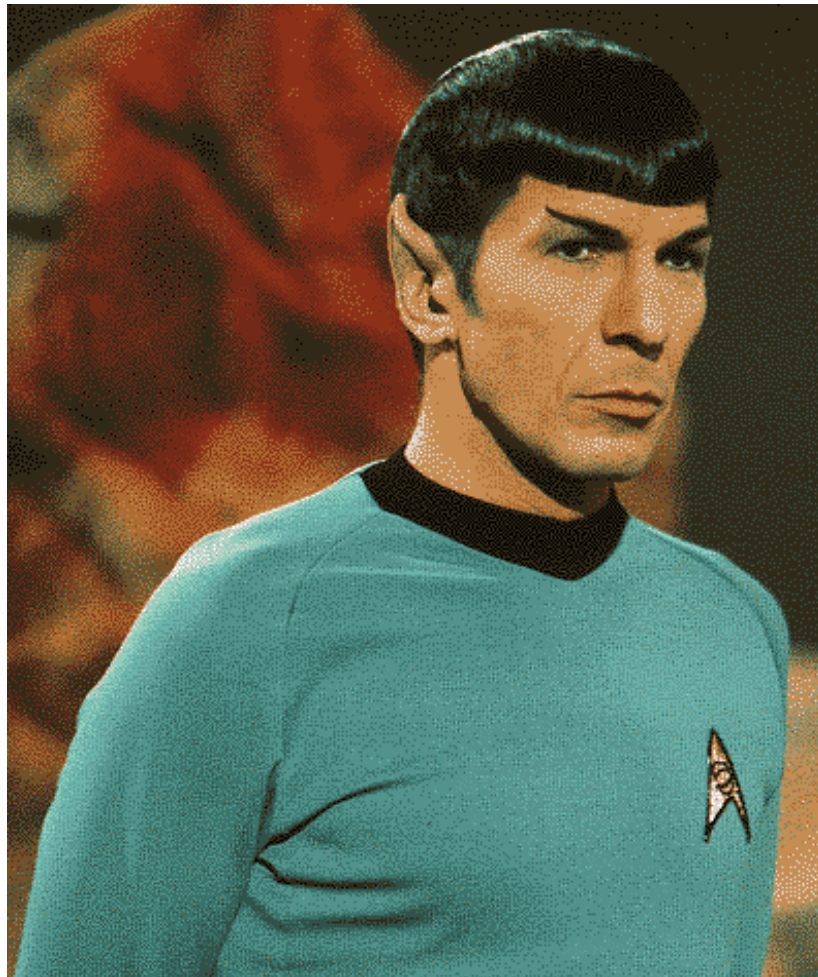


IT'S RESEARCH, JIM,
BUT NOT AS WE
KNOW IT...



Acting at the Nexus
Integration of Research, Policy and Practice
Final report, August 2007

Evelyne de Leeuw, Andrew McNess, Karen Stagnitti & Beth Crisp



Acknowledgments

This report is the result of an exciting journey of discovery. As with all journeys, we have been to many exotic places, have met extraordinary people, and at times have been challenged to keep going ahead rather than retreating.

Good journeys are also enjoyed best in good company. We would like to thank VicHealth for giving us the opportunity to embark on our voyage, but also specifically to some great VicHealth staff: John Biviano, Siân Lloyd, Barb Mouy and Ali Barr have all been travelers along the way, providing us with encouragement, directions and nourishment.

We know that our Project Advisory Committee and the then Chief Executive of VicHealth, dr. Rob Moody, have followed our progress on the journey with great interest. A special word of thanks to professor David Hill, chair of our advisory committee and member of the VicHealth Board of Governance, to sit down with us and critically review our navigation procedures.

But we could not have reached our destination without the great assistance of the people and agencies that gave us their time, energy, and sometimes precious resources, to engage in data collection for our case studies. Again, a particular word of appreciation, to professor Brian Head, and to Ruth Belben for her incredibly efficient assistance, in organising the ARACY workshop on 24 November, 2006 in which we were given an opportunity to triangulate our position with colleagues from research, policy and practice.

Geelong, August 2007,

Evelyne de Leeuw, Andrew McNess, Karen Stagnitti & Beth Crisp

Table of contents

Executive summary	1
Introduction	5
1. Knowledge and evidence: what it is and why it is critical to have it	8
1.1 Knowledge from the ancient Greeks (episteme, sophia, phronesis and techne) to knowledge utilization and management	9
1.2 Evidence: the emergence of evidence-based medicine and attempts to apply its protocols to other health arenas	11
1.3 A post-modern perspective on evidence: appreciation for the range of evidence sources and cultures	13
1.4 Why is it critical to have knowledge and evidence: knowledge = power	14
Interlude	17
2. The nexus between research, policy and practice: original research protocol and amendments	18
3. A review of the theoretical literature on the nexus	20
3.1 Research question and rationale	20
3.2 Sourcing the review	21
3.3 Factors that facilitate or hinder interaction at the nexus	21
3.3.1 'Pitching' research outcomes at both policy-makers and practitioners	21
3.3.2 Differences between policy-makers and practitioners in how they evaluate research	22
3.3.3 Differences between researchers and policy-makers in how they approach social issues	23
3.3.4 How can research influence policy and practice?	23
3.3.5 Summarising the facilitators and barriers to integration	23
3.4 Categorising theories	24
3.4.1 Institutional Re-Design	25
3.4.2 Blurring the Boundaries	26
3.4.3 Utilitarian Evidence	27
3.4.4 Conduits	28
3.4.5 Alternative Evidence	29
3.4.6 Narratives	29
3.4.7 Resonance	30
3.5 An appreciation and assessment of the categories - as they are not mutually exclusive, under which conditions is which approach warranted?	31
4. Acting at the nexus: quintessential networking	34
4.1 Actor-Network Theory as an overarching conceptual framework	34
4.2 Integration of research, policy and practice as a political problem	35
4.2.1 Multiple Streams	36
4.2.2 Punctuated-Equilibrium	37
4.2.3 Advocacy Coalition	38
4.2.4 Policy Diffusion	38
4.2.5 Large N comparative studies	39
4.2.6 Policy Networks	40
4.3 Networking and integration: a conclusion	41

5.	Seven case-studies illustrating whole systems and the complementarity of nexus theories	44
5.1	Introduction: case-study selection and methodological approach	44
5.1.1	Research Design	44
5.1.2	Data Collection	44
5.1.3	Transcribing the Data	45
5.1.4	Analysing the Data	45
5.2	The Brotherhood of St Laurence	46
5.2.1	The Brotherhood's key thrusts:	46
5.2.2	The organisation and its aims	46
5.2.3	How the Brotherhood works to achieve its aims	46
5.2.4	Which integration approach(es) does the Brotherhood utilise?	48
5.2.5	The Brotherhood: Conclusion	48
5.3	VicHealth Centre for Tobacco Control	49
5.3.1	VCTC's main thrusts	49
5.3.2	Organisational set-up	49
5.3.3	Research resonance	50
5.3.4	Collaboration and in-house Blurring of Boundaries	50
5.3.5	VCTC: Conclusion	50
5.4	Primary Health Care Research and Information Service	50
5.4.1	PHC RIS key thrusts	50
5.4.2	Introduction	51
5.4.3	PHC RIS as Conduit: embedding a research culture in primary care	51
5.4.4	Obstacles to embedding a research culture	52
5.4.5	Working with the Divisions of General Practice	52
5.4.6	Acceptance at the nexus	52
5.4.7	PHC RIS: Conclusion	53
5.5	Department of Sustainability and Environment	53
5.5.1	DSE: key thrusts	53
5.5.2	The Organisation	53
5.5.3	The aims of the Department	54
5.5.4	Which integration approach(es) does DSE utilise?	55
5.5.5	Conclusion: Issues of timing	55
5.6	Australian Housing and Urban Research Institute	56
5.6.1	AHURI...	56
5.6.2	Introduction	56
5.6.3	The development of the third-party Conduit	57
5.6.4	Blurring the Boundaries - for a set period of time	57
5.6.5	The percolation of evidence	58
5.6.6	An economic model of research uptake	58
5.6.7	Interaction with the practitioner community	59
5.6.8	AHURI: conclusion	59
5.7	Australian Research Alliance for Children and Youth	59
5.7.1	Main findings from workshop	59
5.7.2	Introduction	59
5.7.3	The predominance of Blurring the Boundaries	60
5.7.4	The value of Conduits	61
5.7.5	The human factor	62
5.7.6	The knowledge question	62
5.7.7	Altering institutional thinking	62

5.7.8	Participants' feedback	63
5.8	Australian Research Centre in Sex, Health and Society	64
5.8.1	ARCSHS: main thrusts	64
5.8.2	Introduction	64
5.8.3	ARCSHS at the nexus	64
5.8.4	Blurring the Boundaries	66
5.8.5	Research advocates	67
5.8.6	ARCSHS: Conclusion	67
5.9	Reflection on the case-studies: action at the nexus for integration of decision-making	67
6.	Discussion and identification of further challenges in understanding the nexus between research, policy and practice . .	69
	References	72
	Appendix 1: Research proposal	79
	Appendix 2: DUHREC Ethics application	86
	Appendix 3: DUHREC Ethics approval	112

Figures and tables

Figure 1:	An ideal model of the instrumental use of evidence in the policy process (cf. Nutley & Homel, 2006)	5
Figure 2:	The Victorian Health Promotion Foundation at the nexus between research, policy and practice	6
Figure 3:	Kurt Lewin's contribution to philosophy of science	7
Figure 4:	Institutional re-design models: fixing and changing rules of engagement	25
Figure 5:	Blurring the Boundaries models: there are no real boundaries between research, policy and practice	26
Figure 6:	Utilitarian Evidence models: research, policy and practice are interconnected through the utilities of evidence of effectiveness	28
Figure 7:	Conduit models: persons or agencies are acting as conduits between research, policy and practice	28
Figure 8:	Alternative Evidence models: stakeholders in research, policy and practice maintain in readiness bits of evidence for use at opportune moments	29
Figure 9:	Narratives models suggest particularly policy-makers are more prone to respond to narratives than to other types of data and evidence representations	30
Figure 10:	The Resonance model indicates that skillful communications (with appropriate usage of metaphors, imagery and symbols) can make research, policy and practice resonate in unison	30
Figure 11:	Events in Multiple Streams leading to the opening up of Windows of Opportunity for policy change	36
Figure 12:	Eldredge and Gould's punctuated equilibrium compared with gradualism	37
Figure 13:	The conceptual map of a study (Breton et al., 2006) applying the Advocacy Coalition Framework to the emergence of the Canadian Tobacco Act	38
Figure 14:	Models used in comparative policy studies (figure 8.1, p. 207, William Blomquist (1999))	39
Figure 15:	A representation of theoretical categories and frameworks pertinent to integration at the nexus between research, policy, and practice. Integration is dealt with through a range of theoretical approaches, represented by the seven building blocks at the centre of the nexus. These are governed in general terms by perspectives offered by Actor-Network Theory specifically, and policy and social network approaches in more general terms. Political theory frameworks offer further vistas on developmental stages in policy formulation toward integration	42
Table 1:	Suitability of study design for assessing effectiveness in the <i>Guide to Community Preventive Services</i>	12
Table 2:	A categorisation of theories reflecting on the dynamics at the nexus between research, policy and practice	24
Table 3:	Interfaces between the Institutional Re-Design category of theoretical models and the other six theoretical categories	33

Abbreviations

4GE	Fourth Generation Evaluation
ACF	Advocacy Coalition Framework
AHURI	Australian Housing and Urban Research Institute
ANT	Actor-Network Theory
ARACY	Australian Research Alliance for Children and Youth
ARCSHS	Australian Research Centre in Sex, Health and Society
CBRC	Centre for Behavioural Research in Cancer
CCRI	Cancer Control Research Institute
CLEU	Community Liaison and Education Unit
DSE	Department of Sustainability and Environment
DU-HREC	Deakin University Human Research Ethics Committee
EBM	evidence-based medicine
EbscoHost	Elton B Stephens Company database
EPA	Environmental Protection Agency
HIA	Health Impact Assessment
HIV/AIDS	Human Immunodeficiency Virus/Acquired immune deficiency syndrome
IDRC	International Development Research Centre (Canada)
MRI	Magnetic resonance imaging
NMR	Nuclear magnetic resonance (imaging)
OPP	obligatory passage point
PAC	Project Advisory Committee
PHC RED	Primary Health Care Research, Evaluation and Development
PHC RIS	Primary Health Care Research and Information Service
RCT	Randomised Controlled Trial
SES	Socio-Economic Status
TBE	theory-based evaluation
UDE	Utility-Driven Evidence
VCTC	VicHealth Centre for Tobacco Control
WHO	World Health Organisation

The nexus between research, policy and practice

Executive Summary

Epidemiologists complain that politicians don't want to know what the most severe health issues are and have a disregard for the types of policies that are proposed to deal with these (non-)problems. Politicians complain about the ridiculously detailed and fat research reports that are supposedly to inform their action, and think that practitioners are creatures that prefer to stick to their routines rather than adopt new practices based on evidence. Practitioners often feel burdened by flocks of researchers observing them or administering endless questionnaires, and academics prefer to see practitioners as convenient data sources. What role the community plays in this tense environment can only be left to the imagination.

Yet, everyone in this triangle would readily agree that better integration between health policy, research and practice would benefit the quality of operations of each element, and is highly likely to impact directly and profoundly on the health of populations. This, in fact, is one of the driving visions behind the activities of the Victorian Health Promotion Foundation, VicHealth.

What, then, is the problem that prevents us all from integrating research, policy and practice? This report attempts to clarify the question and to formulate suggestion to act at the nexus (or, as we might surmise from the above text in italics, the gap) between these three.

We start by asserting that it is not just a *belief* that more integration will lead to better operations and health. Also, we make a case for a largely theoretical exploration of the issue, rather than 'jumping to conclusions' through uninformed empirical research.

We then turn to the root of the issue, and review the nature of evidence and knowledge. Evidence, we found, can be generated by a multitude of methods and approaches drawing on a wide range of sources. The methods and approaches include traditional and more post-modern scientific inquiry procedures but also non-scientific accumulation of information, and the sources of evidence can be anecdotal, community-driven, or very structured. Although the Randomised Controlled Trial is the 'Golden Standard' in the generation of evidence, we assert that the health domain more often than not requires a range of complementary and creative complex methodologies. Knowledge, and the act of 'knowing', we then suggest, is vastly more intricate than just the generation of mere facts. It also involves capacities around skills, political and ethical behaviour, and wisdom. Knowledge, ultimately, is power and it is therefore important for any organisation engaged in the knowledge 'business' to manage it carefully and conscientiously.

Relating this information to the nexus or gap between research, policy and practice, we make an inventory of factors that play out between those three sectors. We find that be it in the health domain or elsewhere, value systems are different across research, policy and practice sectors. Whereas quality of research may be valued more by communities of practitioners, the timeliness and acuteness of research is more valued by policy makers.

There is one aspect that is valued equally highly by practitioners and policy makers: clarity and conciseness in research presentation and recommendations.

