paper F that will show how each cell is conceptually related to all other cells[53].

The other set of descriptors would refer to the actual data element that is placed in the cell. It would include its source and quality, including any imputation techniques that were used. The descriptors of all cells, whether empty or filled, have analytic uses. Filled cells are used in quantitative analysis, while qualitative analysis makes use of both filled and empty cells.

The miracle created by duplication, overlaps, partial data and control totals

We typically think of duplication in negative terms, a symptom of inefficiency and a source of unnecessary response burden. That does not apply in the new social data base which will automatically have many sources of duplicate or overlapping data, and others can be deliberately added. Box E19 provides examples. Duplication, overlaps and control totals can be used to impute missing data, correct erroneous data and, in some cases, even create quite new data that did not exist on any one of the source files – the miracle referred to in the heading.

… role in quality control

Duplicate or partly duplicating data from different sources act as built-in quality controls and can be used to create new data. If data coming from different sources are conceptually identical but differ in reality, then we know that there is a problem with quality of one or both of these sources. Examples can be found in Box E19. Resolving those quality problems can result in adjustments to the data that make them much more consistent and accurate. For missing data resulting from non-response or obvious errors in answering questions, it has always been possible to use imputation techniques to fill many of the gaps. In recent decades, there has been an explosion of new data created by applying new technologies to clean up messy administrative data sources. In the new social data base, the possibilities for imputing missing data increase by many orders of magnitude; there are many more sources of related and overlapping data on which to create the missing data.

…. and in creating new information

Of even greater importance is the use of new computing power to examine the inter-relationships among similar or overlapping data sets in order to create new data that were not there in any of the original collection instruments. The change is comparable in scope to the introduction of sampling into official statistics in the post-war period which similarly allowed new information about a whole to be created by gathering information from only some of the members of the group in question. As with the introduction of sampling, this new approach will likely be introduced slowly at first and will be greeted with much resistance reflecting paternalistic concerns about the high risk of misuse of this new tool.

Following are some current examples of new knowledge that has been created by these means. These are major breakthroughs, but still only hint at the potential power of this new way of doing business.

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[53] The map will use, among other techniques, a logic model approach in showing how data cells describing to individuals and government programs are interrelated – including the individuals who participate in the program and benefit from it and the individual employees and other actors who design and deliver the program. Logic model approaches as they apply to governance are described in Compendium Paper C.

Box E19. Examples of useful overlaps, duplication and exogenous control totals

Stocks and flows: Separate data holding cells will exist for data on both stocks and flows. The two are completely reconcilable, conceptually.

- For example, if we take one's stock of financial assets in one period of time and add to it net financial flows (income minus expenditures), the result equals the stock of financial assets at the next point in time.

- Similarly, our human capital (measured in terms of skills) at one period of time is the same as that at the next period of time, if one adds the skills acquired in the intervening period and subtracts the skills lost during that same period through lack of use.

- The stock and flow notions can be built into most aspects social data – even including data on values and perceived well-being. This is discussed in Compendium Paper F.

Individuals and institutions: In a fully mature system, there will be separate data bases for families, firms, associations, classrooms and other social groups. These will overlap the database that holds individual data.

- That is, while some characteristics of organizations (such as sales or profits in the case of firms) can only be described at the level of the institution taken as a whole, other elements are the simple aggregation of the characteristics of the individuals that comprise those groupings (such as its employees) – with the data about the latter conceptually overlapping the data in the individual database.

- As another example, overlapping data can be collected from schools and from the students who attend those schools (or their parents).

- As well as a conceptual overlap, there are often overlapping sources of actual data. For example, data about various aspects of a person's job are provided by the individuals themselves (e.g., from the Census or Labour Force Survey), and by the employers (e.g., from the Survey of Employment Payrolls and Hours) – and are also provided to the tax system.

- The social data base of the future will have separate data-holding cells for all these overlapping sources – as well as information that shows how they can be reconciled.

Overlapping data from individuals and government programs. In exactly the same way, government programs can be described, in part, by aggregating up the characteristics of program beneficiaries and contributors (obtained through individual information on the administrative records of the program – or from evaluative surveys). In part, however, programs can be described only at the level of the program as a whole (such as measures related to the efficiency of delivery or the extent to which program objectives were being met).

Overlaps between individual and spatial data. The same principle applies to spatial analysis, but in an even richer manner.

- The characteristics of a neighbourhood, or city or province or country can be determined, in part, by adding up the characteristics of the individuals who live in those spaces.

- Still other spatial characteristics can come from aggregating up the characteristics of the institutions that comprise those spaces (e.g., economic data from firms, data on patients from doctors and hospital).

- Still others (such as crime rates, pollution, and accessibility of services) can only be determined at the level of the geographic area taken as a whole.

National Accounts overlap. As will be seen in Compendium Paper F, our proposed social data base will include a way of capturing economic transactions (and approaches to economic stocks and flows) that is identical to that used in the national accounts – enabling full linkages to the double entry bookkeeping tools of reconciliation and analysis that are the strength of the modern accounts.

Time-based accounting: An even more powerful tool of reconciliation and analysis is time-based accounting where activities must add to the 24 hours a day. The framework discussed in Compendium Paper F captures all of the benefits of 24-hour accounting – and adds to them by also incorporating lifecourse analysis where the total of time spent in all life trajectories must, after adjusting for overlapping trajectories, add up to an individual's life span.

Instrument-based overlaps: often arise as a result of the design of data collection instruments, where it is often necessary or efficient to collect identical or overlapping information. For example, basic demographic information is collected in the census, in many surveys and in many administrative files. The social data base of the future will have holding cells for all of these.

- In recent years, Geographic Information Systems have provided vastly richer data bases of spatial data including for small areas, using new computing techniques that can draw on different data sources.

- In Canada, data on from the Adult Literacy sample survey have recently been imputed onto individual census records to provide a rich source of completely new data on skills by industry, occupation and geographic areas. The company who did this, DataAngel[54], has even calculated mismatches in the supply and demand for skills by developing data on employers' demand for skills (using the fine occupational coding on the census micro-records along with exogenous essential skills profiles developed by ESDC).

- Microsimulation tools, particular the LifePath model[55], have perhaps gone furthest in creating highly detailed life histories of (synthetic) Canadians, again drawing on inter-related data from multiple data sources. LifePaths is described in the essay both as an example of the potential power of microsimulation for enabling society analysis and as an example of the difficulties of making use of such analysis when most programming is still structured along welfare state lines. (The funding for LifePaths ended in late 2014.)

E.4. Using big statistics

To this point, the chapter has discussed the internal structure of big statistics. The essay provided examples of how these big statistics will be used in practice. Here we simply note that the system will support both highly complex research and also the needs of lay people. Experts will be able to play with the anonymized raw data directly, without the constraints of pre-existing ways of aggregating that data. Everyday users will have access to simple intuitive programs that provide information that is tailor-made to their needs and available when decisions are being made. These will be no more complicated to use than Facebook or Amazon.

The national system of big statistics will co-evolve based on new partnerships created by the use of the data. Once again, the ALMP example of Compendium Paper A provides an illustration of how it will work in practice. The first stage of evolution is to make a crude representation of real life by using information that already exists and to make steady evolutionary improvements over time as new sources of data become available. That is, the system incorporates ever more lessons that have been learned by following the lifecourses of people and institutions, and becomes an increasingly comprehensive representation of what actually happens in society. The more it is used the better it becomes. And all the partners using the system contribute, automatically, to its development.

This chapter has attempted to describe the structure of big statistics and explain its power in an understandable manner. It has done this by using analogies, simplifying descriptions and casting the argument at a high level of generality. The devil however is always in the detail. Compendium Paper F will take a more microscopic look at how the system of big social statistics will increasingly mirror the structure of real life.

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[54] See the various reports on http://www.dataangel.ca/

[55] A description of Statistics Canada's recently discontinued LifePaths model can be found at http://www.statcan.gc.ca/microsimulation/pdf/lifepaths-overview-vuedensemble-eng.pdf

F. Olivia: an integrating framework for the enabling society

The power and the simplicity of the enabling society both rest on an integrated system of micro-level data. Canada has a taken a lead in developing a conceptual framework to support such a system. It is known as the Olivia framework.

Section F.1 describes social accounting, an earlier attempt to develop a comparable framework to support social analysis.

Section F.2 discusses the origin of the Olivia framework.

Section F.3 describes the principles on which the framework is based.

Section F.4 provides an overview of its current contents.

Section F.5 provides examples of how the framework supports virtually all types of social analysis as well as program design and governance.

Section F.6 discusses the further development of the framework.

F.1. Looking back: an integrating framework for welfare state social policies

The System of National Accounts has been a powerful force for integration on the economic side of policy-making. Why has no counterpart emerged on the social side? This introductory section suggests that an explicit framework is most needed during a period of major change in policy, with less need during subsequent periods of fine-tuning and consolidation.

From an historical perspective, the latest big change in social policy was the introduction of the mature welfare state in the 1960s and 70s. And indeed, at about that time, much work was carried out in developing conceptual frameworks to provide the new kinds of social analysis that were felt to be needed. The most thoughtful of these, and the one that is most relevant to the situation today, was known as social accounting[56]. The social accounts movement was an explicit attempt to further extend national accounting principles on the social side – or, in other cases, it was an attempt to emulate national accounting principles using other means.

The main themes of social accounting are set out in Box F20.

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[56] The main themes of this golden age of social accounting are captured in a book (Juster and Land eds. 1981) reporting on a 1980 workshop which included papers from the main players involved and overall assessments by key figures. The content of Box F20 draws heavily from the concluding assessment by Richard Ruggles, even paraphrasing his words in places. The present author was, in his early days in social analysis, a great admirer of the social accounting school of thought as laid out in this document. It influenced the development of the Olivia framework in many direct and indirect ways.

Social accounting was not the only framework under consideration. Another stream of thought was to base a framework around a systematic approach to social indicators, an approach that was destined to fail for reasons described in Box F20. Another was to use health as an overarching theme and to treat social and economic characteristics in the context of their role as health determinants (a movement sometimes referred to as 'healthy public policy'). It provided useful insights but the implied policy dominance of health consideration over all social and economic factors did not gain wide acceptance. The operational data to support a health-oriented government agenda simply did not exist at that time.

Box F20. Social accounting: an unrealized framework developed for welfare state policies

Social accounting emerged at outset of the mature welfare state and flourished during the relatively short period from the late 1960s until the late 1970s, mainly in the United States.

It addressed two problems that were then seen:

- Existing cross-sectional statistics were descriptive, rather than dynamic and analytical. They were weak in helping understand cause and effect.

- Existing statistics were not easily integrated. There was little ability to see how changes in different aspects of society related to each other. For example, there were data on both subjective well-being and on objective characteristics, but they could not be used together to get an integrated understanding of the sources of well-being.

The goal was to develop a framework or accounting system that would:

- Show how social data were related to each other and with economic data.

- Would be based on flows, which would enable a better understanding of inter-relationships and which would provide a better handle on understanding cause and effect.

- Would be descriptive and neutral and, in particular, would not include social indicators in the social accounts per se, but rather see them as outputs of the statistical system. (Before the 1980s, discussions of social accounts and social indicators had often been muddled together in an unhelpful manner.)

The main focus was on two types of accounting systems: demographic accounts and time-based accounts.

- **Demographic-based accounts** are based on national accounting principles. The basic idea is that one can examine tables (matrices) that show flows (or states and flows) among different population groups (i.e., not individuals) with different characteristics at different points in time. This allows an integrated approach to examining changes in status including many social dimensions – education, health, marital status, income, wealth or even subjective well-being status. The demographic dimension of the accounts allows life expectancies to be divided up into expected time in a whole series of states. Economic links enable costs or benefits to be associated with the relevant states.

- **Time-based accounts** use two types of accounting principles: one based on national accounting principles and the other on time use. This approach is based on micro (individual level) data. It provides an integrated approach to subjective and objective measures of well-being. Time is allocated to both market production and non-market activities. These activities produce a range of outputs (earnings which can provide goods and services, a clean house, improved health, etc.). The activities add up to the 24 hours that are available in a day, providing a powerful accounting tool. The satisfaction obtained from the outputs can be measured – as can sustainability (the capacity to continue on in life). There are three levels of accounts: a household output account, a capital account and social output account. The capital account provides the link to economic statistics and the SNA, while the social production account deals with matters related to social well-being.

Time-based accounts were generally preferred:

- Demographic accounts were not based on micro data and, consequently, were far less flexible, especially in analyzing many variables at the same time. Their reliance on large matrices meant that far more data would need to be collected than was required for substantive analysis.

- The micro time-based accounts were more efficient and allowed far more integration (e.g., between objective and subjective data). As well, the micro approach could readily take account of macro data.

- The time-based micro system could work with whatever data were available; it did not require full-scale implementation to be analytically useful.

Principles for future development

A 1980 symposium (Juster and Land 1981) on social accounts identified the following characteristics that should guide future work on social accounts:

- The system should be general purpose in nature – serving a broad spectrum of demographic, social and economic research, and creating a comprehensive common data base.

- It should integrate micro and macro data in the sense that the macro accounts should be conceptually derivable from aggregations of micro accounts.

- The system should not require the estimation or recording of trivia that arise purely because of accounting design.

- The system should be open-ended, so that analysts interested in specific problems or particular kinds of data can build on the existing system without having to begin anew.

