

THE WHISTLER SYMPOSIUM REPORT

THE FIRST INTERNATIONAL SYMPOSIUM ON THE ECONOMIC AND SOCIAL IMPACT OF GAMBLING

Whistler, British Columbia
Canada

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Also, the many authors of papers, panel presenters and participants, who contributed their ideas, wisdom and spirit, provided for an intellectually stimulating debate that has pushed the envelope and stimulated ideas for future inquiry into the issue of the impacts of gambling on societies around the world.

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The success of the Whistler Symposium and the positive feedback from all participants bodes well for future Symposia to sustain and advance the debate and inquiry.

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1. Background

The First International Symposium on the Economic and Social Impacts of Gambling, co-hosted by the Canadian Centre for Substance Abuse (CCSA), had as its primary goal the development of a concept paper or draft guidelines for estimating the social and economic impacts, costs and benefits of gambling.

Stimulated in part by concerns expressed by various experts on gambling problems regarding the recent worldwide expansion of gambling, there is significant interest from governments, the gaming industry, community groups and the media for reliable information on the social and economic impacts of gambling. Studies to date have used a variety of methods, sometimes based on questionable assumptions, producing a wide range of estimates. Yet consensus in methodologies has emerged, producing a wide range of estimates. There is a need for consensus in methodologies for conducting reliable and comparable impact studies to inform responsive and responsible decisions. Reaching consensus in this area would promote public understanding of decisions made.

Canadians are divided on the issue of legalized gambling. Supporters point to the economic benefits of job creation and enhanced government revenues. Opponents warn that increased access to gaming is leading to problems for many individuals and their families. We need a process and an analytical framework and guidelines that will allow these and other perspectives to be aired and impacts of gambling assessed and, if possible, to reconcile differences in values and opinions on this complex social, economic and environmental issue. The Whistler symposium is a key step toward generating the kind of factual underpinning needed for an informed discussion for future policy decision-making.

In September, 1998, Dr. Harold Wynne participated in roundtable discussions in Washington, D.C. that were part of the U.S. national gambling study and he observed that many participating researchers identified gaps and methodological shortcomings in the research into the costs and benefits of gambling to society. As a senior research associate at the Canadian Centre on Substance Abuse in Ottawa, Dr. Wynne discussed with CEO Jacques Lecavalier the need for “best practice” guidelines for conducting gambling cost/benefits research. The CCSA had implemented a successful “international symposium” approach whereby leading researchers and policy makers met to discuss issues and develop guidelines for assessing the cost of substance abuse to society, and Wynne and Lecavalier considered that a similar approach would be useful in developing guidelines for measuring the economic impacts of gambling.

In September, 1999, the CCSA convened a meeting in Winnipeg of Canadian provincial addictions agency representatives and this inter-provincial planning group developed a preliminary plan to hold the *1st International Symposium on the Economic and Social Impacts of Gambling*. During the next year, this group planned the Symposium, which was ultimately held in Whistler, British Columbia from September 24-27, 2000.

The Symposium was funded by provincial addictions agencies, government gaming departments and lottery corporations, and private gaming industry donations. Eminent gambling researchers and economists from Canada, the United States, Australia, the United Kingdom, and Europe were invited to interact with public policy-makers (politicians, government department and agency officials) to discuss and debate various perspectives, definitions, and methods for assessing the social and economic impacts of gambling to society. In total, about sixty people participated in the Whistler Symposium.

1.1 Purpose of the Symposium

The primary purpose of the Symposium was to bring together policy makers, researchers, and other stakeholders to discuss and begin to develop an internationally acceptable set of guidelines and framework for assessing the positive and negative impacts and the full social and economic benefits and costs of gambling. Internationally acceptable guidelines developed from the CCSA-led International Symposium on the cost of substance abuse, for assessing the costs of alcohol and other drugs would be considered, along with an assessment of the benefits from gambling.

The Symposium involved roughly 50 invited national and international participants from Canada (25 invited participants), the United States (12), the UK (3), Europe (3), Australia (3), South Africa (1), International associations (1) and International Labour Organization (1). (see list of participants in Appendix 2). The participants included economists, gambling specialists, psychologists, criminologists, public policy analysts, epidemiologists, anthropologists, addiction specialist, representatives from government, community groups and other agencies concerned with gambling issues.

The expected outcomes of the Symposium were:

- To describe and discuss recent attempts to estimate the socio-economic impacts of gambling in various settings;
- To identify gaps in methodology and data required for impact estimation and outline critical research required to address these issues;
- To plan the development of guidelines for estimating benefits and costs (with a focus on practical analytical frameworks);
- To promote the implementation of the guidelines;
- To identify what other steps are required to expand the concept of using impact studies as a means to inform decision-makers.

The framework or guidelines that emerge should help to guide future international policy research on the impacts of gambling in support of public policy decisions.

To stimulate discussion and move the Symposium towards achieving its stated objectives, leading researchers and academics were contracted to write the following scholarly papers:

Collins, David and Lapsley, Helen. (2000). [The Social Costs and Benefits of Gambling: An Introduction to the Economic Issues.](#)

Walker, Douglas. (2000). [A Simple Model to Explain and Illustrate the Definition of “Social Cost.”](#)

Eadington, William (2000). [Measuring Costs from Permitted Gaming: Concepts and Categories in Evaluating Gambling Consequences.](#)

Single, Eric. (2000). [Estimating the Costs of Substance Abuse: Implications to the Estimation of the Costs and Benefits of Gambling.](#)

Korn, David, Gibbins, Roger, and Azmier, Jason. (2000). [Framing Public Policy: Towards a Public Health Paradigm for Gambling.](#)

The papers were presented by the authors and discussed by panels and the plenary group during the proceedings. Furthermore, on one day, the Symposium participants were divided into four groups and asked to undertake the following specific tasks:

- Develop a definition(s) and typology of gambling costs and benefits.
- Develop a measurement strategy for assessing identified costs and benefits.
- Develop strategies to improve the utility and use of cost estimates for gambling policy making.

While the ultimate goal of the Whistler Symposium was to derive “best practice guidelines” for conducting future gambling cost/benefit impact studies, all participants realized early-on that this was an overly ambitious expectation that would not be achieved as an outcome of the Symposium. Moreover, the Symposium showed that there is still little consensus on (1) the most salient philosophical perspective, or conceptual framework, that should underpin research into the social and economic impacts of gambling; (2) definitions of “private costs” versus “social costs” attributable to gambling; (3) what costs and benefits should be counted in socio-economic impact analyses; and (4) the best methods for measuring gambling benefits and costs.

1.2 Steering Committee, Working Group and Funding

The CCSA was the primary driver behind the organization of the Symposium soliciting financial support, sponsors and participants, commissioning papers from selected experts, and circulating documents to participants. The CCSA convened a Steering Committee to organize the Symposium and a working group to capture consensus and draft guidelines following the Symposium (see <http://www.ccsa.ca/>).

The Working Group was appointed by the Steering Committee to manage the process of reviewing and commenting on the commissioned Symposium papers served as rapporteurs at the Symposium as well as compiling the final reports of the Symposium. The Working Group included William Thompson, Eric Single, Harold Wynne, John Brody, and David Collins.

2. Symposium Proceedings

2.1 Symposium Format

During the opening ceremonies Sharon Manson Singer, Deputy Minister of British Columbia's Ministry for Children and Families brought greetings from the province and highlighted how important the work from the symposium will be to their provincial government as they develop public policy on gambling. Government needs the guidelines and recommendations for approaching the costs and benefits to ensure a balanced evaluation of the impact of gambling on their community. In order to achieve an approach, which is acceptable to the public, symposium participants need to arrive at a consensus on the methodology, guidelines and recommendations to define the costs and benefits of gambling.

Chief Ian Campbell of the Squamish Nation welcomed the participants to the Whistler Symposium which is being held on Squamish Nation lands.

The Symposium began with a series of four presentations of commissioned papers and panel discussions (see Appendix 5 for agenda). The first panel session focused on the policy and utility implications of impact estimates. The second session focused on the recent experiences in conducting impact studies (costs and benefits) in a variety of settings. The third session examined the economic theory, the analytical framework underpinning estimates of costs and benefits, and gaps in methodology and data. This third session focused on describing the typology of costs and benefits, measurement considerations, basic assumptions underlying impact estimates of gambling and existing data sets, information gaps, and issues surrounding the establishment of causality. The fourth session focused on commissioned papers that examined existing theoretical processes for choosing among policy alternatives and explores other ways that impact analysis results can be utilized.

Following the four panel discussion sessions the Symposium participants split into four breakout groups with the goal of examining specific issues relevant to the development and utilization of guidelines (development of a grid outlining "costs to whom", "what costs", "what benefits", "what intangibles" and devising a strategy for promoting the expanded use of impact analysis guidelines). The output of the four breakout groups, which included a rough framework for gambling impact analysis, were brought back to plenary for discussion and consensus building.

The Symposium then proceeded with the working group attempting to discern some consensus on impact analysis framework emerging from the breakout groups. The Symposium ended with a plenary discussion and identification of future next steps in the development of gambling impact guidelines, models, and research priorities

2.2 Utility and Policy Implications of Cost-Benefit Estimates

The Symposium began with a panel discussion focused on the utility and policy implications of impact estimates. The panel consisted on government decision makers (Hon. Murray Smith, Hon. Steve Ashton), gaming industry representatives (Barry Pitchard), an Aboriginal representative (Kate Spilde), a community representative (Joan Nuffield) and international expert (Behrouz Shahandeh). A 20 minute general discussion followed the presentations.

The **Honorable Murray Smith**, Minister of Gaming, Government of Alberta noted that the issue of gambling raises a passionate diversity of opinions and is fraught with vast amounts of anecdotal information with insufficient analytical capacity and sound data. Gambling and alcohol revenues are significant and discussing these requires sensitivity to the political, economic and social realities. About \$14 billion (wagered or spent on gaming and alcohol) cycles through the Gaming Ministry (for both gaming and alcohol) and with roughly 6 percent retained by the provincial government (about \$864 million net from gaming in 1999-2000). Much of this money is then distributed through the Lottery Fund to charities, community projects, and public initiatives. Some money is spent on health and wellness programs. The vast majority of revenues come from VLTs (Video Lottery Terminals). Minister Smith noted that good data and impact analysis will be fundamental to assessing the economic, social and political realities for advising public policy.

