

Evidence and Healthy Public Policy: Insights from Health and Political Sciences

Patrick Fafard

National Collaborating Centre for Healthy Public Policy

May 2008



Centre de collaboration nationale
sur les politiques publiques et la santé

National Collaborating Centre
for Healthy Public Policy

*Institut national
de santé publique*

Québec 

AUTHOR

Patrick Fafard

Assistant Professor
Graduate School of Public and International Affairs
University of Ottawa

Research Fellow, Canadian Policy Research Networks

This work was commissioned by the NCCHPP in order to further the insights available to the policy-making and public health communities with respect to two related questions: what constitutes evidence in policy-making?, and what models of policy-making are available in political science that can inform our understanding of how to develop healthy public policy?

The National Collaborating Centre for Healthy Public Policy (NCCHPP) seeks to increase the expertise of public health actors across Canada in healthy public policy through the development, sharing and use of knowledge. It is one of six centres funded by the Public Health Agency of Canada located across Canada, each with a mandate for knowledge synthesis, translation and exchange in a different area of public health.

Canadian Policy Research Networks (CPRN) is a not-for-profit organization. Our mission is to help make Canada a more just, prosperous and caring society. We seek to do this through excellent and timely research, effective networking and dissemination and by providing a valued neutral space within which an open dialogue among all interested parties can take place. You can obtain further information about CPRN and its work in public involvement and other policy areas at www.cprn.org.

Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada through funding for the National Collaborating Centre for Healthy Public Policy (NCCHPP).

The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

This document is available in its entirety in electronic format (PDF) on the websites of the National Collaborating Centre for Healthy Public Policy (NCCHPP) at www.ncchpp.ca and Canadian Policy Research Networks (CPRN) at www.cprn.org.

La version française est disponible sur le site Internet du CCNPPS au www.ccnpps.ca et des RCRPP au www.rcrpp.org.

Information contained in the document may be cited provided that the source is mentioned.

PREFACE

The ideas presented in this paper are, in part, the result of a series of structured and spontaneous conversations with a number of people, including the participants in a workshop held at the University of Ottawa on March 5, 2007, and a conversation with staff at the National Collaborating Centre for Healthy Public Policy on September 27, 2007. This paper is also inspired by and seeks to build upon the work of Paul Burton (Burton 2006). I would particularly like to acknowledge the input of Michael Orsini, Katherine Fafard, Scott Findlay, Marc Saner, Marie-Christine Hogue, Louise St-Pierre and Denise Kouri.

TABLE OF CONTENTS

INTRODUCTION	1
1 MODELS OF POLICY-MAKING — THE VIEW FROM HEALTH SCIENCES	4
2 MODELS OF POLICY-MAKING — THE STAGES MODEL	9
2.1 Evidence and agenda setting	9
2.2 Evidence and policy formulation.....	10
2.3 Evidence and decision-making.....	11
2.4 Evidence and policy implementation	12
2.5 Evidence and policy-making in a stages model — General observations.....	12
3 MODELS OF POLICY-MAKING — THE ADVOCACY COALITION FRAMEWORK AND THE ARGUMENTATIVE TURN	14
3.1 Advocacy coalition framework.....	14
3.2 Evidence in advocacy coalition frameworks.....	15
3.3 The argumentative turn and a deliberative approach to policy-making.....	15
3.4 Evidence in discursive policy-making.....	17
CONCLUSIONS	20
REFERENCES	23

LIST OF FIGURES

Figure 1: The dominant view of policy-making in health sciences: from evidence to policy.....	5
---	---

INTRODUCTION

“There is nothing a government hates more than to be well-informed; for it makes the process of arriving at decisions much more complicated and difficult.”

(Attributed to John Maynard Keynes¹)

“Social science does contribute to policy and practice but the link is neither consensual, graceful, nor self-evident.”²

What determines the health of the population? The answer, of course, is highly variable depending on who is being asked. The general public normally points to the critical role of doctors and hospitals, if not in promoting health then at least in combating ill-health. Public health professionals and some influential political and public service leaders have often adopted a quite different approach. This second understanding of health adopts a much more holistic account that emphasizes the many determinants of health beginning with, of course, wealth (or the lack thereof) and extending through a long list of factors including diet, level of physical activity, occupation, and the built and physical environment, to name only a few. But what determines the determinants of health? More precisely, for those health determinants that are subject to individual and collective choices, what determines what we do and do not do collectively and individually? While the list of “determinants of health determinants” is long and complex, some if not many are subject to collective action in the form of politics and public policy. In other words, governments, by what they do and fail or choose not to do, can and do have a significant impact on the health of population. Policies and program choices have an effect on wealth, water and air quality, how we get around town, and levels of literacy and education. In turn, each of these factors and many others has a major impact on the health of the population.

In focusing on health determinants, the emphasis shifts from the planning, funding and delivery of healthcare services *per se* to a much wider range of economic, social, environmental and political forces that have an impact on the health of individuals and especially of broad populations. Public health professionals who are interested and concerned about population health then find themselves becoming active on a broad range of fronts in an effort to address the many determinants of health. Some of these efforts are directed at health promotion broadly defined where the target of the intervention is the general public or specific subsets of the population. These efforts are, if you will, from the public health community to individuals and populations. Other efforts, however, are directed much more specifically at policy (and program) choices that affect the health of populations. In this case, the efforts are from the public health community to the “decision-makers” and “policy-makers” who have the power to make policy and program choices that directly or indirectly influence population health.³ These efforts arise

1 Skidelsky 1992, 630.

2 Rein 1976, 272.

3 The concepts of “decision-maker” and “policy-maker” are in quotation marks because, as argued below, they are not generally well defined in health sciences literature and, indeed, they take on a quite different meaning in different models of the policy-making process.

from the simple yet profound observation that a wide range of policy and program choices about employment, environmental protection, education, etc. all have, or can potentially have, an impact on the health of populations.

This paper focuses on the requirements of healthy public policy, and more importantly the role of evidence, especially scientific evidence in the development of such policies. Simply put, this paper offers a critical account of the extent to which scientific evidence can have an impact on public policy. Drawing on health sciences literature on healthy public policy and political science literature on policy-making, this paper seeks to build a bridge between the worldview of health sciences⁴ and the worldview of political (and policy) science in order to offer some insight into how policy gets made and thereby offer some guideposts to those who wish to develop and promote healthy public policy. In particular, this paper focuses on two linked questions.

First, in order to provide advice to those who might wish to promote healthy public policies, what do we know about how policy gets made and how and where evidence is most effectively used? Specifically, what are some of the available theories, or absent formal theories, models and frameworks, of the policy process and what role does evidence play in each? Second, building on the contemporary preoccupation with evidence-based decision-making (and, at least in some quarters, evidence-based public policy), in thinking about how public policy is made, what constitutes “evidence” and what is the role of evidence in the policy process?

The structure of this paper is therefore as follows. The first part of the paper begins with a short overview of some of the key features of the evidence-based model of policy-making that appears to be predominant in health sciences and is the basis of much of the thinking about how to pursue and promote healthy public policies. This section includes a discussion of how evidence is conceived of in this model. There are often serious reservations about this model if only because it gives rise to a serious paradox: there are multiple examples to suggest that policy-making is not, in fact, a matter of taking action on the basis of the best available empirical evidence (Dopson and Fitzgerald 2005; Nutley, Walter and Davies 2007; Shulock 1999). This is not to say that there are not cases where policy and program choices are based on evidence (e.g. universal vaccination, water treatment).

In order to explore and perhaps explain this paradox, this paper moves on to contrast the direct and linear evidence-based model of policy-making found in health sciences literature with three models that are common in political science literature. Thus, the second part of the paper offers an extended account of the classic “stages” model of policy-making. The stages model is a useful way of underlining the many and different ways in which “evidence” is brought to bear on “policy”. Simply put, the role of evidence varies at different stages in the policy-making cycle. The stages model is also a useful place to begin because it is based on a logic of applied problem solving (e.g. name the problem, propose solution, choose a solution, etc.) (Howlett and

4 In this paper “health sciences” is used as a catch-all phrase to denote the broad range of research that occurs in medicine, nursing, epidemiology, public health, etc. While researchers in each of these areas might be uncomfortable with being grouped together, all share an interest in “health,” however defined, and, with some limited exceptions, approach the study of public policy using tools, techniques and worldviews developed in their core discipline. Moreover, casual observation and epistemological affinity suggest that the view of policy-making that I ascribe here to health sciences applies equally to a great deal of public-policy-related work conducted in environmental science, engineering, natural sciences, etc.