The further work described in Box F20 was not followed up under the heading of 'social accounting' per se, which fell out of favour shortly after the workshop[57]. Even the term 'social accounting' in the sense used in this paper has largely disappeared[58]. This disappearance was not the result of any particular decision or the discovery of any large weakness in social accounting. Rather people just lost interest as a new, more ad hoc agenda made more practical sense.

Attention in the years since 1980 shifted away from big conceptual frameworks in many areas. Economic times became tougher and there was less optimism on the social front. Expectations created about the benefits of a rational, systematic approach to planning were far higher than could be realized. Most important, there was little appetite for innovative thinking about new directions in social policy, let alone its theoretical structure. The great majority of the welfare state programs had been introduced and the main tasks were ones of fine-tuning, filling gaps and cost control.

Moreover, practical, operational systems did not exist for the micro-level data collection and analysis that had been contemplated by the social accountants in this period. Social accounting was technically feasible for relatively small scale analytic and research applications. It is only recently that the needed computing power has become available to allow the introduction of micro-analytic systems on a widespread basis and at reasonable cost.

What the new computing power of the 80s and 90s could do very well was to allow the efficient collection and analysis of a lot more survey data. Accordingly, starting in the 70s, there was rapid growth in the numbers of cross-sectional sample surveys covering many domains of social life. In the more recent decades, there has been significant growth of longitudinal surveys (although there have been recent setbacks) and an increasing, if still modest, statistical exploitation of administrative records.

The argument of the essay is that transformative policy change is again on the near time horizon and that, accordingly, now is the time to begin thinking about new framework, or common social policy language. The needed technology is already available and has been successfully used in other domains.

F.2. The origins of the Olivia framework

In 2004, the Policy Research Initiative[59], a central policy think tank within the Government of Canada developed a descriptive framework, known as the Olivia framework to support policy-relevant social analysis and statistical planning. The framework developed in several waves and its evolution continues.

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[57] As far as this author is aware, time-based accounting has almost completely disappeared as a separate area of investigation. However, there has been much progress in collecting time use data where survey respondents account for their allocation of their time, typically over the course of a 24 hour day – and in policy-related analysis of that data. (The new Olivia framework described below encompasses time-based accounting, but not as a sole focus.) Demographic-based accounting has survived in a form now known as Social Accounting Matrices. These are useful tools in some circumstances but, as they suffer the problems identified in the golden age dialogues, applications are quite limited; they are barely known in social policy world. A Canadian version of such a matrix can be found in Siddiqi and Salem (2006).

[58] 'Social accounting' has a completely different meaning in current usage. It now refers to the process of reporting on the environmental and social effects of economic actions.

[59] PRI (2004). The PRI is now known as Policy Horizons. See footnote 71for role of Stephane Gaudet. The first version of the Olivia framework was imperfect. See Marshall and McMullin (2010) for a criticism. Nevertheless its basic structure and concepts proved highly flexible during subsequent development, requiring small adjustments only.

Subsequent versions developed in Social Development Canada, in ESDC and by the present author increased the scope of the framework[60].

The Olivia framework is today's version of social accounting. It has the potential to become the conceptual framework to support analysis in the enabling society. It integrates social analysis by providing a map of the holding cells in the 'honeycomb' of big statistics described in Compendium Paper E. It provides the conceptual framework to move from a world of unstructured 'big data' to the vastly more powerful world of 'big statistics' and the resulting 'what works' data at the individual level. It supports governance applications because the data are available to support the logic models (inputs, processes, outputs and hierarchies of outcomes as discussed in the essay and in Compendium Paper A.

It supports integrated quantitative and qualitative analysis by providing concepts and definitions for those cells in the honeycomb that are filled with actual statistical data and also for those that may never contain statistical information but that are useful in case studies and other qualitative applications[61].

In its present version it provides a set of integrated concepts that encompass lifecourse, asset-based, network, time use and place-based perspectives, while still building on traditional economic perspectives based on point-in-time transactions. It has the potential to encompass subjective data about values, perceived well-being and opinions that parallel and re-enforce the usual objective statistics.

F.3. The principles on which the framework is based

At the centre of the framework is a simple micro-level model that shows the flows among specific individuals and institutions, i.e., the various agents and interventions in the social world. Institutions are defined broadly and include, for example, firms, schools, voluntary organizations, government programs (and individual projects undertaken as part of a program) and informal social networks. The prime emphasis is on the individual with the individual being situated in his or her social and economic context by identifying the flows of resources that take place among individuals and between individuals and institutions.

Box F21 shows the basic cross-sectional model that underlies the conceptual framework. Everything else – longitudinal analysis, values analysis, links to macro analysis – is based on these building blocks. Four basic types of flows are identified:

- Money.
- Information.
- Goods.
- Services.

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[60] The most recent versions are Hicks (2008a) and Hicks (2012b).

[61] Earlier versions of the Olivia framework were not sufficiently clear on this point, namely that everything covered by the framework is potentially quantifiable, but that not all the concepts are intended to be quantified or included in the system of national social statistics. For example, concerns were expressed that the system seemed to require detailed time use data covering the 24 hours a day for all Canadians, throughout life. This would never be possible in practice. While time use data are highly important both for qualitative and quantitative analysis, the fact that it is only collected periodically in sample surveys does not pose any problem for the framework.

Box F21. Model of cross-sectional resource flows
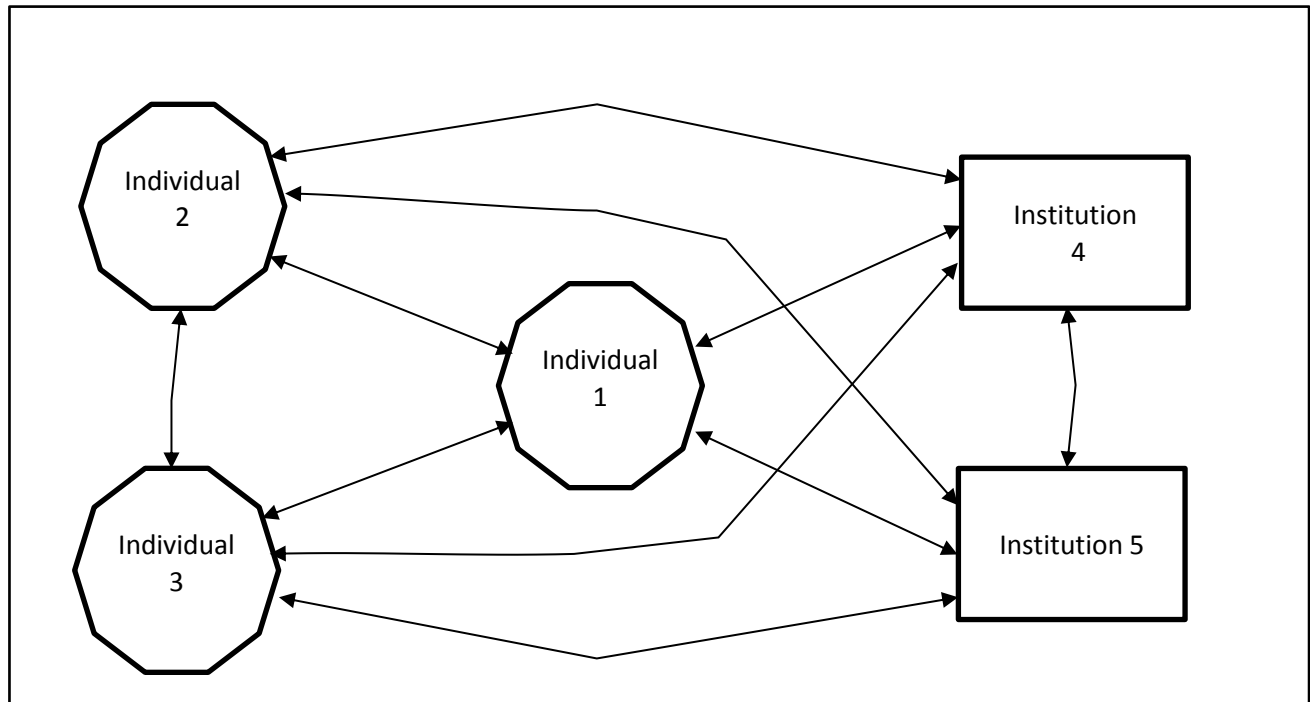
In the original version of the framework, time was also considered as a flow. However this proved confusing in subsequent analysis, where it was more satisfactory to simply treat time as being the duration of another flow. Doing this opened up the possibility of using the concept of duration of flows as the link to closely related analysis of activities and personal projects, as discussed below.

The resource flows are shown using double-headed arrows to suggest that flows go in both directions. For example, a flow of money is usually accompanied by a return flow of goods, services or information. We buy a loaf of bread for a dollar. Information flows, say between two neighbours, represent exchanges of gossip and news that, by definition, are of equal duration for both parties. However the flows need not be equal at any one time period. Unequal flows create debts, savings and gifts and obligations – the basis of asset-based analysis.

Flows are divided into three categories:

- *Transactions* refer to flows that have no duration. They occur when something is sold, traded or given. Transactions mainly take place in the market – buying and selling of goods and services as well as labour market and capital market transactions. However, non-market transactions such as gift-giving are also included. Transactions provide the linkage to the traditional cross-sectional, micro-economic techniques that currently dominate social policy analysis.

- *Social interactions,* usually involving flows of information and services, are flows that have a duration. Social interactions typically occur in family settings, with colleagues in the workplace, when shopping, in community groups and social networks.

- *Activities* are defined as groupings of social interactions that are similar in content and/or purpose. All the social interactions during the course of a period of time (often a single day in the

77

case of analysis relating to individuals) can be divided into a series of overlapping activities[62] that, after the overlaps are taken into account, have a total duration of 24 hours. Activities are used to describe the social and spatial context in which the flows in question take place. They provide a link to traditional activity analysis such as that based on time use surveys or the labour force survey (where employment and unemployment are defined in terms of the duration of work and active job-seeking activities). As well, activities are the basic building blocks of the life-course trajectories that are discussed later.

- *Personal projects*, like activities, are ways in which related social interactions are grouped into larger sets that make sense to the individual concerned – and to social analysts! Ranging from the trivial pursuits of daily life to lifetime obsessions, they are typically the everyday pursuits that give meaning and structure to peoples' lives. A social ecology framework based on personal projects analysis was proposed[63] some years ago as a possible further development of the Olivia framework to supplement the activity concept. However, it has not yet been actively pursued.

- *Events*[64] are large transactions or social interactions that change basic relationships among individuals and institutions – e.g., getting married or divorced, going to a new school or graduating, having a baby, changing houses, having a spouse die, obtaining a job, being fired or retired, etc. Events are assumed to have no duration. Events are the 'transitions' that are part of lifecourse analysis disussed below. As well, as explained in the footnote, events provide an avenue for integrating concepts of risk and insurance into the framework.

The advantages of using flows

Basing the framework on micro flows has many advantages:

- It provide a common integrating framework that encompasses, through the use of transactions, most types of traditional cross-sectional economic, social and spatial analysis.

- It adds a longitudinal dimension, including an integrated approach to two types of dynamic analysis: the stock/flow analysis of economists (including issues related to investments and to social and human capital and as well as financial capital); and the transitions/trajectories analysis found in the lifecourse perpsectives that are emerging in other social sciences. As discussed in the earlier social accounting discussions, analysis of flows gets us nearer to the cause and effect relationships that are of greatest interest in policy applications.

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[62] Activities often overlap, as in multi-tasking. For example, an individual can be simultaneously listening to the radio, overseeing a young child, and preparing dinner. An activity or personal project can incorporate a number of transactions. For example, a project might a shopping expedition where the main flow associated with overall activity might be cast as an information flow (finding out what is available for purchase, comparing prices and quality, etc.) but where the overall activity also included a number of actual purchases (transactions).

[63] The proposal can be found in Little and Phillips (2006). The development of personal project analysis in recent decades has largely been associated with the work of Brian Little.

[64] Events are not necessarily 'resource' flows in the ordinary meaning of flow, although they typically involve a change in the magnitude or direction of a transaction or non-monetary flow. An event changes the nature of a former flow, or creates a new flow – say to a different institution (changing jobs) or different individual (getting married, having children). As the Olivia framework is further refined, there will almost certainly be further development work on 'chance events' – the unpredictable things that add risk to life and that alter the future course of life, such as accidents or death or winning lotteries. This analysis will provide a further way of integrating concepts of risk and social insurance into the framework.

- It opens up the possibility of linkages to other disciplines that are only starting to be used in social policy analysis. These include different approaches to measuring well-being (including the personal projects analysis mentioned above associated with the work of Little), to analysis of latency, cumulative, and pathway effects that are used in some human development analysis, to linkages with health analysis, including mental health.

- As discussed later, it has the potential to allow many forms of qualitative research to be included along with quantitative research in policy research analysis.

More generally, the emphasis on micro-level flows reflects the wish to design a framework that is comprehensive and descriptive, and not based on any particular social or economic theory. It is a way of describing social behaviour and social interventions, not explaining them. That is, it can, in principle, be used in any type of analysis regardless of the theoretical model that underpins the analysis in question. That means it can evolve over time, without needing to be replaced, when new theoretical insights eventually emerge. Although we are still at an early stage of development, the framework has proved highly flexible to date in its ability to support all forms of policy analysis.