The question how to bridge that gap is then approached through a systematic review of the literature on integration practices, where we specifically have looked at theoretically informed practices and evaluations. We do this because we believe in the concept of 'Theory-Based Evaluation', an approach that shows that the application of theory (or, in those cases where theory has not yet crystallised, a coherent 'programme logic') has the potential of not only showing *that* actions have an effect, but also *why* and *how*. This is important as we think that knowledge generation and application is not just about knowing, but more importantly about *learning*. We searched beyond the health domain, and included for instance education, environment, development and aid assistance, social work, agriculture, and political science as theoretical arenas. Nearly thirty different theoretical frameworks specifically dealing with actions at the nexus emerged, and for analytical purposes we have grouped them into seven categories, which could then be put into three groups:

Institutional Re-Design	→ theories about changing the rules of the game
Blurring the Boundaries	→ theories about the structural interaction of actors and how the nature of evidence plays a role in this interaction
Utilitarian Evidence	
Alternate Evidence	
Conduits	
Narratives	→ theories about ways to communicate at the nexus
Resonance	

All of these, we could assert from the literature, have a noticeable impact on activities at the nexus towards more and better integration.

This finding was relatively unanticipated. We had thought that a small group of theories would suggest different types of actions on different types of parameters (e.g., the actors involved, the nature of the problem at hand, etc.), thus allowing us to integrate our findings into a relatively simple framework for testing in a number of selected case studies with a reputation in acting at the nexus.

We chose to integrate our findings differently, and found that all of our categories addressed in one way or another issues of *networking*. Two general approaches to networking are presented: the Actor-Network Theory, an approach that explains the advance of science and technology as a function of connectivity between actors and events (or rather, the semiotic representations of these events), and social and policy network approaches that make claims about the impact of network configuration on network outcomes, and about systems of governance. We conclude this section by proposing that it is important, in order to act at the nexus along the lines of one of our seven theoretical categories, to know details about network configuration. This network mapping would enable better integrative practices.

The empirical part of our inquiry presents details of seven case studies. These were identified on the basis of their reputation in the area of integration, in close consultation with the Project Advisory Committee. Baseline case descriptions were generated on the basis of

information on each agency available in the public domain, and focused on questions that arose from the operationalisation of the seven theoretical categories. We requested interviews with the heads or chief executives of the organisations, and asked them to check and validate the information that we had already compiled. After this, we spoke on average nearly an hour with each, explored the questions on how they acted at the nexus towards better integration. We found that in all our case studies the agencies were following actions as suggested by the theory. However, these actions were usually informed by historical developments, trial and error, and personal skill and experience. A general framework to guide these actions was found to be valuable by all respondents.

The report ends with a critical review of our findings, a discussion, and recommendations for future actions to enable better action at the nexus. Generally, these recommendations focus on the generation and diffusion of more and better knowledge (in its different permutations) around 'nexus issues' and the importance of awareness of the range of actors and factors that play in the integration game:

*The discourse around evidence of effectiveness should take better account of the (re)sources of knowledge and how those impact on actions by stakeholders in research, policy and practice towards a seamless generation and application of knowledge. **Specifically**, there may be a role for VicHealth in advocating the validity of these different (re)sources for knowledge, and an explicit recognition of the role of the different stakeholders in the generation and application of different types of knowledge.*

*Players at the nexus between research, policy and practice should be aware of the different rationalities decision-makers deploy in integrating research, policy and practice. **Specifically**, there may be a role for VicHealth in creating an information resource on how decision makers have acted previously on the generation and utilisation of specific research enterprises, with a view to move more proactively to establish a better 'fit' between research and decision making.*

***VicHealth is in a unique position**, based on a substantial track record in connecting innovation in research with Victorian health promotion activities, to establish an explicit knowledge management approach cognizant of the inherent political nature of the connection between knowledge and decision making. This knowledge management approach will have to draw on insights on the usage and power dimensions of knowledge, and will have to be integrated with all operations of the organisation and its stakeholders.*

If policy makers or practitioners invite researchers to propose research activities to review issues or suggest possible solutions to problems, the tender document must be specific about expectations regarding both the quality of the research as well as its anticipated timeliness. Regardless of these, the specification of parameters for the conciseness and clarity of the research report and its recommendations will be

important for increasing the potential for its uptake. **Specifically**, VicHealth may want to consider the establishment of a set of general parameters for quality, timeliness and presentation of research, which may be adapted to specific environments and actors.

The research presented in this report should be publicised widely with a view to exposing it to critique, validation, and – when appropriate – further refinement. **Specifically**, VicHealth or any of its constituent research partners may want to consider (the financing of) follow-up research that would address the following questions:

1. if applied to one discrete arena of health issues (e.g., tobacco control, obesity or the interface between the arts and health) which of the seven categories yields the most explanatory or predictive power in successful integration of research, policy and practice?
2. if the answer to the first question remains that all seven are overlapping and complementary, can they be amalgamated into one coherent theoretical framework that allows for adequate operationalisation in order to generate enhanced explanatory or predictive power?
3. to what extent can either the answer to the first or second question inform a knowledge management and research policy framework to be refined by VicHealth and other stakeholders in the field?

Stakeholders with an interest in acting at the nexus between research, policy and practice must be cognizant of the networking issues and principles that govern integration or separation of actors and factors. Insights into network structures and knowledge of ways and means to reconfigure (components of) networks is critical to effective operations at the nexus. Network mapping tools must be made available to these stakeholders in user-friendly manners so as to facilitate entrepreneurial activity towards (network) integration. **Specifically**, there may be a role for VicHealth to provide access to, or provide resources for the development of, such network mapping tools. Moreover, for the future effectiveness of the VicHealth Research Policy Framework (and a knowledge management approach) it seems crucial that the organisation itself urgently maps the dynamics of the networks it is engaged in.

The results of this research project and any other related (follow-up) project should be communicated widely, by means of a range of modalities (including workshops, counseling sessions, presentations) to actors directly involved, but notably to actors that should be involved, in acting at the nexus of research, policy and practice. **Specifically**, VicHealth may be expected to develop a strategy to engage these actors and sustain this engagement.

The nexus between research, policy and practice

Introduction

There are some commonly held (mis)conceptions about the trek of research through academia, policy-making and practice; about the hike of policies into practice and academia; and the ventures of practice into research and policy. Some of these conceptions are mere belief, others political propositions, yet others 'common sense' and some indeed seem to have a legitimate or demonstrable evidence base.

Yet, whether it is the 'two communities' thesis, the concept of 'knowledge management' or the practice of 'knowledge translation', there is little or no guidance for agencies wishing to engage *effectively* at the nexus between research, policy and practice. This study hopes to start filling that void with a first rain of wisdom.

Sir Archibald Cochrane's seminal publication of *'Effectiveness And Efficiency: Random Reflections on Health Services'* some two decades ago ushered in, many believe, a new era in the appraisal, development and implementation of health services. Eventually he lent his name to the international Cochrane Collaboration which has become pivotal in formulating guidelines for the generation of evidence-based medicine (EBM). EBM has been described as a paradigm shift in the development of scientific medicine, not just in a colloquial sense, but precisely as historian and philosopher of science Thomas Kuhn (1970) had intended the notion: a radical repositioning of theoretical bases and assumptions (Guyatt et al., 2002). The emergence of EBM seems to have stirred a legion of other perspectives around evidence. Health promotion, public health, mental health, community health, social policy, health policy, and ultimately all public policy should be evidence-based, evidence-driven, or

evidence-informed. Nutley and Homel (2006) have framed an ideal model for the instrumental use of evidence in the policy process, in the course of which almost as an afterthought interventions are being justified (figure 1).

Some observers of the evidence debate have pointed out that the notion of the connection between policy development and evidence generation is not new at all (Nutley, Walter & Bland, 2002; Klein, 2003): the origins of analysis for policy purposes are as old as state governance, and the proposition that policy should *not* be based on some kind of evidence is clearly ridiculous.

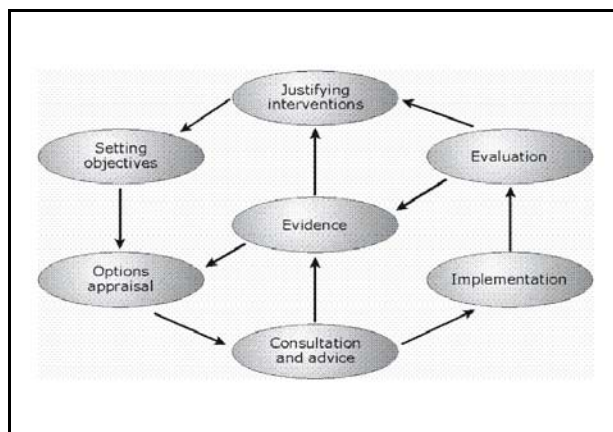


Figure 1: An ideal model of the instrumental use of evidence in the policy process (cf. Nutley & Homel, 2006)

The evidence debate has shifted from * the initial Cochrane argument that health practice should be justified by protocolised inquiry approaches; via * a discourse about proper and

appropriate sources of evidence for a variety of purposes, stakes, and disciplines; via * a philosophical/rhetorical treatment of the most appropriate methodologies and applications of evidence; and * the extent to which certain types of amalgamated evidence are relevant to certain groups or individuals; to * *how* evidence is the basis or informant of policy and practice. This historical evolution of the debate is strangely at odds with how the questions

would then have been presented and answered is exactly the reverse:

Once we know how which types of evidence form a basis for certain forms of policy development and practice implementation we know how to best generate and utilise that knowledge.

With a remit on innovation, a commitment to building evidence on the social determinants of health, and investments in research, program development and policy advocacy, VicHealth is uniquely positioned to engage in a challenge that is facing many organisations: how to better integrate research, policy and practice to

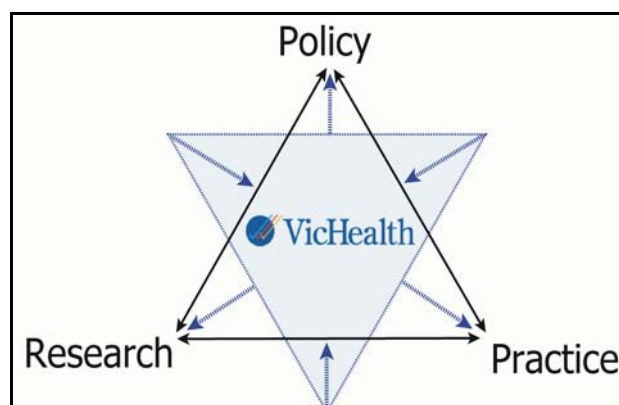


Figure 2: The Victorian Health Promotion Foundation at the nexus between research, policy and practice

facilitate complex problem solving (figure 2).

In 2005 a review of VicHealth's research program gave the organisation the opportunity to more broadly consider its investments in knowledge generation and its wider role in building evidence on promoting population health gain. It was thought a better understanding of theories from a range of schools of thought, including evidence-based public health, organisational change, innovation and public policy analysis, would be useful in underpinning further organisational development. It was also hoped the breadth and complexity of this wide theory base may be able to be usefully synthesised into a typology, or set of conceptual models, which could be further developed through application in a series of case studies. These models could then be used to develop organisational processes and funding structures which would better link research, evaluation, program and policy development and enable innovation for health.

The present project reported on here was a step in VicHealth learning more about how it can facilitate and support better integration of research evidence, both internally in organisational processes and through supporting the different programs that are funded. The exploration of integration options forms part of VicHealth's strategic planning process and the development of a new VicHealth Research Policy Framework.

The project that is reported on here has looked at actions that can be taken at the nexus for improved interactivity between research, policy and practice for health. Those actions are dealing with *factors* at the nexus that are conducive to or prohibiting interaction or joint operation, where it is assumed that such interaction or joint operation will be enhancing the

quality of performance and deliverables. Substantial research has been carried out on the nature of these factors, but not on actions to overcome them.

Bearing in mind two famous quotes by psychologist Kurt Lewin (figure 3) our proposal consisted of a number of steps (the original research proposal can be found as Appendix 1; further methodological considerations are presented in sections 3.1-3.4):

1. the identification of theoretical and conceptual frameworks that formulate propositions specific to acting at the nexus between research, policy and practice (including, but certainly not limited to, such work done in the health domain);
2. the identification of agencies or organisational endeavours, nationally and internationally, that have explicitly formulated as part of their remit to act at the nexus of research, policy and practice;

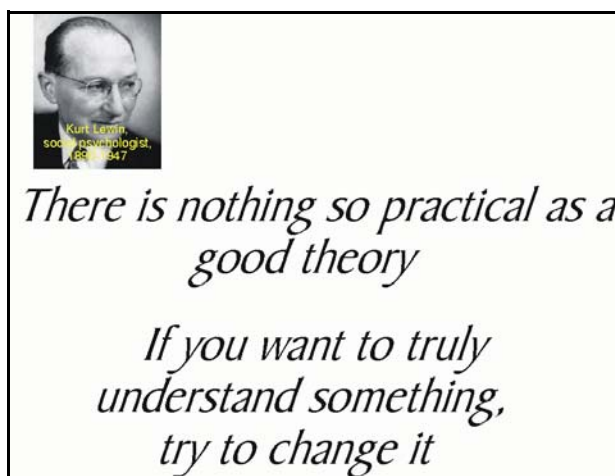


Figure 3: Kurt Lewin's contribution to philosophy of science

3. the development and analysis of a number of case studies cf. (2), applying theoretical and conceptual frameworks cf. (1) demonstrating 'best practice' in acting at the nexus;
4. Application of (1)-(3) to VicHealth current and future operations.

In this report we will first explore the nature of evidence and the connection between knowledge generation and utilisation. We will then continue describing our methodological approach to the generation of our data sets (both the collection of theories as well as the identification of case studies). A

categorisation of theoretical and conceptual frameworks is presented subsequently, and this section will be wrapped up with an intermediate review of the (perceived) usefulness of the findings. The collection of case studies is then presented in a standard format for each, allowing for further analysis and the illustration of our findings by means of a hypothetical case study. The report concludes with a discussion and reflection with further suggestions for VicHealth approaches at the nexus between research, policy and practice.

1. Knowledge and evidence: what it is and why it is critical to have it

A range of stakeholders concerns itself with assessing performance and applying their findings in various realms of human endeavour. In most fields these stakeholders are typically grouped into academics, policy-makers, and practitioners. Obviously, communities, clients and direct recipients of interventions are supposedly closely tied to considerations these professionals may have on the development, implementation and assessment of operations. Rather naively it is assumed that these actors would pursue broadly shared objectives, goals and ideals in measuring the effectiveness of their efforts: to amass and assemble a rich array of indicators and parameters that would demonstrate that some actions are more effective than others, and subsequently develop procedures and protocols (ideally leading to longer term policies) that incorporate and reflect the newly generated wisdoms.