Ramesh 2003) and is therefore an accessible and intuitive model of policy-making for the non-specialist. However, the stages model is a limited representation of policy-making if only because the suggested systematic and linear approach to solving public policy problems is rarely found in reality. Moreover, the model describes policy process but does little to explain policy outcomes. To correct for these limitations, the third and final section of the paper introduces two additional analytical models of policy-making that offer quite different accounts of policy-making. The first is the advocacy coalition framework, which seeks to offer a predictive theory of policy-making. In this framework, research and research ideas become influential on policy as a result of their being incorporated and used by competing advocacy coalitions. Thus, the model introduces notions of power and competition and begins to explain why certain ideas and aspects of research are more influential than others. Having suggested that in policy-making “ideas” do not speak for themselves (as is implied in the predominant model of policy-making in health sciences literature), the third section of the paper also includes more recent (and in some ways more challenging) accounts of the policy-making process that abandon the predominant positivist account of political and social life. Rather than situating research and researchers as the more or less neutral producers of objective ideas that may or may not be incorporated into policy, there is a fast growing approach to the study of policy-making that situates research as an integral part of the policy-making process. In a range of post-empiricist, post-positivist, “constructivist” approaches to policy-making; researchers do not sit above and apart from the process of making policy. Universal laws or even predictive theories of policy are not possible because those who seek to understand the policy process are inextricably part of that process. What is possible and indeed essential is that policies be the product of democratic deliberation, facilitated by policy analysts as deliberative practitioners whose role is to develop a shared understanding of policy issues and policy problems.

1 MODELS OF POLICY-MAKING — THE VIEW FROM HEALTH SCIENCES

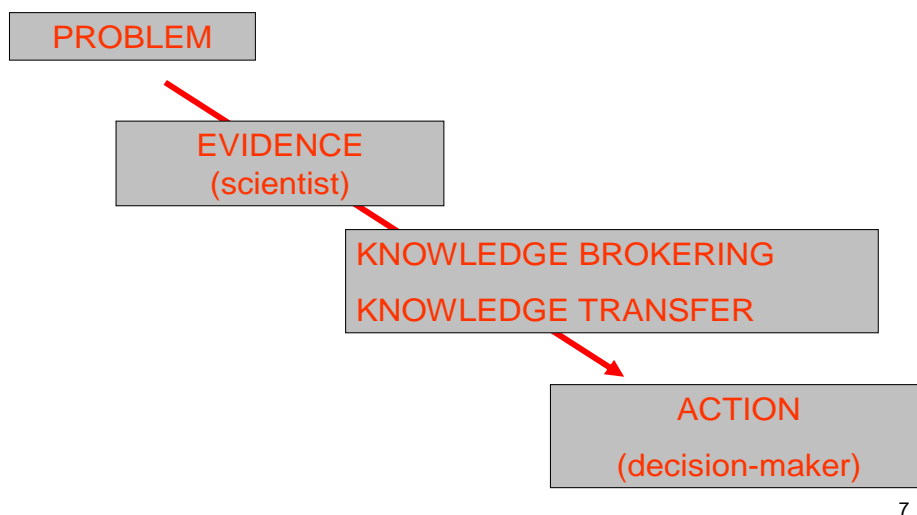
Healthy public policy is variously defined. For some, it is an ambitious normative project to address fundamental inequalities in society. On this account, healthy public policy is meant to designate a wide range of policies and program interventions that seek to make real change in the wide range of health determinants both at a national level (Davies 2001; Milio 2001) as well as internationally (Hunter 2005; Labonte 1998; Mohindra 2007).⁵ For others, healthy public policy is either defined negatively as all those public policies beyond health and healthcare delivery that have an impact on health or very broadly beyond what governments and public agencies do, to the policies and programs of the private and, one assumes, the not-for-profit sector. For the purposes of this paper, healthy public policy is defined loosely as “public policies, outside the formal health sector, that have an impact on health, such as education, transportation, and fiscal policies.”⁶

What then is required to develop healthy public policy? From the perspective of health sciences and, indeed, the natural sciences in general, the most common answer to this question is very straightforward. Public policies, and in particular those that have an impact on the health of the population, should be based on evidence. In this sense, a health sciences perspective adopts and adapts a linear, problem-solving approach to public policy. Having observed illness and disease in the population, the challenge is to better understand the causes of illness and disease, however complex, and having done so, move to addressing those causes by bringing to bear the best possible evidence. The original impetus for policy change may in fact be normative, for example when public health officials seek to mitigate the negative aspects of homelessness or drug addiction in order to improve the health of vulnerable populations. However, having decided that action is necessary, the goal is one of acting based on the best available evidence and/or acting in a way that is least likely to cause harm.

5 Such a broad definition of healthy public policy is, however, perplexing since it leads to a definition that encompasses most of what governments do (and beyond). This is not helpful since it likely leads to an overambitious and unrealizable agenda. As a Canadian government official who contributed to his paper put it, “If healthy public policy is everything, then it is nothing.” Or, as Marmor and Boyum have put it, “It is naive to assume that identifying a cause of ill health—like poverty—does much in itself to mobilize action against economic want” (Marmor and Boyum 1999, p. 38). For a similar sentiment see the comments by Carolyn Tuohy on the dangers associated with “simply substituting health for the concept of social welfare or net social benefit” (Tesh et al. 1987, 258).

6 This definition is borrowed from the National Collaborating Centre on Healthy Public Policy, funded by the Public Health Agency of Canada. The definition is found in the description of the Centre. www.inspq.qc.ca/ccnpps/activites/ressources.asp?id=1&lg=en, accessed June 13, 2007.

Figure 1: The dominant view of policy-making in health sciences: from evidence to policy



In the case of smoking and tobacco control, this problem-solving model moves from observed high levels of lung cancer, circulatory disease and other health problems, through to showing the link to smoking and second-hand smoke, and then to efforts to dramatically reduce tobacco use, particularly among young people. The public policy response, in this model, is therefore almost self-evident: whatever it takes to reduce the incidence of smoking in the population and, failing an outright ban on tobacco, a complex set of measures to reduce consumption. More generally, in the face of a public health problem (e.g. diabetes; obesity) and strong empirical evidence as to what causes the problem, the policy response is relatively straightforward. Policy becomes a matter of problem solving, and designing and implementing programs to address the root causes.

There are at least two other characteristics of this model that deserve comment. First, the transition from step two (research) to step three (policy) has itself been the subject of considerable research and there is now an impressive body of experience and literature on what works by way of knowledge and research transfer. The assumption in this literature appears to be that necessary (but perhaps not sufficient) conditions for policy action are getting the research results into the hands of policy and decision-makers, and effective use of a myriad of techniques of knowledge transfer, exchange and brokering. Since public policy decisions are (or at least should be) based on the best available evidence, and that evidence is the result of careful research, the literature concerns questions of research transfer and research use. In other words, healthy public policy becomes first a question of generating evidence about “what works” (Davies, Nutley, and Smith 2000; Nutley, Walter, and Davies 2007) and second using sophisticated techniques to transfer this evidence to decision-makers on the understanding that policy and program decisions will, naturally, be based on this evidence.⁷ However, this focus on

⁷ In some cases, health public policy is also used to describe efforts to avoid or at least reduce the health risks associated with broader public policies (i.e. health impact assessments).

research transfer assumes, for the most part, that policy will be based on evidence if researchers can find the most effective ways of putting research into the hands of decision-makers. In other words, the assumption on the part of researchers about decision-makers is one of “if they have it (research), they will use it.” This assumption is, however, not supported by much of the available empirical evidence that points to the fact that many policy decisions are based on considerations other than the best available evidence as well as cases of “policy-based evidence” (Marmot 2004) and the general reality that while policy-oriented researchers may want to “speak truth to power,” the powerful are by no means obliged to listen and often do so when it best suits them (Burton 2006, 185).

Second, there is also a strong emphasis, reasonably so, on testing and evaluating the efficiency and effectiveness of different policy and program interventions. Defining what works can and should be based on the careful, scientific and evidence-based evaluation of different interventions. From a health sciences perspective, policy and program interventions are understood to be analogous to clinical interventions. Just as evidence-based medicine requires systematic analysis of different possible clinical interventions ideally based on randomized controlled trials (RCTs) and other similar techniques, evidence-based public policy should similarly be based on the careful testing of different policy and program options. This is arguably where the role of empirical evidence is the strongest. Rather than speak of “evidence for policy,” it may be preferable to speak of “evidence for program and policy instrument choice.” Careful research is required to make choices between an array of possible policy instruments (e.g. the relative impact of regulation vs. tax expenditures to incite farmers to move out of tobacco production) and program interventions (e.g. specifically what kind of physical activity regime in schools has the greatest impact on childhood obesity?). In fact, there is a long tradition of social experimentation for public policy, particularly in the United Kingdom and in the United States (Weiss and Birckmayer 2006). In Canada, the work of the Social Research and Demonstration Corporation⁸ is a good example of this and the Cochrane (health) and Campbell (social policy and education) collaborations are excellent international examples. In all three cases, the research focus is on bounded and small-scale policies and programs or, as they are described by the Campbell collaboration, “interventions.”