… and potential disdvantages

There would be a huge problem with basing the social statistics system on micro flows if one were to assume no changes in the content of the existing base of social data. There are not many sources of micro-level flow data that are currently ready for use in statistical applications. We would basing an elaborate structure on flimsy underpinnings. However, as described in Paper E, the needed micro data will become increasing available as many new sources of administrative data are tapped, and as tools such as microsimulation and imputation are further developed. And, as noted, the system of big statistics does not need comprehensive data to work; where micro data are weak, the system can simply undertake analysis at a higher level of aggregation. Moreover, even unfilled data cells have important uses in that they allow qualitative analysis to feed more easily into policy research applications, supporting quantitative analysis in a more integrated manner.

In other words, the current lack of good micro data is simply a characteristic of the risks that are common to any kind of investment. In order to produce large future pay-offs, it is necessary to invest now in framework development and in data development (e.g., the costs of negotiating the use of adminstrative files for statistical purposes and the cleaning , imputation and privacy protection that is needed in order to make them useful for this purpose). Any investment involves risk. In this case, main risk is one of timing – the length of time required to develop a large enough mass of micro data that will result in demonstrated increases in program effectiveness. Compendium Paper D proposes an implementation strategy that should result in major payoffs in a period of perhaps 5 to 10 years, with more modest payoffs during the developmental period.

There are also some more technical challenges in usng flow data – many of them linguistic in nature. For example, some activities that need to be measured, such a sleep[65], do not involve 'flows' in the ordinary way we think of a flow. To date, however, solutions have been relatively straightforward.

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[65] A number of passive activities are treated as 'resource flows' – even though nothing obvious is flowing. An example is sleep that is both substantively important (personal biological maintenance) and methodologically important (to ensure that the total of all social interactions adds up to 24 hours a day). In the graph shown Box F21, passive flows such as introspection or sleeping would be shown by simply creating a loop that begins and ends with the same individual. Such devices are awkward, but the inconvenience is minor compared with the powerful strengths of the resource flow concept.

Standard ways of classifying institutions and flows

Unlike traditional statistical analysis based on aggregated data, the new system of big statistics allows users to create their own way of grouping micro data, whether related to individuals, institutions, flows or activities – building up from the tiny micro cells according to rules that they prescribe. This is useful for serious researchers exploring new territory. However, for the vast majority of uses, and certainly for nearly all practical policy uses, the micro data need to be combined together in standard pre-coded ways. In the Olivia framework these ways of organizing data simply follow standard practices used by, for example, national statistical agencies such as Statistics Canada. That is, the shift to the system of big statistics will not result any disruptions to existing data series and will be invisible to most people who use the data.

In this sense, the framework can be seen as a tool that provides micro underpinnings that integrate most existing ways of categorizing and classifying social data – and that allow the development of new systems of classification to evolve in an integrated fashion.

Box F22 gives examples of the common descriptors used for *individuals and institutions*. Note that the descriptors will vary for different types of individual or institution. For example, governments are coded in two ways, as employers and in terms of their program structure. Note also that the descriptors of informal social networks (which are institutions in the language of the framework) are quite different from those of formal organizations such as firms.

Flows are similarly categorized in familiar ways: the time and location of the flow, the parties involved, volumes (e.g., the dollar value of transactions), the type of good or service that is flowing and the duration of flows[66] in the case of social interactions. However, two potentially powerful new ways of categorizing flows will also be developed:

- The intensity of resource flows. The standard classifications have not yet been developed, but they will be crucial to the extension of the framework to cover assets – both human capital and social capital as discussed below.

- The purposes of resources flows and expressed satisfaction with those flows – which links to the analysis of purposes and values, again as discussed below.

Similarly, most *events*, such as births, marriages, school graduation or retirement are defined and coded in same way as they are in existing national statistics. However, over time, new standards will almost certainly emerge as a result of increased interest in consistently measuring life course trajectories in the various domains of life.

Most *activities* will similarly be be categorized using the same approaches now found in time use surveys and othe activity-based analysis such as labour force analysis. This includes information about duration, timing and sequencing of activities that allow us to distinguish activities that overlap each other in time. As noted in the later discussion of lifecourse analysis, activities would also be coded according to the pre-defined life trajectories of which they are constituent elements.

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[66] In practice, a number of coding conventions will need to be developed to deal with cases of, for example, information that flows via text messages. They could be arbitrarily assigned a duration of 0 or perhaps 1 second. Many such conventions will be needed as the Olivia framework's concepts are developed into a set of operational definitions. Transactions are assumed to take place instantaneously but, when durations are important to analysis, they similarly be assigned a duration of 0 or 1 second.

Box F22. Standard typologies and descriptors, individuals and institutions

Standard descriptors of individuals	*Standard typology and descriptors of institutions*
There would be standard descriptors for each of the 35 million individuals in Canada: • Characteristics they were born with, or that arose out of their environment when they were born, including place and date of birth, the socio-economic and other characteristics of their parents, health status at birth, etc. • Current characteristics that people acquire during one stage of life that stay with them during subsequent stages. Examples include educational attainment and some aspects of disability and occupation. • Characteristics related to current resource flows, i.e., the flows shown in Box F21 for a particular current period such as yesterday. • Characteristics of the individual's current assets, i.e., those that result from the accumulation of previous resource flows (human capital in the form of skills and health, housing, financial capital, social capital). • Characteristics related to space and time. The basic unit is the dwelling or the institutional workplace in which flows take place. (This allows adding up in a flexible way to neighbourhoods, cities, local labour markets, national economies, etc. – enabling historic and macro-level data to be linked to specific individuals.) • Descriptors of individual well-being, including expectations, values, stress and perceptions of well-being or happiness – including a person's expressed satisfaction with the variables described in the preceding bullets, especially their assets. Subjective indicators such as these are dealt with on a highly detailed micro basis, comparable to 'objective' data. • The inter-relationships among these characteristics can, be examined by many types of analysis, including logic models that show how activities can show how institutional attachments, participation in government programs and personal project relate to well-being.	Institutions are assigned to various categories according to a standard typology that codes institutions to grouping such as firms, non-for-profit organizations, extended and blended families, formal social networks such as Facebook, informal networks such neighborhood friends. Institutions in the public sector are coded in two different ways. First they are treated as employers (where government departments per se are distinguished from arm's length bodies such as schools and hospitals). Second, they are also treated as aggregations of the various programs they administer using a standard typology of different types of programs. Information about institutions comes from two sources: a summation of data from the individuals that comprise those organizations (e.g., in the case of a firm, it could be the number of employees and their educational attainment) and information collected at the level of the institution as whole (e.g., number of paid employees, their current occupation, hours paid for, fringe benefits, etc.). Often these sources will provide duplicate of overlapping data (number of employees in this example), a great strength of this kind of data base as discussed in Compendium Paper E. Each of these categories of institutions has its own set of standard descriptors. In the case of firms, for example, they include ownership, industry type, types or products or services, financial data, number of employee and geographic location. Government programs are also categorized in additional ways, including by instrument type and by a hierarchy of inputs, processes, outputs and outcomes – showing inter-relations among programs, program participants and actors within the system. Networks are coded by size, purpose, density and intensity (including support for analysis of weak ties, embeddedness tipping points and social capital).

F.4. The current content of the Olivia framework

The current content of the framework is organized in four modules. Each module uses the consistent, measurable concepts above to describe individuals and organizations from a different perspective. The content of the modules is summarized in

Box F23.

Box F23. The current content of the Olivia framework

Module One: resources flows

Module One provides a consistent terminology for describing resource flows. It is a simple extension of the traditional, point-in-time micro-economic analysis that is the basis of much of today's social policy analysis. It sets out consistent concepts for describing the interactions or transactions that take place among individuals and institutions. (An institution is defined very broadly to include government programs and informal social networks, as well as formal organisations such as firms, schools and non-governmental bodies.)

These concepts encompass the monetary flows that are the basis of the economy, as well as non-monetary flows of goods, services and information.

As well, Module One provides standard ways of describing the characteristics of individuals, institutions and resource flows. It is our starting point. For example, there is provision for coding resource flows by their duration, by their skills/learning intensity and healthiness intensity (which allows analysis of the human capital and human development as set out in Module Two), by their networking intensity (which, when more fully developed, appears to be a good basis for calculations of social capital and the role of communities), and by perceived satisfaction (which is one of measures of purpose in Module 4).

Module 2: lifecourses and stocks and flows

Module Two starts with the point-in-time resource flows and transactions of Module One, but uses them as the basis for a consistent approach for describing how people and social institutions change and develop over time. The module provides complementary lenses by which we can describe social change and development in statistical terms.

First is a lifecourse approach based on transitions (events) in the main trajectories of life. Events are large changes or discontinuities in the resource flows of Module One. Such analysis allows us to describe the main compartments and changes of life.

Second is stock and flow analysis that looks at, for example, financial capital, housing, human and social capital and how these also result from the point-in flows in Module One. We build up assets from flows at one stage of life, and convert them back into other flows at subsequent stages of life. This analysis allows us to describe the continuities that cross the various transitions and stages in the lives of people and institutions.

Module Three: meso and macro linkages

Module Three provides a set of concepts for describing the networks/hierarchies of spatial settings where individuals and social institutions are situated – neighbourhoods, cities, labour markets, provinces/states, the country as a whole, and international groupings such as OECD countries. These contain data that are built up from the characteristics of those who live in those locations and also exogenous data about those locations derived from other sources. This type of analysis allows us to anchor people in real space and in real history.

Macro (high level) analysis at, say the level of the nation, allows a linkage with macro economic and environmental characteristics. Meso (or intermediate) level analysis – say at the level of neighbourhoods or non-geographic groupings such as firms, occupations or ethnic or language groups – can add much understanding of the richness of ordinary life since individuals are often nested in multiple types of spaces that share some common characteristics but that are quite distinctive in others.

Module 3 allows us to use the micro-analysis of Modules One and Two in conjunction with macro- and meta-level analysis by attributing the following kind of information to individuals:

- The business cycles, wars, cultural changes, educational fads and climate changes that took place at different stages in the lifecourse of an individual.
- Workplace quality in the case of the firms in which they were employed.
- Social infrastructure, unemployment rates and crime in the communities in which they lived.

Module Four: measuring purposes and well-being

Module Four provides a consistent set of systems-based concepts that can be used to describe the purposes or goals of individuals, institutions and societies.

For institutions, we use the familiar input-process-output-outcome model to describe purposes. This is the logic model discussed in the essay that will support evidence-based governance.

For individuals, the purpose is well-being. We approach this through concepts related to values, satisfactions and expectations – with these concepts rooted in the finely-grained descriptions of the first three modules, including both stocks and flows.

For societies, purpose is shown through social indicators, with the framework explicitly supporting a range of different approaches to social indicator development.

F.5. How the Olivia framework supports all forms of social analysis

The following pages take a closer look at how the framework provides concepts and terminology that can support a full range of analytic methods, including:

- Traditional cross-sectional, micro-economic analysis.

- Stock and flow analysis, including human and social capital.

- Lifecourse analysis.

- Analysis of purposes and the links to logic models and governance issues.

- A variety of other types of social policy analysis, some of which are likely to be quite innovative.

### Cross-sectional and traditional micro-economic analysis

Since the starting point for the model is a description of flows at a point in time, it is not hard to see how it continues to support cross-sectional micro-economic analysis. Box F24 makes this clearer by expanding the basic flow model so that it explicitly shows the economic transactions that lie at the heart of much of traditional social analysis.

The example shown in Box F24 puts a single individual, Olivia in this case, at the centre of the system of flows. However the framework is not only centred on individuals. Similar charts could be constructed for any groupings of individuals or institutions. For example, the central box might refer to the aggregation of a number of individuals – such as all unemployed women living in Ontario, or post-secondary graduates working in the mining industry, or the Canadian population aged 65 and over. Or it could contain all the firms in a particular industry, or all people employed in a particular occupation. Program beneficiaries and contributors can be added up to program groupings such as the Canada Pension Plan or the federal income tax system.

For example, data about the volumes of specific flows (and the attributes of flows such their duration) can be used to measure:

- Monetary transactions between specific groupings of individuals and institutions – in order to calculate Employment Insurance payouts to people under the age of 25 in Halifax; to compare the income taxes paid by people in different income groups; to calculate the cost of dental visits in Regina, to explore changes in the size of intergovernmental fiscal transfers, or to compare the wage costs in different industries and localities.

- The duration of selected flows among groups of individuals – in order to compare the amount of time that mothers and fathers devote to child care, or elder care; or to calculate the hourly earnings of different occupational groups.

- And, as already described, placing the individual in a hierarchy (or network) of geographic and other spaces, provides linkages to a wide range of aggregate data that is available for those spaces – including macro data such as the state of the economy or environment, and meso data about the mid-level organizations, firms and communities in which the individual (or group or institution) is situated.