Regrettably, romantics that believe in such an ideal and 'do-good rational' perspective will have to wake up to a more realistic – some would call it a more cynical – world view. Certainly, measures of effectiveness, leading to evidence of effectiveness, are direly needed to support our actions. In a landmark publication on the evidence of effectiveness in health promotion, McQueen and Anderson (2001) quote Butcher:

A piece of evidence is a fact or datum that is used, or could be used, in making a decision or judgement or in solving a problem. The evidence, when used with the canons of good reasoning and principles of valuation, answers the question why, when asked of a judgement, decision, or action.

Surprisingly, in some policy areas the tiniest shred of evidence can lead to multi-billion dollar interventions. A well documented point in case is what Ron Suskind has called the 'One Percent Doctrine' for foreign policy of the United States of America (Suskind, 2006). The doctrine is supposedly based on a statement by Vice-President Dick Cheney, outlining the level of evidence required for decisive policy action: "If there was even a 1 percent chance of terrorists getting a weapon of mass destruction – and there has been a small probability of such an occurrence for some time – the United States must now act as if it were a certainty." Cheney reportedly strengthened his rationale by continuing: "it's not about our analysis, it's about our response." Suskind then observes the following: "this conviction effectively sidelines the traditional policymaking process of analysis and debate, making suspicion, not evidence, the new threshold for action."

A similar but less obvious argument was recently made by Potts et al. in the reputable British Medical Journal (2006). They suggest that if a limited number of randomised controlled trials indicates that an intervention might be effective, the full application of Cochrane Collaboration review protocols would become superfluous. The rationale for the preliminary application of not yet fully conclusive evidence, they feel, is dependent on a type of 'meta-cost-effectiveness': "During the exponential growth of a new HIV epidemic a modestly effective preventive intervention introduced early will save more lives than a highly effective method introduced 10 to 15 years later" (p. 702). They seem to argue for an approach to evidence that in a way mirrors recommendations (for instance, by the US Food and Drug Administration) for clinical trials to be stopped if the experimental treatment is excessively

more effective over the control treatment in life-threatening conditions. The article stirred considerable controversy: orthodox hard-liner evidence-based medicine proponents felt that there is only one decisive form of evidence of effectiveness: that which is produced following internationally agreed upon Cochrane protocols, which, by the way, do support alternate forms of evidence generation beyond the randomised controlled trial, (Rychetnik et al., 2004). We will return to the latter in 1.3.

1.1 Knowledge from the ancient Greeks (episteme, sophia, phronesis and techne) to knowledge utilization and management

As is so often the case, the Ancients, in this case Greek philosophers, have already reflected on the question which knowledge is relevant in which situation. It is useful to show that pure scientific knowledge, episteme ('Επιστήμη' or the knowledge of facts), in this view is only relevant if complemented with 'Τέχνη' (techne), the knowledge of art, craft and skill as well as Σοφία (sophia; wisdom) and phronesis (Φρόνησις) which is the virtue of using knowledge in ethical or political considerations. It appears that in western, Cartesian and positivist perspectives on science, technology and society, for a long time wisdom and phronesis have disappeared from the debate. In their discussion of the sociology of science and technology Pinch and Bijker (1984), together with Latour (1988) make an effort to re-integrate these four sources of knowing. In connecting these dots (De Leeuw, 2006) we would have the ambition to establish a seamless mosaic in which the different forms of integrated knowledge can flow effortlessly between a diversity of knowledge generators, catalysts, stimulants, users, and decision-makers.

The issue here is, of course, not to generate more knowledge, but better and different types of knowledge. And it should, furthermore, not be considered sufficient to just generate such knowledge, but a responsibility of knowledge networks (sets of interconnected actors that fund, use, apply, and create knowledge) to be responsive to a range of needs.

Stone (2002) finds three categories for the dynamics in knowledge utilisation being responsive to those needs:

Pushing research onto policy agendas:

- if research would become more policy-relevant (a 'public good') its uptake will be easier;
- there is enough research, but its accessibility should be improved;
- research presentation should be better connected to policy parameters (such as cost-effectiveness);
- researchers should become better communicators.

Policy-making pulls research into its considerations:

- overcome policy-maker's research ignorance by appointing scientists on policy platforms;
- a tendency towards anti-intellectualism in government bureaucracy could be overcome by strengthening democratic institutions;
- the life cycle of politics is incompatible with research time lines; bureaucrats and political leaders should be trained to become 'intelligent customers';

- research is politicised and will only be used if it is consistent with current political motivations.

The policy current is too strong to be bridged:

- strong beliefs in society that research and decision-making are separate worlds sustain the separation. Using community-based actors would facilitate overcoming this;
- research outcomes are transformed from specific to broader ideological perspectives which only slowly pervade political agendas;
- different policy domains display different rationalities, thus limiting logical connections;
- there is a final question around 'knowability': what can be known, and how can that knowledge be generated? There may be different epistemologies between different cultures which limit effective knowledge generation for policy change.

Clearly, Stone's twelve-point message is surprisingly devoid of any political theory explaining these phenomena. Policy decision-making is a messy affair, by some described as 'muddling through' (Lindblom & Cohen, 1979), or a negotiated space in the 'polity' (Stone, 1997). Kingdon (1995) has demonstrated that windows of opportunity for policy decision-making are created when policy entrepreneurs have applied a process of 'alternative specification' in which different representations of the same 'truth' are presented to stakeholders in the process. This implies that the evidence used in alternative specification may take different shapes for different stakeholders.

The perspective is shared by Weiss (1979, 1998, 1999) and Vedung (2000). In their work on research utilisation (or, in our terms, the application of evidence for decision-making purposes) they maintain that research is put into action through different strategies. Six models are proposed:

- The knowledge-driven model: new knowledge will lead to new applications, and thus new policies. An example could be fundamental research into nuclear resonance signals, leading to the development of NMR and MRI scanners, the emergence of which led to medical technology assessments to assist governments in deciding where and how the costly new technology could be implemented.
- The problem-solving model: research findings are actively sought, and used for pending decisions. In its ideal form, health impact assessments are an instrument in this model; HIAs supposedly are commissioned to guide decision-making related to proposed profound environmental and social change operations.
- In the interactive model incremental policy change is interactively driven back and forth by emerging research outcomes. The current Swedish national health policy is an exemplary application of this model, taken some twenty years to establish.
- The political model leads to research being used to support partisan political positions. Debates around the acceptability of nuclear power demonstrate the different political connections to different research perspectives.
- In the tactical model, the fact that research is being undertaken may be an excuse for delaying decisions, or deflect criticism.

- And in the enlightenment model, concepts and theoretical perspectives that social science research has engendered permeate the policy-making process, rather than single studies or research programmes having a discernable impact on policy priorities.

1.2 Evidence: the emergence of evidence-based medicine and attempts to apply its protocols to other health arenas

Sir Archibald Cochrane's publication of *Effectiveness and Efficiency: Random Reflections on Health Services* in 1972 was the result of the great epidemiologist's frustration over limited resources being directed towards solving the wrong problems, or solving problems with the wrong interventions. His pivotal argument was that more (epidemiological) evidence was needed to support the applicability of well-defined medical practices. These should be assessed in terms of both effectiveness (what effect does an intervention have?) as well as efficiency (at what cost -financial and otherwise- is a demonstrable effect to be implemented?). From his epidemiological toolbox Cochrane took the Randomised Controlled Trial as the method that would yield the best (and most epidemiologists would argue most indisputable) evidence.

RCTs dictate that two matched populations are established (an 'experimental' and a 'control' group). The supposed effective intervention is administered to one population, and the other population receives an intervention which is known as ineffective. The researchers are unaware of which group receives which type of intervention (this is called a 'double-blind' design). Any significant test results can supposedly be attributed to the effectiveness of the intervention, as all 'confounding factors' (outside factors that might influence measurements and effectiveness) have been cancelled out by the research design. Appropriate application of the RCT methodology is based on a number of assumptions: the experimental and control groups are homogeneous (often 'healthy men between 18 and 60') and test conditions have been randomised completely (any factors that might influence the test procedures are distributed randomly in the populations) so as to allow for statistical analysis.

Complex social issues (and most health promotion and population health interventions or programmes would fall into this category) might not be assessed appropriately with the RCT approach. As will have become clear from the above, the conceptual frameworks guiding the research endeavour are far more complicated and intricate, leading to questions which cannot be resolved through the 'experiment-control' notion. Health scientists with roots in this tradition therefore try to apply the 'quasi-experimental' research design. In quasi-experimental designs investigators recognise that conditions cannot always be randomised, and that 'real' populations are not as homogeneous as the RCT approach assumes. An added feature of quasi-experimental designs is therefore that measurements take place at various points in time (a T_0 measure before the intervention, and T_{1-n} measures during and after the intervention) and in different natural settings with a high degree of similarity (e.g. neighbourhoods with comparable demographic profiles). In health promotion, apart from very practical considerations (what would, for instance, be the 'control' setting if the town of Horsens is the 'experimental' setting?), socio-political dynamics will often not allow for such a methodology. There may be elections, and political

priorities may change during the inquiry period. The economy may experience an upswing, a new factory is opened and SES in the neighbourhood will (slowly) change. The housing authority may all of a sudden decide to redevelop an intervention setting and there is an influx from people with entirely different characteristics from those assumed by the research design.

McQueen and Anderson (2001) in their 'Evaluation in Health Promotion' chapter eloquently describe the methodological problem:

'Unfortunately, many health promotion researchers put the cart before the horse when choosing research methods. They let research methodology drive the investigation, rather than allowing theory and models to provide the conceptual underpinnings for the advancement of knowledge. With such conceptual understanding, investigators can then seek appropriate methods. For instance, many researchers inappropriately use randomised controlled trials in health research.'

Such 'inappropriate' methodological choices are regrettably sustained by a continued attempt to apply clinical methodology to non-clinical environments: an influential evidence-based public health initiative in the United States (*The Guide To Community Preventive Services*; Zaza, Briss & Harris, 2006) acknowledges on the one hand that evidence for health promotion and public health is constituted by much more than experimental data alone, and recognises the value of experiential data (or 'expert opinion') to tip the balance in favour of effectiveness. On the other hand, in establishing quality benchmarks for the project Briss et al. (2000) rank the methodologies for generating evidence as represented in table 1.

Table 1. Suitability of study design for assessing effectiveness in the <i>Guide to Community Preventive Services</i>	
Suitability	Attributes
Greatest	Concurrent comparison groups <i>and</i> prospective measurement of exposure and outcome
Moderate	All retrospective designs <i>or</i> multiple pre or postmeasurements but no concurrent comparison group
Least	Single pre and postmeasurements and no concurrent comparison group <i>or</i> exposure and outcome measured in a single group at the same point in time

For the 'uninitiated' in methodological reasoning a cursory interpretation of this ranking would again indicate that the Randomised Controlled Trial ('*Greatest Suitability*') is the Golden Standard for the generation of evidence.

This leads us the issue of 'error'. In the philosophy of science there is general recognition of the existence of two types of

error: Error Type I (a hypothesis is rejected while in fact it is true - in serum testing referred to as false-negative) and Error Type II (hypothesis accepted while it is false - false-positive). Mitroff & Featheringham (1974) introduce the concept of Errors Type III (wrong conceptualisation of the problem, yet elegant and significant research outcomes). An example of an error of the third kind has for a long time been research in the area of poverty and health. The conceptualisation of the problem dictated an inquiry into the effects of poverty on health, and indeed, such effects were shown to be profound. Only recently the reconceptualisation of the problem allowed for a more meaningful inquiry highlighting more complex causal pathways between health and poverty, thus opening up a new debate on possible interventions in the realm (WHO, 2002).

Guba and Lincoln (1981, 1989) argue for an evaluation approach that would prevent Type III Errors to occur. This 'Fourth Generation' or 'naturalistic' inquiry includes modalities to deal with 'messy', 'wicked' (Churchman, 1976) or 'ill-structured' (Mitroff & Mason, 1980)

problems (De Leeuw, 1989). For Fourth Generation Evaluation the acronym 4GE ('forge') is appropriately chosen, as 4GE is a participatory, dialectic, post-modern scheme of reference ultimately leading to consensus on evaluation parameters, their use, and expected outcomes. The 4GE methodology is not unique, extremely innovative, or past any current paradigm. Boutilier, Mason & Rootman (1997) describe what they call 'community reflective action research' that incorporates stakeholder perspectives in policy development. Fourth Generation Evaluation assumes the following steps in the development process: (1) contracting, (2) organizing, (3) identifying stakeholders, (4) developing within-group joint constructions, (5) enlarging joint stakeholder constructions through new information/increased sophistication, (6) sorting out resolved claims, concerns, and issues, (7) prioritizing unresolved items, (8) collecting information/adding sophistication, (9) preparing agenda for negotiation, (10) carrying out the negotiation, (11) reporting, and (12) recycling.

Another 'new' philosophical approach to effective evaluation in complex socio-political contexts is 'realist evaluation' (Pawson & Tilley, 1997, Pawson, 2006). Similar to 4GE the perspective acknowledges the diverse political and community drivers for the generation of specific types of evidence of effectiveness.

One might too easily assume that Fourth Generation or Realist Evaluation leads to 'vague', 'uncontrollable' or 'soft' (i.e. qualitative) research. This is not correct. The approach simply allows for selecting the right conceptual framework (theory) for a jointly defined problem, and thus leads to the most appropriate methodology - which could in fact be the randomised controlled trial!

1.3 A post-modern perspective on evidence: appreciation for the range of evidence sources and cultures

As we have suggested in paragraph 1.2, increasing numbers of policy-makers, practitioners and (scientific) researchers acknowledge the contextual and value-driven nature of evidence. Imposing simplistic methodological standards on complex social issues is inappropriate. Apart from the *methodological* critique and alternatives suggested, among others, by Pawson, Tilley, Guba and Lincoln (above) there is also a more profound *theoretical* reflection. Where evidence emerged half a generation ago in medicine and has colonised much of the health science discourse since, in recent years other fields of academic endeavour have been subject to the 'empiricists' imperialism', such as education and social work. It is particularly from these areas that powerful theoretical counter-arguments are presented to a rigid application of (neo-)positivist philosophies of science. Pease (2007), for instance, attempts to establish new common ground between critical social science and the pressure to work from an evidence-base. He argues for the development, at the nexus between social work research, policy and practice, of a '*critical knowledge-informed practice*'. In Pease's view, this practice finds a foundation in the recognition of the core values of social transformation pertinent to social work, the necessary association with critical social theory and social constructionism to truly understand and implement the requisite value-driven interventions, and a key appreciation of the knowledge base of particularly the consumers, clients and

users of socio-educational programmes. Pease thus confirms that true 'evidence' can only be generated from an enormous range of sources, events, actors, and perspectives.

A similar (and yet radically different!) perspective on what constitutes evidence is presented by Sehon & Stanley (2003) and Upshur (1997). These authors look at logical frameworks and foundations of philosophy of science. Sehon and Stanley critique the paradigm shift notion postulated by Thomas Kuhn, and Upshur argues that Kurt Gödel's proof (that mathematical systems cannot necessarily explain all phenomena determined by their foundation axioms) does not apply to evidence-based medicine (and thus, by inference, to evidence-based public health and evidence-based policy). From their different perspectives, these authors arrive at the Quine-Duheme thesis, and more specifically Quine's Web of Belief, as a sound philosophy of science to be applied to the generation and interpretation of evidence.