To return to the example of smoking, the model requires rigorous testing of the relative effectiveness of anti-smoking ads aimed at children and teenagers, efforts to promote enforcement of the laws restricting the sale of tobacco products, pricing and tax policies to make tobacco more expensive, etc. Here the assumption is that policy-makers will, or at least should, choose the policy or program responses that have been shown to be most effective. This may, in fact, be an effective (if partial) approach to promoting evidence-based (healthy) public policy. Rather than focus on the question of “should action be taken,” the emphasis is downstream.

8 The Social Research and Demonstration Corporation (SRDC) describes itself as having a two-part mission “to help policy-makers and practitioners identify social policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and to raise the standards of evidence that are used in assessing social policies and programs. It accomplishes this mission by evaluating existing social programs, and by testing new social program ideas at scale and in multiple locations before they become policy and are implemented on a broader basis.” (Taken from the SRDC Web site, www.srdc.org/en_about_us.asp?id=887, June 14, 2007.)

Once the decision has been taken to act, the research question is much more focused on “what can and should be done,” the merits of different policy and program responses.

This being said, proponents of healthy public policy and others in health sciences have learned that this evidence-based model of policy-making does not always capture what happens in practice. The reality is that in many areas of public policy, broadly defined, it would appear that decisions are sometime based on anything but scientific evidence. Casual observation suggests that governments make policy decisions based on the vagaries of public opinion, electoral considerations, personal preference and crisis management (Willison and MacLeod 1999). Thus, not surprisingly, both proponents and critics of evidence-based healthy policy-making have engaged in a spirited and sometimes heated debate and discussion of the ethics, epistemology and nature of both evidence-based medicine and clinical decision-making and, by extension, evidence-based (health) policy (Holmes et al. 2006; Jenicek 2006; Holmes 2006; Kemm 2006; Miles and Loughlin 2006; Willison and MacLeod 1999).

There is neither the space nor a need to get into this debate here. For the purposes of this paper, two linked ideas stand out. First is the shift from “evidence-based” to “evidence-informed” policy-making and second is the renewed interest in taking into account the *context* of decision-making. It would appear that the growing consensus view is one that asserts that policy-making in healthcare and indeed in other domains that have an impact on the health of populations cannot be based solely on available scientific evidence, however systematically it might have been reviewed (Dobrow, Goel and Upshur 2004; Dopson and Fitzgerald 2005). It would appear that the gold standard has shifted to one of striving for *evidence-informed* decisions that take into account the context in which decisions are made (Chalmers 2005; Lomas 1990; Nutley, Walter, and Davies 2007). Faced with the reality that neither clinicians nor policy-makers appear to be willing or able to rely solely on the best available scientific evidence, the goal remains one of ever more effective research and knowledge transfer, but with a view to informing policy and program decisions. Having acknowledged that complex decisions are often (and perhaps should be) based on the specific context of the decision,⁹ it is understood that decision-makers will make decisions based on the available evidence combined with their reading of the context in which the decision must be taken.

From the perspective of political science, this shift is critical. If nothing else, it allows for an account of policy-making and policy decisions that takes into account the efforts by decision-makers to account for the underlying values and value conflicts associated with a policy decision. To return to the tobacco policy example, the weight of scientific evidence clearly demonstrates the negative health effects of both smoking and second-hand smoke. However, consideration of context allows for the possibility that decision-makers will want to take into account the impact of regulatory restrictions on smoking and the sale and distribution of tobacco products on, among other things, individual freedom and Charter rights, the economic viability of small businesses, the cultural concerns of Aboriginal peoples, interprovincial tax competition and the livelihood of farmers who have relied on tobacco farming for generations. Consideration

⁹ As Dobrow and colleagues put it, both evidence and context are integral components of an evidence-based decision and attention must be paid to the “decision-making context.” See Dobrow, Goel and Upshur 2004, 207–217).

of the context also encourages us to ask how issues of tobacco control land on the public policy agenda and how they stay there. As Albæk and his colleagues have argued, the structure of the political system (e.g. federal vs. unitary; congressional vs. Westminster) can have a significant impact on whether and how issues of tobacco control make it on to the political agenda (Albæk, Erik; Christoffer Green-Pedersen and Lars Beer Nielsen 2007). In other words, a model of policy-making that aspires to have scientific evidence simply *inform* decisions (rather than decisions based *only* on such evidence) allows for the real world possibility that decision-makers can and will only tackle some issues and not others at any point in time and will take into account the values and value conflicts that are often very real in making broad policy decisions.¹⁰

To summarize the argument so far, health sciences view¹¹ of the policy-making process would appear to be one that emphasizes a quite linear process, one that does or should begin by the careful amassing of evidence on what works—this is the purview of the scientific expert. This is followed by a process of ensuring that evidence is transferred effectively to decision-makers. Further, this model assumes that the choice of policy and program interventions should, once again, be based on the careful gathering of evidence as to which are most effective. More recent work in health sciences emphasizes the importance of context and aims for decisions, including policy decisions, that are informed by evidence and take into account the context in which decisions are made. This latter interest in context is critical in the bridge building that this paper seeks to accomplish. Allowing for context, it seems to me, enables a consideration of issues of power in all its dimensions. If it is nothing else, the study of politics (and hence political science) is the study of power. This brings us to the ways in which policy-making is understood by political scientists and other social scientists who share an interest in understanding (and perhaps even explaining) how policy decisions and non-decisions are made.

10 Some might still want to argue that information about the values and value conflicts that are at issue in a policy decision still constitute a form of “evidence” and so we can still speak in terms of evidence-based decision-making and policy (see Mair Gray, J.A. 2004). I find this to be stretching the concept of evidence too far thus assuming that revealing underlying values and value conflicts is a straightforward matter. In fact, politics is often about bringing to the fore value conflicts. Our political institutions including collective Cabinet decision-making and parliamentary debate exist to give expression to these values and value conflicts and, one hopes, reconcile them. However, these institutional arrangements are often unable to give voice to the full range of public concerns, hence the interest in finding ways to encourage significant citizen input and public engagement and aspirations to move to more deliberative forms of democracy (Fischer 2003).

11 I appreciate that it is perhaps foolhardy to ascribe to something as large and diverse as the health sciences a single view of the policy process. Again, there are significant and important differences. What is being described here, however, is my observation of an overall central tendency.

2 MODELS OF POLICY-MAKING — THE STAGES MODEL

The stages model of policy-making is arguably among the most widely used while at the same time one of the most criticized. While by no means a predictive theory of policy-making or even a particularly accurate account of how policy is made “in the real world,” the stages model remains an excellent heuristic device (Burton 2006; Deleon 1999).

There are numerous varying accounts that emphasize the different stages of policy-making. Among the first was that of Harold Lasswell who identified seven stages beginning with what he called “intelligence” (data-gathering) and ending with appraisal or evaluation (Howlett and Ramesh 2003). Over the next 50 years there have been numerous attempts to amend and improve on this initial formulation with different authors identifying different numbers of stages and using different labels to describe each stage. For our purposes, it is useful to adopt the formulation of Howlett and Ramesh (2003) who see the stages model as a form of applied problem-solving and divide the policy-making process into five stages:

Stages in the policy cycle

- 1- Agenda setting
- 2- Policy formulation
- 3- Decision-making
- 4- Policy implementation
- 5- Policy evaluation

With respect to the use or non-use of evidence, the key point is that how and to what extent evidence is used, as well as what kinds of research evidence, will vary in each of the stages of the policy-making process (including policy evaluation, which is not considered here).

2.1 EVIDENCE AND AGENDA SETTING

The agenda setting stage is where governments decide what to focus on the relative importance of any given issue or set of issues. The government’s agenda is complex and is the result of the push and pull between a range of forces, including promises made during election campaigns, advice received from the public service, the policy and program priorities of the political party that forms the government, policy and program development initiatives initiated by the previous government, pressure from foreign governments, the personal priorities of the prime minister or premier and the personal priorities of individual ministers.

The agenda of a government is multifaceted and complex and goes well beyond highly public statements such as Throne speeches and budgets. For example, John Kingdon argues that the agenda of a government is best captured by considering three distinct streams (Howlett and Ramesh 2003). He first identifies a “problem stream” made up of issues that must be dealt with, perhaps sooner, perhaps later (e.g. how to address the increasing incidence of obesity in the population). Second is a “policy stream” dominated by ideas including ideas about what should be done (e.g. the government should adopt a comprehensive cancer strategy). Third in

Kingdon's model is the "political stream" of priorities that arise from the natural desire of governments to be popular and get re-elected and give rise to agenda items with perhaps dubious policy or program merit but considerable public appeal (e.g. subsidies for public transit passes).