In other words, the Olivia framework encompasses not only existing cross-sectional, transaction-based analysis along familiar lines, but also it allows that analysis to be extended in a variety ways – to include non-monetary flows and to encompass the findings of analysis that takes place at the level of macro- and intermediate meso-level spaces. Such analysis will be particularly powerful when the micro and macro data use consistent concepts. This is currently the case in the economic data, since the System

Box F24. An expanded view of resource flows
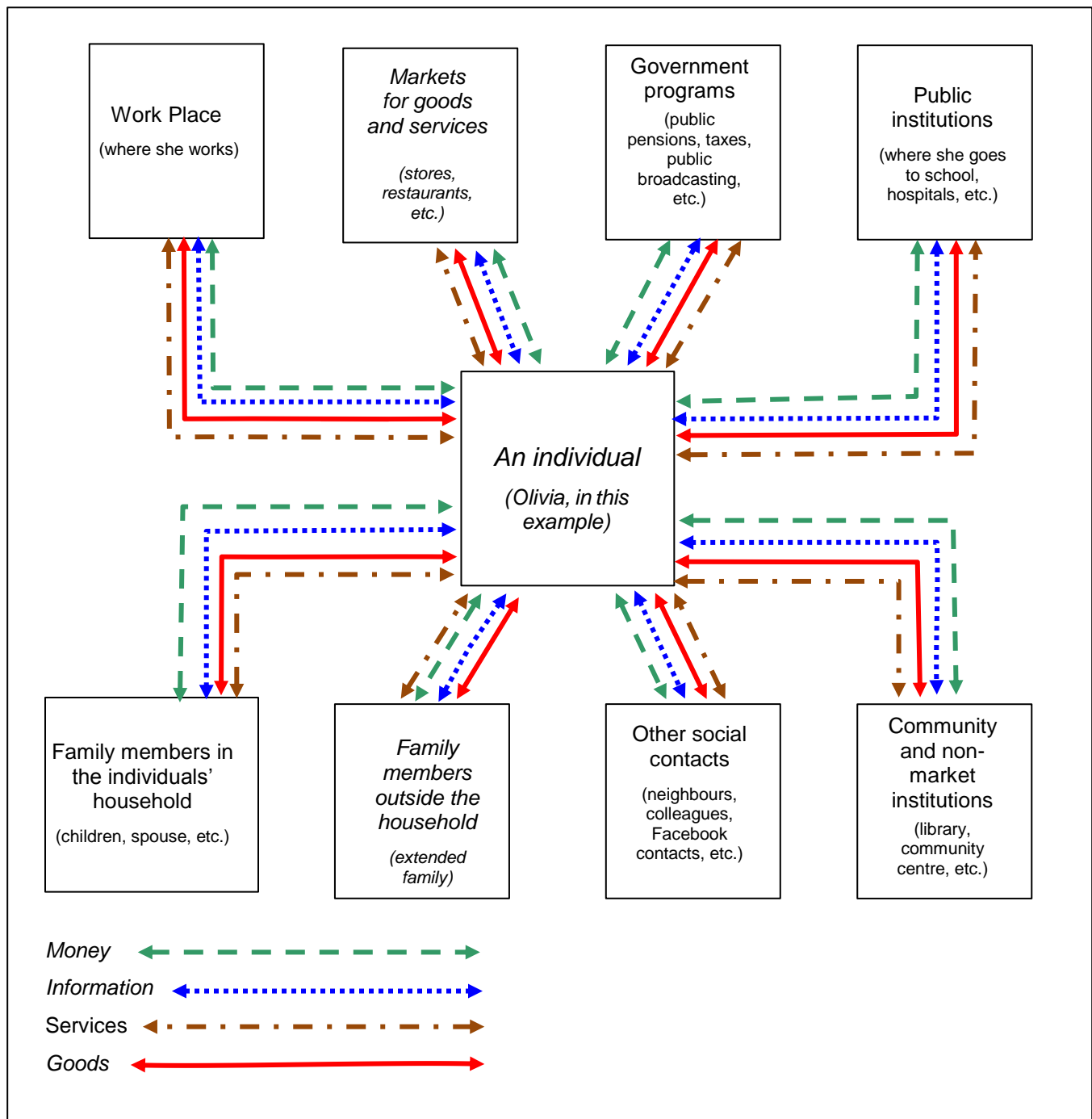
NOTE: The two headed arrows in these charts suggest that there can be two-way flows in any of the resources: money, information, goods, etc. It is not meant to suggest that there are equal flows at any particular point in time for any one resource. For example, often money is exchanged for goods and services. Or, in any period of time, money inflows can exceed money outflows.

of National Accounts ensures consistency between micro and macro concepts[67].

Analysis of changes over time: assets and lifecourse analysis

There are three ways in which the framework, in its current stage of development, can be used to address changes over time. Firstly, and obviously, social indicators and other forms of time series analysis continue to be supported based on the cross-sectional readings that have just been described. Second is asset-based analysis. Third is lifecourse analysis. Here we elaborate on assets and life-courses.

Analysis of assets and capital

Over time, resource flows create stocks or assets[68]. Flows of money create savings or debts. Flows of learning-intensive activities create human capital. Flows with others in a network create social capital[69]. These assets can then be drawn down at a later time to create new resource flows – ideally at a time in life when they are most needed.

Box F25 shows how the framework supports asset-based analysis.

Earlier versions of the Olivia framework provided an illustration of the role of assets in the life of Olivia. It showed a graph of how her financial assets, physical assets (e.g., housing, car), human capital (e.g., health and skills) and social capital (e.g., networks of family and friends) changed over the course of her life. In her case, financial capital was U-shaped over life, if one counts her share of her parents wealth when she was a child living at home. If one looks only at the assets she held in her own name, both physical and financial assets increased grew later in life, particularly after the age of 50. Major changes in her financial and physical capital were related to her changes in family relationships, particularly her late second marriage.

In this illustration, Olivia's human capital also grew over life, until near the end of life when she withdrew from voluntary activities and began losing skills, and when her health began deteriorating.

Her social capital on the other hand was highest when she was young (strong family bonds and school friendships) and when she was in her 50s (active in both work and volunteering) and lowest when in her middle years when her financial assets were also low (divorce, spells of unemployment, moving to a

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[67] There are some minor inconsistencies between the survey data typically used in social statistics and the concepts of the System of National Accounts. For example, they use somewhat different concepts in areas such a home ownership and employer contributions to pension plans. Also, there are important economic transactions taking place that affect the individual but without the individual's direct participation – such as the rise or fall in the value of stocks that are held. The conventions to be used in these cases were discussed in documents associated with the golden age of social accounting. A Canadian paper (Siddiqi and Salem 2006) made many of the needed adjustments in the context of developing a Canadian Social Accounting Matrix.

[68] In addition to financial, human and social capital, some of the literature identifies neighbourhood or cultural capital – often defined in terms of the community resources available such as schools, community centres, parks and convenient shopping. This kind of analysis is fully supported by the Olivia framework in the Module 3 which deals with the spatial dimensions. It can be fully integrated with the analysis of human, social and financial capital that arise directly from individual resources flows.

[69] The Policy Research Initiative, the Social Research and Demonstration Corporation and ESDC (in its various past manifestations) have played important roles in exploring the uses of social capital concepts and data in policy applications. In the academic world, Barry Wellman at the University of Toronto has played a key role in areas such as network analysis including the roles of the internet, social relations and social structures. An anonymous critic of an earlier draft of this paper usefully pointed out the fruitful intersection of human capital and social capital approaches in a number of topics of policy interest, including ways in which new immigrants integrate into Canadian society.

Box F25. From flows to stocks: measuring financial, human and social capital

Stocks of assets – financial, human and social capital – can be directly measured by asking individuals and institutions to provide information about their current asset holdings. As well, estimates of assets can be built up from the earlier resource flows that were illustrated in Box F24.

Financial capital

In the case of financial capital and durables (e.g., bank accounts and house ownership), the way in which stocks are built up is straight-forward. If money flowing in at a point in time does not equal money flowing out, the result will be the creation, over time, of savings and debts, home ownership equity and mortgages.

Human capital

Human capital is a main subject of social analysis. It deals with investments in developing skills and good health, and the subsequent returns from those skills and from that good health.

Skills. 'Skills' is shorthand for analysis of the full range of peoples' skills, knowledge, aptitudes and abilities. It includes how these were acquired both through experience and in more formal learning settings – and how they are lost through lack of use or a deterioration of one's mental and physical health. It also includes how they were used, with most analysis concentrating on labour market uses (i.e., providing services to employers in return for wages).

In the Olivia framework, stock measures of skills are captured directly through surveys of skill levels such as those used in the international survey of adult skills, supplemented by individual descriptors related to educational experience, occupation, experience, etc.

The measures of the flows that created this stock of skills have yet to be fully developed but the proposal is to base them on standard descriptors of *learning/skills intensity*, likely related to the measures already developed and used in the OECDs international surveys. These descriptors will classify the extent to which different resource flows require the use of skills and, as well, the potential for learning associated with those flows. For example

- In challenging jobs or difficult academic courses, for example, we might expect that there is both a high level of skills being applied and a high level of skills being learned.

- In more passive learning (say, in watching a TV documentary or reading a business report), there might be only a moderate application of skills but considerable potential for acquisition – learning new things.

Health. Health refers to analysis based on the WHO positive definition of health – including the determinants of good health and how health status helps or constrains subsequent resource flows later in life.

In the Olivia framework, stock measures of health are based on current descriptors of health status, including obstacles to the conduct of those activities that comprise normal daily living.

Flow measures have yet to be developed but, as with skills, the likely approach is likely to including coding of resource flows by *health intensity*:

- The extent to which those flows were constrained by limitations on the individual's capacity to perform Activities of Daily Living, based on the considerable existing classification work that now exists in this area.

- The extent to which those flows have the potential to improve or weaken health, including dietary practices, physical exercise, stress, environmental factors, etc.

Social capital

Social capital has received much attention in the academic literature in recent years, particularly in the field of sociology, with Canadians playing an important international role. However it is less developed in the area of official statistics, with no fully developed consensus on either its role in official government statistics or on best approaches to practical, routine measurement.

Social capital deals with interactions within networks and with the subsequent benefits that are realised from investments in those networks. These investments are usually in the form of flows of information (whether informal chatting with neighbours, on-line social networks, or more formal 'what worked best for me' discussions among people with similar interests and problems). However they could also include services (e.g., shovelling snow for a sick neighbour or more formal volunteering) or money (e.g., charitable donations).

The Olivia framework, which is based on networks of resource flows, including informal networks, is ideally suited to supporting developmental work leading to standard measure of social capital. The approach, as with the measures of skills intensity and health intensity, would be to develop standards for measuring the *networking intensity* of interactions with other people and institutions. Existing typologies of networks (e.g., bridging, bonding,) may provide a starting point.

different city). Social capital also fell rapidly in the later years of life, especially after the death of her husband.

This example was, of course, an illustration of qualitative analysis – showing showing the factors that led to the creation of capital, and how the various forms of capital work in combination, over the life of particular individual. However, once the data are available in the system of big statistics, quantitative analysis can be carried for different population groups. And that, in turn, will add huge power to future qualitative analysis since the narratives of people's lives can be situated in the context of actual statistics about the characteristics of the different groups to which they are a part.

Lifecourse analysis

It would be hard to underestimate the importance of lifecourse perspectives in understanding the changes that are taking place in social and employment policy. Both the human development and vulnerability goals of social policy are now being cast in lifecourse terms, as are resulting policy responses – making an actual, measureable difference in what happens over the course of people's lives. From the perspective of devising conceptual frameworks, it has particular advantages. First it is a broad perspective that helps integrate many dimensions of social and labour market policy and analysis. Second it is a perspective only, not a rigid theory. That is, it complements, not excludes, other theories and perspectives. Readers interested in more background will find a short, accessible paper[70] by Victor Marshall to be an invaluable review of the evolution of lifecourse thinking, including a discussion of main issues and how lifecourse perspectives relate to policy.

Lifecourse analysis can be defined broadly or narrowly. A recent formulation[71] identifies a broad approach based on four principles: (1) that our daily experiences form a trajectory that begins at birth and stretches to death; (2) that lifecourse patterns unfold in a multiplicity of interconnected realms; (3) that social bonds form throughout our own lifecourse and that of others; and (4) that a variety of local and national contexts shape lifecourses and are shaped by them.

Some of these dimensions are shared with other analytic perspectives and are built into the various modules of the Olivia framework[72]. For example, Module 1 places individuals in their social contexts. Module 2 on assets and flows deals with social bonds and the building of social capital. Module 3 on spatial dimensions places people in their local and national contexts. What is missing from these other perspectives is the core lifecourse perspective that, throughout life, lifecourse patterns unfold in a multiplicity of interconnected realms.

Module 2 therefore sets out lifecourse concepts which describe how people's lives unfold through transitions, events and states in a variety of trajectories in different domains of life, with attention placed on the importance of the sequences and durations of transitions and states.

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[70] Marshall 2011. The paper in question was the inaugural presentation at the inauguration ceremony of the Swiss National Center of Competence in Research, LIVES, on March 2011. The paper summarizes more detailed analysis of the way in which the lifecourse perspective is useful in policy thinking found in Marshall (2009). This latter paper also critiques the original PRI lifecourse work, of which Olivia was one element.

[71] McDaniel and Bernard 2011.

[72] The Olivia framework had its origins in lifecourse thinking, one of defining characteristics of new enabling society policies. Indeed the first report on the framework's development (PRI 2004) was titled 'A Lifecourse Approach to Social Policy Analysis: A Proposed Framework'. The very earliest internal draft by Stéphanie Gaudet (currently with the Department of Sociology and Anthropology at the University of Ottawa) was intended to introduce the lifecourse concepts of transitions and trajectories to her economist colleagues.