In brief, the Quine-Duheme thesis holds that models relating to the empirical world are necessarily underdetermined, i.e., they lack sufficient data for the full unequivocal realisation of an interpretation. As stated above, in such situations where the quality of the *data and attribution of causality* themselves are rigorous it is still possible to make an Error of the Third Kind (Error III), cf. Mitroff & Featheringham (1974), that is, studying the 'wrong' problem or being forced (by ritual, tradition, or norm) to apply the 'wrong' theory. Quine's metaphor of the Web of Belief is one of the foundation philosophies of the Quine-Duheme thesis. Quine sees the scientific enterprise as a web of beliefs or statements that at its outer limits is attached to the rigid structure of our sensory experiences. Light is light, not darkness. However, for (theoretical) abstractions that move away from the direct sensory experience, we need additional beliefs or statements to interpret the evidence as being true. For instance, our senses do not directly register UV light. Knowing and interpreting the effects of UV light on life would require additional non-sensory information, and/or a series of earlier confirmed 'evidence'. The web thus becomes a whole of constructs; Quine is sometimes credited with being the father of 'holism' because he claims that none of the logical or evidential claims we make can be separated from others (Quine, 1953): for evidence-based public health and health promotion this indeed means, as Pease (2007) has argued, that only the whole, and the widest possible array of sensory and non-sensory experiences and beliefs can constitute an appropriate base for evidence.

1.4 Why is it critical to have knowledge and evidence: knowledge = power

One last observation that needs to be made in this prelude is a managerial one. *Google* 'Knowledge Management' and the search engine will return over 63,000,000 'hits'. The Victorian Health Promotion Foundation, VicHealth, has commissioned this piece of research in part to (re-)consider its knowledge management operations.

The need for organisational perspectives on the management of knowledge is perhaps best illustrated by the following, almost haiku-like pronouncement by former US Secretary of Defence Donald Rumsfeld:

*As we know,
There are known knowns,*

*There are things we know we know.
We also know
There are known unknowns.
That is to say
We know there are some things
We do not know.
But there are also unknown unknowns,
The ones we don't know we don't know.*

Feb 2, 2002, US Department of Defense news briefing

The concept of Knowledge Management is used by organisations to identify, create, represent, and distribute knowledge for reuse, awareness, and learning within and outside the domain of activity of an agency. Knowledge Management programmes are typically tied to organisational objectives and are intended to lead to the achievement of specific outcomes, such as shared intelligence, improved performance, competitive advantage, or higher levels of innovation.

Public sector health agencies seem to have been lagging in the conscientious adoption and implementation of knowledge management principles, quite contrary to organisations operating in the private domain (Gabbay & Le May, 2004, Van Beveren, 2003). Gabbay & Le May, however, demonstrate that these principles should find their place in clinical and public health practice, particularly in an age of evidence-based work.

Knowledge transfer (one aspect of Knowledge Management) has always existed in one form or another. Examples include on-the-job peer discussions, formal apprenticeship, corporate libraries, professional training, and mentoring programs. However, since the late twentieth century, additional technology has been applied to this task, such as knowledge bases, expert systems, and knowledge repositories. The Cochrane and Campbell Collaborations, in the health and social justice arena, are obvious examples of such endeavours.

Knowledge Management programmes attempt to manage the process of creation or identification, accumulation, and application of knowledge or intellectual capital across an organisation. Knowledge Management, therefore, attempts to bring under one set of practices various strands of thought and practice relating to:

- intellectual capital and the knowledge worker in the knowledge economy
- the idea of the learning organization
- various enabling organizational practices such as Communities of Practice and corporate Yellow Page directories for accessing key personnel and expertise
- various enabling technologies such as knowledge bases and expert systems, help desks, corporate intranets and extranets, Content Management, wikis and Document Management.

The mechanistic (or, as it is sometimes framed, the 'scientific') paradigm for knowledge management refutes the key issue that knowledge is power. Managing, and controlling, the generation, compilation, diffusion and application of knowledge (and thus, of evidence) is inherently related to the question *who* has knowledge to *what* purpose. McAdam and McCreedy (2000) explore that tension, conceptually consistent with Pease's (2007) approach above, as follows:

(The constructionist consciousness...) approach to knowledge construction considers inequality, conflict, domination, subordination and manipulation influences as well as more traditional behavioural questions associated with efficiency and motivation (...). Thus, knowledge construction includes a dynamic process of sense making rather than being restricted solely to the assimilation of a body of facts (...). This social view of knowledge, from the critical perspective, causes problems for those who use the 'knowledge is power' weapon in organisations. (P.159)

For organisational environments, such as the VicHealth one we visualised in figure 2 (above), where values such as equity and social justice are driving forces for the institutional remit, McAdam and McCreedy's recommendations are critical:

- define the role of knowledge management and its paradigm in the organisation and its context
- what are the business and employee benefits of this choice?
- develop an open approach to knowledge capture, embodiment and dissemination within the organisation
- knowledge should be seen as a dynamic asset residing throughout, in, and between people in the organisation
- technologies, tools and techniques are to be considered enablers and not prime drivers of organisational development
- the organisation must continuously reflect on the role knowledge management plays now and in its future directions.

Interlude



In the movie *Star Trek: Generations* Captains Kirk and Picard meet their nemesis in villain Dr. Tolian Soran. Soran wishes to enter an interstellar nexus (pictured above) which will give him the bliss of immortal time travel, reuniting him with his family.

The nexus between research, policy and practice is much less enchanting.

2. The nexus between research, policy and practice: original research protocol and amendments

After a call for proposals was published by VicHealth in March, 2006 an expression of interest to investigate the integration of research, policy and practice was lodged on 8 May, 2006 (appendix 1). The signatories to the tender were dr. Evelyne de Leeuw (Chair in Health and Social Development), dr. Karen Stagnitti (associate professor in Occupational Science and Therapy) and dr. Beth Crisp (associate professor in Social Work). The range of disciplines and perspectives embodied in this small team exemplified the research intent to explicitly look beyond experiences around the nexus between *health* research, policy and practice. During an interview with VicHealth senior staff on 17 May, 2006, this perspective was further strengthened: also materials from fields such as education, law, social justice, sustainable development and engineering were to be included in the study. Subsequently, the project was awarded to the Deakin University School of Health and Social Development and Andrew McNess (research assistant) started to work with the team on 17 July, 2006.

Following the original proposal, from the kick-off of the project at that date we started to source the theoretical references that would constitute the foundation of our work. We had the great opportunity to share our approach almost immediately with the Project Advisory Committee (PAC) at its meeting on 25 July, 2006. At the meeting the methodology and logistics of the project were outlined, and members of the PAC were invited to suggest a number of local, national and international case-studies that would inform the empirical part of the study.

The PAC met again with the project team on 12 September, 2006, at which meeting a deep concern was expressed about the abstract and theoretical nature of the study. The Committee considered that the approach chosen might not adequately inform future operations of VicHealth. To address these concerns a meeting was called between dr. Rob Moody, professor David Hill, Barb Mouy (VicHealth project leader counterpart) and the Deakin team leader, Evelyne de Leeuw, on 8 November, 2006. The project was suspended until that time, considering that new directions might emerge from the meeting. The outcome was that the empirical findings emerging from the case studies would indeed have the potential to lead to a set of tangible and useful directions for VicHealth to organise and manage its operations at the nexus between research, policy, and practice.

In further conversations with VicHealth counterparts (and indeed, intimately operating at the nexus between research, policy and practice!) it was decided that the originally proposed methodology for compiling case study material would run a danger of returning little insightful information: the original methodology proposed to compile and analyse case studies from publicly available sources, upon which each case study would be presented to agency executives for a validation and check of appropriateness of the material. Although this is considered an appropriate methodology in the political science realm, the project team, in conversation with VicHealth representatives, agreed that in-depth interviews with key stakeholders in selected case study agencies were warranted. This was reinforced that the Australian Research Alliance for Children and Youth, through its representation on PAC by Professor Brian Head (ARACY Chief Executive Officer), had offered to 'road test' initial study findings during a workshop on 24 November, 2006.

To preserve consistency and quality between case studies a similar in-depth approach was required regarding the other agencies that were selected on the basis of PAC feedback. It was decided to continue to compile case study descriptions through publicly available resources, but to conduct subsequent interviews with agency executives. This required an ethics application and approval process through the Deakin University Human Research Ethics Committee (DU-HREC), cf. Appendix 2. This process led to a delay in the project of a further 6 weeks; approval was granted on 19 February from 2 February 2007 for a period of three years (appendix 3).

Case study material was subsequently collected by means of a validation of public records during interviews at which dr. Andrew McNess was always present, and other team members (De Leeuw, Stagnitti, and Crisp) alternated. The write-up of the material was initially carried out by dr. McNess, and edited and amended by other team members, and subsequently sent back to interviewees for final consideration.

A draft version of the material was presented at the World Conference of the International Union of Health Promotion and Education in Vancouver (De Leeuw et al., 2007). Feedback from participants at the session led to a further refinement of the argument and a stronger emphasis on networking. One thing that became urgently clear during the debate was how much need there is among practitioners, policy makers and researchers for more understanding and direction of integration between the three.

3. A review of the theoretical literature on the nexus

3.1 Research question and rationale

A concern for the differences between health research, policy and practice has become more prominent among health academics, policy-makers and politicians, and practitioners in the field. Where an ever-increasing body of evidence of effectiveness in health care, public health and health promotion (through the Cochrane Collaboration) and education, welfare and social justice (through the Campbell Collaboration) is being established, the uptake of these insights in policy and practice has demonstrated a far slower pace. The different arenas have come up with approaches to working at the nexus between research, policy and practice with a view to integrating knowledge and evidence generation and application. There is currently, however, no evidence which of these approaches yields better results. In this paper we will be looking at the range of conceptual and theoretical approaches. These will form the foundation of a series of case-studies in which the practicalities of working at the nexus towards better integration are to be explored.

What place has theory in mapping the nexus of research, policy and practice? As researchers, policy-makers and practitioners often have widely divergent aims, agendas and responsibilities, any interaction between the three communities would likely be complex and complicated in nature. Any theory explaining this interaction, one would wonder, simplifies and generalises the interaction and would lose explanatory power. Some would argue that it would be more effective to just "get in there" and engage with the various communities, and work out any difficulties and misunderstandings as they arise?

We propose that theory is not a 'head in the clouds' abstraction, but rather a useful and practical 'guide' in approaching these complex situations, just like the adage 'Nothing is as practical as a good theory', attributed to psychologist Kurt Lewin. As Birckmayer and Weiss (2000) emphasise in their overview of theory-based evaluation (TBE), theoretical frameworks are important in that they posit how a given organisational practice "should work" (de Leeuw & Skovgaard 2005: 1334). In this sense, a theoretical framework offers actors a proposed 'course of action' for approaching the complexities in working at the nexus.

A review of literature sourced from a broad range of academic disciplines was undertaken to identify theoretical frameworks which provide approaches for working at the nexus of research, policy and practice. In the process of reviewing the literature, it became apparent that a number of frameworks were thematically similar (For instance, there is a common belief that working at the nexus is complex because of differing research, political and practice agendas; a number of frameworks effectively challenges this notion). Therefore, we decided that placing the frameworks in categories would be helpful in highlighting and clarifying the various strategies for working at the interfaces.

Also, we found that there are conceptually distinct sets of approaches to this problem of the nexus. A number of studies engage in discovering and explaining factors and phenomena that, being placed at the nexus, can either form barriers or enabling factors for integration. Other studies (and in fact, the vast majority in our findings) looks at the dynamics and possible interventions to address these factors across the nexus.

Before outlining each of the theoretical categories (or 'models of integration'), we will describe our approach for sourcing literature. We will also highlight the common factors which assist or impede interaction between researchers, policy-makers and practitioners. The facilitators and barriers to integrating the three communities underline the conflicting and contradictory objectives between the communities. The value in highlighting these facilitators and barriers is that it provides us with a context for recognising how a given theoretical framework provides a 'course of action' for dealing with these complexities.

3.2 Sourcing the review

We do need to emphasise that the facilitators and barriers, as well as the theoretical frameworks, have been sourced specifically from literature centred on the nexus of research, policy and practice. This is opposed to concentrating on the extensive range of literature focussed solely on evidence-based policy or evidence-based practice.

The literature was sourced from both VicHealth and Deakin University's database of articles concerned with research, policy and practice. Relevant links from these articles were also sought out. Finally, database searches of EbscoHost and Academic Search Primer were undertaken using the key words 'research, policy, practice'.

3.3 Factors that facilitate or hinder interaction at the nexus

In the process of identifying theoretical frameworks, a significant amount of literature was observed which relates to factors which facilitate or hinder interaction between researchers, policy-makers and practitioners. Although substantially more literature was located which addressed the 'cultural differences' between the research and policy worlds (eg. different values, demands, timelines, and organisational language/jargon), disparities between policy makers and practitioners, in terms of what is considered 'useful' research, were also identified. This latter issue emphasises the importance of directing research dissemination at both policy makers and practitioners, and not viewing policy uptake as an end in itself. Practitioner acceptance of research - its aims, outcomes and recommendations - is also important.

In outlining the facilitators and barriers of integration below, a number of key observations and issues will emerge:

- Policy makers and practitioners similarly value 'clarity' in research presentation and recommendations.
- The current relevance of research is of greater importance to policy makers.
- The quality of research is valued more by practitioners.
- The values and agendas of the 'three communities' are often significantly different from each other.
- The impact of research outcomes on policy and practice can be both subtle and gradual in effect.

3.3.1 'Pitching' research outcomes at both policy-makers and practitioners.

In a series of public health studies examining policy makers' utilisation of research (Gray, White & Barton, 1995; Nutley, 2003; Innvaer, Vist, Trommald & Oxman, 2002; Jacobsen,

Butterill & Goering, 2003) two facilitators of research uptake were consistently mentioned by the authors; a) the timeliness and relevance of research, and b) the 'accessible' presentation (that is, accessible beyond academic circles) of research findings with clear recommendations.

Based on Neilson's (2001) literature review of knowledge utilisation and public policy making, Eddy's (1990a, b) recommended guidelines, and Lohr, Eleazor, Mauskopf (1998) and Grol and Grimshaw's (2003) overview of clinical practice guidelines, practitioners similarly placed a high value on research recommendations that contained an 'action plan' (eg. outlining how research outcomes can be applied on a practice level). Also, the recommendations were written in a 'user-friendly' style, as opposed to a dense academic style. Projects aimed exclusively at knowledge generation were less likely to influence policy or programme change than projects that had action plans (Neilson, 2001).