The role of evidence in agenda setting is equally complex and multi-faceted, particularly when we acknowledge that some of the priorities adopted by governments are the result of partisan and public pressure. That said, how a given issue is framed can also have an enormous impact on the place of evidence and what evidence is considered relevant. When an issue is portrayed as a technical problem, experts can and often do dominate the process of decision-making. In contrast, when the various ethical, social and indeed political implications of the issue are the focus, a much broader range of participants can and must become involved (Howlett and Lindquist 2004).

2.2 EVIDENCE AND POLICY FORMULATION

The policy formulation stage is where governments, perhaps with the assistance of outside experts, seek to identify the range of possible responses to a given definition of the problem. The range of proposals for action may originate in the agenda-setting process itself. For example, if the problem of obesity is framed as being exclusively about individual behaviour then the resulting policy options will focus on changing individual behaviour (e.g. exercise and diet). Alternatively, the process of identifying what can be done about a given policy problem may be a discrete process involving government officials in consultation with relative outsiders, be they interest groups, academics or other governments.

There is extensive (if not always internally coherent) political science literature that seeks to shed light on the process of policy formulation. There is some agreement that it makes sense to speak about different policy subsystems: a large number of parallel and simultaneous policy formulation processes between (e.g. foreign policy vs. health policy) and within (e.g. Aboriginal health vs. cancer control) different policy domains. How to characterize these processes is by no means a settled matter. Policy communities, policy networks, iron triangles, issue networks, sub-governments and advocacy coalitions are all names that have been given to different conceptualizations of different policy subsystems.¹² The advocacy coalition framework developed by Paul Sabatier and Hank Jenkins-Smith is one of the more popular theories of policy-making, if only because it purports to generate testable hypotheses. It will be discussed in more detail below.

For the moment, the critical point is the complexity of the process by which policy and program choices are identified and evaluated, and which are included and excluded from final consideration by those with the power to make binding decisions on what is to be done. In other words, even if an issue is "on" the policy agenda, it is not always straightforward or clear as to who is involved in the process of working out the nature of the issue and therefore "what is to be done."

¹² For a survey and introduction to this literature see Howlett and Ramesh (2003), Chapter 6, and Pal (2005), Chapter 6.

2.3 EVIDENCE AND DECISION-MAKING

As argued earlier, in much of health sciences literature on policy-making, decision-making on policy is the core focus. Thus, for example, in the various models of knowledge transfer, exchange and brokering,¹³ the emphasis is on getting research to the persons who make decisions. In contrast, in the stages model, deciding what to do is only one of several steps in the policy process.

In order for action to be taken, decisions have to be made after agreeing that an issue is on the agenda for action and assembling information and analysis on the range of possible responses. The decision-making process can be quite simple and involve one or only a small group of people (as is often the case in clinical decision-making) or it can be quite complex and involve dozens if not hundreds of people (as is common in Cabinet decision-making). Similarly, public policy is rarely the result of a single discrete decision and is much more likely the result of a series of piecemeal, more or less integrated decisions or decision rounds (Howlett and Ramesh 2003).

Moreover, this is where the distinction between policy and programs can become critical. In deciding what is to be done, or more precisely, the range of options for what might be done, a series of decisions or decision rounds is required. Having agreed that a policy problem (e.g. long wait times, the risk of pandemics, social exclusion) is “on the agenda,” the first round of decisions is about general direction and the broad choice of policy instruments. In response to the problem, will the emphasis be on regulation, public expenditure, tax measures of various kinds or perhaps waiting for conditions to change (the equivalent of “watchful waiting” in a clinical setting)? The formulation of options in the course of this first round is not likely to be particularly amenable to evidence or at least evidence alone. The choice of instruments is often determined as much by the general philosophical orientation of the government (e.g. liberal governments prefer spending, conservative governments tax measures) as it is by the marshalling of evidence. In subsequent decision rounds, having established the general direction, governments must decide on specific program options.

The role of evidence in decision-making has been extensively studied over many years and while it is not possible or necessary to survey this literature here,¹⁴ the following generalizations arising from this body of research have implications for students of health public policy:

- as suggested earlier, we know from a range of studies that research evidence is not always used or even sought out;
- research evidence is sometimes used not to guide decision-making but rather to justify it. There are many examples of what might be called “decision-informed evidence” where research is assembled in order to justify a decision that has already been taken; and,

13 Notions of knowledge brokering are not limited to the health sciences. They can be found in the policy analysis literature. See for example, (Lynn 1999).

14 For an introduction to the literature on evidence and decision-making with a particular emphasis on health policy see, inter alia, Bekker, Putters and Van der Grinten, T. E. D. 2004; Champagne and Lemieux-Charles 2004; Lavis 2004; Ouimet et al. 2006.

- different kinds of evidence are used in different kinds of ways (Amara, Ouimet and Landry 2004).

2.4 EVIDENCE AND POLICY IMPLEMENTATION

At first glance, it seems odd to focus on what happens after the decision has been taken. In small-scale and clinical settings, this distinction is arguably less critical because, if you will, the person who makes the decision implements it. In most areas of public policy, however, the decision to initiate a new policy direction may not be the end of the story; it may simply be a critical milestone along a much longer process that requires a number of subsequent decisions and choices.

For example, the minister of Health Promotion in a given provincial government may recommend to their Cabinet colleagues that the government take action to increase the amount of physical activity in schools. Cabinet might well agree on the broad policy or that dedicated funds should be set aside for targeted transfers to school boards. While these decisions are important, they leave unspecified precisely how school boards, individual schools and individual teachers will, in fact, expand physical activity. Thus, the high level decision to expand physical activity levels triggers a complex series of subsequent decisions about funding and policy implementation.

Arguably, it is at this stage that research evidence can have its greatest impact. Careful empirical studies can be and have been conducted on the effectiveness of different approaches to physical activity in schools (e.g. how many minutes per week, at what level of intensity, based on what activities, etc.) (Strong et al. 2005). In fact, I would go so far as to suggest that to the extent a case can be made for evidence-based public policy, it is precisely at the policy implementation phase where broad policy is translated into detailed program choices. The focus remains one of research and knowledge transfer but the target of the transfer changes. To take the example of physical activity in schools, authors of detailed studies of different program mixes need to target decision-makers at the level of the individual school board and school, not necessarily at the provincial (much less federal) level. Moreover, careful research on “what works” (Davies, Nutley, and Smith 2000) at the program level also lends itself to collaboration between, on the one hand, researchers and, on the other hand, those responsible for recommending and implementing specific policy and program initiatives.

2.5 EVIDENCE AND POLICY-MAKING IN A STAGES MODEL — GENERAL OBSERVATIONS

There are a number of features of this heuristic account that stand out when contrasted with the implicit and explicit features of the policy process that is predominant in health sciences. First, note that decision-making is but one stage among many. This suggests that the preoccupation with exercising influence over specific “decision-makers” or “policy-makers” is misplaced or at least offers an incomplete account of how research can and does have an impact on policy. Rarely is government policy the result of a single decision—the inherent complexity and contestability of policy means that taking action will require many decisions, perhaps over several weeks, months or even years.

Second, in this model, the stages are by no means hermetically sealed from one another, such that the range of policy and program options that are retained at the decision-making stage are heavily determined by what goes on at the agenda setting and policy formulation stages. In other words, a strategy designed solely to try to influence decision-makers risks failure because it does not take into account whether and to what extent a particular policy problem is on the active agenda of a government and, if it is, how the range of plausible choices has been defined and reduced to a manageable number in order to facilitate decision-making (Howlett and Ramesh 2003). Similarly, it is potentially misleading to focus only or even primarily on decision-making since this can mean missing the extent to which policies and programs can change, often quite dramatically, at the implementation stage, usually as a result of the decisions made during the implementation phase by what have been described as “street-level bureaucrats.” Incidentally, these can and do include physicians and nurses in clinical and community health settings (Checkland 2004; Pressman and Wildavsky 1979; Walker and Gilson 2004).

Third, while presented in a sequential order here, there is a strong consensus in the literature that not all policy problems go through the cycle in a particular order or that all stages are used in all cases. Thus, for example, it is often the case that, in response to a crisis or external shock, policy-makers move directly to the decision-making stage based on little or no analysis of the range of possible policy and program options. The immediate response to SARS is a good example where federal, provincial and local decision-makers were forced to move quickly to make policy and program decisions with the inevitable mixed results. Similarly, policies and programs are sometimes ended well before evaluations are done (or an evaluation is not built in from the beginning), making it more difficult to know the extent to which they were or were not effective.

Thus, different kinds of evidence are critical at different stages of the model. Evidence is required to frame the problem and make the case that it warrants a prominent place on the public policy agenda. Similarly, evidence is required to assess the likely impact of various policy options and different kinds of evidence are required to evaluate the impact of the policy or program. In this model of policy-making, the value of research evidence is based on criteria external to the model—the rigour with which the research is conducted, the robustness of the findings and conclusion and, following the work on research and knowledge transfer, the effectiveness by which researchers disseminate their work to those directly involved in policy-making and program development (Lavis, Ross, and Hurley 2002). In contrast, in other models of policy-making, research and evidence are not external to the model; they are an integral part of the policy-making process.