Basically, the framework divides an individual's life into various domains such as life in school, life in the family, and life at work. These are referred to as trajectories. A trajectory consists of transitions and intervening states. For example:

- A *state* (or stage of life) might consist of holding a particular job or being married to a particular person, or going to elementary school.

- A *transition* might be losing that job, becoming retired, getting a divorce, or moving on to secondary school. In the Olivia framework, transitions are defined as *events*, the large changes in flows (both transactions and non-monetary flows) of Module One.

- A *trajectory* consists of sequences of transitions and states in the main domains of life. As an example, a work trajectory would include a person's lifetime experience in the labour market, including various transitions (losing, finding, changing jobs) and states (holding jobs of different tenures, various periods of job search or training to find new jobs). Some lifecourse researchers prefer the terms 'career' or 'status passage' rather than 'trajectory', but the underlying concept is about the same.

- The 'states' that comprise trajectories are comprised, at least in theory, of an aggregation of the more micro level *activities* discussed earlier. This part of the framework has, however, not yet been fully developed.

The Olivia framework, being based on microdata concepts, allows users to construct both trajectories and events in any manner they wish, given the research or analytic objectives at hand. However, in order to facilitate consistent analysis, it also provides standard coding that will cover the great majority of uses:

- A set of pre-coded events will be built up over time, starting with the many thousands of variables that are currently used in national statistics such as birth, becoming unemployed, graduating from school, etc.

- The pre-coded trajectories will start with commonly used domains where good statistics are now available such as life in the labour market, in schools, in the extended family, in households, etc. These could be supplemented by additional standard trajectories when there is a sufficient consensus on how these should be defined. Examples might be a community participation trajectory or a caregiving trajectory.

- Pre-coded events/trajectories need not be mutually exclusive. For example, one type of household trajectory could concentrate on the physical characteristics of the household, its size, its location, its safety, etc. Another type of household trajectory could concentrate on family size and generation, such as living alone, living in a household with one, two or three generations present.

Box F26 provides an example of the labour force trajectory of Olivia.

In earlier versions of the Olivia framework, similar graphs were also drawn for the household and learning trajectories in order to illustrate the interplay among three of the most common domains of life – at home, at school and at work.

One of these illustrations looked at one resource flow only, the flow of money, and showed Olivia's incomes and expenses and savings at different stages of life overlaid against the events and stages of her life in the three trajectories. This showed, for example, how the pooling of her earnings with those of her spouse played a large role in her expenditures and living standards over life, the effects of raising children on expenditures and savings, and how her husband's death affected her assets. Such charts can

present an integrated picture of intra-family flows of money and household expenditures at different stages of life. Another application would be an examination of the effects of unemployment or parental leave on an individual's work and household trajectories.

Another qualitative illustration from earlier versions of the framework showed how events and activities within the various trajectories of life worked together to create stress and time-crunches over the course of Olivia's life. Once again, these are qualitative examples but they also illustrate the kind of quantitative analysis that will be possible be possible in a system of big statistics.
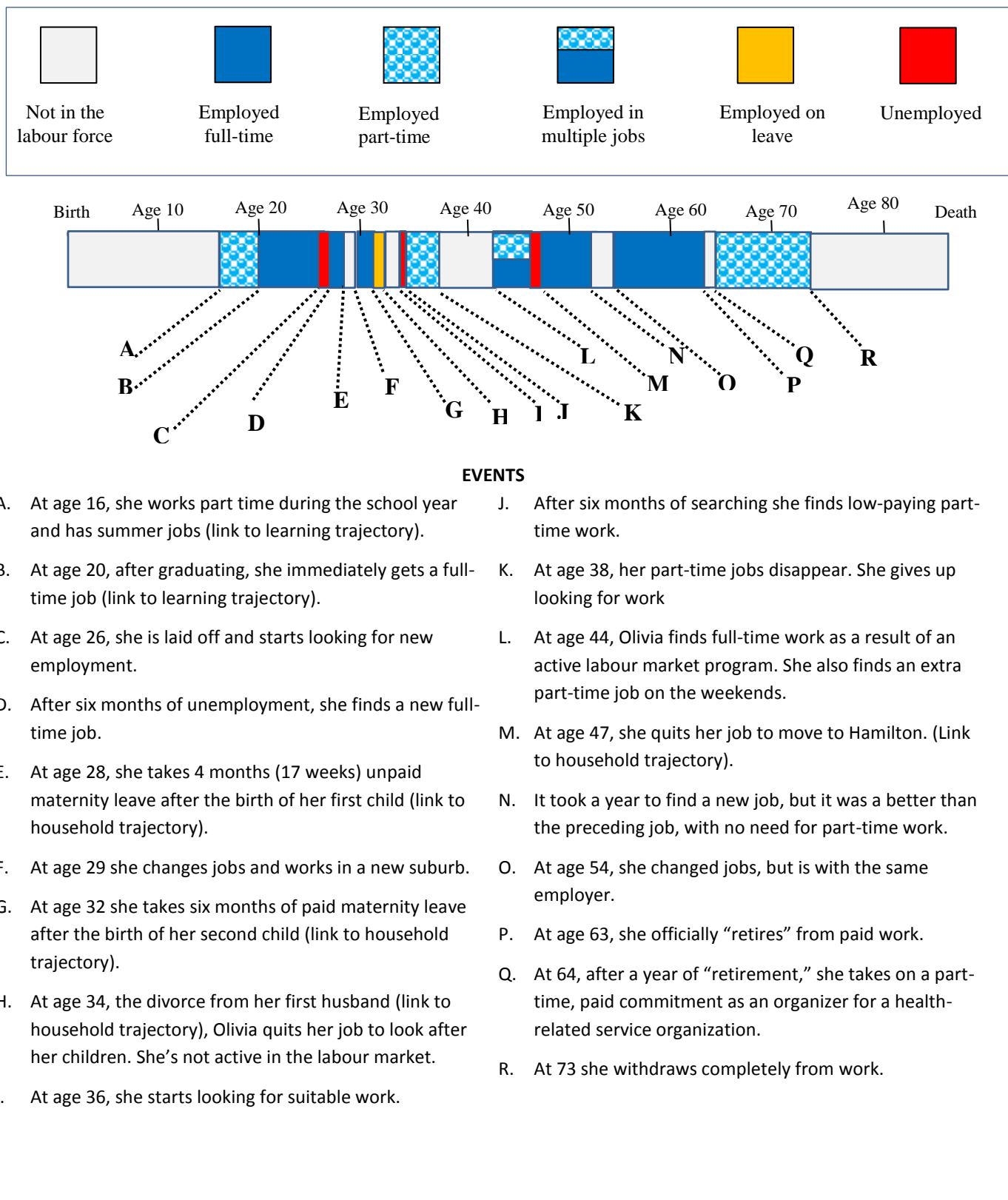
Analysis of purposes and values

Module Four sets out standard concepts to describe the purposes of individuals, institutions and societies – and the extent to which those purposes have been achieved.

The purposes and objectives of institutions relate to outputs and outcomes. The Olivia framework uses the standard logic model – the hierarchy of inputs, processes, outputs and multiple levels of outcomes described in the essay. This type of analysis is particularly important in assessing the performance of government programs and as practical tool in the ongoing governance of programs, as described in the essay and elaborated on in Compendium Paper A. Remember that programs are treated as institutions in the framework and that, for government social programs, highly detailed logic models will be created using administrative data files not only for programs as a whole, but also for program sub-components, allowing the program logic models to be attributed to the employees who work in these small program sub-activities. Logic models can also be constructed for program participants with for example, their experience subsequent to the program being used to develop various measures related to subsequent outcomes.

Moving beyond particular programs applications to more general measures of purpose, the framework takes a descriptive, pragmatic approach. It neither relies on any single concept of well-being, nor on any single combination of measures such as an index of perceived well-being or happiness. Rather the framework supports a multitude of micro measures that analysts can use to create these overall measures or undertake any type of analysis related to values or subjective well-being. These are all related to the foundational concepts of resources flows, assets and lifecourse trajectories. For example:

- The volume of resource flows such as goods and services that the individual receives and the volume of his or assets – in order to support traditional material indicators of well-being.

- Satisfaction with time spent in various activities.

- Stresses and time crunches related to events and transactions.

- Constraints on participating in different activities, including disability, temporary sickness, lack of facilities (the wanted institutions and networks do not exist), or lack of geographic access.

- Satisfaction with respect to the substance and delivery of the resource flows to and from social institutions and networks – including government programs.

- Satisfaction with one's human and social capital.

The system would also provide a home for all micro level data related to values or well-being that researchers have collected by surveying individuals, such as measures of trust and perceived overall well-being. These are simply treated as individual descriptors.

Box F26. Labour force trajectory of Olivia

Legend: Not in the labour force | Employed full-time | Employed part-time | Employed in multiple jobs | Employed on leave | Unemployed

EVENTS

A. At age 16, she works part time during the school year and has summer jobs (link to learning trajectory).

B. At age 20, after graduating, she immediately gets a full-time job (link to learning trajectory).

C. At age 26, she is laid off and starts looking for new employment.

D. After six months of unemployment, she finds a new full-time job.

E. At age 28, she takes 4 months (17 weeks) unpaid maternity leave after the birth of her first child (link to household trajectory).

F. At age 29 she changes jobs and works in a new suburb.

G. At age 32 she takes six months of paid maternity leave after the birth of her second child (link to household trajectory).

H. At age 34, the divorce from her first husband (link to household trajectory), Olivia quits her job to look after her children. She's not active in the labour market.

I. At age 36, she starts looking for suitable work.

J. After six months of searching she finds low-paying part-time work.

K. At age 38, her part-time jobs disappear. She gives up looking for work

L. At age 44, Olivia finds full-time work as a result of an active labour market program. She also finds an extra part-time job on the weekends.

M. At age 47, she quits her job to move to Hamilton. (Link to household trajectory).

N. It took a year to find a new job, but it was a better than the preceding job, with no need for part-time work.

O. At age 54, she changed jobs, but is with the same employer.

P. At age 63, she officially "retires" from paid work.

Q. At 64, after a year of "retirement," she takes on a part-time, paid commitment as an organizer for a health-related service organization.

R. At 73 she withdraws completely from work.

In terms of society-level measures, all the standard social indicators used today would, of course, be supported by the framework – income levels, educational attainment, leisure time, longevity, and the extent of poverty and inequality. The framework also opens some interesting new possibilities that could be explored. For example, it would be possible to construct a new generation of time-based social indicators such as expected lifetime hours spent in work, in school, in family unions or alone, in sickness, in low income, etc. Also it might be possible to develop a set of indicators based on assets as well as flows.

Other forms of analysis

Many other kinds of analysis are supported. Indeed, because of its micro foundations, the framework can be adapted to virtually any kind of analysis and to cover any type of social topic.

For example, as already described, the framework is particularly rich in supporting various kinds of qualitative analysis and allowing a much stronger linkage between qualitative and quantitative analysis.

Being based on resource flow networks, it should provide much opportunity for researchers using newer forms of network analysis. Demographic analysis, including studies of generations and cohorts, is fully supported. Time use analysis is, of course, strongly supported.

When analysis based on stocks is combined with analysis based on the lifecourse concepts discussed below, it will become possible to undertake analysis of human development based on concepts of accumulated advantage and disadvantage (asset concepts) – how experience in early life shapes the way in which life unfolds in different conditioned pathways over time (lifecourse concepts). The necessary development work to undertake this kind of integration has not yet taken place.

Lifespan psychology overlaps with the more sociological approaches to the lifecourse used in the framework[73] and, as already mentioned, early in the development of the framework, a paper[74] explored the way it might incorporated of the potentially powerful concept of personal project analysis and social ecology – concepts identified with the work of the psychologist Brian Little.

The spatial dimension of the framework (Module 3) is particular useful in integrating many kinds of analysis. As already noted, this includes macro-level economic analysis, geographic analysis, historical analysis and environmental analysis. For example, the framework provides a way of integrating various approaches to sustainable development including both generational and environmental perspectives.

Another area of interest is the potential for integrating analysis of rule-based instruments, including broader human rights issues, together with analysis of spending /information instruments. Regulatory/rights analysis traditionally takes place in a separate silo from the analysis of spending instruments where economic and sociological perspectives prevail. The missing linkage can be found in the trajectories of the Olivia framework. These trajectories can be defined in terms of the rules that govern behaviour in those trajectories – family law, labour market regulation, etc. Matters related to crime and victimization might, for example, find their place in the framework through a safety and justice trajectory – although this would require further exploration of the sort that could take place in the preparatory work described in Compendium Paper D.

Another application discussed in the essay, and expanded on Compendium Paper C relates to the governance of social policy. The framework encompasses all the evidence that allows an integrated

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[73] Mayer, 2002

[74] Little and Phillips, 2006. The paper uses the case of 'Oliver' to explore the use of the framework in conjunction with personal projects.

approach to managing horizontal and vertical issues and that will allow the whole system to act on the basis of empirically-driven partnerships.

In terms of policy areas, the framework now covers the social and employment topics that are the focus of the essay. Possible extensions as part of the implementation strategy include adapting the framework to explicitly include concepts related to health policy (including mental illness, disability, chronic conditions and addictive behaviours), public safety and justice as noted above, and housing.