The **Honorable Steve Ashton**, Minister responsible for the Gaming Control Act, Government of Manitoba, indicated that provincial governments recognize that this is a new field and noted the need to balance in the middle gambling that has been done with alcohol; balancing economic and social considerations with political realities. While there are different dimensions for gaming (greater benefits but with some social and health costs), it is far easier to estimate the benefits than the costs. Minister Ashton highlighted the need to assess the financial implications (personal), social policy and health impacts, which are not well understood. He noted that the same tools that are currently applied to assessing the impact of alcohol use could be applied to gaming impact analysis. Many gaming revenues are in essence a voluntary tax that in Manitoba. VLT revenues are a significant source of revenues that is equivalent to roughly a 3% sales tax. The Minister called for a balanced approach (with some regulations) to gambling rather than a complete prohibition or wide open access.

Barry Pritchard, Senior Vice President for ABS Casinos (Edmonton, Alberta) provided a gaming industry perspective from 25 years of experience with the casino industry. Mr. Pritchard identifies measurable economic benefits to communities, business, and government in the form of employment, revenues and tax revenues (which can be reinvested in the community). He acknowledged that social impacts exist, yet argued against prohibition as the answer to dealing with social issues. Mr. Pritchard noted that gambling has existed for some time in societies while today it is more widely accessible (legally) to a broader audience.

Joan Nuffield, with the Hann Group and Project Manager for the Ontario Substance Abuse, presented a perspective on the community views on gambling from her experience and study in four communities in Ontario. Ms. Nuffield identified a polarization of people in communities towards gambling particularly at the outset of a gaming industry development. There are strong views both pro and con and rare to find a neutral party on the subject. People in community want to know what to expect from the impacts of allowing gaming industry development in their communities. At the community level, people want a common sense approach and consider that all issues are relevant which may go counter to orthodox economic analytical methods and theories. Must be sensitive to the local impacts and phenomenon of gambling impacts as well as the macro perspectives. The lack of a suitable social-political infrastructure and process at the local level is a serious weakness, lacking inclusive qualities. . In the past, a lot of decisions have been based on passion rather than quantified or qualified data. A new structure is required that is more inclusive and open to different viewpoints allowing for the integration of passion and data. The planning process (which is often rushed) tends to be a lost opportunity for coming to a common understanding to plan for the negative.

Kate Spilde, Director of Research, National Indian Gaming Association (NIGA) in Washington, D.C. Her work, as an anthropologist, involves documenting and articulating the historic economic and social impacts of gaming on Indian Country. The main goal for Indian gaming is to apply sound research to protect sovereignty over tribal gaming. She noted that the researching the impacts on gaming on Indian peoples is complicated with limitations to availability of economic data because of the proprietary nature of the information, which is held in private by Indian peoples. It is a constant struggle to keep the data in the discussion, as the focus on past initiatives has been to examine qualitative information only. The scope of the gaming discussion has been hard to maintain as NIGA's focus has thus been on the social and community impacts of gaming, addressing false images (media, public) of Indian gaming, as well clouded by other issues such as land claims, and social and economic growth.

Behrouz Shahandeh, Senior Advisor on Drugs and Alcohol at the International Labour Office (Geneva, Switzerland) presented an international perspective on the impact of gambling related to public policy issues. The focus of the ILO research, the first of its kind on workplace impacts from gambling, is on the loss of labour productivity and workplace impacts as well as the impacts on family welfare (loss of income, impacts on family life (breakdown), and children). The desired outcome of this research is to raise the issue of impact on labour and workplace climate at the international level.

The discussion and questions that followed the session raised the following critical issues: Francois Vaillancourt (who recently completed a study of the benefits and costs of gambling in Canada for the Canadian Tax Foundation) raised the question of what, from the results of impact research, is required to make a meaningful contribution to public policy decision making. The speakers responded by noting the need for more detailed quantification of impacts on specific component areas of gaming that will help shape public policy. Also, examination of the overall economic benefits (impact) of gambling and providing this analysis as much prominence as the social impact analysis. Knowledge of gaming's economic capacity is also critical, including knowledge of the scope of access to gambling opportunities and demand (e.g. Internet gambling). More complete information is required to make better decisions. The fundamental question is whether this information would change current public policy positions on gaming.

Roger Gibbins raised the issue of creating a single framework that bridges macro (economy/society) and micro (community) impact analysis, including revenue flows. Reaction from the panel included the need to develop such a framework to understand the current impacts and future possible impact of gaming industry expansion to help guide where gaming development may go in the future.

Both Minister's from Alberta and Manitoba highlighted the importance of looking at capitalizing the social benefits. They recognize that the more the analysis gets down to the community level the more micro the analysis becomes, and correspondingly the higher the analysis the more macro it becomes. How do we propose bridging these two different approaches?

Again, the need to strike a balance between the positive and negative impacts, making this information transparent both at the macro and micro impact level.

2.3 Lessons Learned from Cost-Benefit Studies

The second session was chaired by John Borody (Manitoba) and focused on lessons learned and experiences in conducting impact studies (costs and benefits) in a variety of settings. Presentations from different jurisdictions were made, followed by a general discussion. A panelist of researchers who have conducted recent studies included: **Peter Collins** (South Africa), **Rick Harwood** (U.S. Gambling Commission report), **Jan McMillen** (Australian Institute for Gambling Research), **Harold Wynne** (Canada) and **François Vaillancourt** (Canada).

Peter Collins spoke of the South African experience from a developing country perspective (with a large population of poor people). Neither an economic or social impact survey nor analysis has been completed in South Africa given the recent massive expansion of the gaming industry since 1994. In a poor country we cannot expect government to pay for a coherent national, integrated policy that addresses the need for public education, for gambling operators, treatment of problem gamblers and research into the whole issue. Without the public sector's participation the private sector is playing a major role in addressing gambling issues. All public benefit would have to be measured in the form of tax revenues accruing to the government. The public policy objective of expanding gaming opportunities was to assist the redistribution of benefits from richer to poorer rather than expanding tourism business opportunities, per se. National lottery has been a failure as a means of redistributing benefits to non-profit causes; indeed national lotteries has become a source of problem gambling for those attempting to become rich quick. There is generally more problem with gambling than with alcohol.

Rick Harwood spoke of his analysis work of the adverse social-economic impact of pathological and problem gambling in the U.S. Dr. Harwood raised an important analytical hierarchy that would:

- 1) Begin with defining gambling as a good-bad moral issue;
- 2) Determine whether gambling should be a government monopoly;
- 3) Examine how to tax the monopoly rents of government;
- 4) Determine how to allocate these rents, and;
- 5) Examine how to deal with specific gaming policy issues.

He focused instead on problem-pathological gamblers, noting that studies show that pathological-problem gamblers often do not attribute typical problems with their own problem activities. Using health, clinical or human capital frameworks for analysis we can focus on specific social and health issues related to problem gambling. Intangibles, while important, were not assessed, per se. They assessed tangible adverse impacts (consequences) and screen for difference factors by age-sex classifications. Compared pathological gamblers with non-problem gamblers who had remarkably different impacts and differences in attribution of gambling impacts. Using statistical analysis they found that significant differences between pathological-problem gamblers and non-problem. The work by Dr. Harwood and his colleagues has found that pathological gamblers are not enormously predisposed to given impacts. Annual costs and life-time costs per person were estimated for problem-pathological gamblers. The cost is relatively small compared to alcohol and drug abuse costs. The impacts are nevertheless important, despite their relatively small size, and getting gross estimates are necessary. More refined and rigorous assessments are important to examine portions of the population who are greater risk and their impacts.

Jan McMillen spoke of the Australian experience of gambling impact analysis from the Australian Productivity Commission (the government's think-tank on economic policy) report which has been very influential. The Gambling Research Institute, which Dr. McMillen

heads, assisted in the study; the first time in Australian history in which the national government took a position on gambling. Gambling activity in Australia has risen dramatically to a new height where currently 3.8% of national spending goes to gambling activities. Dr. McMillen asked the question: how far can Australia expand gaming opportunities without significant impacts? The communities concerns are with problem gambling impact and wanted information on the costs-benefits of gambling. A balanced, interdisciplinary approach was used that combined qualitative data, anthropological data and community input. Using cross-data triangulation, social surveys, surveys of counseling agencies and testing of various economic measures and models. None of the economic models proved to be accurate or effective. They tested different models of assessing problem gambling; most of which have been rejected given the diversity of cultural differences in Australia. The findings of the study showed conservative results including:

- 82 % of Australians gamble regularly;
- gambling losses (expenditures) by all gamblers totaled \$12.4 billion (1998-1999) or \$837 per capita and varies between states;
- The major social benefits are consumer pleasure;
- Gambling taxes vary from 14.5% of total tax revenues in Victoria to 5% in Western Australia reflecting different policy environments;
- Problems with gambling by type of gambling activity;
- Economic benefits are not clear since there is a significant redistribution of jobs, income and expenditures in the economy from one sector to another;
- 2.1% of Australians are problem gamblers which now amounts to a public health issue;
- Gambling is no longer seen as simply an addiction but a long-term health issue;
- Gaming machines are a serious problem with nearly 10% of machine (e.g. VLT) players noting a problem;
- Roughly 33% of gambling revenues comes from problem gamblers;
- More accessible gambling is the norm;
- Environmental factors are also important;
- Lack of consumer education about the problems;
- Data sources are unreliable for conducting good studies plus inadequacies of aggregate (national) data sets resulting from flaws in surveys;
- Paradoxically spending on lotteries reported by Australians tend to overestimate actual expenditures;
- Impacts are felt at the community level thus we need to work at the micro-community level, and;
- A simple “gambling index” is not possible.

Harold Wynne presented a state of research in Canada and noted the general lack of studies in this new area. Dr. Wynne highlighted two studies:

1) A 1995 study by Phillippe Sacyrenne titled “An Analysis of the Net Social Benefits from Legalized Gambling in the Province of Manitoba. Winnipeg: University of Winnipeg) came to the following conclusions:

- a) gambling produces enormous social benefits and costs;
- b) major costs related to pathological gambling;
- c) VLT gambling produces the greatest social cost;
- d) revenues from gambling is not just a voluntary tax, and
- e) revenues raised from problem gamblers may come at the expense of spouses and children.