3 MODELS OF POLICY-MAKING — THE ADVOCACY COALITION FRAMEWORK AND THE ARGUMENTATIVE TURN

3.1 ADVOCACY COALITION FRAMEWORK

As suggested earlier, the stages model is by no means the only model of policy-making and has significant limitations. In an attempt to address some of these limitations, Sabatier and Jenkins-Smith developed the advocacy coalition framework (ACF) in the 1980s (Sabatier 1988; Sabatier and Jenkins-Smith 1999). As a result of numerous efforts to apply, critique and test the framework over the past two decades, the ACF has moved toward being something closer to a predictive theory of policy-making or at least a theory of medium-term policy change (Burton 2006).

Unlike the stages model, which offers little insight into policy change, the ACF seeks to explain why public policies change over time. In this framework, the preferred approach is to consider medium term policy change and focus on specific policy subsystems similar to the models of policy decision-making discussed earlier. Within these subsystems, the policy process is driven by coalitions of various actors with an interest in the policy field. These actors can include policy advocates, lobbyists, decision-makers, journalists, public servants, individual politicians, and so on. For the purpose of this paper, it is also important to note that advocacy coalitions will also include policy researchers both inside and outside of academic settings. These internal workings of policy subsystems and the relative influence of different advocacy coalitions are governed by relatively stable sets of rules, institutions and norms that include constitutional structures, basic sociocultural values and a given distribution of broadly defined resources. In the case of healthcare in Canada, for example, the internal workings of this policy subsystem are defined by the constitution making health a largely (but not exclusively) provincial responsibility, the Canadian commitment to the redistributive bargain that underpins a publicly funded healthcare system and the practical reality that healthcare is heavily influenced by the continuing emphasis on doctors, hospitals and acute care.

The ACF emphasizes the overall stability of policy subsystems and explains change with reference to policy-oriented learning inside the subsystem and, much more importantly, shocks that arise from outside the system. Policy learning in this model refers to relatively enduring changes to the ways in which members of advocacy coalitions understand the issues based on experience and increased knowledge of the state of the problem (Sabatier 1988). However, Sabatier and his colleagues argue that real change occurs less as a result of such learning than as a result of external shocks that can include the rise of new interest groups, changes in the orientation of the party in power, or a shift in the overall policy focus of the government. In the case of healthcare in Canada, internal policy leaning might include such movements as primary healthcare reform and the slow shift in focus to the “upstream” determinants of health. External shocks could include key court decisions (e.g. Chaoulli), the resource constraints of the mid-1990s leading to relative underinvestment in healthcare, or the ageing of the population.

3.2 EVIDENCE IN ADVOCACY COALITION FRAMEWORKS

In the ACF model of policy-making, unlike the stages model, there is explicit recognition of the role of policy research and policy researchers. Most importantly perhaps, policy researchers are explicitly identified as key members of advocacy coalitions. Researchers can become members of advocacy coalitions by active choice but, equally likely, they become part of such coalitions because their research is appropriated and used by other members of the coalition as they seek to maintain their position and defend it against challenges from other advocacy coalitions. In the case of public health, for example, research on the impact of poverty, education or social capital on the health status of populations is incorporated into the strategies of advocacy coalitions seeking greater investments in health determinants, regardless of whether researchers take an active interest in the policy implications of their research.

Whether and to what extent any research findings have an impact on decision-makers on this account is much less the result of the effectiveness of research transfer and much more the result of the position of the advocacy coalition that emphasizes those research findings (Burton 2006). In the case of health policy for example, researchers doing work on the impact of the built environment on rates of obesity (Keith et al. 2006) are able to disseminate their research to (some) people in governments. However, the impact of this research will be limited if the overriding definition of the “problem” of obesity is that this is a problem of, and for, individuals, even though, as Evans observes, “The so-called ‘individual’ behaviours are deeply interwoven with the physical and social context”(Robert G. Evans 2006, 22).

When it comes to research and evidence, perhaps the most enduring implication of the ACF is that it opens the door to the possibility that policy-making is driven by competing and multiple accounts of the nature of policy problems and by the political clout of a given advocacy coalition. This insight challenges the image of, as Burton puts it, “objective policy researchers uncovering universal truths, revealing these to policy-makers and seeing them incorporated in the process of making policy” (Burton 2006, 186). In other words, the ACF emphasizes the fact that power and competition for power (a central tenet of how political scientists analyze policy-making) are critical to explaining how research evidence is used and not used.¹⁵ However, if “evidence” is then something that is not eternal and immutable but is a strategic resource, this encourages us to consider the possibility that research evidence is, in fact, socially constructed, a core tenet of a more discursive account of policy-making.

3.3 THE ARGUMENTATIVE TURN AND A DELIBERATIVE APPROACH TO POLICY-MAKING

The study of public policy was, for many years, thought by some to be an area of human endeavour that was a good candidate for careful scientific study. In the latter half of the 20th century, a movement of “policy science” emerged, which sought to develop a rigorously empirical approach to the study of public policy and testable theories of policy-making. In political science, in a broader sense, the “scientific” approach to the study of political life in

¹⁵ This also applies to other accounts of policy-making that focus on debate and argument within policy subsystems such as public health.

general and public policy in particular has led to efforts to develop testable theories of politics and policy. The advocacy coalition framework is a product of this movement.

However, in the last 25 years or so, the discipline of policy studies has expanded considerably and moved well beyond the search for covering laws and testable theories of policy-making. Political and other social scientists who study public policy now embrace radically different theoretical and methodological approaches (Orsini and Smith 2007). They increasingly draw from other subfields of political and social science, including what has come to be known as historical institutionalism as well as feminist analysis, the “new geography” and social movement analysis, as well as drawing on the work of theorists such as Jurgen Habermas and Michel Foucault (even if these different fields and authors have very little in common). For students of healthy public policy, the details of this expansion are perhaps less important than the overall tendency to radically reconceptualize the role of evidence, the role of the policy analyst and indeed the very possibility of a predictive science of policy-making.

There are relatively few core or shared ideas among proponents of critical policy studies beyond a deep scepticism about the possibility or even the desirability of a science of policy-making and, more generally, a common desire to move beyond objectivist constructions of reality and a rejection of a strict dichotomy between facts and values.¹⁶ However, in this approach to the study of politics and policy, there are two linked ideas—discourse and policy frames—that can help students of healthy public policy make sense of the policy debates of which they wish to be a part.

Discourse, discursive politics and the analysis of discourse are increasingly common among students of public policy. Discursive politics can be defined as “a struggle for discursive hegemony in which actors try to secure support for their definition of reality” (Hajer 1997, 344). On this account of politics and public policy, discursive politics become the confrontation between different and competing policy frames. As Juillet puts it, “By weaving a selection of facts, beliefs and values into a plausible prescriptive narrative, these policy frames, or storylines, allow actors and publics to reduce the complexity of policy problems, ascribe meaning to problems and events and crudely assess possible policy alternatives” (Juillet 2007, 259). This approach takes us well beyond competing advocacy coalitions where there is a common definition of the problem. Discursive politics emphasize the fact that, very often, policy debates are between groups that proffer fundamentally different understandings of the problem, the significance of the problem and the range of possible solutions.

¹⁶ Maintaining a distinction between facts and values is essential in health and natural sciences. It is this distinction that allows scientists and health professionals to participate in policy debates and take the position that what they bring to the table are facts based on careful amassing of research evidence. If policy decisions are ultimately taken based on other considerations (i.e. values and value conflicts), so be it. As a reader of an earlier version of this paper put it, (a) policy decisions ought to be science-informed, (b) the non-science (i.e. normative) rationales should be clearly differentiated from the scientific rationales and (c) it is the conflation of these two that is the most irritating for scientists. That being said, one of the basic axioms of much of the work in science and technology studies is that scientific knowledge, like all knowledge, is socially constructed (see Latour, Bruno and Steve Woolgar, eds. 1979).

In the case of obesity, for example, as I have alluded to before, there are several possible ways of framing the problem each with its own array of embedded and core facts and beliefs about the nature of the obesity problem. As Lawrence has observed, based on an analysis of media accounts of obesity in the United States, there are at least two competing frames, one that emphasizes individual behaviour and one that emphasizes environmental factors. In the first framing of the problem, obesity is caused by and can be solved by individual choices. The role of government is limited to ensuring individuals have the information they need to make informed choices (e.g. school curriculum changes, advertising campaigns). In the environmental frame, in contrast, the problem is one of unhealthy food and a broader physical environment that makes it difficult for people to get the exercise they need. These are the result of policy choices and, therefore, the solution to the problem lies in the realm of policy change (Lawrence 2004).