The extension to the health area would be particularly useful. Health is treated in the framework as one dimension of human capital. All the usual information related to population health and the operations of the health care system are quite compatible with this perspective. Lifecourse influences on subsequent health should be able to be incorporated into the framework's concepts without difficulty. With the inclusion of health data, the framework and its big statistics would result in particularly powerful analysis of the determinants of health and analysis of the obstacles to daily living. Clinical trial data would support powerful 'what works best' applications and current initiatives to computerize doctors medical records would provide, when taken in conjunction with existing hospital data, very rich institutional data.

The education field, particularly postsecondary education, would be another area where much of the data already exists to allow an early transformation to 'what works best' technology. One could examine the subsequent careers of graduates from different fields of study and different colleges at a fine level of occupational, industrial and geographic detail. This would provide individual students with a much stronger basis of evidence of expected outcomes when they choose their educational paths – and it would result in a vast improvement in economy-wide information about labour supply and demand and on specific skill shortages and surpluses. Similar gains could be made for workers at all educational levels, particularly when done in conjunction with standards assessments of individuals' skill levels, including generic skills.

F.6. How the framework should be implemented

The big challenge is to identify a party responsible for overseeing the further development of the framework and overseeing its practical implementation. There is currently no organization or consortia with the necessary mandate or interest to take this on.

The essay argues that it would be best to introduce the framework in a low-key manner as part of long-term statistical planning. It could play a high useful role in providing the conceptual framework needed in planning the development and structure of the new system of big statistics – the map of both the filled and unfilled cells of the giant warehouse of new system of social statistics discussed in Compendium Paper E.

Such an approach would be feasible and would ground the framework in practical development work that is widely recognized as being needed. It would promulgate the use of the framework throughout the social policy and social analysis worlds in an automatic, non-threatening manner.

There are risks associated with this approach of course. Perhaps the main one is that the framework might become too associated with statistical development priorities, with not enough attention paid to its development as a tool to support qualitative analysis and to support quantitative analysis that is not immediate linked to current policy priorities.

While the risks are real, the statistical planning route seems to this author to be the most practical approach. Alternative development strategies, such as establishing consortia of academic and policy

people to oversee its development, are possible but it is hard to imagine them gaining the necessary support to get off the ground. And, even if the framework could be developed independently, it would still be necessary to find a way of using it in design of the emerging system of national statistics.

G. Other thoughts: regulations, health and education, and social marketing

This final compendium paper consists of unrelated shorter observations about several topics that I had to omit from an essay that was becoming overly long.

- Section G.1 deals with regulatory instruments, the only type of policy instrument not touched on in the essay.

- Section G.2 examines the application of the enabling society concepts in health and education policies.

- Section G.3 discusses the role of social marketing and nudge policies in the enabling society.

G.1. Regulatory instruments

The essay discussed policy instruments that provide service, income security and information. However, it said little about regulations, the fourth type of policy instrument, since it is less affected by the shift to the enabling society. Nevertheless, there will be indirect effects on these rule-setting instruments. These effects are the subject of this brief note.

By regulatory instruments, we refer to a wide range of rule-making activities related to human rights, the operation of the justice system, codes of conduct, terms and conditions, as well as to regulations defined more technically. Making and enforcing rules is a key instrument of social policy. In the employment and social policy areas (i.e., the main subject matter of the essay), examples include minimum wages laws, workplace health and safety rules, procedures for contracting out of social services, and combatting discrimination.

Current rhetoric about the importance of de-regulation notwithstanding, recent decades have seen a large growth in the role of regulation in developed countries. The literature[75] suggests that this growth is likely to continue in directions that are already established. Levi-Faur summarizes as follows:

"… the welfare state relies on an extensive system of regulation both in order to regulate its own processes and to govern the economic and social pillars of welfare-provision. Regulation, rule-making, rule-monitoring and rule-enforcement, is the administrative infrastructure of welfare governance … [and, following its growing role in the 90s,] will continue to stand at the centre of government attention. The politics of austerity will only re-enforce this trend since austerity implies that the costs of governance will continue to fall on the regulatees rather than on the public budget. …To the extent that the regulatory state is a response to globalization and privatization and outsourcing on the one

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[75] See Levi-Faur (2011), Mabbet (2011), and McConkey (2006). In some of the literature, regulations are treated in a separate category, where the 'regulatory state' is contrasted with what that literature defines as the 'welfare state' – with the latter consisting of the more active, politicized tools of fiscal intervention such as funding the provision of services, taxation and income transfers. This separation is useful for some types of analysis since there are clear differences between setting the rules of the game and spending interventions within that game. However, when looking to the future, it is essential that we treat regulation as one of the instruments in the social policy toolkit, where it can be assessed along with alternative instruments.

hand, and cultural, political and social developments such as [neo-] liberalism, distrust and democratization on the other, there is no clear reason at the moment to expect its stagnation or transformation[76]."

Of course the literature does not explicitly take account of the shift to enabling society social policies. The question then is whether the shift to enabling society policies will accelerate or decelerate the growth of regulation that is likely to occur in any event as a result of the forces of globalization, new public management agendas, neo-liberalism, distrust and accountability.

The most likely effect will be adjustments in the balance among the various functions that comprise the regulatory system, i.e., rule setting, rule monitoring and rule enforcement. However the exact shape of that rebalancing is not clear at this time since there will likely be effects that work in different directions:

- Monitoring will be hugely improved as the transformed statistical system will automatically generate a vast amount of detailed information about programs that can be used in monitoring rules as well as in estimating expected results. The availability of such information should help reduce the climate of distrust in government that has been one of the factors leading towards greater regulation. It could be that this will result in more interest in ensuring accountability by looking at the actual outcomes of programs as opposed to seeking compliance with the rules that govern those programs.

- One the other hand, the new information is likely to result in the uncovering of new instances of non-compliance with rules, especially in areas where front-line staff or third parties have greater freedom to adapt programs to meet the particular needs of citizens or to adapt to local circumstances. This seems likely to create pressures on rule-formulating functions – mainly in the direction of consistency and coherence across wider system. As well, the result might be pressures to strengthen the rule enforcement functions, particularly rule enforcement, again in areas that cross traditional jurisdictional boundaries.

On balance it would seem reasonable to assume that the transition to the enabling society will have relatively modest effects in the area of regulatory policy.

G.2. Health and education policy

The essay dealt mainly with employment and income support programs. However the enabling society will encompass all areas of social policy. The payoffs in other areas will be even greater, particularly health and education, but it will take longer to make the transition. The preparatory work that was called for in the next few years should lay the ground for developing the system of big statistics that will apply to these areas.

In the health area, the literature echoes many of the enabling society themes found in the essay. As early as 1946, the World Health Organization included a positive definition of health in its constitution. Themes over the decades have included the need to shift away from remedial, disease-by-disease, point-in-time perspectives. The new view is one that takes fuller account of longitudinal, lifecourse perspectives, that takes a less fragmented view of health, that emphasizes the integration of health care with population health – including a focus on the social and economic determinants of health. The solutions that are sometimes proposed include a shift to a more citizen-centric focus, with emphasis on

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[76] Levi-Faur (2011), pp. 28 and 29.

integration through evidence-driven front end referral and case-management functions in primary care – and with accountability and incentives that are driven by evidence of what is working best.

On the other hand, it must also be noted that health reform analysis along the lines just described has been discussed in just about the same terms for many decades, with little actual change in the health care system, at least in Canada where reform has focused on health care finance not on the way in which health care is delivered. The long-standing 'enabling society' rhetoric has been largely unconnected to the actual operations of the health care system itself.

Box G27 summarizes shows the similarity of trends in the health care system, along with important differences in the current status of reform thinking.

Similarly in the education system, there has for long been interest in themes related to individual-based learning and lifecourse perspectives. These include interest in student-based learning – moving away from teacher-based learning in one-size-fits-all classrooms based mainly on age and towards the use of concepts such as lifelong learning that recognize that learning follows pathways across the lifecourse starting at birth and that learning takes place in many settings in addition to schools.

For some postsecondary institutions, much of the data already exists that would allow early adoption of 'what works best' technology. In some case for example, we are close to the point where it would be possible to examine the subsequent careers of graduates from different fields of study at a fine level of occupational, industrial and geographic detail. Such a data base could eventually provide individual students with a much stronger basis of evidence of expected outcomes when they choose their educational paths – and it would result in a vast improvement in economy-wide information about labour supply and demand and on specific skill shortages and surpluses. Similar gains could be made for workers at all educational levels, particularly when done in conjunction with standards assessments of individuals' skill levels, including generic skills.

However, the main thrust of educational reform during the years of the welfare state has been directed to providing traditional classroom education to accommodate the large numbers of babyboom children and to extending the formal education system to lower ages and, especially, to extending access to post-secondary education. While there also have been initiatives based on individualized learning and lifelong learning concepts, these have not, for the most part, affected the basic structure of the education system and have been difficult to scale up into normal ways of doing things. As is also the case in the health care system, the professionals working within the education system are trained and experienced in the traditional ways of doing things and the evidence base on what actually works best at the level of individual learners has not been strong enough to justify large structural changes.

More generally, the transition to the enabling society will help us realize deep aspirations in nearly all areas of social policy. However the practical obstacles to moving forward are large in most. The essay proposes early action in the area of employment policy, where the challenges are relatively easier to tackle, in order to facilitate deeper changes in the multitude of ways in which governments work with citizens to improve well-being.

Box G27. Parallel shifts in the health care system

Similarities with health care reform agendas

The enabling society will extend to all areas of social policy. For example, many of the themes in the health care reform literature[a] echo the income security and employment themes found in the essay:

- The need to shift from the present remedial, point-in-time perspectives of the acute health care system to one that takes fuller account of the longitudinal, life-course perspectives that are needed in chronic care and mental health, including greater emphasis on the social and economic determinants of health.

- The paralysis of the present system of health care governance and its highly siloed structure. The solutions that are often proposed are similar to those outlined in the essay: a citizen-centric focus, with emphasis on integration through evidence-driven front end referral and case-management functions in primary care – and with accountability and incentives that are both driven by evidence of what is working best.

The concern that improvements in effectiveness are difficult to achieve in the present system, regardless of the amount of money that is spent – and a consequential desired to use ICT technology not only to digitize existing ways of doing things, but also to transform the system, including the use of new technology to develop 'what works' evidence at the individual level.

The need to introduce flexible, experimental approaches to the delivery of services and for arrangements that allow system-wide learning from those experiments.

Some important differences

However, the shift towards enabling society concepts is at very different stage of development in health care:

In the social and employment areas, information sources on outcomes are potential quite good. Longitudinal files from administrative sources show the subsequent effects of social interventions on employment and income. The bigger challenge is to get better data on the 'black box' – the characteristics of the interventions themselves.

In the health care system, there is much better information on which kinds of interventions work best, including information derived from clinical trials and related meta-analysis. The challenge is to get better information on outcomes – in particular linking multiple medical interventions at different times of life, socio-economic and lifecourse characteristics, and health outcomes in the lives of particular individuals.

There are also huge differences in the size R&D spending on what might work best. Vast sums are spent on health care research; spending in other areas of social policy is close to invisible in comparison.

That difference in funding levels also applies to support for data creation. Large sums have been spent in the health care system on developing a rich digital information base on medical interventions. In Canada, an independent agency, the Canada Health Infoway, has made major progress in working with many partners in digitizing medical records including those of primary health providers.

But in neither case, is technology yet being used to transform the system

Most of the effort in creating computerizing medical records has been devoted to making the existing system and existing services work better – the equivalent to the computerization of existing programming on the social and employment side discussed in this paper. That is, the potential of ICT technology to transform service provision, whether in health care services, educational services or social and employment services has not yet been exploited. However the health care data bases that are being constructed should be highly useful when the time comes to begin the transformation to evidence-driven, citizen-centred services.

[a] Key recent documents on health care reform in Canada are Lewis and Sullivan (2013), Drummond (2011) and Falk et al (2013). The present author was directly involved in health care policy issues in Canada some 25 years ago and, in reviewing the current literature, was surprised by the similarity of the prescriptions for reform of the system that exist today and those that were then on the table. If anything, systems and governance reform has been greater in the social and employment side of social policy than on the health care side.

G.3. Social marketing and nudge policies

Social marketing is the use of information to discourage behaviour that has undesirable consequences (e.g., unsafe work habits, discrimination, eating junk food) and to encourage behaviour that is in line with society's social goals (e.g., training for occupations that are in demand, active living, and adequate personal retirement savings).

Currently social marketing is mainly used in the health area and is less developed in employment and social services. In part this reflects the state of empirical knowledge, both about the extent and characteristics of the undesirable and desirable states in question and about the extent to which behaviours can be modified by these social marketing tools. That is, it is a little easier to find quantitative evidence of this sort in the health area than in the area of employment or social exclusion – although in no area is the evidence all that good.

In the welfare state, social marketing has been seen as an information product that operates largely independent of other programs[77], although there has been recent interest in 'nudge' policies[78], which introduce social marketing considerations into service and income products. These use findings from behavioural economics and psychology in mainstream program design and delivery. The goal is to use small levers that influence behaviour in ways that result in better social outcomes. For example, suppose a retirement savings program allows people to make a choice among, say, different investment strategies or contribution rates. If an individual does not make a specific choice, then social marketing considerations would lead to making the default choice be the one that experts think will get the best results for most people.