2) A second Manitoba study conducted by KPMG Management Consultants providing a critical assessment of the Manitoba Lottery Corporation and concluded:

- a) Lottery Corp.'s total expenditures of \$544 million produced \$948 million in gross output, \$403 million in GDP increase;
- b) Expenditures created 10,000 jobs and \$300 million in employment income, and;
- c) For every \$1 million in Lottery Corp. expenditures gaming produced \$783,000 in GDP and 22 person years of employment.

These results are typical of the benefits that are reported, however, these studies have critics.

A Nova Scotia study by Porter and Dylan in 1999 was a result of an Act of Parliament (Bill 17) placing a moratorium on VLTs and called for a study to estimate impacts. The findings of the study included:

- a) If VLTs were banned in Nova Scotia (excepting First Nations reserves) household income would decline by \$3.7 million and 145 FTE jobs would be lost;
- b) Government revenue would decline by \$57 million, and;
- c) VLT problem gamblers cost some \$61 million per year yet a VLT ban would not mitigate these costs.

This study too has been widely criticized, including by Dr. Wynne. Dr. Wynne reported that Vaillancourt and Roy conducted the most recent Canadian study as to the social and economic benefits and costs of gambling in Canada for the Canadian Tax Foundation completed in 2000. Dr. Wynne invited Professor Vaillancourt to highlight their study's findings.

Francois Vaillancourt presented the findings of the study recently completed with co-authored Alexandre Roy. Titled "Gambling and Governments in Canada, 1969-1998: How Much? Who Plays? What Payoff?" for the Canadian Tax Foundation, the study represents the first Canadian estimates of the costs and benefits of gambling in Canada. First, the study examined the impacts on society and government. The study began as an examination of government revenues, taxes and distribution of taxes then expanded into societal issues. Second, the study asks the fundamental question as to: What is the alternative choice to gambling? Should the alternative be no gambling, illegal or imported gambling? Vaillancourt and Roy noted that answers to this important question matter because of the significant impacts of gaming on government revenues. Third, the study examined how the area or scope of analysis (geographic) impacts benefits and costs, mobility of gamblers and distributional issues. The study raised the issue of the importance of the time period (year) which is chosen to assess impacts. The Vaillancourt-Roy study covered two years 1990 and 1995 (pre- and post-VLTs and casinos).

Benefits would exclude employment creation (considered a transfer rather than a true benefit); employment impacts should only be considered if gambling is an import, substitute and/or export generating. The study assumed lotteries and VLTs were local and casinos were export-oriented and neglected the import effect (e.g. people going less to Las Vegas), given lack of information.

Benefits considered included:

- a) government revenues
- b) consumer surplus (an economic measurement tool that applies to even problem gamblers)

Costs include:

- a) crime costs, health costs, employment, suicide (not considered)
- b) loss of revenues

The key issue is that roughly 80% of citizens gamble, 20% of citizens do not and roughly 5% of gamblers are problem gamblers thus 19 out of 20 gamblers have good, clean fun gambling. As an economist these ratios suggest passing the cost-benefit test with many more people benefiting than would suffer. Thus it is not surprising that we see a net benefit even if we double the costs. Extensions to the study might involve provincial studies and possibly community studies. As well, distributional studies and special group studies. Potential studies of Internet gambling should this emerge in Canada.

Following the presentations questions were posed with the following key observations were made:

- There may be weaknesses in data on problem gamblers with problem gamblers not responding honestly to survey questions. This issue was acknowledged as a real issue that warrants greater attention.
- Have studies examined the cost and benefits for the different mixes of gambling (given differential addictiveness of different types of gambling) and how might these be different? In Canada such studies have not yet been conducted; this work has started in Australia.

2.4 Filling Gaps in Methodology

The third session of Day One (September 24) chaired by Vic Poleschuk, CEO of B.C. Lotteries, examined the filling in of methodology gaps and examining economy theory and non-analytical frameworks that underpin estimates of costs and benefits. This session was based on five commissioned papers and followed with a critical review by a panel. The following are some of the highlights of the papers presented. For a complete version of the papers follow the web-links.

Paper #1: [The Social Costs and Benefits of Gambling: An Introduction to the Economic Issues](#) (Collins and Lapsley)

David Collins, Macquarie University, Sydney, Australia

Helen Lapsley University of New South Wales, Sydney, Australia

David Collins presented the paper on behalf of co-author **Helen Lapsley**.

The purpose of the Collins and Lapsley paper was not to put forward what was right or wrong with the research today, but to examine the theory and context around gambling impact analysis Collins presented a survey of theoretical economic issues involved in the analysis and measurement of the social costs and benefits of gambling. The paper contrasts an economist's perspective on the social costs of gambling compared with other disciplines, noting that economists are interested in the economic costs of gambling. Collins clearly articulates the need for a total costs and total benefits analytical framework for assessing the total economic and social costs of gambling; where total costs/benefits = private costs/benefits + social costs/benefits. One of the confusions in economic impact analysis is distinguishing clearly between private and social costs. Collins points to the definition by Markandya and Pearce: "*To the extent that the costs are knowingly and freely borne by the consumer or producer himself, they are referred to as private costs but to the extent they are not so borne but fall on the rest of society they are referred to as social costs.*" Collins argues that three essential conditions must be simultaneously satisfied if a particular cost of gambling is to be classified as a private cost:

1. Gamblers must be fully informed;

2. Gamblers must be rational, and;
3. Gamblers must be required to bear the total costs of their gambling.

Collins concludes that there is a remarkable range of estimates of the costs of gambling. For example, the Australian Productivity Commission (1999) estimates the average annual costs of problem gamblers in the United States ranged from US\$560 to US \$52,000 which can be interpreted as “gambling is an insignificant problem” to “gambling imposes a massive social cost.” This tremendous disparity in estimates reflects:

1. Theoretical errors that result in incorrect social cost methodologies and estimates, and;
2. Different approaches to the issue of rationality when it comes to the choices of individuals towards gambling.

Moreover, Collins points out that a major problem relates to the direct attribution of costs to gambling as distinct from merely being associated with gambling, noting that much of the current attribution information is either relatively naïve, biased by different philosophical points of view on gambling, or of poor quality relative to work on alcohol, tobacco and illicit drugs (English, Holman *et al* (1995). In essence the argument becomes, what costs are attributed to gambling versus what costs are associated with the behaviour. Gambling behaviour is not a homogeneous activity, gambling behaviour seem to differ by the specific gambling activity. Future research requires actual quantification of the casual relationship between gambling and social issues such as crime.

Economists also face problems since much of the work related to gambling is outside their expertise falling into other science disciplines. Serious information deficiencies exist in areas related to total cost (and benefit) estimations where economists could assist. Many problems attributable to gambling involve intangible costs that are more difficult to value in monetary terms. This challenge will require innovative techniques for valuation.

Collins ends with a proposal that would pursue the establishment of a theoretical framework for social cost estimation studies, quantify casual relationships between gambling and social problems and encourage broadly comparable bases of international estimates of the social costs of gambling. Collins called for a pragmatic approach to social cost attribution analysis by identifying the nature of attributable social costs and quantifying those which are most reasonable or practical to quantify.

Paper #2: [A Simple Model to Explain and Illustrate the Definition of “Social Cost”](#) (Walker)

Douglas M. Walker, Georgia College & State University, Milledgeville, GA,USA

Walker focused primarily on the issue of typology of the social costs and benefits of gambling. Researchers, politicians, and the general public are concerned with the extent to which gambling, particularly by pathological gamblers, has a harmful effect on society. His paper notes that the literature is lacking in two important areas. First, it lacks an appropriate standardized definition of social cost. Second, it lacks a methodology for measuring the value of these costs. As it stands in the literature, individual researchers choose what to include and exclude from their cost studies. The apparent criterion for inclusion is ease in measurement; most researchers estimate a dollar figure for some effects, but simply note that there are other effects that are not measurable. He notes that in fairness to researchers, a major limitation to research has been a lack of data.

Walker examines the methodological issues respecting social cost estimation and presents a model for identifying and measuring the impacts of pathological gambling.

His paper concludes that the methodological issues in the social costs of pathological gambling are rather complicated, compounded by the diversity the researchers' specializations. He notes that it will be fruitful for researchers to develop a standardized social cost methodology. He notes that "Only when we adopt a single definition of social costs and agree upon acceptable measurement methods, can we begin to compare social cost studies across regions and through time. This will be particularly useful for future policy espousal and the evaluation of past experiences." (2000, p.42).

Walker goes on to note that "Perhaps the most important point to recognize is that economics is a complicated subject. Though some of the issues seem straightforward, often in reality they are very complicated. Such is the case with the social costs of pathological gambling. Too often, logical thought has been foregone in favor of ad hoc methods of analysis. These studies usually provide unreliable estimates of the social costs, and hence, may lead to policy errors." The Walker model presented in this paper allows the adoption of a simple rule for identifying and measuring the effects of pathological gambling. "First, for the items that are legitimately considered to be social costs, i.e., if they decrease the aggregate wealth in society, then we should attempt to measure their value.¹ For all of the other negative effects of pathological gambling that do not decrease aggregate wealth, or that do so in a way that cannot be adequately measured (e.g., psychic costs), then we should only identify these effects and suggest ways to decrease their severity. But we should not attempt to arrive at dollar figures for these effects since the estimates are likely to be unreliable." (2000, p.42-43)

Walker points out that the solution to problem gambling would be easier to solve "if politicians and the public were not so hungry for quick answers." As Walker and others noted at the Symposium, it is very simple to just compare a total cost and benefit estimates, regardless of their conceptual and analytic validity, and make simplified decisions on this basis.

Walker concludes that with the legalization of casino gambling slowing in the US (while increasing in Canada) and with several years of data available, we now have the luxury of going back in time to perform careful economic analyses of the U.S. experience regarding the effects of gambling and pathological gambling. This would provide insights into future potential outcomes that may be expected in Canada and other countries where gambling problems are only now emerging. As Walker notes "the conclusions derived from economic analyses are only legitimate to the extent the studies' methodological foundations are sound."