3.4 EVIDENCE IN DISCURSIVE POLICY-MAKING

Political scientist John Dryzek argues that “Nobody can defend any longer the position that it is possible to produce covering laws based on logical deduction”. He goes on to argue that, in the social sciences at least, no one believes it is possible, “to stockpile such laws and develop predictive theory that could then be the basis for policy interventions in the causal web that constitutes social systems” (Dryzek 2004).¹⁷ The broader point is that this gives a sense of the epistemological start of what has come to be known as the discursive or argumentative turn in policy analysis. In keeping with the postpositivist and constructivist traditions in the philosophy of science, this approach to thinking about public policy asserts that while policy analysis is an integral part of the discursive practice of policy-making, it cannot offer a neutral accounting of the world. When thinking about policy-making using this approach, both policy analyst and policy-maker are not sitting above the real worlds of policy and the attendant conflicts. They are inextricably part of the policy process and the perspective of both analyst and decision-maker, researcher and policy-maker are heavily conditioned by who they are and what their position is in the social process that is policy-making. Thus, unlike the stages model for which evidence and analysis is largely outside the model,¹⁸ or the ACF that allows for the possibility of the relatively neutral policy analyst, the discursive turn denies the possibility that a policy analyst, or anyone else who might wish to contribute “evidence” to policy-making, can be a neutral third party. In this tradition, there is no such thing as producing knowledge for its own sake and then, perhaps, having it contribute to the policy process. As Rogers Smith has observed, all knowledge is inextricably tied to advancing specific value frameworks (Smith 2002). In fact, and again in keeping with the constructivist roots of the argumentative turn, on this account of policy-making facts are social constructions, not objective features of the material world awaiting discovery (Finnemore and Sikkink 2001; Haas 2004). The postpositivist account of policy analysis asserts that “there are no social facts that exist independent of the investigator as sociopolitical beings” (Lynn 1999, 419).

17 Although, contrary to Dryzek, many still do defend that position (Green 2005).

18 In the stages model, it is quite possible that public servants will generate analyses based on the available evidence and/or tap into the analysis done by persons outside government. Nevertheless, in this model, evidence and analysis remain an independent force.

On this account of the policy-making process, the job of the policy analyst, and indeed for anyone seeking to change public policy, is much less about bringing together facts in new and different ways and deducing the best policy options and is much more about facilitating conversations and dialogue between different participants in the policy process. Rather than search for one truth to inform policy-making, the task of policy analysis and policy change becomes one of recognizing that there are many truths. Rather than produce what amounts to highly contextualized, propositional knowledge (as is found in an ACF approach), policy analysis becomes an exercise in analyzing what participants in the policy process or those who would be effected by or interested in the policy decisions themselves have to say about the policy in question (Hajer and Laws 2006). The task of policy analysis then becomes one of focussing on beliefs, how policy problems are framed and a careful review of narrative, discourse and, in some cases, storytelling (Hajer 2005).

Under the argumentative turn, policy analysts (and, for the purposes of this paper, proponents of healthy public policies) become integral parts of the deliberative process. Their analysis, advocacy and any evidence they generate are not a neutral third party exercise nor are they rooted dispassionately in “science,” but are fundamental parts of the deliberations over what constitutes the most appropriate way forward to address policy challenges facing society. In this approach, evidence for policy is the result of a very precise, almost ethnographic approach that seeks to discover and describe the beliefs, frames and discourses about the policy problem. And since these are not likely to be stable, the job of the policy analyst and those who wish to change public policy becomes one of regularly returning to the field to see if there are shifts in what people believe, how they frame the problem and the discourse or language they use to describe the problem (Hajer and Laws 2006).

To return once again to the public health challenges associated with rising levels of obesity, calculating the numbers of persons who are clinically obese and evaluating the relative impact of personal (e.g. diet and exercise) and societal (e.g. the nature of the built environment) is but a start of the policy analysis process. A more deliberative approach to policy analysis, and therefore healthy public policy-making, encourages the analyst to probe the meaning of the word obesity, how the concept is socially constructed and the different understandings of the concept expressed by health professionals and non-health professionals, by those who are obese and those who are not, and by the general population as compared to the parents of children considered to be obese. Moreover, if analysis is to lead to policy then the job of the policy analyst becomes one of being self-critical about the limits of the policy advice one can give knowing the limits of the evidence. For example, the validity of research evidence on the causes of obesity is most likely to be validated only with reference to a single scientific community (e.g. medicine; public health) even while the definitions of obesity are themselves far from immutable and change over time (Chang and Christakis 2002). More to the point, research evidence on obesity is often fed into a process that leads to policy decision and programmatic interventions that are aimed at influencing the behaviour of not only those who are obese (an individual level approach) but also of those who make decisions that affect the ability of populations to eat well, exercise regularly, and generally live their lives in ways that can make obesity less likely (a more societal level approach). As a result, it seems reasonable to include in the process of policy analysis careful review and analysis of how all of these groups and individuals understand obesity, how they frame the problem and what stories they tell

themselves, their peers and society at large about what they do and who they are. In other words, if evidence is meant to influence policy that in turn is meant to influence behaviour, then we need to be confident that we understand how all of those involved understand the issues at hand.

In more practical and direct terms, a more discursive approach to policy-making means adding tools to the toolkit of the policy analyst. Added to the traditional panoply of quantitative methods, there is a need for tools that allow for the analysis of discourse, the identification of different and competing policy frames, and, perhaps most importantly, tools that allow for a dialogue with a wide range of people including analysts, decision-makers and members of the many communities that will feel the impacts of policy and program change (Fischer 2003). Consider, for example, the work of Canadian Policy Research Networks (CPRN), which took on the challenge of policy analysis around the long term storage of nuclear waste. This has traditionally been understood as an empirical challenge with emphasis on science and engineering studies. However, before governments can make decisions on how and where to store nuclear waste, they need to have a much finer sense of what the population thinks not just in general (“not in my backyard”) but also in the face of the need to reconcile our demand for electricity and the resulting nuclear power plants’ need to store the waste from these plants (Maxwell et al. 2004). CPRN and a wide range of other organizations in Canada and a number of other countries are actively experimenting with deliberative policy-making tools and techniques designed to bring the views of citizens to bear on complex policy issues.

CONCLUSIONS

Even though Keynes suggested governments hate to be well informed, they feel compelled to use scientific research in policy-making. Governments are therefore voracious consumers (and producers) of research and science and scientific evidence do contribute to policy. However, as Martin Rein has cautioned, “the link is neither consensual, graceful nor self-evident,”¹⁹ and this paper seeks to describe and chart this lack of consensus, gracefulness and clarity. By way of conclusion, what follows are a series drawn from different models of evidence and policy-making described in this paper.

Proposition one: Scientific evidence is perhaps most influential on discrete program choices.

Proposition two: Research and knowledge transfer are critical but not the whole story.

Proposition three: The role of scientific evidence is variable, depending on the stage of the policy-making process at which it is introduced.

In health sciences broadly defined, the way in which evidence influences policy is often implicit but it is generally assumed that scientific evidence informs (or should inform)²⁰ decisions about public policy in much the same way that evidence informs clinical decisions. That is to say that there is a reasonably direct, linear relationship between what we know and what we do. Two things stand out in this model of evidence and policy-making. First, the model would seem to have some applicability to discrete program decisions. There may be a reasonably direct line between evidence and action when the action is less broad public policy (e.g. what is the role of the government in reducing the incidence of obesity among children) and more very specific program interventions (e.g. what kind of physical activity regime in schools has the greatest impact on childhood obesity?). Second, in this model of evidence and policy, research transfer is critical. Moving evidence from those who produce it to those who might use it becomes a very important part of the policy-making process.

Yet, we observe that public policy continues to be made on the basis of things other than the best available evidence. This is something of a continuing puzzle. Moreover, this puzzle is particularly important to those interested in healthy public policy, defined as policies outside the formal health sector that have an impact on health, such as education, transportation and fiscal policies. To begin to explain when and how scientific evidence has or does not have an impact on public policy, this paper describes some of the ways in which this relationship is understood in political science.

19 Rein 1976, 272.

20 The efforts to promote evidence-based medicine and evidence-based decision-making in medical care and the debates about the veracity or the applicability (i.e. concerns about the autonomy of individual clinicians) speak to the gap between what is desired (at least by some) and what is reality.

The so-called stages model of policy-making emphasizes some of the inherent complexity of the policy-making process. On this account, decision-making is but one stage among many. This suggests that the preoccupation with exercising influence over specific “decision-makers” or “policy-makers” is misplaced or at least offers an incomplete account. Government policy is rarely the result of a single decision about policy choice. The decision to act will often require many discrete decisions taken over several weeks, months or perhaps years. Moreover, evidence will play a different role at different stages of the policy-making process—agenda setting, policy formulation, decision-making, implementation and evaluation.