The importance of research being presented in a form that is accessible to a wide audience is emphasised by Marston and Watts (2003). They caution that "experts can keep non-experts out of (public debate and analysis) by insisting on using both a vocabulary and highly arcane methodologies that they have created and which they run in ways that keep the laity at bay." (Marston & Watts 2003: 44). Accordingly, organisations such as the Canadian Health Services Research Foundation have created web-based materials, such as the Communication Primer (1998), that guide researchers in presenting outcomes in a form accessible to a range of audiences. Primarily, however, researchers are being guided in how to present research outcomes in as acceptable a form as possible to policy makers and practitioners (eg. user- and/or context-friendly language, clear recommendations). As section 4 of this paper will outline, the majority of the 'models of integration' endeavour to assist in achieving this 'user-friendly' goal. However, there is variation across the models in how to achieve this.

3.3.2 Differences between policy-makers and practitioners in how they evaluate research

In contrast to policy makers, practitioners' confidence in research recommendations, and associated policy, is more dependent on the recommendations being supported by a strong evidence base (Innvaer et al. 2002; Neilson 2001; Lohr et al. 1998; Eddy 1990a, 1990b). From the context of the health professions, "any organisation that cannot explain its policy must understand that decision makers will be unlikely to take its policy seriously" (Eddy 1990b: 390). An evidence base that 'backs-up' research recommendations also needs to inform practitioners of how a proposed practice can work in a variety of contexts (Eddy 1990a: 1840).

So, a slight discrepancy in needs between practitioners and policy makers, in terms of what they value in research content, has been identified. Therefore, the successful integration of research into both policy and practice (as opposed to 'merely' policy) requires that research be clear and timely in its aims, but also supported by a strong evidence base.

3.3.3 Differences between researchers and policy-makers in how they approach social issues

There are not only discrepancies between policy-makers and practitioners in how they value research. There also significant discrepancies between researchers and policy-makers in relation to how they approach social issues. For instance, where policy maker values are closely attuned to 'hierarchies of power', social science researchers are more attuned to 'the plight of the powerless' (Caplan 1975). Furthermore, the 'two communities' divide is based on the assumption that social scientists are preoccupied with 'pure' science, while government policy makers are more practical, action-oriented and centred on immediate issues (Caplan 1979). Noting this discrepancy in approaches toward social issues serves as a reminder in how research outcomes need to be 'pitched' with a policy audience in mind. (The second 'model of integration' to be outlined below - Blurring the Boundaries - is particularly instructive in 'pitching' research outcomes to an intended audience.)

3.3.4 How can research influence policy and practice?

The influence of political agendas on policy makers' uptake of research may leave the impression that unless research outcomes have an immediate political use, the researcher's lot will generally be a passive one. It would seem that efforts to disseminate research can only extend so far. Additionally, "policy making at whatever level will always be grounded in other non-evidential things like core organisational or social values and first-hand practitioner testimony...[the] role of scholarly research in all this may be subtle and hard to trace." (Saunders 2005: 385)

This however is not to preclude research a place in the worlds of policy-makers and practitioners. For instance, Saunders (2005) and Short (1997) caution against judging research impact on the basis of direct influences on policy. In doing so, they suggest/reassure that research has an active, if subtle place, in policy-practice worlds. As Saunders (2005: 385) implores "surely we want [research] influence to be a cumulative one that changes habit of thought, [rather than] the flash-in-the-pan effect of today's sensationalist survey that is contradicted by next week." Although Short (1997) recommends that researchers work in line with the necessities of the policy making system (eg. to be politically relevant, to provide action plans and recommendations), policy-maker's acceptance of research is not the primary goal. Rather, it facilitates the contribution of a more humane 'wisdom' into the political imperatives of social policy and the everyday tasks of practitioners.

3.3.5 Summarising the facilitators and barriers to integration

In sum up then, the facilitators and barriers of integration are indicative of the dynamic and complex relations in the nexus of research, policy and practice. Therefore in approaching the nexus on both a theoretical and practical level, foreknowledge of the following is of particular importance:

- Value-systems of the 'three communities' are often notably different from each other.
- Quality of research, coupled with a strong evidence base, is more evidently valued by practitioners.

- Timeliness and current relevance of research is of greater importance to policy makers.
- Clarity in research presentation and recommendations is similarly valued by policy makers and practitioners.
- The influence of research outcomes on policy and practice can be subtle, gradual and accumulative in effect.

3.4 Categorising theories

Through outlining the facilitators and barriers to integration, we have gained a strong sense of where the aims of one community often differ from the aims of another. Below we will present six different theoretical categories that explain the interactions at the nexus of research, policy and practice, and suggest ways to improve our relations. Taken together, the categories illustrate the range of impacts - often subtle, other times direct - research can have on policy and practice worlds.

A theoretical framework serves a series of purposes. Primarily, it helps explain how a program (eg. policy guidelines, a practitioner action plan or, in our case, an integration strategy) is expected to work, and, in doing so, provides a structure for the analysis of results. Whether the theory is right or wrong is largely irrelevant; its import is in providing a framework for thinking about the program's effectiveness (Birckmayer & Weiss 2000). With our subject matter, we are identifying theoretical frameworks that posit how the integration of research, policy and practice should best work.

As previously mentioned, in the process of reviewing the literature it became apparent that a number of frameworks were thematically similar. We decided then that placing the frameworks in categories would be a clarifying step toward examining how the dynamic relations between research, policy and practice can be more easily managed and effectively utilised (table 2 below). Appropriately each category (or 'model of integration') was found to address particular facilitators and barriers toward successful integration.

Table 2: a categorisation of theories reflecting on the dynamics at the nexus between research, policy and practice

category/model	theories	tenet
INSTITUTIONAL RE-DESIGN	Institutional Arrangements for Connecting Evidence and Policy (Nutley, Walter & Bland, 2002): <i>there are eight conditions/propositions for institutional arrangements that facilitate the exchange and utilisation of evidence in policy.</i> Institutional Design (e.g., Klijn & Koppenjan, 2006): <i>policy outcomes are dependent on policy network composition. Network composition can be designed by changing game rules.</i>	The integration of research, policy and practice is dependent on institutional (both 'hardware' – i.e. buildings, people, accountabilities – and 'software' – i.e. norms, cultures, beliefs) arrangements which are amenable.
BLURRING THE BOUNDARIES	Boundary Management (van Buuren & Edelenbos 2004): <i>If both researchers and stakeholders work together to establish a research agenda, 'knowledge fights' are avoided in the production of evidence.</i> Sustained Interactivity (Huberman 1990): <i>If partnerships are well-established, then...more successful and wide-ranging dissemination of evidence will occur. However, time is needed for development of a shared vocabulary, vision and mutual trust.</i> Stakeholder-oriented Framework (Sauerborn, Nitayarunphong & Gerhardus 2000): <i>A key ingredient in the integration of research into the policy-making process is the interaction between researchers and stakeholders.</i> The 'street level' bureaucrats model (Lipsky 1980): <i>In theory, if researchers are capable of understanding/relating to the situation of the street level bureaucrats, their impact on the direction/organisation of policy will increase.</i>	Agenda setting and continual interaction between stakeholders enhances joint problem definition and solving; helps inspire practitioner confidence in research.

UTILITARIAN RESEARCH, POLICY AND PRACTICE	<p>Utility Driven Evidence (de Leeuw & Skovgaard 2005): <i>Evidence will only be used if it serves a purpose (a 'utility') - this is not necessarily 'truth'. The utility could also be political, financial, status or prestige.</i></p> <p>Multiple Streams (Kingdon 1984): <i>If the 'right' interpretation of events in the three streams (policy, problems and politics) connect, a window of opportunity opens to introduce research findings into new policies.</i></p> <p>Percolation model (Weiss 1977): <i>'Percolation' occurs as researchers begin using new frameworks or concepts, which progressively filter through various policy networks. Ties in with the "enlightenment function of research".</i></p>	Research that serves a current policy position and which is timely and relevant has a better uptake than 'free-floating' evidence
ALTERNATE EVIDENCE	<p>Advocacy Coalition Framework (Sabatier & Jenkins-Smith 1993): <i>The competition between opposing advocacy coalitions both compels and restrains policy change. The framework emphasises the influence of 'belief systems' in the development of policy and practice/community thinking.</i></p>	Research that counters current policy positions can be kept in readiness to influence the system
CONDUIT	<p>Community Liaison Model (Mitchell & Walsh 2003): <i>An 'intermediary' acts as a 'plain language' bridge between the contrasting knowledge worlds of research and policy making; the intermediary aims to increase the relevancy of research to the practical world.</i></p> <p>Knowledge Broker (Canadian Health Services Research Foundation, 2005): <i>Knowledge brokers link decision makers and researchers, facilitating their interaction so that they are able to better understand each other's goals and professional cultures, influence each other's work, forge new partnerships, and promote the use of research-based evidence in decision-making.</i></p>	Intermediaries link research and decision-making communities and ensures clarity of research presentation
RESEARCH NARRATIVES	<p>Policy Narratives (Roe 1991): <i>If 'narratives' are utilised to assist in the presentation of evidence, then the evidence can 'resonate' more powerfully with policy makers and practitioners. Part of the appeal of narratives is their utility in simplifying complex issues.</i></p>	Narratives assist in clarifying research and increase the perceived community relevance of research
RESEARCH RESONANCE	<p>A model that, while not based on an actual theoretical framework as such, shares a similar function to Research Narratives in helping 'dry' research 'resonate' on a policy, practice and community level.</p>	Resonance increases the perceived relevance of research, policy and practice

3.4.1 Institutional Re-Design

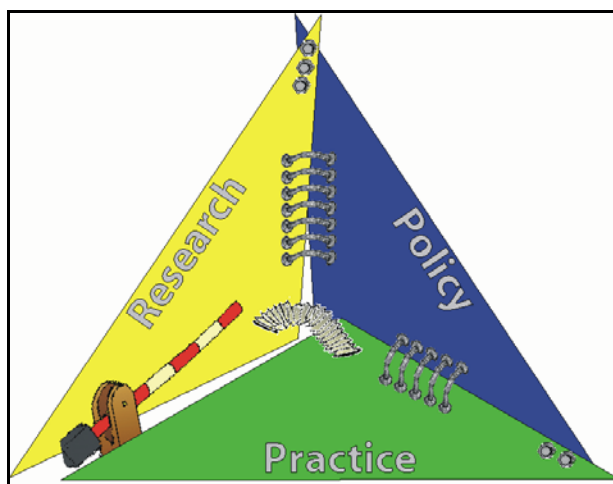


Figure 4: Institutional re-design models: fixing and changing rules of engagement

The INSTITUTIONAL RE-DESIGN category of theories acknowledges that researchers, policy-makers and practitioners form an intricate web of interactions. The operations of that web are governed by sets of rules, known sociologically as 'institutions'. As Ahrendt (1970) has said: *an institution is a body of people and thought that endeavours to make good on common expressions of human purpose*. Klijn and Koppenjan (2006), arguing from a policy network theoretical foundation, find that these rules are amenable to change: actors in the network can endeavour to change rules or set new rules. Klijn &

Koppenjan find that actors engaged in policy networking at times may want to change the rules that formally or informally apply to the network, thus influencing their policy outcomes. Actors may try to influence network composition (by changing or consolidating actor positions, adding or changing access rules, or modifying external determinants of actor

positions through, for instance, regulation), network outcomes (by changing performance indicators or professional codes of conduct), and network interactions (by laying down rules on conflict regulation, the governance of interaction, or hierarchical relations).

Nutley, Walter & Bland (2002) also see a 'hardware' function of institutional arrangements (for instance, physical proximity between researchers, policy-makers and practitioners) and in an empirical review of such arrangements in the UK Drug Misuse arena have come up with the following propositions:

- Evidence use will be greater when the system is open to evidence and argument
- Evidence use is encouraged by a climate of rationality
- Evidence use is more likely when the nature of the issue on the policy agenda does not kindle popular or official passions
- Evidence use may be facilitated when the makers of policy are specialised experts in the substance of the policy domain
- Evidence use needs a thriving social science community to supply evidence for the policy process
- Evidence use is facilitated by institutions that bridge the academia-government gap
- Evidence use is facilitated by mechanisms for bringing together government analytical staff with their policy counterparts
- Evidence use is facilitated by institutions that provide easy access to a comprehensive evidence base and translate the implications of this evidence into guidance for service providers.

Although some of these seem all too obvious, they form an interpretive basis for the next six categories which appear to address 'how' questions for each of these propositions.

3.4.2 Blurring the Boundaries

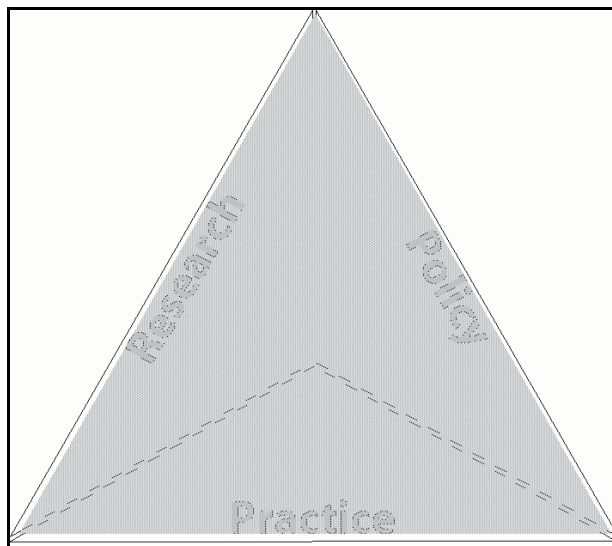


Figure 5: Blurring the Boundaries models: there are no real boundaries between research, policy and practice

This model resists the notion that the worlds of researchers, policy-makers and practitioners are essentially separate from each other in terms of values, goals, timelines and 'jargon' employed. This is not to say that the model denies the existence of differences between the 'communities'. However to improve the interactions between researchers, policy-makers and practitioners, BLURRING THE BOUNDARIES highlights the value of each community recognising the values, demands and pressures that the other adheres to/ experiences. Ideally, understanding 'the other' facilitates the development of shared understandings between the communities.

For example, the Boundary Management framework (van Buuren & Edelenbos 2004) promotes researcher/ policy-maker/ practitioner interaction from the outset of a research project. It follows the logic that researchers' engagement is more likely if they have been involved in the original priority-setting (IDRC 2004; Hanney 2004); they are less willing to work on an agenda with which they disagree (Kogan & Henkel, 1983). As de Leeuw (2006: 2) argues, "collaboration should ideally start from a joint recognition of a problematic issue, and not from an ideology that dictates partnerships." Also, shared priority-setting befits the development of basic conditions which aid the sharing of knowledge between organisations; conditions include the development of trust and the establishment of a collective language and vocabulary (Nahapiet & Ghoshal, 1998).

In another example, the focus of Sustained Interactivity (Huberman, 1990) upon stakeholder interaction (even beyond the duration of a particular research project) provides stakeholders' insight and understanding into the research process. This, in turn, provides a more realistic stakeholder view of the research project (Hanney, 2004). Also, through continued interaction, researchers become more informed of variation in organisational set-ups (Hargreaves, 1996). When a range of practitioner experiences/'contexts' are reflected in the research, practitioner receptiveness toward evidence is more likely (Hargreaves, 1996).