Paper #3: [Measuring Costs from Permitted Gambling: Concepts and Categories in Evaluating Gambling's Consequences](#) (Eadington)

William Eadington, Institute for the Study of Gambling and Commercial Gaming, University of Nevada.

Eadington's paper focuses on the social welfare debate as it relates to the spread of commercial gaming in societies applying sound economic principles in reviewing approaches taken in major research studies on gambling. Eadington reminds readers of the principles of economic theory

¹ A specific analysis of measurement methodologies is beyond the scope of this paper.

and methods and how and why they might be applied in particular impact analysis situations. He notes that economic methodology, while having well-defined concepts, provides only one perspective on impact analysis. The paper attempts to provide a clear and well-defined economic framework for providing guidance to social scientists for estimating factors and variables that can be readily measured, and highlighting the difficulties in quantifying benefits and costs, some which defy measurement.

Eadington's paper focuses on the cost side of the gambling equation focusing specifically on: (1) the damage from pathological or problem gamblers to themselves and society, at large; (2) the adverse effects of commercial or not-for-profit gaming on other sectors of the local economy; (3) the costs to society at large from public resource, funding and infrastructure outlays dedicated to the gambling industry; (4) the potential link between gambling and social (crime) and health costs (suicide, physical health) and undesirable impacts; (5) reduction of respect for shared individual, community or social values, and; (6) concern about spread of gambling as a reflection of deterioration of social values and quality of life, in general.

To illustrate these impacts, Eadington examines: (1) the miscreant father (financial and household impact of the problem gambler); (2) the failed restaurant (impacted by adjacent gambling facilities); (3) public sector costs (road traffic, policing); (4) social impacts (noise, substance abuse (alcohol), crime, and suicide); (5) community values, and; (6) judgementalists (gambling as a "sin" or "wrongful")

Eadington's paper raises many of the methodological challenges in impact analysis including:

- Difficulty in attribution of outcomes to gambling as the sole cause;
- Costs associated with outcomes are difficult to conceptualize and categorize;
- Need to distinguish between private costs (those borne by the consumer) and social costs (those borne by society);
- Costs are difficult to measure with any degree of accuracy;
- Weak or non-existence guidelines for measurement and attribution (e.g. the measurable incremental costs to society of additional suicides);
- Studies that measure social costs attributable to gambling should be tied to policy objectives with the appropriate basis for measurement related to some alternative or desired "state of nature."

He identified several weaknesses with many studies. To date studies into the costs of gambling tend to report a single number or broad range of estimates and that these numbers are often measured and reported, without regard to their lack of context, challenges with conceptualization and measurement, or the ease with which reporting can be misinterpreted. This raises a chronic concern about researcher bias where personal beliefs and values regarding gambling can color research.

Paper #4: Estimating the Costs of Substance Abuse: Implications to the Estimation of the Costs and Benefits of Gambling (Single)

Eric Single, University of Toronto, Canada

Single describes a recently developed set of guidelines for estimating the economic costs of substance abuse and discusses the implications to the potential development of guidelines for estimating the costs and benefits of gambling. The guidelines for estimating the costs of substance abuse present a general framework of costs to be included and discuss methodological issues such as the definition of abuse, determination of causality, comparison of the demographic and human capital approaches, the treatment of private costs, the treatment of non-workforce mortality and morbidity, the treatment of research, education, law enforcement costs, the estimation of avoidable costs and budgetary impact of substance abuse, and the significance of intangible costs. Utilizing these guidelines, a study was undertaken to estimate the economic costs of alcohol, tobacco and illicit drugs to Canadian society in 1992. It is noteworthy that the application of the guidelines in similar studies in Australia and the U.S. produced more robust and comparable results. Based on this experience, it is argued that multidisciplinary teams should conduct cost/benefit research and that the real value of such work lies more in the detailed findings than in the bottom line results. It is further recommended that cost estimation studies include sensitivity analyses in which the results under varying assumptions are calculated and reported, and that such studies report their results in a manner which facilitates comparison with other studies. Single concludes by recommending that focus should be placed on developing an ongoing process for developing consensus on how to conduct studies of the costs and benefits of gambling, rather than attempting to find a precise methodology that everyone agrees upon.

Paper #5: Framing Public Policy: Towards A Public Health Paradigm for Gambling (Korn, Gibbins, Azmier)

David Korn, Department of Public Health Sciences, University of Toronto

Roger Gibbins, President and CEO, Canada West Foundation

Jason Azmier, Senior Policy Analyst, Canada West Foundation

The Korn, Gibbins and Azmier paper argues that gambling should be assessed from a public health perspective; a wider framework of analysis. Applying the public health perspective would provide a wider 'lens' for assessing and understanding gambling behavior, analyzing the benefits and costs, and identifying multi-level strategies for action and points of intervention. This public health framework can be used by opinion leaders, researchers and policy makers in the gambling field to enhance the quality of life of individuals, families and communities, minimize the potential for harmful consequences, and protect vulnerable people.

They point out that the manner in which social issues are framed has a direct impact on public policy debates. The paper begins with an examination of traditional gambling frames then explores alternative policy frames through which the expansion of legalized gambling in Canada can be observed. They argue that the traditional frames fail to accommodate the full economic and social impacts of gambling and suggest a public health frame that would be more effective in capturing economic and social impacts. This more robust frame would facilitate an enriched public policy debate. The paper scopes out the basic structure of a public health analytical framework for gambling; acknowledging the challenges faced with accepting a new framework. The paper concludes with an examination of the role of research in moving towards a public health frame for gambling and proposes a research agenda within this frame.

Through a public health lens, gambling can be viewed in a broader context, including an examination of the epidemiological and social characteristics of gambling. The public health framework is broad and diverse enough to accommodate an analysis of gambling.

The public health model is a valuable impact framework since it tends to focus on the socio-economic determinants of health. Health is viewed (in accordance with World Health Organization definition) as the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs and, on the other hand, to change and cope with their environment. This positive concept emphasizes social and personal resources as well as physical capacities. Health is seen as a dynamic process and as a resource for living.

The sheer scope of health public policy, and its capacity to accommodate a broad range of economic and social impacts, opens the door to framing gambling as a public policy issues. The public health model examines key determinants of health (applicable to gambling impact assessment) including income, social status, social support networks, education, employment, working conditions, physical environment, biology and genetic endowment, personal health practices, coping skills, healthy child development and health services. Gambling can be viewed through the lens of mental health and addictions fields, allowing for framing of gambling as *healthy* and *unhealthy* behavior; healthy gambling entailing informed choices while unhealthy gambling referring to different levels of gambling problems.

When applied to gambling the health framework provides three guiding principles for setting public policy goals, actions and accountability: (1) prevent gambling related problems of those at risk to gambling addiction; (2) promote informed and balanced attitudes, behaviours and policies towards gambling and gamblers both by individuals and by communities and (3) protect vulnerable groups from gambling-related harm. The authors also point to the need to foster personal and social responsibility for gambling policies and practices.

Framing gambling as a public health issues offers several benefits including:

- a broad viewpoint on gambling in society;
- emphasis on prevention of gambling-related problems and harm reduction;
- addressing the risk of problems for the gambler and quality of life of their family and communities affected;
- consideration of multiple biological, behavioral, socioeconomic, cultural and policy determinants influencing gambling and health;
- a life-cycle approach to measuring social and economic impacts, recognizing the social context of gambling;
- examination of risks to special groups who are more vulnerable or marginalized, and finally;
- recognizes that there are both costs and benefits associated with gambling.

Empowered with this lens and information, public policy and strategies can work towards minimizing gambling's negative impacts while appreciating its potential benefits.

The paper examines several obstacles to imposing a new public policy framework including agreement on concepts and methodologies. The authors identify the need for research that is useful, easily understood, relevant, timely and practical. They point to the need for a public health research frame that accommodates current research on economic and social impacts of gambling, yet ensure a cross-disciplinary research approach that is publicly (government) funded.

Following the presentations of each of the commissioned papers, a panel of researchers and experts were asked to discuss and provide comments on the papers. This was opened up to general discussion involving Symposium participants.

3. Towards a Unifying Framework for Measuring Socio-Economic Impacts of Gambling

On day three of the Symposium (September 26) four-breakout groups were asked to examine specific issues relevant to the development and utilization of guidelines for examining the impact of gambling. The groups were asked to develop an impact grid outlining that identifies: (1) “costs to whom?”; (2) “what costs?”; (3) “what benefits?”; (4) “what intangibles?” and; (5) devise a strategy for promoting the expanded use of impact analysis guidelines. The output from the four breakout groups, were used to develop a rough framework for gambling impact analysis.

Group participants were asked to participate in the following task process:

Task 1 – Define the typology of costs and benefits

Develop a grid delineating costs, benefits and to whom they accrue.

Task 2 – How should tangible and intangible costs and benefits be expressed

Identify:

- Measurement issues
- Qualitative assessments
- Quantitative assessments – for example: willingness to pay

Task 3 - Develop strategies to improve the utility and use of cost estimates

Consider addressing the following questions:

- Who should address what additional methodological issues, in what priority and?
- How can the capacity for gambling impact analysis/evaluation be enhanced worldwide?
- What are the critical elements/steps to securing on-going political commitment to impact analysis/evaluation and, ultimately, the use of this knowledge in policy making?

The commonalities that emerged out of the group discussions included:

- Consensus around the basic structure of an impact analysis grid;
- The importance of looking at the distributional effects (transfers and ‘pecuniary’ costs) in the context of a holistic total wealth (well-being) impact and monetary total cost-benefit analysis of gambling;
- The challenge of dealing counterfactual and conflicting evidence of benefits and costs, at various scales, and;
- The importance of considering intangible and qualitative impacts of gambling despite challenges in their measurement.