However, political science is, if nothing else, the study of power and for the purposes of this paper we are interested in the myriad of ways in which scientific evidence is used and appropriated by those with power and those without. In the health sciences model and the stages model scientific evidence is, for the most part, something that exists and is produced outside the policy-making process. Evidence is brought to bear on policy. In contrast, in the last two models of policy-making discussed in this paper, evidence and the production of evidence are an integral part of the policy-making process.

Proposition four: The relationship between any given body of evidence and public policy depends on the dominance of the advocacy coalition that has appropriated it.

If an advocacy coalition framework is used to understand the role of evidence in policy-making, those who seek to bring evidence to bear on policy are understood to be (willingly or not) key members of competing advocacy coalitions. The influence of any given set of research findings on decision-makers will be the result of the position of the advocacy coalition that emphasizes those research findings (Burton 2006). Thus, contemporary debates about what to do to combat childhood obesity can be understood as competition between two (or more) advocacy coalitions, one of which defines obesity as a problem of, and for, individuals and emphasizes the critical importance of influencing individual behaviour (i.e. eat better, exercise more). To the extent that this advocacy coalition is dominant, and current government policy choices suggest that it is, scientific evidence on the impact of the built environment on rates of obesity will have limited impact, regardless of how compelling the evidence might be.

Proposition five: Policy-making is a social process and evidence is socially constructed. Analyzing and promoting certain policy options is a process of facilitating conversations and dialogue between different participants in the policy process.

Proposition six: Proponents of healthy public policy need to analyze discourse, identify different and competing policy frames, and promote dialogue between members of the many communities that will feel the impacts of policy and program change.

Political and other social scientists who study public policy increasingly now embrace a range of quite different theoretical and methodological approaches (Orsini and Smith 2007) that, each in their own way, radically reconceptualize the role of evidence, the role of the policy analyst and

indeed the very possibility of a predictive science of policy-making. When thinking about policy-making using these approaches, both policy analyst and policy-maker are not sitting above the real words of policy and the attendant conflicts. They are inextricably part of the policy process and the perspective of both analyst and decision-maker, researcher and policy-maker are heavily conditioned by who they are and their position in the social process that is policy-making. As a result, the job of the policy analyst and, by extension, proponents of public policy, becomes one of facilitating conversations and dialogue between different participants in the policy process and recognizing that there are many truths that inform public policy. Understanding and then promoting (healthy public) policy options becomes an exercise in focussing on beliefs, how policy problems are framed and a careful review of narrative, discourse and, in some cases storytelling (Hajer 2005).

For public health professionals and others who wish to promote healthy public policy, many of these propositions will be familiar and commonsensical. Public health as an intellectual exercise, movement and profession has a long acquaintance and familiarity with the complexity of the policy-making process, with the fact that policy-making is about power and power relations, and with the power of deliberation, discourse and citizen engagement (Garvin 1997). While some public health professionals are most comfortable to identify themselves as scientists and analysts, there would appear to be a large number of others who see themselves as having something of a professional obligation to engage in advocacy and engage citizens in the process (Chapman 2004). In fact, to return to the bridge metaphor introduced at the outset of this paper, while much of the emphasis has been on what public health can learn from political science, traffic on the bridge can and should be in the other direction and political scientists, interested in deliberation, discourse and citizen engagement can learn from public health professionals, particularly those who practice in a new public health tradition (Peterson and Lupton 1996; Hofrichter 2003; Rowitz 2006).

Promoting and encouraging healthy public policy requires a mix of tools and approaches. In some cases, developing healthy public policy is best done by emphasizing a simple, somewhat linear model of evidence-based public policy that is intuitive to many trained in health sciences and familiar with the push for evidence-based medicine. In other cases, however, promoting healthy public policies requires more sophisticated models and approaches, ones that take power into account and grasp the power of framing, discourse and citizen engagement.

REFERENCES

- Albæk, Erik, Christoffer Green-Pedersen, and Lars Beer Nielsen. 2007. Making tobacco consumption a political issue in the United States and Denmark: The dynamics of issue expansion in comparative perspective. *Journal of Comparative Policy Analysis: Research and Practice* 9, (03/01): 1–20.
- Amara, Nabil, Mathieu Ouimet, and Réjean Landry. 2004. New Evidence on Instrumental, Conceptual, and Symbolic Utilization of University Research in Government Agencies. *Science Communication* 26, (1) (September 1): 75–106.
- Bekker, M. P. M., K. Putters, and T.E.D. Van der Grinten. 2004. Exploring the relation between evidence and decision-making—A political-administrative approach to health impact assessment. *Environmental Impact Assessment Review* 24, (2) (FEB): 139–149.
- Breton, E., L. Richard, F. Gagnon, M. Jacques, and P. Bergeron. 2006. Fighting a Tobacco-Tax Rollback: A Political Analysis of the 1994 Cigarette Contraband Crisis in Canada. *Journal of Public Health Policy* 27, (1): 77–99.
- Burton, Paul. 2006. Modernising the policy process: Making policy research more significant? *Policy Studies* 27, (3): 173–195.
- Chalmers, Iain. 2005. If evidence-informed policy works in practice, does it matter if it doesn't work in theory? *Evidence & Policy: A Journal of Research, Debate and Practice* 1, (2): 227–242.
- Champagne, François, and Louise Lemieux-Charles, eds. 2004. *Using Knowledge and Evidence in Healthcare: Multidisciplinary Perspectives*. Toronto: University of Toronto Press.
- Chapman, S. 2004. Advocacy for public health: a primer. *Journal of Epidemiology and Community Health* 58, (5) (May 1): 361–365.
- Chang, Virginia W., and Nicholas A. Christakis. 2002. Medical modelling of obesity: A transition from action to experience in a 20th century American medical textbook. *Sociology of Health & Illness* 24, (2) (March 2002): 151–177.
- Checkland, K. 2004. National Service Frameworks and UK general practitioners: street-level bureaucrats at work? *Sociology of Health and Illness* 26, (7): 951–975.
- Davies, Huw T. O., Sandra M. Nutley, and Peter C. Smith, eds. 2000. *What works? Evidence-based policy and practice in public services*. London: The Policy Press.
- Davies, J. K. 2001. Back to the Future? Prospects for healthy public policy. *Public Health Medicine* 3, (2): 62–66.
- Deleon, Peter. 1999. The Stages Approach to the Policy Process: What Has It Done? Where Is It Going? In *Theories of the Policy Process*. ed. P. Sabatier, 19–34. Boulder, Co.: Westview Press.
- Dobrow, Mark J., Vivek Goel, and R. E. G. Upshur. 2004. Evidence-based health policy: Context and utilisation. *Social Science & Medicine* 58, (1): 207–217.

- Dopson, Sue, and Louise Fitzgerald, eds. 2005. *Knowledge to Action: Evidence-based Healthcare in Context*. New York: Oxford University Press.
- Dryzek, John. 2004. [Review of Frank Fischer, *Reframing Public Policy: Discursive Politics and Deliberative Practices*.] *Policy Sciences*, 37 (1): 89.
- Evans, Robert G., 2006. Fat zombies, Pleistocene Tastes, Autophilia and the “Obesity Epidemic.” *Healthcare Policy / Politiques De Santé* 2, (2) (11/15/): 18–26.
- Finnemore, Martha, and Kathryn Sikkink. 2001. Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics. *Annual Review of Political Science* 4, (1): 391–416.
- Fischer, Frank. 2003. *Reframing Public Policy: Discursive Politics and Deliberative Practices*. Oxford: New York: Oxford University Press.
- Gagnon, France, Jean Turgeon, and Clémence Dallaire. 2007. Healthy public policy: A conceptual cognitive framework. *Health Policy* 81, (1) (4): 42–55.
- Garvin, Theresa, and John Eyles. 1997. The sun safety metanarrative: Translating science into public health discourse. *Policy Sciences* 30, (2) (05/01): 47–70.
- Goodin, Robert E., Martin Rein, and Michael Moran. 2006. The Public and its Policies. In *The Oxford Handbook of Public Policy*, eds. Robert E. Goodin, Martin Rein and Michael Moran, 3–35. Oxford: Oxford University Press.
- Green, Donald P. 2005. Donald P. Green: on evidence-based political science. *Daedalus* 134, (3): 96.
- Gross, Paul R., and Norman Levitt, eds. 1994. *Higher Superstition: The Academic Left and Its Quarrels with Science*. Baltimore: Johns Hopkins University Press.
- Haas, Peter. 2004. When does power listen to truth? A constructivist approach to the policy process. *Journal of European Public Policy* 11, (4) (January 1, 2004): 569–592.
- Hajer, Maarten, and David Laws. 2006. Ordering through Discourse. In *The Oxford Handbook of Public Policy*, eds. Robert E. Goodin, Martin Rein and Michael Moran, 251–268. Oxford: Oxford University Press.
- Hajer, Maarten. 2005. Setting the Stage: A Dramaturgy of Policy Deliberation. *Administration and Society* 36, (6): 624–647.
- Hajer, Maarten. 1997. *The Politics of Environmental Discourse*. Oxford: Oxford University Press.
- Hofrichter, Richard, ed. 2003. *Health and Social Justice: Politics, Ideology, and Inequity in the Distribution of Disease*. San Francisco: Jossey-Bass.
- Holmes, Colin A. 2006. Never mind the evidence, feel the width: A response to Holmes, Murray, Perron and Rail. *International Journal of Evidence-Based Healthcare* 4, (3): 187–188.