There is a current debate about the use of nudge policies. White (2013) in the June 2013 issue of Policy Options argues that individual preferences and interests are too diverse and complex to be simply measured. The result is that nudge policies (and by extension much of social marketing) invariably place more weight on their comparatively simple macro-level social and economic effects rather than their more important effects on individual lives. He argues that the better goal should be to help people learn how to make better choices given their own interests and circumstance, not steer them in certain directions that are thought, by those in power, to be good for society – a particularly telling argument when looking ahead to the enabling society with its emphasis on individual choice.

However, 'what works' micro data will help resolve this conflict, at least in the case of service programming such as ALMPs. It will be possible to make much better assessments of the likely outcomes of different courses of action at both the level of particular individuals and at the level of the society. The system will be both more effective and transparent, with big statistics simultaneously supporting both social marketing and nudge policies and providing better basic information to enable citizens to make decisions for themselves.

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[77] There is also much marketing associated with promoting the use of existing government products (e.g., encouraging use of tax incentives for retirement savings, promoting the awareness of mental health interventions, or using existing government sponsored training).

[78] Which became popular with the publication of Thaler and Sunstein (2008).

BIBLIOGRAPHY

ALKIRA, S. AND S. IBRAHIM (2007). 'Agency and empowerment: A Proposal for Internationally Comparable Indicators', *Oxford Development Studies*, 35 (4), 379-403. 2007.

ATKINSON, P. AND P. VAN DEN NOORD., 2001, *Managing public expenditure: some emerging policy issues*, OECD Economics Department, Working Papers, No. 285, OECD Publishing. http://dx.doi.org/10.1787/066436018532

BATTLE ET AL 2006. K. BATTLE, M. MENDELSON AND S. TORJMAN, *Towards a New Architecture for Canada's Adult Benefits, Caledon Institute for public policy.* http://www.caledoninst.org/Publications/PDF/594ENG.pdf Accessed September 14, 2013.

BERNARD, P. 2005. 'LES CHIFFRES POUR LE DIRE: LES NOUVEAUX INSTRUMENTS DE L'HEURISTIQUE CAUSALE' IN *L'ANALYSE DU SOCIAL: LES MODES D'EXPLICATION*, QUÉBEC: PUL

— 2007. 'The Interconnected Dynamics of Population Change and Lifecourse Processes', *Horizons* 9(4): 13-16

BERNARD, P. ET AL. 2007. P. BERNARD, C. BEACH, P. BÉLANGER, J. CHARBONNEAU, C. LEBOURDAIS, D. LIVINGSTONE, S. MCDANIEL, L. MCDONALD, S. PHIPPS, L. POTVIN, A. QUESNEL VALLÉE, J. D. WILLMS, *Capturing The Lifecourse: The contribution of a Panel Study of Lifecourse Dynamics (PSLD) to public policy analysis in Canada*, Conference Proceedings: Longitudinal Social And Health Surveys in an International Perspective, http://www.ciqss.umontreal.ca/longit/Doc/Paul_Bernard.pdf, accessed January 12, 2013

BOADWAY, R. AND J-D. GARON 2011. *The Design of Employment Insurance in a Federation*, ISBN 978-0-9877827-1-7, Mowatt Centre for Policy Innovation, http://www.mowateitaskforce.ca/sites/default/files/Boadway-Garon.pdf, accessed March 4, 2014

BOURGON, J. 2011. *A New Synthesis of Public Administration: Serving in the 21st Century*, School of Policy Studies, McGill-Queens University Press, ISBN 978-1-55339-312-2.

BOVENBERG, A. L., 2009. *The Lifecourse Perspective and Social Policies: an Overview of the Issues*, in (OECD 2009)

BURCHARDT, T. 2006. *Foundations for measuring equality: A discussion paper for the Equalities Review,* CASE, http://eprints.lse.ac.uk/6236/1/Foundations_for_measuring_equality_A_discussion_paper_for_the_Equalities_Review.pdf, accessed August 21, 2013.

— 2013. *Re-visiting the conceptual framework for public/private boundaries in welfare*, Social Policy in a Cold Climate Research Notes Series *RN002, CASE,* http://sticerd.lse.ac.uk/dps/case/spcc/RN002.pdf, accessed August 14, 2013.

CIHI 2013. Canadian Institute for Health Information, *National Expenditure Trends 1975 to 2013.* https://secure.cihi.ca/free_products/NHEXTrendsReport_EN.pdf, accessed September 20, 2014.

CARD, D. ET AL 2010. D. Card, J. Kluve, A. Weber, *Active Labor Market Policy Evaluations: A Meta-Analysis,* NBER Working Paper No. 16173. http://www.nber.org/papers/w16173. Accessed January 20, 2014.

COLPITTS, T. AND J. SMITH 2002. *Targeting Reemployment Services in Canada: The Service and Outcome Measurement System (SOMS) Experience, http://research.upjohn.org/cgi/viewcontent.cgi?article=1189&context=up_bookchapters, accessed March 12, 2013.*

CORAK, M. 2013. 'Income Inequality, Equality of Opportunity, and Intergenerational Mobility'. *Journal of Economic Perspectives*, 27(3): 79-102.

CORBELLA, L. 2012. *Baby Boom Needed to Halt Grey Tsunami.* Calgary Herald, November 21. Accessed October 8, 2014. http://www2.canada.com/calgaryherald/news/story.html?id=da6e8a46-5513-47e5-a902-2968c712ef1c&p=2

COURCHENE, T. 2001. *A State of Minds: Toward a Human Capital Future for Canadians.* Montreal: Institute for Research on Public Policy.

— 2012. *Policy Signposts in Postwar Canada: Reflections of a Market Populist.* IRPP's 40th Anniversary Essay. Montreal: Institute for Research on Public Policy.

COURCHENE, T., AND J. ALLAN. 2009. *A Short History of EI, and a Look at the Road Ahead.* Policy Options 30 (8): 19-28.

DRUMMOND, D., 2011. *Therapy or Surgery: A Prescription for Canada's Health System, C.D. Howe Institute Benefactors Lecture.* http://www.cdhowe.org/pdf/Benefactors_Lecture_2011.pdf Accessed Employment and Social Development Canada

ESDC 2014. <u>Departmental Performance Report 2013-2014</u>. Ottawa: ESDC.

ENVIRONICS INSTITUTE. 2010. *Focus Canada 2010.* Toronto: Environics Institute. Accessed October 5, 2014. http://www.queensu.ca/cora/_files/fc2010report.pdf

— 2012. *The Common Good: Who Decides? A National Survey of Canadians. Backgrounder.* Toronto: Environics Institute. Accessed October 5, 2014. http://www.environicsinstitute.org/uploads/institute-projects/tf%202012%20survey%20-%20backgrounder%20-%20final%20november%2012-2012.pdf

— 2013. *Responsible Citizenship: A National Survey of Canadians. Backgrounder.* Toronto: Environics Institute. Accessed October 5, 2014. http://www.environicsinstitute.org/uploads/news/tf%202013%20survey%20backgrounder%20-%20responsible%20citizenship%20-%20oct%2031-2013%20eng.pdf

EKOS POLITICS, 2013. *Choosing a better future? Public preferences on long-term trajectory shifts.* Press release, http://www.ekospolitics.com/wp-content/uploads/full_report_july_26_2013.pdf, accessed Oct 15, 2013

ESDC, 2010. *Summative Evaluation of the Sector Council Program.* *http://www.esdc.gc.ca/eng/publications/evaluations/skills_and_employment/2010/march.shtml*

ESPING-ANDERSEN, G. 1990. *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press

—2009. *The Incomplete Revolution: Adapting to Women's New Roles*, Polity Press

ESPING-ANDERSEN ET AL 2001. G, Esping-Andersen, D. Gallie, A. Hemerijck and J. Myles, *A New Welfare Architecture for Europe?* Report submitted to the Belgian Presidency of the European Union, http://www.epa.aau.dk/fileadmin/user_upload/ime/CCWS/students/Esping-A.report_2001_.PDF, accessed January 7 2013

FALK ET AL, 2011. W. Falk, M. Mendelsohn,and J. Hjartason, *Fiscal Sustainability and the Transformation of Canada's Health Care System: A Shifting Gears Report,* Mowat Centre; School of Public Policy and Governance, University of Toronto. http://mowatcentre.ca/wp-content/uploads/publications/38_fiscal_sustainability_and_transformation_canada.pdf Accessed March 14, 2014.

FORD, R., M. FRENETTE, C. NICHOLSON, ET AL. 2012. *Future to Discover: Post-secondary Impacts Report.* Ottawa: Social Research and Demonstration Corporation.

GILBERT, N. 2005. THE *ENABLING STATE? From Public to Private Responsibility for Social Protection: Pathways and Pitfalls. OECD Social, Employment and Migration Working Papers 26*. Paris: OECD Publishing.

GALARNEAU ET AL, 2013. D. Galarneau, R. Morrisette and J. Usalcas, *What has changed for young people in Canada?* Statistics Canada, Catalogue no. 75-006-X, ISSN 2291-0840. http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11847-eng.pdf, accessed January 20, 2014

GOLD, J, AND M. MENDELSOHN 2014, *Achieving social impact through outcomes-based funding,* Mowat Research No. 91, ISBN 978-1-927350-76-8. http://mowatcentre.ca/wp-content/uploads/publications/91_better_outcomes_for_public_services.pdf , accessed August 12, 2014,

HARELL, 2008. A. Harrel, S. Soroka and A. Mahon, 'Is welfare a dirty word: Canadian public opinion on social assistance policies', *Policy Options*, http://www.irpp.org/en/po/canadas-working-poor/is-welfare-a-dirty-word-canadian-public-opinion-on-social-assistance-policies/. Accessed October 20, 2013.

HEISZ, A., 2014. *Trends in Income Inequality: Overview of Canadian Trends Relative to other OECD countries,* PowerPoint presentation at IRPP/CLSRN Conference: Driving Forces, Outcomes and Policy IRPP-CLSRN Conference: Inequality in Canada: Driving Forces, Outcomes and Policy, Ottawa, Feb. 24, 2014, http://www.irpp.org/assets/Uploads/heisz.pdf Accessed March 18, 2014.

HEISZ, A. AND B. MURPHY, 2014. *The role of taxes and transfers in reducing income inequality*, PowerPoint presentation at IRPP/CLSRN Conference: Driving Forces, Outcomes and Policy IRPP-CLSRN Conference: Inequality in Canada: Driving Forces, Outcomes and Policy, Ottawa, Feb. 24, 2014. http://www.irpp.org/assets/Uploads/heisz-murphy.pdf Accessed March 18, 2014.

HEINTZMAN, R., 2009. *Measurement in Public Management: The Case for the Defence.* Optimum Online 39, no. 1. 66–79. http://www.optimumonline.ca/article.phtml?id=325&page=1

— 2014. *Public Service Renewal: Toward a Charter of Public Service,* Canada 2020, http://canada2020.ca/wp-content/uploads/2014/10/2014_Canada2020_Paper-Series_Public_Service_EN_Final.pdf

HICKS, P. 2002. *Preparing For Tomorrow's Social Policy Agenda*, Social Research and Demonstration Corporation Working Paper No. 02-04. Available At SSRN: http://ssrn.com/abstract=2192541 or http://dx.doi.org/10.2139/ssrn.2192541

— 2008a. *The Olivia Framework: Concepts for Use in Finely-Grained Integrated Social Policy Analysis,* www.queensu.ca/sps/publications/working_papers/45-Hicks.pdf, accessed January 9, 2013

— 2008b. *Social Policy in Canada – Looking Back, Looking Ahead*, Queens University School of Policy Studies, Working Paper No. 46. Available at SSRN: http://ssrn.com/abstract=2187109 or http://dx.doi.org/10.2139/ssrn.2187109, accessed January 9, 2013

— 2012a. *Later Retirement: a Win-win Solution,* http://cdhowe.org/pdf/Commentary_345.pdf, accessed January 15, 2013

— 2012b. *A Framework for Citizen-centred Social Statistics and Analysis,* Queen's University School of Public Policy Working Paper No. 48. Available at SSRN: http://ssrn.com/abstract=2178149 or http://dx.doi.org/10.2139/ssrn.2178149. Accessed January 15, 2013

—2013a. 'An Enabling Society: The Coming Transformation of Social and Employment Policies, Policy Analysis and National Social Statistics'," *Population Change and Lifecourse Strategic Knowledge Cluster Discussion Paper Series,* Vol. 1: Iss. 1.

—2013b . 'L'analyse sociale au sein d'une société habilitante : pertinence des perspectives fondées sur les parcours de vie dans l'élaboration des politiques'. *Sociologie and Sociétés. Vol XLV, No.1.,* Pages 301–333

HORNER, K. 2011. *A New Pension Plan for Canadians: Assessing the Options.* IRPP Study 18. Montreal: Institute for Research on Public Policy.

HUMA 2015. *Renewal of the labour market development agreements,* Report Of The Standing Committee On Human Resources, Skills And Social Development And The Status Of Persons With Disabilities. http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=6839662&Language=E&Mode=1&Parl=41&Ses=2&File=5

INGLEHART, R., AND C. WELZEL. 2009. "How Development Leads to Democracy." *Foreign Affairs* 88 (2): 33-48.

INSTITUTE FOR CITIZEN CENTRED SERVICE DELIVERY. 2013. *Understanding Dimensions of Client Satisfaction, and Enabling Actionable Service Performance Management.* Presentation, June 2013. Accessed October 1, 2014. http://www.iccs-isac.org/library/2011/10/CF6-Presentation-for-CES-2013.pdf

ISSENBERG, J. 2012. *Victory Lab: The Secret Science of Winning Campaigns.* New York: Crown.