By design, Sustained Interactivity is facilitative of the finding that

"Research utilisation is more likely where steps are taken to encourage policy makers to: absorb and learn from interaction with researchers, commission and learn from systematic reviews and policy analysis; base some policies on appraisal of evidence; and balance research with other factors (industry, media, public, etc.)" (Hanney, 2004: 77).

So BLURRING THE BOUNDARIES promotes trust, understanding and confidence between researchers, along with enhancing opportunities for research uptake. However, the understandings that emerge through the 'blurring the boundaries' approach needs to extend to an understanding of power differentials between the communities (Springett, 2001). For instance, even when collaboration between the communities has occurred, if the researcher/s ultimately sets the research agenda, the research's representativeness of practitioner and policy maker experience is limited. Thus the potential wide-ranging influence of research is undermined.

3.4.3 Utilitarian Evidence

In this model the core idea is that research should be 'useful' in order to be applied in policy and practice. It recognises that the underlying principles informing the decision-making of policy-makers and practitioners are often not the same principles informing researchers. In this regard, research needs to be 'pitched' in such a manner that it is clearly of use to policy and practice communities (eg. the research outcomes are articulated in a manner that reflects current political concerns/ agendas, and/or the research suggests how the outcomes can be applied on a practical level). As alluded to in the BLURRING THE BOUNDARIES model, the interaction of researchers with policy-makers and practitioners can provide researchers with insight into how to most effectively direct new knowledge at policy-makers and practitioners. One framework, Utility-Driven Evidence (de Leeuw & Skovgaard, 2005) follows the thought

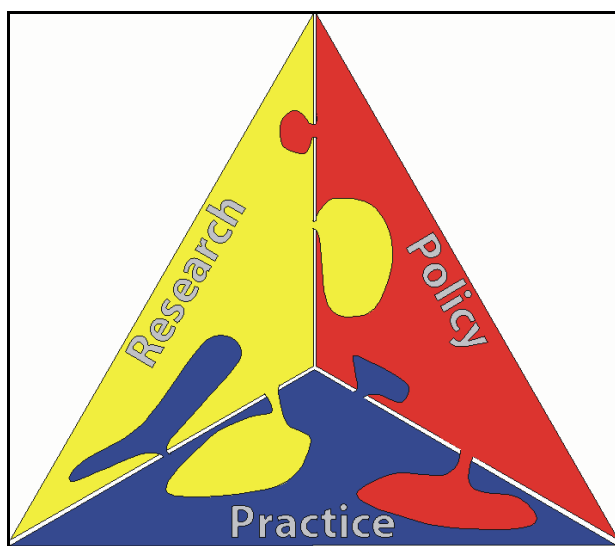


Figure 6: Utilitarian Evidence models: research, policy and practice are interconnected through the utilities of evidence of effectiveness

practice. The 'conduit' informs different communities - policy communities, practice communities, the 'general' community - of research developments and outcomes through

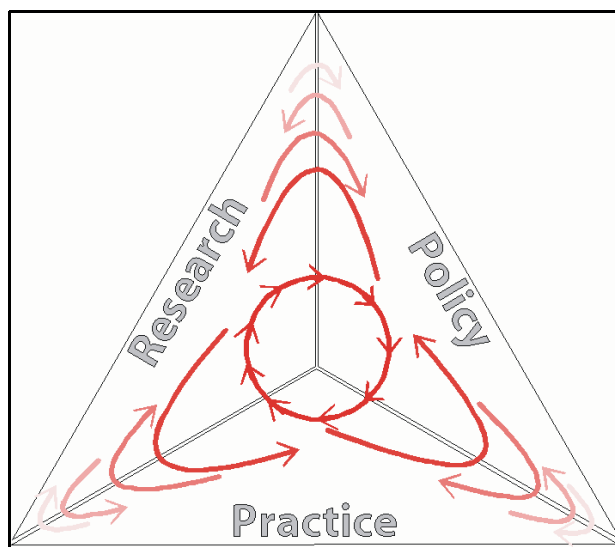


Figure 7: Conduit models: persons or agencies are acting as conduits between research, policy and practice

fewer material and symbolic resources (eg. resources such as skills and knowledge of specific disciplines) (Bernier et al., 2006). Also, in disseminating new knowledge in an accessible manner, 'conduits' anticipate that at some point a demand for the application of the evidence is created.

that knowledge should be generated in such a way that it is made relevant to stakeholders. Other frameworks within the 'utilitarian' paradigm assume that utility is created through relatively autonomous processes and events. One of them is the 'Multiple Streams' idea where a policy entrepreneur tries to connect perceptions about policies, problems and politics. Another, the Percolation idea, assumes that new evidence slowly seeps into the realities of politicians and practitioners (Overseas Development Institute, n.d.).

3.4.4 Conduits

The 'conduit' is a person or agency who acts as a link between research, policy and practice. The 'conduit' informs different communities - policy communities, practice communities, the 'general' community - of research developments and outcomes through developing 'user-friendly' language and presentations. Whereas a journal article uses dense academic terminology to report on research outcomes, the 'conduit' works to disseminate new knowledge in a format that is more widely accessible (eg. using more common, every-day terms, utilising tables and graphs, avoiding jargon).

The 'conduit' figure facilitates collaboration between the communities in that clear communication during various research decision-making processes "fosters the ongoing engagement of the partners in the research activity" (Bernier et al., 2006: 353). In working between the various communities, the 'conduit' provides a platform for communities to express their concerns, in particular those who have

3.4.5 Alternative Evidence

What if research projects and research outcomes are perceived as running counter to current political agendas or are believed to contradict current organisational practice? ALTERNATIVE EVIDENCE follows the notion that if research does counter current political agendas/paradigms, its immediate impact will be muted. However, there will likely come a time where the mass of counter evidence can no longer be ignored - or at least not without undermining present policy positions or inviting criticism from opposing parties and/or practitioners (Hanney et al., 2003; Nutley, 2003). In any event, researchers should also keep in mind that "at the end of the day, policies...are constantly framed and reframed in response to changing contexts" (Choi et al., 2005: 634).

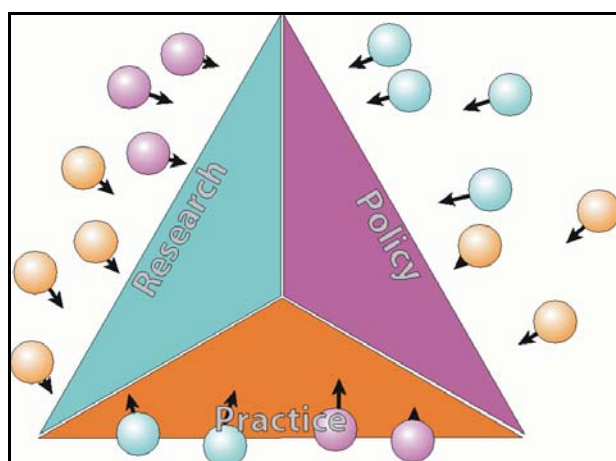


Figure 8: Alternative Evidence models: stakeholders in research, policy and practice maintain in readiness bits of evidence for use at opportune moments

ALTERNATIVE EVIDENCE suggests that the impact of research outcomes on policy and practice communities is, in line with the Enlightenment function of research (Weiss, 1977), gradual and often subtle. That is, it can contribute toward a more gradual paradigm shift (Krastev, 2000; Neilson, 2001; Sabatier & Jenkins-Smith, 1993). This contrasts with the three previous models which suggest that research can have a relatively direct and immediate impact, depending on how appropriately research is 'pitched' at policy-makers and practitioners. In the case of 'alternative evidence', the utilisation of research as political

ammunition has integration value if evidence is consequently "distributed more widely among members of policy and practice communities than is presently the case" (Nutley, 2003: 15).

This model also demonstrates the aforementioned value of research in providing 'wisdom'; that is, building upon the evidence-base with critical commentaries and alternate perspectives (Hanney et al., 2003). As Hanney et al. (2003: 15) emphasise 'there is no monopoly of wisdom and those who wield enormous power do well to foster their own critics and counter-analysis.' Furthermore, 'alternate evidence' connects with political theory that says that in the reality of policy-making there are always groups of stakeholders that negotiate and try to connect with each other to advance their ideas (e.g. the 'advocacy coalition framework') (Abrar, Lovenduski & Margetts 2000).

3.4.6 Narratives

RESEARCH NARRATIVES work to 'humanise' the presentation of research aims and outcomes with the inclusion of personal stories. Through using personal stories, they inject 'common man' (sic) experience into research outcomes (Sutton 1999). The narratives humanise the research, but can also bring a sense of immediacy to the research topic that a 'dry'

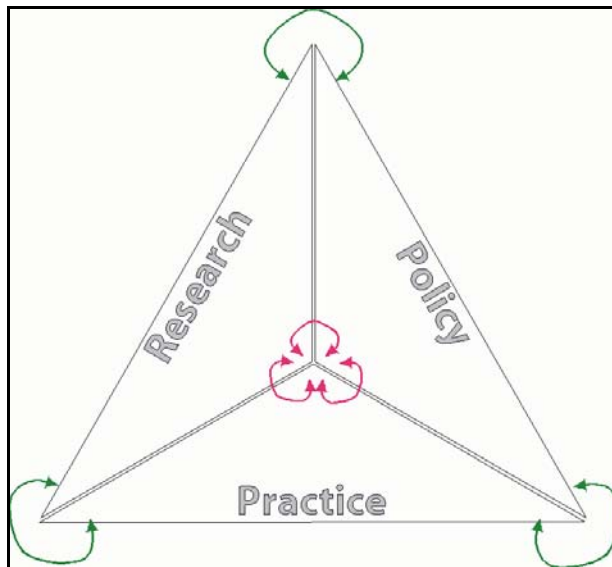


Figure 9: Narratives models suggest particularly policy-makers are more prone to respond to narratives than to other types of data and evidence representations

presentation of results might otherwise lack. Given policy makers' valuing of experience and common sense (over esoteric science) in their 'selection' of evidence (Booth, 1988) then the inclusion of narratives in the overall presentation of research would appear a wise one. The narratives support the research, and they potentially highlight practitioner experiences.

Furthermore, they can function to both illustrate research findings and simplify complicated findings (Stone, 2002). Connecting RESEARCH NARRATIVES conscientiously with any of the first four models - where actors try to blur boundaries, demonstrate usefulness, act as conduits, or generate alternate

evidence - would likely have higher impact on the integration of research, policy and practice.

3.4.7 Resonance

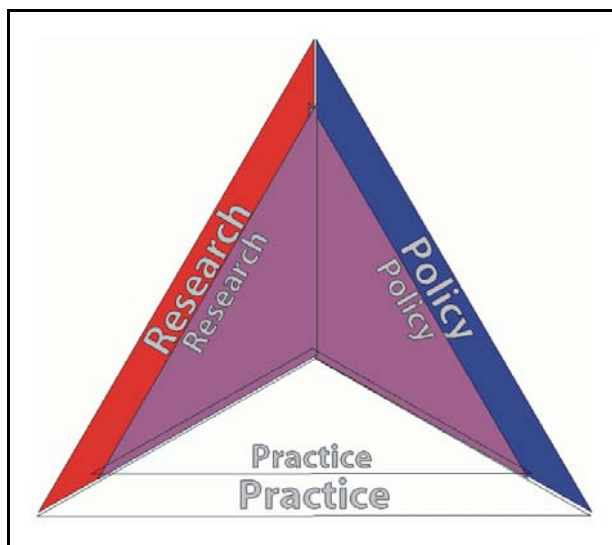


Figure 10: The Resonance model indicates that skillful communications (with appropriate usage of metaphors, imagery and symbols) can make research, policy and practice resonate in unison

This model works on the idea that researchers - or their 'conduits' - should have their 'finger on the pulse' of contemporary cultural belief systems. In doing so, they can link their research outcomes with popular or emergent belief systems (eg. 'social inclusion', a 'safe environment for all individuals'). Therefore, the receptivity of the intended audience to their research should be increased.

As an example of this, the Australian Research Centre in Sex, Health and Society (ARCSHS) (Hillier & Mitchell, 2004) provided a case study of how they attracted greater organisational and public interest in health issues affecting gay youth. Through crafting a publicity campaign that related the health issues to

the theme of individual safety, they increased the receptivity of communities to their health

issues. Their previous campaign had focussed on the more contentious issue of 'morality', and it had attracted a far less receptive response.

Similarly, debates around HIV/AIDS, birth control, or euthanasia, have often been framed in the context of morality (derived from religious perspectives). It would not be helpful to argue that the morality is 'wrong', as it is very strongly connected to people's life worlds. However, trying to make the evidence resonate with other belief systems could advance the application of new knowledge.

In the Research Resonance model it is argued that connecting the HIV/AIDS discourse to issues of 'safety', and the euthanasia discourse to 'dignity', rather than to 'morality', is helpful in integrating research, policy and practice. Issues of safety and dignity are issues that any individual, irrespective of their belief system, can identify with. Widdershoven (1999, 2005) has demonstrated that notions of 'autonomy' in the euthanasia debate in The Netherlands have liberated it largely from religion-based belief systems and subsequent ethical judgements, and enabled an open societal discourse on the desirability and conditions for voluntary active euthanasia. The Research Resonance model displays how the 'spin' which promotes research can influence the level of public and organisational interest in the research.

3.5 An appreciation and assessment of the categories - as they are not mutually exclusive, under which conditions is which approach warranted?

To sum up then, we have described one structural model, five systems interactive models, and two 'communicative' models that give direction for better integration of research, policy and practice. Summarising the key concerns from each model, we have found that working effectively at the nexus of research, policy and practice is highly dependent on the following factors:

- being relevant to the debate
- being responsive to needs of stakeholders
- thinking creatively about alternatives to the current debate, and being strategic (focussing on longer term effects rather than immediate change)
- building relationships and trust

As the above factors show, the 'models of integration' also address the various barriers toward integration and capitalise on the reported facilitators of integration.

The surprising finding of our literature review, though, is that although we had anticipated to find a range of theoretical models, we had also expected that these theories would find a foundation in specific disciplines, and that within these common foundations a convergence of theoretical perspectives into a relatively small group of perspectives on acting at the nexus between research, policy and practice would emerge. We have not found such a convergence.

Quite the contrary: within the categories of theories we found that none is mutually exclusive from any of the other. To illustrate this, we have produced Table 3, in which we map institutional re-design parameters against the pronouncements of the other models. It

is clear that each of the remaining categories has unique contributions to make to at least the institutional re-design perspective, but certainly to each other as well.

In sum, all of these theoretical models can provide valuable insights into activities to be employed at the nexus, but the establishment of a simple recipe or checklist is as yet beyond our grasp.

In the remainder of this study we will therefore look at more general theories on social and political processes (because we find the adage proposed by Laswell (1930,1936) that politics deals with the question of '*who gets what*' eminently applies to our exploration of the nexus) and activities employed by a number of agencies with a track record of successful actions at the nexus.