3.1 Methodological Issues

The groups identified the following methodological issues:

1. The difficulty in establishing causality of drivers and impact outcomes with perhaps four to five different views of what causality is;
2. The importance of identifying and studying attribution factors;
3. The limitations of very sparse literature and research;
4. A research agenda common to the field should be established;
5. The need for transparency of data, funding sources and methods needed;
6. Avoid rejecting a factor just because it can't be easily measured;
7. The need for longitudinal studies and good survey data;
8. The need to have an inter-sectoral or multi-disciplinary approach to impact studies;
9. The importance of qualitative measurement as well as quantitative elements;
10. Measurement of quality of life issues are important;
11. Sex, drugs, rock and roll: which speaks to the concurrent disorders—gambling disorders do not come alone but are associated with other social problems that are not necessarily psychologically based. Problem gambling should not be seen in isolation but included in a larger set of difficulties;
12. The issue of high-risk populations should be examined;
13. A continuum of gambling behaviors should be considered, not just problem gambling, and;
14. The need for simple communication of impact findings that resonate with politicians, the public and the media.

3.2 Gambling Impact Analysis Framework

Wynne and Anielski have developed a comprehensive gambling impact framework, based on the compilation of work by break-out group discussions, that may guide future research into the impact of gambling on individuals, households (family), business, communities, the economy and the environment.

The proposed impact framework attempts to encompass a broad range of analytical frameworks including:

- 1) Financial analysis and accounting (e.g. used by business);
- 2) Neoclassical economic analysis and theory (e.g. benefit-cost analysis);
- 3) National income accounting (e.g. macro economic analysis, such as the gross domestic product (GDP) accounting);
- 4) Welfare economics (e.g. cost-effectiveness and cost-utility analysis as well as new sustainable well-being measurement systems like the Genuine Progress Indicator (GPI) accounting system);
- 5) Social impact analysis, and;
- 6) Public health impact analysis.

The goal is an analytic framework that is robust, transparent, flexible and dynamic, to accommodate analysis of impacts from multiple perspectives and allow for customization according to individual community or national circumstances.

The gambling impact framework (see table below) posited by Wynne and Anielski is comprised of two *meta* levels of analysis: ‘benefits’ and ‘costs’ of gambling. ‘Benefits’ and ‘costs’ include the physical, qualitative and monetary impacts of gambling

For each of the benefit and cost levels of analysis the following analytic architecture is posited. An attempt has been made to show potential alignment between domains, sub-domains, and impact indicators while the methodologies and outcomes columns apply to each of the previous columns:

1. **Domains:** represent the scale of analysis whether at the level of the individual (including health), household (family), community, economy, and the environment.
2. **Sub-domains:** second-order clusters of stakeholders that align with domain categories of stakeholders.
3. **Impact Indicators:** that reveal the full impacts, both quantitative, qualitative and monetary (costs and benefits) of gambling. The indicators would be relevant to the various scales or domains allowing decision makers to assess impacts from the individual to the broadest societal level of analysis. The indicators would be qualitative in nature showing impact of gambling in terms of quality of life parameters, as well as show the full monetary costs (human health, household, societal, and environmental) and benefits (cash flow or revenues) associated with gambling activity at various scales (domains). (Note: Table 1 shows a preliminary list of impact indicators that is by no means complete. Jan McMillen (Australia) has graciously provided a comprehensive list of data needs for comprehensive community impact analysis that may provide some guidance for indicator development (see Appendix 5).
4. **Measurement methods:** Various impact measurement methods are available for assessing the impacts of gambling at various domains and subdomains. We have identified: 1) Financial analysis; 2) Benefit-cost analysis (BCA); 3) Benefit-effectiveness analysis (BEA); 4) Benefit-utility analysis (BUA), and; 5) Genuine Progress Indicator (GPI) accounting and well-being analysis as five possible approaches. There are undoubtedly other models that are available and could be explored, however, other models would likely find a home within the five methodological options. For example, public health impact models might fit within the BUA or GPI accounting models.

There is likely no ideal analytical method for assessing impacts, rather a menu of options to choose from depending on the domain, subdomain or impact being considered. Ideally, a more holistic impact accounting stance is more desirable than a narrowly defined analytic perspective. Traditional methods such as financial analysis and neo-classical economic benefit-cost analysis tend to be narrowly focused on money-related impacts and do not deal well with qualitative impacts which gambling can entail.

It should be noted that because gambling results in the redistribution of income and expenditures in society, this presents a unique analytical challenge to traditional economic benefit-cost analysis. The unique challenge is to differentiate between the redistribution effects and true costs in the analysis of gambling impacts. Indeed, the redistribution impacts may actually be greater than traditional accounts of costs or benefits. Because traditional economic analysis does not usually consider distribution effects, this dimension will need to be elevated in gambling research studies. The other key challenge will be to ensure problem gambling impacts are disentangled from regular gambling impacts.

The following provides a more detailed description of the various measurement tools:

- a) **Financial analysis** is used primarily in the private sector and is concerned with measuring the monetary (cash flow) benefit and cost outcomes of private sector or business decisions. The expected revenues and cash from an activity are viewed as benefits while the payments to factors of production (labour, land, and fixed capital) are viewed as costs regardless of their impacts elsewhere in the economy or on the environment.
- b) **Cost-benefit analysis (CBA)** is a standard neoclassical economic analysis approach to evaluating the monetary impacts of public projects where the project outcomes are evaluated from the basis of the public's interest. In CBA impact analysis involves the assessment of prices (monetary dimension) associated with the benefits and costs of social utility gains rather than only cash flow as in financial analysis. In CBA results are measured and reported in money terms using prices that are usually adjusted for market distortions.
- c) **Cost-effectiveness analysis (CEA)** is a method that ranks the outcomes or impact of activities or a project that cannot be measured or compared in money terms. CEA differs from CBA in that social, human health or environmental impacts can be measured and expressed in physical, qualitative or non-monetary units. CEA may be suitable where money terms for impacts are not applicable. The non-monetary impacts could, in theory, be compared with monetary benefit and cost outcomes.
- d) **Cost-utility analysis (CUA)** is a method of evaluating alternatives according to a comparison of their costs and the estimated utility or value of their outcomes. CUA might be used in cases where subjective evaluation of qualitative and quantitative outcomes is required, for example, assessing educational outcomes or the qualitative impacts of problem gambling on the quality of family life. CUA is useful where subjective assessments about the nature and probability of outcomes are required. However, because of the subjective nature of CUA results from various studies may be less comparable than for comparing CBA and CEA impact analysis results.
- e) **Genuine Progress Indicator (GPI)** accounting and analysis is a new holistic impact analytic tool being developed by researchers at the Pembina Institute for Appropriate Development for assessing the full range of physical, qualitative and monetary (costs and benefits) impacts on the well-being of individuals, households, communities, the economy, and the environment from economic activity. GPI accounting could in principle provide a comprehensive impact analysis tool that embraces virtually all existing methodological impact analysis tools, including those posited.

Appendix 1 provides a preliminary analytic framework, a two-dimensional grid, to provide guidance to future researchers in identify and measure the impacts (both physical, qualitative and monetary) associated with the posited domains and sub-domains of stakeholders impacted by gambling. This framework should assist researchers in scoping out and visualizing the full range of impacts. The impact grid is a preliminary architecture and would require continuous improvement and modification as new impacts are identified and measured.

5. Outcomes:

The outcome of the impact analysis of the ‘benefits’ and ‘costs’ of gambling might be the construction of a Genuine Progress Indicator (GPI) well-being account and statements for gambling activities that would include:

- a) A statement of the condition (assets and liabilities) of gambling and its impacts (i.e. a GPI gambling balance sheet) reported at various domains and subdomains;
- b) A ‘net benefit income statement’ for gambling that shows the full monetary costs and benefits associated with gambling activity in society, including highlighting dimensions of CUA and CEA analysis at various scales (i.e. domains and subdomains).
- c) Indicators of physical, qualitative and monetary impacts of gambling, derived from the GPI balance sheet and income statements, and used in an impact report framework like, for example, the “triple bottom line” (economic, social, environmental) corporate annual reports emerging from some international corporations. These impact ‘statements’ could become the basis for reporting on the full and integrated impacts (qualitative and monetary indicators) of gambling in a “balanced” accounting framework.

The Genuine Progress Indicators (GPI) System of Sustainable Well-being Accounts that has been developed by Anielski and other economic researchers at the Pembina Institute for Appropriate Development (<http://www.pembina.org>). This comprehensive systems approach to well-being measurement considers the full range of quantitative, qualitative and monetary (i.e. economic) conditions of economic (e.g. economic growth), societal (e.g. gambling) or environmental (e.g. air quality) well-being. Taking a systems and integrated approach, the GPI well-being accounting system recognizes the interrelationships between the physical, qualitative, and monetary parameters that constitute ‘well-being’.

For example, a GPI account for gambling could examine the full impacts of gambling activities at scale of the individual, household, community, society (economy) or the environment by considering both the physical/qualitative impacts of the activity as well as the full range of monetary (cash flow) costs and benefits associated with the activity.

GPI accounting allows decision makers to examine the full range of impacts, either related to quality of life or traditional economic parameters, and the sustainability of any given sector or activity in an economy. Sustainability is defined as ensuring that current activities and practices do not compromise the well-being of both current and future generations of citizens.

GPI well-being accounting may lend itself to assessing the full impacts of gambling in a community, province/state or nation.

Current GPI accounting initiatives are underway:

- The Alberta GPI sustainable well-being accounting project by the Pembina Institute for Appropriate Development (<http://www.pembina.org>) led by Mark Anielski and the Green Economics research team (includes a preliminary GPI analysis of the impact and cost of problem gambling in Alberta);
- The Nova Scotia GPI initiative is led by GPI Atlantic’s Ron Colman, but does not include an analysis of the cost of gambling;

- The Australian GPI 2000 by the Australian Institute led by Clive Hamilton (includes a cost of problem gambling estimate from 1950 to 1999 for Australia to adjust Australia's GDP), and;
- The U.S. GPI by Redefining Progress (<http://www.rprogress.org>) includes many social and environmental costs and benefits that are used to adjust the U.S. GDP figures for an estimate of sustainable economic welfare, however, does not consider gambling.

This new economic, social and environmental well-being measurement systems is designed as an alternative measurement system to the current System of National Accounts from which economic well-being measures such as the gross domestic product (GDP) are derived. The GPI accounts provide a more comprehensive analysis of well-being, whether measured in terms of individual, household or community well-being (including human health and societal well-being parameters). The GPI analytical framework might lend itself to assessing the full impact of gambling to societies.