JAPEL ET AL 2005. C, Japel, R, Tremblay, and S. Côté, 'Quality counts! Assessing the quality of daycare services based on the Quebec Longitudinal Study of Child Development', *IRPP Choices*, 11(5)

JUSTER, T. AND K. LAND EDS., 1981. *Social Accounting Systems: Essays on the State of the Art,* Academic Press, ISBN 0-12-392550-9

KING, G. 2011. **'**Ensuring the Data-Rich Future of the Social Sciences', *Science* 11 February 2011: Vol. 331 no. 6018 pp. 719-721

LECKIE, N., T.S. HUI, D. TATTRIE, ET AL. 2010. *Learning to Save, Saving to Learn: Learn$ave Individual Development Accounts Project — Final Report.* Ottawa: Social Research and Demonstration Corporation.

LECHNER, M. AND J. SMITH 2007. 'What is the value added by caseworkers?*' Labour economics* 14 (2), 135-151

LEISERING, L. AND S. LEIBFRIED 2001. *Time and poverty in western welfare states*, Cambridge University Press. ISBN: 9780521003520

LENIHAN D. 2002. *Realigning Governance: From E-Government to E-Democracy.* Centre for Collaborative Government. http://kta.on.ca/pdf/cg6.pdf downloaded Nov 19, 2014.

LEVI-FAUR, D. 2011. *The Odyssey of the Regulatory State: Episode One: The Rescue of the Welfare State*, Jerusalem Papers in Regulation and Governance, Working Paper No. 39

LEWIS, M. 2004. *Moneyball: The Art of Winning an Unfair Game.* New York: W.W. Norton.

LEWIS, S. AND T. SULLIVAN**.** 2013. *How to Bend the Cost Curve in Health Care.* IRPP Insight, May 2013, No. 1. http://www.irpp.org/assets/research/faces-of-aging/how-to-bend-the-cost-curve-in-health/Lewis-Sullivan.pdf Accessed March 12, 2014.

LINDQUIST, E. 2012. *Horizontal Management in Canada Ten Years Later.* Optimum Vol. 42, Issue 3, Sep 2012 http://www.optimumonline.ca/article.phtml?e=fjtcgvty&id=422 Accessed January 12 2015.

LITTLE, B, AND S. PHILLIPS, 2006. 'Social Participation, Personal Projects and Well-Being: A Social Ecological Framework on the Lifecourse', http://www.carleton.ca/sppa/wp-content/uploads/LittlePhillipsParticipationLifecourseFinal.pdf Downloaded July 23, 2013.

MABBET, D. 2011. 'The regulatory state and the welfare state' in Levi-Faur (Ed) *Handbook on the Politics of Regulation*, Edward Elgar, Cheltenham, http://www.lives-nccr.ch/en Accessed January 14, 2014.

MARSHALL, V. 2009. 'Theory Informing Public Policy: The Lifecourse Perspective as a Policy Tool', in V.L. Bengtson, D. Gans, N.P. Putney, and M. Silverstein (eds.), *Handbook of Theories of Aging*, New York, Springer, p. 573-593

—2011. *Risk, vulnerability, and the lifecourse, Lives Working Paper 2011.1.* http://www.lives-nccr.ch/sites/default/files/pdf/publication/1_lives_wp_marshall.pdf. Accessed December 8, 2013.

MARSHALL, V AND J. A. MCMULLIN, 2010. 'The Life Course Perspective and Public Policy Formation: Observations on the Canadian Case' in *Soziale Lebenslaufpolitik,* pp 732-747, ISBN 978-3-531-16410-6.

MARSON, B. AND R. HEINTZMAN 2009. *A Decade of Results-Based Service Improvement in Canada,* Institute of Public Administration of Canada, New Directions Series.

MAYER, K. 2003. 'The sociology of the lifecourse and life span psychology - diverging or converging pathways' in U. Staudinger and U. Lindenberger (Eds.), *Understanding Human Development: Lifespan Psychology in Exchange with Other Disciplines.* Dordrecht: Kluwer Academic Publishers.

—2009. *New Direction in Lifecourse Research*, Annual Review of Sociology, 2009.35:413-433.

MAYER-SCHONBERGER, V., AND K. CUKIER. 2013. *Big Data: A Revolution That Will Transform How We Live, Work and Think.* Boston, MA: *Eamon*Dolan/Houghton Mifflin Harcourt.

MCCONKEY, M. AND P. DUTIL (EDS.) 2006. *Dreaming of the Regulatory Village; Speaking of the Regulatory State,* New Directions Series No. 18, The Institute of Public Administration of Canada (IPAC).

MCDANIEL, S. AND P. BERNARD, 2011. 'Lifecourse as a Policy Lens: Challenges and Opportunities', *Canadian Public Policy – Analyse de politiques*, vol. xxxvii, Supplement February 2011.

MENDELSOHN, M AND K. BATTLE 2011. *Fixing the Hole in EI: Temporary Income Assistance for the Unemployed,* Mowat Centre for Policy Innovation, ISBN 978-1-927350-13-3. http://www.mowateitaskforce.ca/sites/default/files/Mendelson-Battle.pdf Accessed March 3, 2014.

MORGAN, S., AND C. CUNNINGHAM. 2011. "Population Ageing and the Determinants of Healthcare Expenditures: The Case of Hospital, Medical and Pharmaceutical Care in British Columbia, 1996 to 2006." *Healthcare Policy* 7 (1)

MOWAT CENTRE, 2011. *Making It Work: Final Recommendations of Employment Insurance Task Force*, Mowat Centre for Policy Innovation, ISBN: 978-1-927350-09-6. www.mowateitaskforce.ca Accessed March 3, 2014

NUSSBAUM, M. 2000 *Women and Human Development: The Capabilities Approach*, Cambridge University Press, Cambridge.

ORCUTT, G. 1957. 'A New Type of Socio-economic System', *Review of Economics and Statistics*, 58:773–797

OECD 1998. *Maintaining Prosperity in an Aging Society*, ISBN 92-64-16093-0

— 2005. *The "enabling state?" from public to private responsibility for social protection: pathways and pitfalls*, OECD Social, Employment and Migration Working Papers No. 26

— 2005a. *Meeting of OECD Social Affairs Ministers, 2005 - Extending Opportunities: How active social policy can benefit us all - Final Communique*, http://www.oecd.org/general/meetingofoecdsocialaffairsministers2005-extendingopportunitieshowactivesocialpolicycanbenefitusall-finalcommunique.htm, accessed June 2, 2013.

— 2005c. *e-Government for Better Government*, OECD Publishing. doi: 10.1787/9789264018341-en. Accessed October 15, 2013.

— 2006. *Boosting Jobs and Incomes – Policy Lessons from Reassessing the OECD Jobs Strategy*, www.oecd.org/els/emp/36889821.pdf, accessed June 2, 2013

— 2007. *Modernising Social Policy for the New Lifecourse: Proceedings of a seminar on Life Risks, Lifecourse and Social Policy*, Paris, OECD Publishing

— 2007b. *Babies and Bosses – Reconciling Work and Family Life: a Synthesis of Findings for OECD Countries*, ISBN: 978-92-64-03244-6

— 2009. Focus on Citizens: Public Engagement for Better Policy and Services, ISBN 978-92-64-04886-7

— 2011. *Final Communiqué of the Ministerial Meeting on OECD Social Policy: Building a Fairer Future: The Role Of Social Policy*, www.oecd.org/social/ministerial/finalcommuniqueoftheministerialmeetingonoecdsocialpolicybuildingafairerfuturetheroleofsocialpolicy.htm, accessed June 4, 2013

— 2011b. 'Linking pensions to life expectancy', in *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing. http://dx.doi.org/10.1787/pension_glance-2011-9-en

— 2011c. *M-Government: Mobile Technologies for Responsive Governments and Connected Societies,* OECD, International Telecommunication Union, ISBN: 9789264118690

— 2013. *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills,* OECD Publishing. http://dx.doi.org/10.1787/9789264204256-en

— 2015. Agenda for conference, *Lead-Engage-Perform: Public Sector Leadership for Improved Employee Engagement and Organisational Success*, Jan 21 and 22, 2015. http://www.oecd.org/gov/pem/agenda.pdf

PAQUET, G. 1999. *Governance Through Social Learning.* Ottawa: University of Ottawa Press.

— 2004. *Pathologies de gouvernance : Essais de technologie sociale.* Montreal : Éditions Liber.

— 2005a. *Gouvernance: Une invitation à la subversion.* Montreal : Éditions Liber.

— 2005b. *The New Geo-Governance: A Baroque Approach.* Ottawa: University of Ottawa Press.

— 2007. 'Intelligent Accountability', *Optimum,* Vol 37, issue 3. http://www.optimumonline.ca/article.phtml?e=fjtcgvty&id=287&page=1

POLLITT, C. 2000. *How Do We Know How Good Public Services Are*" IN B. Guy Peters and Donald J. Savoie, eds., 'Governance in the Twenty-First Century: Revitalizing the Public Service'. Montreal & Kingston: Canadian Centre for Management Development and McGill-Queen's University Press: 119-152.

PRABHAKAR, R, J. LLOYD AND I. MULHEIRN (2010). *The future of child trust funds: proposals for reform,* The Social Market Foundation. http://www.treasury.govt.nz/publications/media-speeches/guestlectures/pdfs/tgls-prabhakar-s-june10.pdf, accessed August 14, 2013

POLICY HORIZONS 2012. *Driving Policy on a Shifting Terrain: Understanding the Changing Policy Environment Amid 21st-Century Complexity*, http://www.horizons.gc.ca/page.asp?pagenm=2012-0125_01, accessed January 5 2013

PRI 2004. *A Lifecourse Approach to Social Policy Analysis: A Proposed Framework,* http://www.horizons.gc.ca/doclib/DP_LC_Social%20Policy%20Analysis_200412_e.pdf. Accessed July 29 2012

RAGAN, C. 2011. Canada's Looming Fiscal Squeeze. Ottawa: Macdonald-Laurier Institute.

SAVOIE, D. 2013. *Whatever Happened to the Music Teacher? How Government Decides and Why*, McGill-Queen's University Press

SCHRÖDER, M. 2011. *SHARELIFE Methodology* http://www.share-project.org/uploads/tx_sharepublications/FRB-Methodology_feb2011_color-1.pdf Accessed January 24 2013

SIDDIQI Y. AND M. SALEM, 2006. *A Social Accounting Matrix for Canada, 2006*, http://www.iariw.org/papers/2006/salem.pdf). Accessed March 10, 2013

SHEEDY, A. 2008. *Handbook on Citizen Engagement: Beyond Consultation.* Canadian Policy Research Networks, http://www.cprn.org/documents/49583_EN.pdf. Accessed January 4, 2014

SEN, A. 1980. *Equality of What?* In The Tanner Lecture on Human Values, Cambridge: Cambridge University Press. http://www.uv.es/~mperezs/intpoleco/Lecturcomp/Distribucion%20Crecimiento/Sen%20Equaliy%20of%20what.pdf. Accessed January 7, 2013

STÅHLBERG, A. 2007. *Redistribution across the Lifecourse in Social Protection Systems: An Overview*, in OECD (2007)

STATISTICS CANADA, 2013. *Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies* (PIAAC). Catalogue no. 89-555-X. ISBN 978-1-100-22678-1

— 2014. *Cansim Table 478-0001*, accessed October 13, 2014.

SRDC 2013. *Can social finance improve the outcomes of employment and training programs?,* prepared by Karen Myers and Natalie Conte, Social Research and Demonstration Corporation, http://www.srdc.org/media/199684/social-finance-paper.pdf, accessed, December 15, 2013.

THALER, R. AND C .SUNSTEIN. 2008*. Nudge: Improving Decisions about Health, Wealth, and Happiness*, Yale, ISBN 978-0-14-311526-7

WELZEL. C., 2011. *A Human Development View on Value Change* , World Values Survey presentation, http://www.worldvaluessurvey.org/wvs/articles/folder_published/article_base_83, accessed October 20, 2013

WHITE HOUSE, 2012. *Obama administration unveils "big data" initiative,* Press Release, http://www.whitehouse.gov/sites/default/files/microsites/ostp/big_data_press_release_final_2.pdf. Accessed October 21, 2013

WHITE, M., 2013. 'The Dangers of Manipulation', in Policy Options issue on *Nudge: Experiments in Human Nature*, Policy Options, June 2013.

WILLIKENS, F. 1999. 'The Lifecourse: Models and Analysis', in van Wissen, L.J. G. and P. A. Dykstra (dir.) *Population Issues: An Interdisciplinary Focus,* Dordrecht: Kluwer Academic Publishers

WOLFSON, M. 1995. *Socio-Economic Statistics and Public Policy: A New Role for Microsimulation Modeling*, A Paper Prepared for the 50th Session of the International Statistical Institute, Beijing, ISBN: 0-662-2

— 2013. *Not-So-Modest Options for Expanding the CPP/QPP*, IRPP Study No. 41, July 2013.

WORLD BANK 1994, *Averting the old age crisis: Policies to protect the old and promote growth.* ISBN: 978-0-8213-2970-2.

WOUTERS, W., AND L. LEVONIAN. 2013. *What We've Heard: Blueprint 2020 Summary Interim Progress Report.* Ottawa: Government of Canada.