Table 3: Interfaces between the Institutional Re-Design category of theoretical models and the other six theoretical categories

Theoretical categories Institutional re-design parameters	Blurring the boundaries	Utility-Driven	Conduits	Alternative evidence	Narratives	Resonance
influence network composition	X		X			X
frame network outcomes	X	X	X	X		X
structure network interactions	X	X	X		X	X
make the system open to evidence and argument	X	X		X		
encourage a climate of rationality	X		X		X	X
frame the nature of the issue on the policy agenda not kindling popular or official passions	X	X	X	X	X	X
position makers of policy who are specialised experts in the substance of the policy domain	X	X		X		
work with a social science community to supply evidence for the policy process		X		X		
work with institutions that bridge the academia-government gap	X		X		X	X
bring together government analytical staff with their policy counterparts	X	X	X			X
engage institutions that provide easy access to a comprehensive evidence base and translate the implications of this evidence into guidance	X	X	X			X

4. Acting at the nexus: quintessential networking

Acting at the nexus between research, policy and practice, furthering integration between the three realms quintessentially addresses the following questions:

- how do different types of knowledge, and the ways in which they are generated, permeate the different realms?
- how are boundaries, as some authors have defined them, between these different realms permeable for change?
- how does the permeability of realms relate to the factual uptake of 'new' forms and tenets of knowledge, and how does this shape new horizons for policy, practice as well as research?

Aside from more esoteric reflections on these questions (e.g., the assertion that we are entering the Age of Aquarius in which holistic integration of about everything is to happen) there are academic considerations from different disciplines that attempt to shed light on exactly these issues. We do not find this to be the place to produce a primer on the philosophy of science or political science, but these fields seem to reflect more appropriately on the generation and utilisation of knowledge, and the interaction between stakeholders in their social networks pertinent to this.

4.1 Actor-Network Theory as an overarching conceptual framework

One could say that the philosophy of science has become increasingly aware of the social and political nature of knowledge generation; the field itself has been blurring boundaries considerably with sociology (e.g. Callon, 1986 and Latour, 1988). Callon and Latour are the fathers of the 'Actor-Network Theory' (or ANT) which rather than a theory in a Popperian manner (that is, allowing for predictions under certain conditions) is a coherent material-semiotic conceptual framework that allows for explanations *how* such networks form and act. Material-semiotic networks, according to ANT proponents, link material issues (people, structures) with immaterial or semiotic issues (like institutions in the sociological sense, communication patterns, and imagery). ANT suggests that these dynamic networks constantly form and reform, and that certain configurations allow for innovation and permeability of knowledge and agency boundaries.

Interestingly, a core concept in ANT is *translation*. The ANT version of the concept, however, is considerably more complex than what is suggested in the idea of knowledge translation as applied in the health sciences and notably medicine. In the eyes of actor-network theorists and practitioners the translation effort aims to construct a *forum*, a central network in which all the actors agree that the network is worth building and defending. Callon has defined four moments of translation. These four moments consider a *problematization*, '*interessement*', *enrolment*, and *mobilisation of allies*¹.

At the problematisation moment the network concerns itself with the problem that needs to be solved? Who are the relevant actors? Delegates need to be identified that will represent

¹ It comes as no surprise, then, that a key theory on the establishment of interagency work and intersectoral collaboration uses similar stages for developing effective partnerships (Gray, 1985, 1989).

groups of actors. During problematisation, the primary actor tries to establish itself as an obligatory passage point (OPP) between the other actors and the network, so that it becomes indispensable.

At the intersement moment it becomes important to getting the actors interested and negotiating the terms of their involvement. The primary actor works to convince the other actors that the roles it has defined for them are acceptable.

During enrolment actors accept the roles that have been defined for them during intersement, and finally, in mobilising allies the question is whether the delegate actors in the network adequately represent the masses? If so, enrolment becomes active support.

In our view, the Actor-Network Theory represents an overarching (meta-)perspective for the integration categories described in the previous chapter. Each of the categories described there suggest intervention modalities both for material actors as well as the establishment of semiotic relations.

It is clear from the vast scope of issues and phenomena that has been subjected to ANT analyses (see, for instance, http://carbon.cudenver.edu/~mryder/itc_data/act_net.html for examples ranging from psycho-analysis, technology studies, history, informatics, anthropology and linguistics to medicine) that there is no simple algorithm that would provide guidance on which intervention modality (or conceptual category) should be used under which conditions. Each of the four moments that Callon describes, under an enormously dynamic network (re-)configuration effort, would potentially justify any of the categories to be employed in a unique permutation of possibilities.

4.2 Integration of research, policy and practice as a political problem

As stated above, we believe that integration of research, policy and practice is essentially a political problem (*'who gets what?'*). If we accept this postulate, it makes sense to briefly explore theories that reflect on political processes. Political science harbours hundreds of theories, and Paul Sabatier (1999) has taken it upon himself to develop a set of theories that 'are clear enough to be proven wrong' (p. 5).

A theory is a clear and logically interrelated set of propositions, some of them empirically falsifiable, to explain fairly general sets of phenomena. Applying this presupposition to the field of political science, Sabatier finds a distinction between *conceptual frameworks*, *theories*, and *models* which operate on a continuum from broadly applicable to any situation to (preferably mathematical) modeling for highly specific situations. A 'good' conceptual framework, theory, or model of the political process should explain goals and perceptions, actions and events, among potentially hundreds of stakeholders in the process, leading to specific sets of policy outcomes. For the area under investigation here, this would mean that a 'good' theory would explain why stakeholders in areas of research, practice, and political decision-making would endeavour to integrate or separate their spheres of action under which conditions.

The traditional (or *'old-fashioned'*) perspective of the policy process is that of the 'stages heuristic': the notion that the policy process follows clearly distinguishable steps from problem definition, through alternative specification, to resource allocation and implementation. Although this conceptual framework seems to have served a purpose in the 1970s and

1980s, it has since become the subject of devastating criticism, predominantly focusing on the fact that the stages heuristic fails to address the dynamics of multiple, interacting, iterative and incremental cycles of action at many different levels of interaction at the same time. As we have seen above, this is exactly the context for our integration endeavours.

Sabatier subsequently formulated four criteria to seek out better theories:

1. *Each framework must do a reasonably good job of meeting the criteria of a scientific theory; that is, its concepts and propositions must be relatively clear and internally consistent, it must identify clear causal drivers, it must give rise to falsifiable hypotheses, and it must be fairly broad in scope (i.e., apply to most of the policy process in a variety of political systems);*
2. *Each framework must be the subject of a fair amount of recent conceptual development and/or empirical testing. A number of currently active policy scholars must view it as a viable way of understanding the policy process;*
3. *Each framework must be a positive theory seeking to explain much of the policy process. The theoretical framework may also contain some explicitly normative elements, but these are not required;*
4. *Each framework must address the broad sets of factors that political scientists looking at different aspects of public policymaking have traditionally deemed important: conflicting values and interests, information flows, institutional arrangements, and variation in the socioeconomic environment (p.8).*

Presenting these to a symposium of leading political scientists in the spring of 1996 five such frameworks were deemed appropriate. We will briefly discuss them here, plus the policy network theory that has since emerged.

4.2.1 Multiple Streams

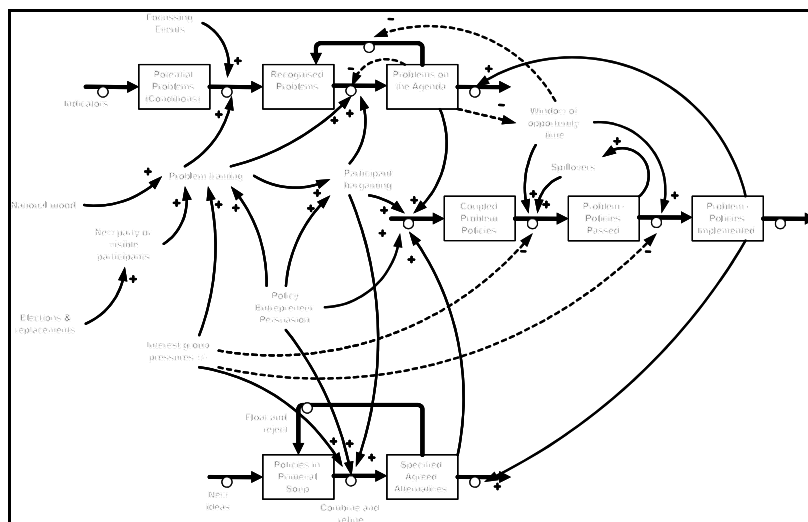


Figure 11: Events in Multiple Streams leading to the opening up of Windows of Opportunity for policy change. Graph developed by Geoff McDonnell, Centre for Health Informatics, Cliffbrook Campus, University of New South Wales, Australia

The Multiple Streams Framework was developed by John Kingdon (1984, 2002) based on extensive empirical data collection work on policy development processes in the United States. Kingdon postulated that formal ('visible') and informal ('invisible') contributors/stakeholders are active during the policy process in three independently operating streams: the problem (data representations and perceptions), policy (existing and proposed policies and their associated

actors) and politics (elections and elected officials) streams. Under specific circumstances windows of opportunity will open, and policy entrepreneurs (Skok (1995) found that others theorists have described this role under different names: "social entrepreneur," "issue initiator", "policy broker", "strategist", "fixer", "broker" or "caretaker" – cf. our conduit category above) can seize this in order to effect significant policy change. As figure 11 shows, the framework is essentially event-driven, as confirmed by Kingdon who asserts that 'a disaster is the best guarantee for policy change'.

Although the Multiple Streams framework is referred to widely (the Social Science Citation Index gives around hundred citations annually) and applied to a range of issues around the world (cf. Hoeijmakers et al., 2007, Zahariadis, 1992, 1995) the framework is sometimes perceived to be unsatisfactory as it displays some internal inconsistencies. We will return to this in paragraph 4.2.6.

4.2.2 Punctuated-Equilibrium

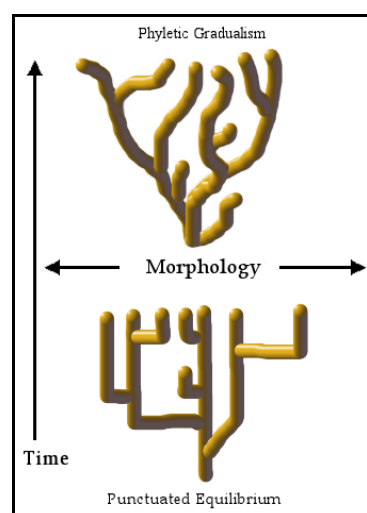


Figure 12: Eldredge and Gould's punctuated equilibrium compared with gradualism

As a political science framework, this theory borrowed its name from a similarly identified theory from evolutionary biology. It states that most sexually reproducing species will show little change for most of their geological history. When phenotypic evolution occurs, it is localized in rare events of branching speciation (called cladogenesis), and occurs relatively quickly compared to the species' full and stable duration on earth. Punctuated equilibrium is commonly contrasted against the theory of phyletic gradualism, which states that most evolution occurs uniformly and by the steady and gradual transformation of whole lineages (anagenesis). In this view evolution is seen as generally smooth and continuous.

Eldredge and Gould (1972) proposed that the gradualism predicted by Charles Darwin was virtually nonexistent in the fossil record, and that stasis dominates the history of most fossil species. Borrowing the term from these two evolutionary biologists, Baumgartner and Jones (1993) found the same pattern in policy development processes: they are character-

ised by long periods of slow incremental change, punctuated by brief periods of major policy change. These, like Kingdon's Multiple Streams explanations, are the result of critical events and changes in the political context. These events and changes can come about when opponents of the static policy state manage to fashion new 'policy images' and can exploit the interactions between policy systems. Communication is essential in the management of these changes (cf. our narratives and resonance categories) – as Stone (1997) has shown, success in policy change depends heavily on the capacity to control and exploit language and communication, for instance through the appropriation of metaphors and symbolism.

4.2.3 Advocacy Coalition

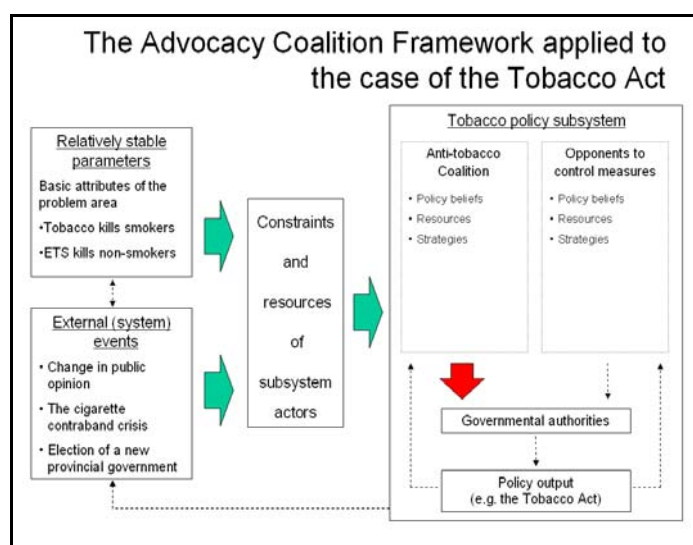


Figure 13: The conceptual map of a study (Breton et al., 2006) applying the Advocacy Coalition Framework to the emergence of the Canadian Tobacco Act

The Advocacy Coalition Framework (ACF) proposes that in any policy (sub-)system actors endeavour to establish strong coalitions in order to influence policy development effectively. According to the fathers of the approach, Sabatier and Jenkins-Smith (1988, 1993) these actors can come from a wide range of agencies and sectors, and coalesce on specific policy issues alone. They spend considerable time forging their agency capacity, and ultimately, policy change is both a function of competition for entry into (or limitations in access to) coalitions, as well as external events. Critical to the framework is the notion that belief systems of policy elites

should be mapped in order to analyse the conditions under which policy-oriented learning across sectors and coalitions can occur. The framework has been applied widely (e.g. by Breton et al. (2006) and Farquharson (2003) who carried out her work with the VicHealth Centre for Tobacco Control – cf. 5.3 below).

In relation to our theoretical groupings it seems clear that ACF values institutional re-design parameters and communication modalities.

4.2.4 Policy Diffusion

Berry and Berry (1990, 1992) were interested in the question how a specific policy initiative (in their original case, allowing lotteries in different states of the USA) is adopted and diffused among sets of similar political systems. Their policy diffusion framework argues that adoption across political entities is the result of characteristics of the political system (composition of the legislature, political history, etc.) and a variety of diffusion processes (some of which we have described above, e.g., Rogers' Diffusion of Innovation approach). The analyses in the Policy Diffusion framework draw heavily on the quantification of large amounts of historical data within those internal and external 'determinants of policy diffusion' sets, where the assumption is that 'the larger N, the better the research'.

The Policy Diffusion framework, in Australia, might be applicable to assess and possibly predict variation and policy adoption between politically coherent local governance systems and localities (e.g., municipalities within a state or territory), but we feel that the issue under scrutiny in this report is not a 'relatively simple' or specific policy initiative that could be subjected to a policy diffusion analysis, nor do we believe that we have identified a 'successful' policy in this arena which policy diffusion career can be followed from one political system to another.