Considerable research will be required to refine and complete the various impact analysis identified in the gambling impact framework. Indeed, the one offered here is a skeletal open architecture for continuous improvement and refinement through application. Moreover, understanding the interrelationships between domains and sub-domains and their respective impacts at various scales will require careful planning in the research and analysis that emerges. As the impact framework is tested through application these interrelationships between the domains and sub-domains will become clearer as will the information required to complete the analysis. Perhaps most challenging will be ensuring that the impact analysis system allows for a holistic and composite picture of gambling's personal, societal, economic, and environmental impacts allowing decision makers to discern the tradeoffs necessary when considering gambling as an economic and social activity.

Table 1: Gambling Impact Analysis Framework

BENEFITS

Domain	Sub-Domains	Impact Indicators	Measurement Methods	Outcomes
Individual		Personal pleasure	Financial Analysis	Genuine Progress Indicator (GPI) net well-being impact statement:
Personal health		Consumer surplus	Cost-Benefit (CB) analysis	a) Balance sheet (physical condition statement; assets and liabilities)
Household economy			Cost-Effectiveness (CE) analysis	b) Net sustainable economic/financial benefit statement (full benefit and cost analysis)
Community/ workplace	Groups of people (family unit, ethnic, religious)		Cost-Utility analysis (CU)	
Macro economy	Business & industry	Gaming and other industry revenues and employment	Genuine Progress Indicator (GPI) accounting and analysis	c) GPI impact indicators and index for gambling impact
	Social institutions (schools,	Gambling revenues		

Environment	churches) Government (health, education)	Contribution to GDP (gross domestic product) Employment		
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COSTS

Domain	Sub-Domains	Impact Indicators	Measurement Methods	Outcomes
Individual Personal health		Individual well-being ○ Personal bankruptcy ○ Quality time use losses (redistribution) Personal health and wellness ○ Suicide ○ Substance abuse (drugs, alcohol, tobacco) ○ Mental illness ○ Stress ○ Disease and physical health ○ Self-rated health	Financial Analysis Cost-Benefit (CB) analysis Cost-Effectiveness (CE) analysis	Genuine Progress Indicator (GPI) net well-being impact statement: a) Balance sheet (physical condition statement; assets and liabilities) b) Net sustainable economic/financial benefit statement
Household economy		Household (Family) health and economy ○ Domestic violence ○ Financial stress ○ Bankruptcy ○ Property values ○ Divorce/separation ○ Loss of family time	Cost-Utility analysis (CU) Genuine Progress Indicator (GPI) accounting and analysis	c) GPI impact indicators and index for gambling impact
Community/ workplace	Groups of people (family unit, ethnic, religious)	Workplace climate ○ Absenteeism ○ Job productivity Community/ Societal Institutions ○ Crime ○ Social cohesion ○ Charitable giving ○ Property values		
Macro economy	Business and industry (workplace) Social institutions (schools, churches) Government (health, education)	Macro economy and government ○ GDP, income employment redistribution impacts on other sectors ○ Labour productivity ○ Loss of government tax revenues from other sectors ○ Public sector regulatory		

Domain	Sub-Domains	Impact Indicators	Measurement Methods	Outcomes
Environment		costs and addiction program costs. ○ Welfare programs Environment ○ Noise ○ Air quality ○ Land use impact		

3.3 Principles and Factors of Measurement Conduct

The break-out groups identified key principles and factors to consider when conducting comprehensive impact assessments of gambling. These have been clustered according to: 1) process 2) data and information 3) indicators and impact framework, and 4) analysis and reporting:

Process:

1. Should also be sensitive to unique communities, First Nations/Indian, Asian communities, children/youth and seniors, and have ethical consent.
2. Should employ control groups and be multidisciplinary or transdisciplinary.
3. Should employ an electronic (internet) clearinghouse, where all data is freely available, and where international and intra-national cooperation and coordination.
4. Requires an international or intra-national coordinating body, where research is coordinated and conducted within ethical protocols and involve peer review.
5. Impact studies should be conducted at arms-length (independent) of government or industry, and research results presented at international forums and provided to the press.

Data and Information:

1. Data sources should be reliable, appropriate, and effective.
2. Should not reject variables *a priori* that weren't guaranteed.
3. Counterfactual evidence should be clearly specified.
4. Information should include anecdotal evidence (stories).
5. Need to develop data sets and attribution factors as the basis of cost analysis. (note: Jan MacMillen (Australia) has developed a list of data sets needed and has kindly provided a list which can be found in Appendix 5 to this report. Attribution factors are crucial to the impact analysis.

Indicators and Impact Framework:

1. Need to examine an impact framework using socio-economic, age-sex profiles, population health, and social determinants of health to determine distribution of impacts, including assessment of prevalence.
2. Should work towards indicators that reflect the outcomes of gambling impacts.
3. Indicators need to be repeatable, comparable at the provincial, national level and show rate of change (i.e. trends) from a baseline.
4. Need to include intangibles social 'costs' of gambling even if estimates are challenging.

Analysis and Reporting:

1. Need to assess the redistribution effects of gambling in terms of money flows (government revenues, charitable donations, etc.), resources (e.g. labour), and time-use impacts of gambling.
2. Need to analyze the continuum of problems related to the gambling behavior spectrum.
3. Need to monitor change or trends over time, including longitudinal impacts.
4. Need to consider the spill-over impact to adjacent communities.
5. Need to assess gambling by type of gambling and by the different types and structures of cost and benefit impacts, avoiding simplified aggregation that can conceal these differences.
6. Need to analyze the macroeconomic impacts of gambling (e.g. employment, national output and consumption (GDP, expenditures), and the balance of payments) and establish objective assessments of the macroeconomic impacts.
7. Need to present appropriate interpretation of the research results so as to prevent misinterpretation. The ultimate goal of this analysis should be program and policy evaluation.
8. In the absence of a theoretical consensus the need for transparency in the presentation of results and methodology is critical.

4. Rapporteur Epiphanies and Final Comments

The Symposium concluded with a plenary wrap-up session led by the Rapporteurs who were asked to provide closing comments, observations, and major epiphanies as a result of the Symposium. The following observations were made:

1. While the substitution effects of gambling are important, we must also consider additive effects; and avoid confusion between public and private, legal and illegal.
2. Assessing gambling impacts is not a zero-sum gain; whatever the magnitude of the benefit, the emphasis should be on mitigating or reducing costs.
3. We must apply the same principles to identifying a cost from a benefit, and;
4. Apply the same evidentiary standards to the attribution of costs and to benefits.
5. By far the most important required piece of research is on gambling attribution factors (linking problems to gambling). Without this information it is not possible to produce meaningful estimates of costs and benefits
6. A major proportion of the social costs of gambling consist of intangibles and it is important to find a way of presenting this information in a way that prevents their importance being understated.
7. Pecuniary costs and benefits can be very important because of their impacts on regions and on specific community groups.
8. It is important to present methodology and results in a transparent way and not to overstate the accuracy or significance of the results. They will almost inevitably be misinterpreted but we should at least try to ensure that we are not to blame for such misinterpretation.

9. Economists still have a lot to learn from other disciplines (and the reverse is also true).

Harold Wynne, provided an overview of assessing gambling through the lens of human health.

How should we define human health?

- “Monetary” wealth is only one component of the “total” wealth possessed by the individual, family, and community group;
- Cannot put a dollar value on all components of human wealth;
- Science of economics is helpful in examining changes in “monetary wealth”, and;
- Scientific approaches from other disciplines are more helpful in examining changes in “non-monetary human wealth.” (health, education, sociology).

What enhances or diminishes human health?

- Need to identify what a community group considers the “components of human wealth” to be (money, health, education, spirituality, food/shelter/clothing, clean environment);
- Need to recognize that multiple factors precipitate increases/decreases in human wealth, and;
- Need to develop strategies to isolate and measure the effects of changes in “indicators” of human wealth.

Does gambling enhance or diminish human health?

- Need to examine how the introduction of (and changes in) legalized gambling contributes to changes in the “components of human wealth” (monetary and non-monetary) as defined by the community;
- Need to incorporate a multi-disciplinary research approach to measuring these changes (not just economics!), and;
- Need to continuously monitor changes in human wealth at the individual, family, community, and national levels (not just longitudinal research).

5. Future Action Steps

The ultimate goal of the Whistler Symposium was to derive “best practice guidelines” for conducting future gambling cost/benefit impact studies, however, all participants realized that this goal was ambitious and that the Symposium represented the first step towards the development of an impact analysis framework. The Symposium showed that there is still little consensus on (1) the most salient philosophical perspective, or conceptual framework, that should underpin research into the social and economic impacts of gambling; (2) definitions of “private costs” versus “social costs” attributable to gambling; (3) what costs and benefits should be counted in socio-economic impact analyses; and (4) the best methods for measuring gambling benefits and costs.

The hope of the Symposium organizers and participants is that a 2nd International Symposium be held in 2002 wherein a proposed pragmatic analytic framework and issues of social and economic impacts can be further debated.

In closing, the following key “next steps” were identified by the Symposium participants:

Information and Research Clearinghouse

1. Need for a clearinghouse and network of researchers and websites to develop common databases, share information, impact analysis frameworks and literature in order to guide public policy with sound and credible knowledge. This includes dissemination of information to a wider public audience. Various foundations may be interested in participating in a gambling clearinghouse.
2. All gambling-related institutions and organizations need to plug into the research network that has been established as a result of the Whistler Symposium to consolidate and further refine the impact matrices developed by the Symposium working groups.
3. Need to develop a common, systematic core data set that may be developed and maintained over time.

Community and Business Involvement

4. Need to have researchers engage both community groups and businesses impacted by gaming activities, at the community level.
5. The gaming industry should support good methodologies (with data) to examine the impacts of gambling.
6. Greater effort must be given to gathering information for impact analysis at the community level of impact and to seek new ideas and processes for engaging both community and industry in the planning and impact assessment process.