- Holmes, Dave, Stuart J. Murray, Amelie Perron, and Genevieve Rail. 2006. Deconstructing the evidence-based discourse in health sciences: Truth, power and fascism. *International Journal of Evidence-Based Healthcare* 4, (3): 180–186.
- Howlett, Michael, and Evert Lindquist. 2004. Policy Analysis and Governance: Analytical and Policy Styles in Canada. *Journal of Comparative Policy Analysis* 6, (3) (December 2004): 225–249.
- Howlett, Michael, and M. Ramesh, eds. 2003. *Studying Public Policy: Policy Cycles and Policy Subsystems*. 2nd ed. Don Mills, ON: Oxford University Press.
- Hunter, David J. 2005. Choosing or losing health? *Journal of Epidemiology and Community Health* 59, (12) (December 1): 1010–1013.
- Jenicek, M. 2006. Evidence-based medicine: fifteen years later. Golem the good, the bad, and the ugly in need of a review? *Medical Science Monitor* 12, (11).
- Keith, S. W., D. T. Redden, P. T. Katzmarzyk, M. M. Boggiano, E. C. Hanlon, R. M. Benca, D. Ruden, et al. 2006. Putative contributors to the secular increase in obesity: Exploring the roads less traveled. *International Journal of Obesity (2005)* 30, (11) (Nov): 1585–1594.
- Kemm, John. 2006. The limitations of “evidence-based” public health. *Journal of Evaluation in Clinical Practice* 12, (3): 319–324.
- Kindig, David, A. 2007. Understanding Population Health Terminology. *The Milbank Quarterly* 85, (1): 139–161.
- Labonte, Ron. 1998. Healthy public policy and the World Trade Organization a proposal for an international health presence in future world trade/investment talks. *Health Promotion International* 13, (3): 245–256.
- Larsen, Jakoba Bjerg, Karsten Vrangbæk, and Janine M. Traulsaen. 2006. Advocacy coalitions and pharmacy policy in Denmark—Solid cores with fuzzy edges. *Social Science & Medicine* 63, (1): 212–224.
- Latour, Bruno, and Steve Woolgar, eds. 1979. *Laboratory Life: The Construction of Scientific Facts*. Beverly Hills: Sage Publications.
- Lavis, John N. 2004. A Political Science Perspective on Evidence-Based Decision-Making. In *Using Knowledge and Evidence in Health Care: Multidisciplinary Perspectives*, eds. Louise Lemieux-Charles, Francois Champagne. Toronto: University of Toronto Press.
- Lavis, John N., Suzanne E. Ross, and Jeremiah E. Hurley. 2002. Examining the Role of Health Services Research in Public Policymaking. *The Milbank Quarterly* 80, (1): 125–154.
- Lawrence, Regina G. 2004. Framing Obesity: The Evolution of News Discourse on a Public Health Issue. *The Harvard International Journal of Press/Politics* 9, (3): 56–75.
- Lomas, Jonathan. 1990. Finding Audiences, Changing Beliefs: The Structure of Research Use in Canadian Health Policy. *Journal of Health Politics, Policy and Law* 15, (3): 525–542.

- Lynn, Laurence E. 1999. A Place at the Table: Policy Analysis, Its Postpositive Critics, and Future of Practice. *Journal of Policy Analysis and Management* 18, (3) (Summer 1999): 411–425.
- Marmor, Theodore R., and David Boyum. 1999. Medical care and public policy: The benefits and burdens of asking fundamental questions. *Health Policy* 49, (1–2): 27–43.
- Marmot, Michael G. 2004. Evidence-based policy or policy based evidence? *BMJ* 328, (7445) (April 17): 906–907.
- Maxell, Judith, Nandini Saxena, Suzanne Taschereau, and Judy Watling. 2004. *Responsible Action—Citizens’ Dialogue on the Long-term Management of Used Nuclear Fuel*. Ottawa: Canadian Policy Research Networks.
- Miles, A., and M. Loughlin. 2006. Continuing the evidence-based healthcare debate in 2006. The progress and price of EBM. *Journal of Evaluation in Clinical Practice* 12, (4): 385–398.
- Milio, N. 2001. Glossary: healthy public policy. *Journal of Epidemiology and Community Health* 55, (9) (September 1): 622–623.
- Mohindra, K. S. 2007. Healthy public policy in poor countries: Tackling macro-economic policies. *Health Promotion International* 22, (2) (June 1): 163–169.
- Muir Gray, J A. 2004. Evidence based policy making. *BMJ* 329, (7473) (October 30): 988–989.
- Nutley, Sandra M., Isabel Walter, and H. T. O. Davies, eds. 2007. *Using Evidence: How Research Can Inform Public Services*. Bristol: Policy Press.
- Orsini, Michael, and Miriam Smith. 2007. Critical Policy Studies. In *Critical Policy Studies.*, eds. Michael Orsini, Miriam Smith, 1–16. Vancouver: UBC Press.
- Ouimet, M., R. Landry, N. Amara, and O. Belkhdja. 2006. What factors induce healthcare decision-makers to use clinical guidelines? Evidence from provincial health ministries, regional health authorities and hospitals in Canada. *Social Science and Medicine* 62, (4): 964–976.
- Petersen, Alan R. and Deborah Lupton, eds. 1996. *The New Public Health: Health and Self in the Age of Risk*. London; Thousand Oaks, CA: Sage Publications.
- Pressman, Jeffrey L., and Wildavsky, Aaron B., eds. 1979. *Implementation: How Great Expectations in Washington are Dashed in Oakland: Or, Why It’s Amazing that Federal Programs Work At All, This Being a Saga of the Economic Development Administration as Told by Two Sympathetic Observers Who Seek to Build Morals on a Foundation of Ruined Hopes*. 2nd ed. Berkeley: University of California Press.
- Rein, Martin. 1976. *Social Science and Public Policy*. Harmondsworth, UK; New York: Penguin.
- Rowitz, Louis, 2006. *Public Health for the 21st Century: The Prepared Leader*. Sudbury, MA: Jones and Bartlett.

- Sabatier, P., and H. Jenkins-Smith. 1999. The Advocacy Coalition Framework: An Assessment. In *Theories of the Policy Process*. ed. P. Sabatier, 233–260. Boulder, CO: Westview Press.
- Sabatier, Paul A. 1988. An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences* 21, (06/01): 129–168.
- Shulock, Nancy. 1999. The Paradox of Policy Analysis: If it is Not Used, Why Do We Produce So Much of It? *Journal of Policy Analysis and Management* 18, (2) (Spring 1999): 226–244.
- Skidelsky, R. 1992. *John Maynard Keynes: A Biography. Vol. 2: The Economist as Saviour, 1920–1937*. London: Macmillan.
- Smith, Rogers M. 2002. Should We Make Political Science More of a Science or More about Politics? *Political Science & Politics* 35, (2) (June 2002): 199–201.
- Strong, W. B., R. M. Malina, C. J. R. Blimkie, S. R. Daniels, R. K. Dishman, B. Gutin, A. C. Hergenroeder, et al. 2005. Evidence Based Physical Activity for School-Age Youth. *Journal of Pediatrics* 146, (6): 732–737.
- Tesh, Sylvia, Carolyn Tuohy, Tom Christoffel, Trevor Hancock, Judy Norsigian, Elena Nightingale, and Leon Robertson. 1987. The meaning of healthy public policy. *Health Promotion International* 2, (3) (January 1): 257–262.
- Walker, L., and L. Gilson. 2004. “We are bitter but we are satisfied”: nurses as street-level bureaucrats in South Africa. *Social Science and Medicine* 59, (6): 1251–1261.
- Weiss, Carol Hirschon, and Johanna Birckmayer. 2006. Social Experimentation for Public Policy. In *The Oxford Handbook of Public Policy*., eds. Robert E. Goodin, Martin Rein and Michael Moran, 806–830. Oxford: Oxford University Press.
- Willison, Donald J., and Stuart M. MacLeod. 1999. The role of research evidence in pharmaceutical policy-making: evidence when necessary but not necessarily evidence. *Journal of Evaluation in Clinical Practice* 5, (2) (May 1999): 243–249.