Adopting existing and emerging impact frameworks

7. Need to avoid duplication of information systems and possibly use a system similar to the current drug/alcohol information dissemination system and addictions impact framework.
8. Need for addiction agencies to applicability of alcohol impact assessment frameworks and treatment programs in developing a conceptual and working model for measuring gambling impacts and gambling treatment outcomes and prevention outcomes.
9. Assessing the impact of gambling requires a multi-disciplinary approach (e.g. criminologists, public health experts, economists) blending academic and non-academic people from a variety of disciplines taking an integrated approach for examining the economic, social, and other impacts.
10. Need to assess gambling through the lens of public health models and raise the level of debate around personal health issues (e.g. public health outcomes), including an examination of risk profiles (factors), prevention factors and etiology of gambling problems.
11. Need to assess the dimensions of time-use (how much time individual gamblers devote to games of chance) and money flows (net loss of disposable income resulting from games of chance) in assessing the impacts of gambling.
12. Need to study the impact of gambling on older adult (seniors) gamblers and the unique impact on this special group.
13. Need to consider comprehensive, integrated analytical frameworks for assessing the well-being of society and economies such as the GPI – Genuine Progress Indicator accounting framework that would include the impact of gambling on economic, social and environmental well-being as a key component.

Politics and policy

14. Political timing is critical in shaping policy, thus the need to involve elected officials responsible for gaming to future symposia and discuss of the nature of gambling impacts.
15. There is a need to engage the international community, particularly European countries, in assessing the cost-benefit impacts of gambling, possibly through the International Labour Organization (ILO) in Geneva.
16. Impact assessment should become imbedded in legislation related to gaming policy.
17. Clarity is required around the taxonomy of problem gambling; especially what constitutes a cost versus benefit. Also, there is a need to identify personal and social values that underlay perspectives on gambling impact analysis.

These action steps were subsequently discussed by the Whistler Working Group and distilled to three recommended actions post-Whistler including:

1. **Analytic Framework:** Further refinement of the analytical framework posited in this report. A working group will undertake this initiative including: Jacque Lecavalier, Harold Wynne, Jan McMillan, Mark Anielski. The results of the working group's efforts will be shared with members at the June 21, 2001 teleconference of the Whistler Steering Committee.
2. **Development of data sets in Canada:** A second working group that includes Jan McMillan, Bill Eadington, Harold Wynne and Mark Anielski will focus on the development of data sets required to undertake gambling cost-benefit studies. This initiative will include an exploration of interprovincial collaboration in Canada to develop these data sets. The results of this work will likewise be presented to the Whistler Steering Committee on June 21, 2001.
3. **Literature review of problem gambling causality:** The Ontario Problem Gambling Research Centre, through the leadership of Rob Simpson, CEO, will fund a review of the literature into problem gambling correlates including variables that are correlated with problem gambling. Prospective causal linkages will be identified so that attribution fractions pertinent to cost-benefit analysis may be identified. Mr. Simpson will report progress on this research at the June 21, 2001 teleconference meeting.

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Appendix 1: Gambling Impact Analysis Framework, Details

<i>Domain and sub domain</i>								
	Individual	Personal health	Household economy (family unit)	Community and workplace			Macro economy	Environment
IMPACTS			<i>Family Unit</i>	<i>Business & industry</i>	<i>Ethnic/religious groups</i>	<i>Social institutions (e.g., schools, churches)</i>	<i>Government (health, education, addictions counselling)</i>	
Individual health and wellness								
Suicide								
Substance abuse (alcohol, drugs, tobacco)								
Healthy lifestyle								
Stress								
Mental health								
Disease (premature mortality, life expectancy)								
Self-rated health								
Personal pleasure								
Mental health								
Time use (paid work, and quality time for family, friends, community and leisure)								
Absenteeism (workplace)								
Life expectancy								
Divorce and family breakdown								
Educational attainment								
Societal well-being								
Domestic violence and conflict								
Crime and legal problems								
Pawn shop activity								
Community health								
Addictions services								

Financial and economic well-being								
Gross domestic product (economic output) and sectoral redistribution impacts								
Income								
Consumer surplus								
Business (gaming and other) revenues, jobs and opportunities								
Government tax revenues (gains and losses) and expenditures								
Financial stress: debt, bankruptcy, lack of disposable income								
Income and wealth inequality								
Efficiency of tax instrument								
Public sector regulatory costs, addictions service costs and welfare program costs								
Charitable giving								
Loan sharking								
Money laundering								
Property values								
Employment (full and part-time jobs)								
Work (labour) productivity								
Environmental well-being								
Air quality								
Noise								
Land								

Appendix 2: Participant List

Symposium Participant email links

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Appendix 3. Symposium Agenda

**FIRST INTERNATIONAL SYMPOSIUM
ON THE ECONOMIC AND SOCIAL IMPACT OF GAMBLING
Cascade Lodge, Whistler, British Columbia, Canada
September 23-27, 2000**

Saturday September 23, 2000

12:00 – 17:00 : Check-in to Cascade Lodge

19:00 : Reception : Cascade Lodge

Sunday September 24, 2000

07:30 – 08:30 : Continental Breakfast

08:30 – 10:30 : Session 1 : – Opening remarks (30 min)

Premier Ujjal Dosanjh, British Columbia
or delegate

First Nations Welcome and Opening Blessing

Chief Ian Campbell

Welcome remarks – local host

M. Hansen

Purpose, expectations and process

J. LeCavalier

Session 1 : – Panel presentation: utility and policy implications of cost/benefit estimates (70 min) Chair: P. Meade

Provincial issues

M. Smith
S. Ashton

Industry perspectives

D. Hestermann

Community views

J. Nuffield

Aboriginal considerations

K. Spilde

Implications for the workplace

B. Shahandeh

General discussion (20 min.)

All

10:30-11:00 : Break

11:00-12:00 : Session 2 : – Recent experience – lessons learned from cost/benefit studies ~ Chair: J. Borody

3 presenters (10 min. each)

(Australia, Canada, U.S)

Discussion (30 min) All

12:00-13:00 : Catered Luncheon

13:00-15:00 : Session 3: – Filling gaps in methodology ~ Chair: V. Poleschuk

Commissioned paper – Theory and context... (30 min) D. Collins

General discussion (30 min.) All

Commissioned paper – Typology of costs/benefits (60 min.)
D. Walker
W. Eadington
E. Single

15:00-15:30 : Break

15:30-17:00 : Session 3 (cont'd) : - Filling gaps in methodology ~ Chair: V. Poleschuk

Commissioned paper – Typology of costs... (cont'd)

Panel discussion (30 min.)
R. Gupta
W. Thompson
B. Yates

General discussion (60 min.) All

19:00-21:00 : Banquet – Hy's Steak House

Monday September 25, 2000

-

07:30 – 08:30 : Continental Breakfast

08:30 - 10:30 : Session 4 : – Translating into policy ~ Chair: K. Whyte

Commissioned paper – (40 min)	R. Gibbins D. Korn
Panel discussion (30 min.)	S. Macpherson J. McMillen L. Stephenson
General discussion (45 min.)	All

10:30 - 11:00 : Break

11:00 - 12:00 : Session 4 (cont'd) : – Translating into policy ~ Chair: K. Whyte

General discussion (cont'd)	All
Presentation of break-out assignments	H. Wynne

12:00 - 13:00 : Catered Luncheon

13:00: Free afternoon

Evening invitation to a barbecue at the Whistler home of William Deeks,
Chair, Board of Directors, CCSA

Tuesday September 26, 2000

-

07:30 – 08:30 : Continental Breakfast

08:30 - 10:30 : Session 5 : - Break-out groups (4)

What costs? - what benefits?

Costs to whom?

How to express intangible costs and benefits?

Strategies to improve the utility and use of cost estimates

10:30 - 11:00 : Break

11:00 - 12:00 : Session 5 (cont'd) : - Break-out groups (4)

What costs? - what benefits?

Costs to whom?

How to express intangible costs and benefits?

Strategies to improve the utility and use of cost estimates

12:00 - 13:00 : Catered Luncheon

13:00 - 15:00 : Session 5 (cont'd) : - Break-out groups (4)

What costs? - what benefits?

Costs to whom?

How to express intangible costs and benefits?

Strategies to improve the utility and use of cost estimates

15:00 - 15:30 : Break

15:30 - 17:00 : Session 5 (cont'd) : - Group presentations (4) ~ Chair: Miki Hansen

10 min/group (40 min.)

Integration of findings with wrap-up by Chair (50 min.) All

19:00-21:00 : Group dinner – AlpenRock House

Wednesday September 27, 2000

08:00 – 09:00 : Continental Breakfast

09:00 - 10:30 : Session 6: Wrap-up ~ Chair J. LeCavalier (90 min)

Presentation of elements of consensus by Working Group WG

General Discussion All

Next steps and follow up action All

10:30 - 11:00 : Break

11:00 :

Hotel check out

Departure for Vancouver

Appendix 4. Working Breakout Groups

Tuesday, September 26, 2000

Four breakout groups were tasked with the goal of examining specific issues relevant to the development and utilization of guidelines (development of a grid outlining “costs to whom” – “what costs” – “what benefits” – “what intangibles”, devising a strategy for promoting the expanded use of impact analysis guidelines). The output of the four breakout groups, which included a rough framework for gambling impact analysis, were brought back to plenary for discussion and consensus building.

Group findings and suggestions were synthesized in plenary with particular focus on giving directions to the Working Group responsible for the preparation of draft guidelines and adopting action-oriented recommendations.

Red group

J. Borody ®
C. Campbell (N)
P. Glendenning
L. Glikzman
R. Gupta (N)
H. Harwood
J. Kelly
G. Meyer
S. Murphy
L. Nadeau
V. Poleschuck (N)
K. Spilde
J. Westphal
J. Wiebe
K. Zorn

Yellow group

S. Ashton
D. Collins ®
K. Cunningham
F. Cribb
T. deVos (N)
D. Dubeau
R. Frisch
J. LeCavalier
J. McMillen
P. Meade
B. Pritchard
C. Reilly
R. Simpson
D. Sturko (N)
D. Walker

Blue group

M. Anielski
J. Derevensky
W. Eadington
R. Gibbins
R. Hann
D. Klingspohn
D. Korn
S. Macpherson
M. Perron
E. Single ®
R. Tizzard
G. White
B. Wilbur (N)
B. Yates

Green Group

J. Azmiel
P. Collins
A. Dyer
D. Fafard Rouffignat
M. Hansen
D. Hesterman
J. Nuffield
R. Parks
C. Poulin
B. Shahandeh
M. Smith
L. Stephenson
W. Thompson ®
K. Whyte
H. Wynne

® indicates rapporteur
(N) indicates not confirmed

Appendix 5: Gambling Impact Data Needs, Australian Institute for Gambling Research



Australian Institute for Gambling Research

DATA NEEDS – COMMUNITY IMPACT STUDIES

Professor Jan McMillen
Australian Institute for Gambling Research
University of Western Sydney
aigr@uws.edu.au

Below is a list of data sets that would assist analysis of Canadian gambling impacts and trends. This list is indicative, rather than comprehensive.

In mid-1990s the Australian Bureau of Statistics (ABS) began to compile similar data sets (denoted* below); and since 1972/73 the Tasmanian Gaming Commission has compiled annual *Australian Gambling Statistics* (denoted# below) on behalf of all states and territories (gaming@tres.tas.gov.au). These data sets have been progressively improved and, as descriptive national data, they are valuable aids to Australian research.

However, with few exceptions, official Australian data sets provide aggregate data that are not sensitive to local community impact analysis. It must also be stressed that all these Australian data sets remain subject to problems of inconsistent categorisation, double-counting, self-reporting bias and omissions. In particular, the ABS Census data and Household Expenditure Survey (HES) data are too infrequent to be of current value and are usually outdated before they are publicly available. The HES data, like most self-report surveys, are notoriously unreliable.

As Canadian researchers and policy-makers develop an impact methodology appropriate for Canadian circumstances, I would also advise against adopting an exclusively spatial-geographical definition of 'community'. 'Communities of interest' are equally important, as are the possible spill-over impacts on other communities.

Research and data collection should be designed to measure *actual* impacts, rather than estimates (eg by application of economic models). Data should attempt to measure the *nature* of impacts, the *prevalence/incidence* of impacts and the *degree* of impact on all areas of community life.

Suggestions for baseline data include:

- Annual gambling statistics, for each type of gambling and each province. It is important that the provinces develop standardised data categories and consistent compilation methods. The *Australian Gambling Statistics* provide a useful model, although even after almost three decades, these data sets still need further improvement. National gambling statistics can include:
 - turnover per adult capita and provincial/national totals
 - expenditure (real and actual) - per adult capita and totals
 - annual rates of growth
 - % Household Disposable Income
 - \$ taxation (gaming and racing, all gambling)
 - % provincial revenue (gaming and racing, all gambling), etc.
- Characteristics of the gambling industries - by sector and by province, compiled annually or biannually eg:
 - See the Australian Bureau of Statistics compilation – *Gambling Industries* for the type of aggregate data collected in Australia. However, these data frameworks are under review following deficiencies identified in the Productivity Commission's inquiry.
 - Detailed industry operating data, as reported by New Jersey casinos (eg income and expenditure, purchasing data, marketing etc) would assist regional analysis of economic costs and benefits.
- Gambling labour force statistics – by sector and by province, compiled annually; eg the Australian Bureau of Statistics compiles data on:
 - number of employees by gambling enterprise
 - type of operator/employer (private, public; size of enterprise, etc);
 - number of employees by category of work (eg gaming, administration, technical support)
 - standard socio-demographics (gender, age, education levels, marital status, cultural identification, etc)
 - full-time, part-time, casual employment;
 - annual/hourly salaries by category of employee
 - annual staff turnover rate by category of employee

- level of unionisation;
 - number and type of industrial disputes;
 - Equal Employment Opportunity policies, affirmative action programs
 - OHS requirements and issues (eg passive smoking)
- Social disadvantage index: To assist identification of ‘at risk’ communities. Data should be capable of analysis at the lowest statistical area possible – eg at the level of 200 households, local community, community of interests.
 - National time use data, leisure statistics that include gambling participation in each province, capable of breakdown to units of 200 households.
 - Social wellbeing index – to measure gambling impacts on quality of life.
 - Problem gambling data – by local community and province:
 - prevalence of problem gambling – general population survey data, specific groups and communities.
 - Surveys of gambling clients receiving counselling or other support services.
 - Demand for gambling-related support services, eg surveys of welfare and community agencies. Development of a national Minimum Data Set and resources/support to compile the necessary data will ensure reliable, quality data.
 - Data on personal and family impacts – effects on children, partners, divorce or separation, domestic violence, psychological wellbeing, etc
 - The development of the CPGI and the HARM measures in Canada will assist quantitative analysis.
 - However, qualitative data about the nature of problem gambling and its impacts on particular individuals and communities are equally important – eg from focus groups, ethnographic studies.
 - Data on prevention programs:
 - Consumer information – costs and benefits. Program evaluation studies.
 - Community education programs - costs and benefits. Program evaluation studies.
 - Primary and secondary prevention programs, early intervention. Efficacy, program evaluation studies.
 - Community surveys, focus groups – to identify quality of life issues and impacts.
 - Data on treatment programs, community support services – at provincial and local community levels, compiled annually:
 - distribution of services by type: eg counselling, community health service, stand-alone, integrated
 - resources, staffing, professional qualifications

- access: hours of operation; mode of access (crisis line, telephone/internet counselling, clinic visits, etc), public subsidy or private fee-for-service, etc;
- client usage patterns – gamblers, families, gambling industry workers, others.
- problem gambling services provided (financial counselling, psychological counselling, relationship counselling, emergency relief, health services, domestic violence support, etc)
- * problem gambling Minimum Data Set (MDS) – to record the use of problem gambling services, client data, etc. Victoria and Queensland have collected data using their own versions of MDS for several years. These models have been generally criticised, however, and an improved MDS is being developed by the NSW Department of Health (for information contact the Senior Policy Officer, Deborah Hatzi – dhatzi@doh.health.nsw.gov.au)
- program evaluation studies, efficacy studies.

Health data:

- epidemiological data that record gambling-related health problems. The Australian Medical Association has a National Policy on Problem Gambling, framed as a public health issue, but has not yet developed a research strategy. In 1998 the NSW AMA developed an education program for General Practitioners, including the DAGS (Drug, Alcohol and Gambling Screen). However, no mechanisms or funding for compilation and analysis of these data have been established.
- Gambling-related suicide. In Australia, data collection is unsystematic and ad hoc; attribution to gambling as the principal causal factor has been difficult.
- Co-morbidity data, eg gambling and alcohol, depression, parental neglect, etc. A crucial area that also must develop methods to address attribution factors.

Layered geo-mapping of various data sets – to identify ‘at risk’ communities, sites with high levels of gambling problems, areas of service need, quality of life impacts, etc. *AIGR is currently doing this type of analysis in NSW and Victoria.

Ethnographic studies and community studies to explore the cultural meanings and practices of gambling in different communities and groups. Such studies are essential first steps to refining existing data sets and methodologies to ensure they are culturally sensitive.

Crime and regulation:

- Community crime statistics and court records that identify direct relationships to gambling (to overcome the attribution problem, to disentangle gambling-related crimes from other trends and externalities).
- Data on gambling participation and problems in penal/correctional systems
- Costs of gambling regulation and policing – both proactive/preventative and reactive regulation (ie data that differentiates gambling from other more general regulatory and enforcement costs).

- Data on the resource allocation effects of corruption. A complex issue that could vary case by case.
- Calculation of the benefits of regulation (ie diminished crime or no crime). Program evaluation studies.

Financial and economic data:

- Regional economic data and frameworks for analysis – eg Queensland is establishing annual regional data on household expenditure. Data would include the usual measures of economic activity. Where possible, emphasis should be given to *actual* data and trends, not estimates.
- Retail data to measure the impacts of gambling on local business. Not an easy task, given the generally poor records for the retail sector.
- Production: gambling related absenteeism, loss of productivity, reduced unpaid household services.
- Bankruptcy: data that identifies the direct contribution of gambling to bankruptcy. Australian data are fundamentally flawed in this area, and are virtually useless.
- Data from financial institutions on gambling-related refinancing, loans, mortgage closures, etc.
- Taxation – participation data to explore conventional tax issues at the national, provincial and community levels (regressivity, tax incidence, sensitivity analysis, etc)
- Data on the collection and distribution of charitable funds – to explore issues of equity, efficiency and effectiveness, etc.

Urban and environmental impacts:

- Environmental impact studies – eg on traffic, pedestrian patterns, urban aesthetics, heritage and cultural issues, etc.
- Costs and benefits of town planning requirements; are they public or private costs/benefits, etc.
- Community surveys and focus groups – to examine the impacts on community image, quality of life, etc.

Surveys, focus groups, interviews and observation:

- These provide useful sources of data for elaboration and cross-validation of other data sets.
- For example, detailed national survey data can show the socio-demographic profiles of Canadian gamblers as a whole, by province, location (postcode is best, or metropolitan, non-metropolitan), gender, age, income, education, personal status and cultural identity.
- For each socio-demographic characteristic:
 - the proportion of Canadian gamblers who participated in a particular gambling activity
 - of those who gambled, the proportion of gamblers in a particular province/community who participated in a particular activity
 - comparison of patterns between recreational/occasional gamblers, regular gamblers and gamblers with problems
 - the proportion of each group in the population.

- However, surveys do have significant limitations as a source of data. Note the findings of the Australian Productivity Commission with regard to the design, conduct and analysis of community surveys (Productivity Commission 1999, Appendix F) and of surveys of clients of counselling agencies (Productivity Commission 1999, Appendix G).

Preliminary frameworks for community impact analysis are currently being developed in Australia. Each provides very broad guidelines that should be adapted for specific circumstances. Draft guidelines are available from the following:

- Queensland Office of Gaming Regulation: info@qogr.qld.gov.au; <http://www.qogr.qld.gov.au/>
- Australian Institute for Gambling Research: aigr@uws.edu.au; <http://www.aigr.au/> The AIGR is also developing a framework and impact study methodology for local authorities in Victoria (Victorian Local Governance Association).

Jan McMillen, AIGR
9-10-2000