4.2.5 Large N comparative studies

A final 'traditional' policy framework is that which Sabatier refers to as 'The Funnel of Causality and Other Frameworks in Large-N Comparative Studies'. These studies and their associated conceptual frameworks started from the belief that variation in policy outcomes could be explained from variations in other (demographic, socio-economic, political-institutional, public opinion, media representation, resource allocation, etc.) variables.

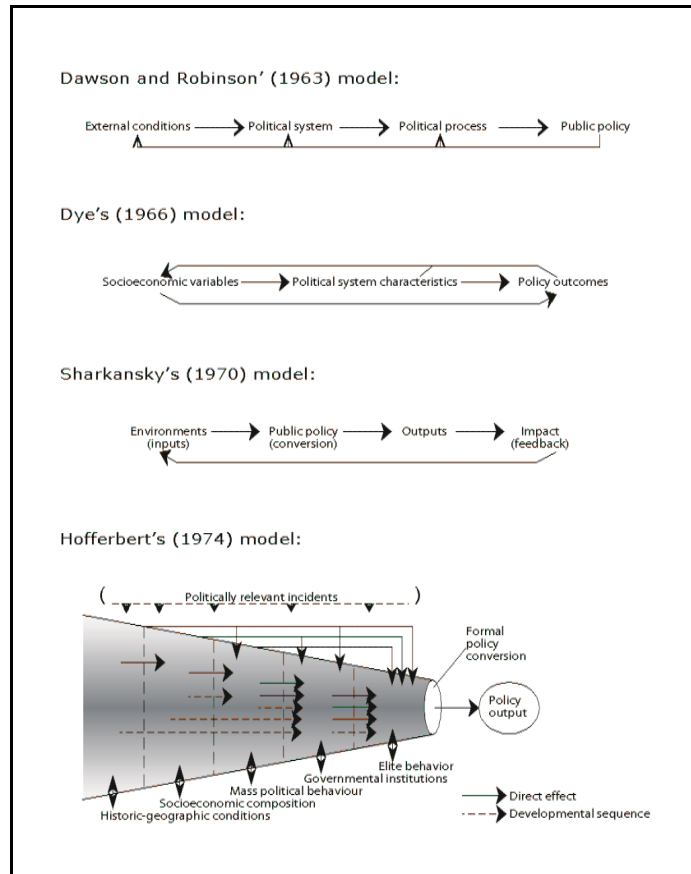


Figure 14: Models used in comparative policy studies (figure 8.1, p. 207, William Blomquist (1999))

Essentially, these frameworks all follow the key characteristic of systems theory: you study the input and the output, but are not necessarily interested in the black box that processes input into output. Over time, these comparative policy studies have become increasingly sophisticated (see figure 14) but in becoming so, they have also displayed major drawbacks and have not met expectations, the most important of which would perhaps be to explain dynamics in policy *change*. The different frameworks do explain determinants of policy formulation, but do not generally realise an image of policy interaction or evolution.

Again, like policy diffusion frameworks, we do not feel that this category of policy theories has currently much to offer to the explanation or prediction of processes in the integration of research, policy and practice.

As far as we have been able to identify, there are no studies in this particular policy domain that have been carried out with regard to the integration issue. Also, the comparative policy studies 'mode' has been dominant in the United States in the 1970s and 1980s but has slowly disappeared from political scientists' agendas to make way for the large N-study policy domain approach as developed by sociologists and political scientists like Laumann and Knoke (1987). In their influential book 'The Organizational State' they chose to study policy not from a specific policy *issue* perspective (such as most of the above frameworks tend to do, e.g., 'abortion', 'lottery' or 'tobacco control') but from a general policy *domain*. The book looked at actor-event networks in the USA energy and health domains, and tried to map interactions, centrality and degree of peripherality to explain why suggested policy (in the health field, the introduction of a national health insurance scheme in the USA) failed or succeeded. Laumann and Knoke have become influential in the policy networks literature.

4.2.6 Policy Networks

As we have seen in the above, the notion of networks operating at the nexus of research, policy and practice is relatively dominant. In each of the integration categories that we have found 'networking' is in some way or other an important driver of change. The Actor Network Theory explicitly postulates (and has evidenced) that networks form before and around the emergence of new inventions, policies, procedures, and techniques. Kingdon's Multiple Streams, the Advocacy Coalition and the 'large N' studies – and particularly the policy domains approach initiated, among others, by Laumann and Knoke – all benefit from network methodology and the network perspective.

However, Börzel (1998) describes how two perspectives have taken hold of the policy network discourse: the one described above; an Anglo-Saxon one where networks are being mapped on particular policy issues (such as 'health' or 'energy'); and a German/North-European one where policy networks are used as theoretical models describing new forms of governance. As to the latter, a quote from Kenis & Schneider (1991) may be enlightening:

"... The mechanical view of the world established the idea of linear causality explaining social states and events as determined by external forces. The bio-organic perspective shaped the notion of functional causality in which societal subsystems contribute to prerequisites and needs of a global social organism. Both the mechanical and biological world pictures conceived systemness and societal control as something beyond individual actors. Essentially, this perspective is changed in the network perspective of society. The core of this perspective is a decentralized concept of social organization and governance: society is no longer exclusively controlled by a central intelligence (e.g. the State); rather, controlling devices are dispersed and intelligence is distributed among a multiplicity of action (or "processing") units. The coordination of these action units is no longer the result of "central steering" or some kind of "prestabilized harmony" but emerges through the purposeful interactions of individual actors, who themselves are enabled for parallel action by exchanging information and other relevant resources."

Based on empirical work in the analysis of Dutch health policy development (Hoeijmakers et al., 2007) we believe that the two approaches are not irreconcilable. We suggest that the study of complex social policy issues, including the integration of research, policy and practice, would benefit from the dynamic multi-level network mapping that is being developed.

In brief, our programme logic for the approach would be the following:

1. Actor-Network Theory shows that social, technological and policy change follows translations (a la Callon and Latour rather than the health sciences conceptualisation) in the composition and interaction of actors;
2. The Multiple Streams framework pulls these actors and events apart into three semi-autonomously operating streams (problems, policies, and politics) between which, due to the work of policy-entrepreneurs, windows of opportunity emerge for policy change;

3. Laumann and Knoke (1987), Howlett (2002) and Lewis (2005a, 2005b) find that (policy) network configuration determines (policy) outcomes;
4. Hoeijmakers et al. (2007) have found that stakeholders in a domain (actors both connected and for the time being disconnected from the core or periphery of the network, but with potential stakes in its operations) network differently in the problem, policy and politics stream;
5. Social and policy entrepreneurs (or, as we would call them, conduits or operators in the narrative) can contribute to network reconfiguration at each of these different networks (De Leeuw, 1999) where some streams are more 'malleable' than others (e.g., networking around problem perceptions is easier than engaging in political decision making for most peripheral actors);
6. Therefore, in network building and reconfiguring for the purpose of integration of research, policy and practice it seems important (a) to map different levels of networking, in order (b) to strategically engage in network (re)configuration, using © any of the approaches outlined in our seven categories of models of integration, in order to (d) build an actor-network that allows for an optimal integration in the generation, dissemination and application of knowledge across social sectors.

4.3 Networking and integration: a conclusion

Based on the review of theories that have not initially emerged from our literature review in chapter 3, reflecting on policy and technological change, we believe that the material we have presented in this chapter provides us with a lense to focus on the integration issue in more profound ways than just the categories with great immediacy to the issue.

We suggest that the core concept for acting at the nexus between research, policy, and practice for the purpose of integration of knowledge is *networking*. In figure 15 we have attempted to illustrate how networking, the seven theoretical categories we have developed in chapter 3, and the political science insights presented in this chapter work towards integration of research, policy and practice.

At the centre of the 'integration game' or the nexus we have placed the seven categories; within these we have – cf. chapter 3 – distinguished between three groups:

- theories that make claims or would allow for predictive statements on how institutional parameters (the 'rules of the game') influence integration. This category is of a slightly higher 'order' than the others as its application may control or limit the possible operations derived from the other theoretical categories;
- theories that suggest there are structural approaches to integration (such as appointing conduit agencies or individuals, or set up collaborative forums), taking into account the nature of evidence for each of the stakeholders in these structures; and
- theories that make claims or allow for predictive statements how different forms of communication (stories; or the usage of symbols and metaphors) impact on integration.

All of these, as we have observed, are potentially operating simultaneously on the stage of the nexus. To interpret the operating principles of each of the actions that may result from the application of the seven categories we have found, in this chapter, that the key notion is

the initiation, development, and maintenance of networks at the nexus for integration purposes.

Actor-Network Theory presents one 'gaze' at these operations, and states that it is all a matter of 'translation' – moving meaning on technological and social issues such that actors feel they are interconnected towards a common objective.

Other perspectives on social and policy networks, though, do not make such bold claims. Especially the policy network theory is not particularly united: one group of theorists searches for explanatory models that connect network configuration to (policy) outputs, whereas another is more philosophical and sees networks as shaping new governance systems.

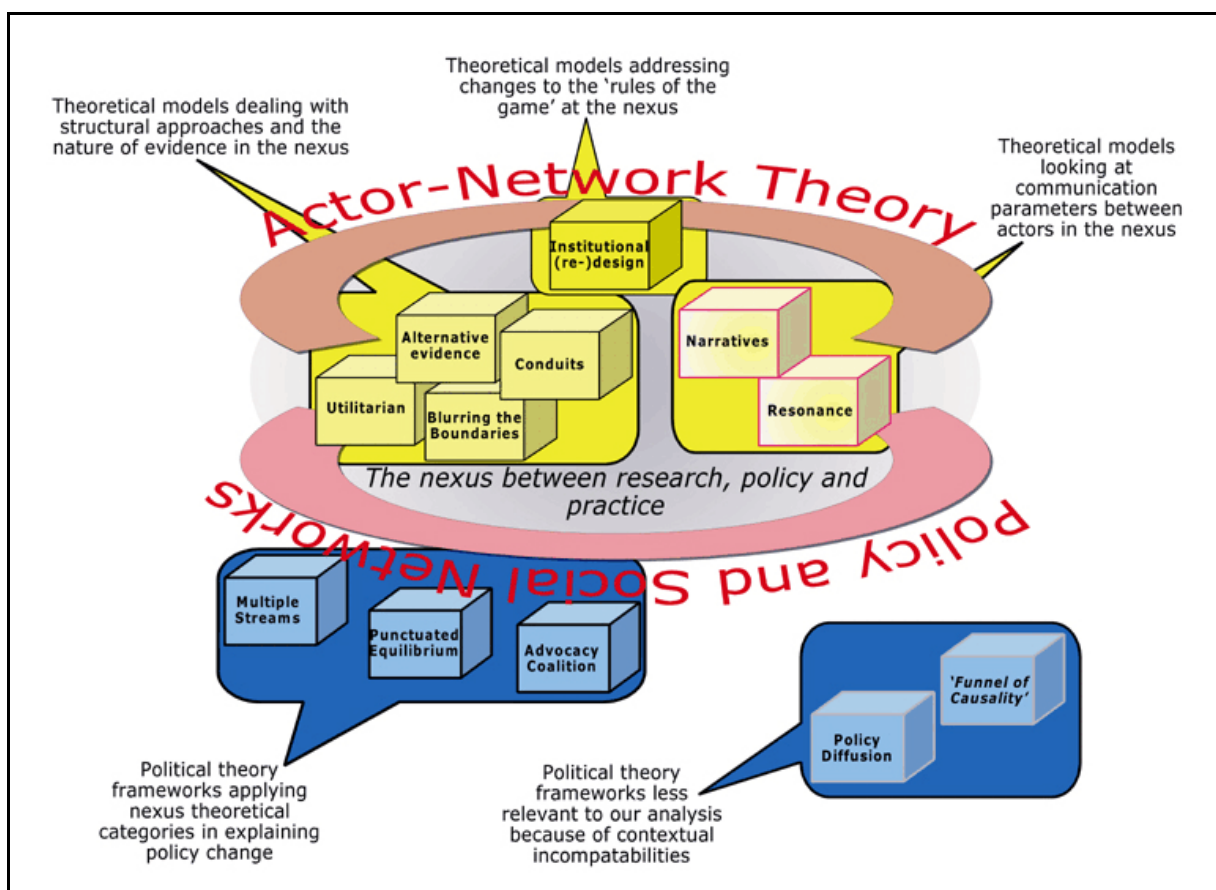


Figure 15: A representation of theoretical categories and frameworks pertinent to integration at the nexus between research, policy, and practice. Integration is dealt with through a range of theoretical approaches, represented by the seven building blocks at the centre of the nexus. These are governed in general terms by perspectives offered by Actor-Network Theory specifically, and policy and social network approaches in more general terms. Political theory frameworks offer further vistas on developmental stages in policy formulation toward integration.

In our study all three perspectives, nevertheless, are valuable:

1. connectivity leads to integration but does not state how and where actors and events are to be connected.

2. Mapping networking configurations would potentially demonstrate potential for integration and ways in which actors and events at the nexus can be reconfigured towards *more* or *better* integration; and
3. The ideal model of collaborative governance has a proper fit with our ideal world of research, policy and practice where knowledge and evidence are generated and applied jointly.

In reaching these conclusions we have also briefly reviewed five political theory frameworks that would have a bearing on integration as a matter of 'who gets what'. Two of these frameworks (the *policy diffusion* model and the *large N funnel of causality* approach, we felt were less applicable to our study. The other three, though, impact on our understanding of the shape of the playing field at the nexus, and the expectations we may have of policy change towards more or better integration. They contextualise our project, but as will be seen in our description of case studies in the next chapter, we have not applied these to our data for any analytical purposes.

5. Seven case-studies illustrating whole systems and the complementarity of nexus theories

5.1 Introduction: case-study selection and methodological approach

The eight models conceptualise effective strategies at the interface of research, policy and practice. However, how successfully do the models translate to 'practical' organisational levels? For instance, are conceptual strategies insignificant in the face of human dynamics relating to networking and persuasive speakers (Exchange Findings, 2006)? Would an organisation or agency working at the interfaces even recognise 'models of integration' as representative of their own organisational strategies? Alternately, do organisations 'adhere' to a particular model, or strategically employ a range of models, and has this actually produced efficient relationships at the nexus of research, policy and practice? As an example of the latter question, following the Utilitarian model should ensure the production of evidence that is timely and relevant for policy makers - but have organisations or agencies found this reflected in their experience?

5.1.1 Research Design

As mentioned, we argue that undertaking a series of case studies to examine the effectiveness of the theoretical underpinnings of given organisations is necessary to test whether theory is beneficial and illuminating on a practical level. More specifically, we would employ a multiple case-study design informed by a grounded theory approach. A qualitative case-study design enables researchers to document the uniqueness and diversity inherent in expert practice (Hammell & Carpenter, 2004). This design capacity complements our intention to procure the involvement of a diversity of organisations and agencies throughout Australia in order to examine working at the interfaces (eg. government and non-government agencies, interdisciplinary and transdisciplinary organisations). The principal reason behind gathering preliminary data on each potential organisation is to help determine where each organisation positions itself at the interfaces.

5.1.2 Data Collection

The examination of integration facilitators in the literature review was instrumental in the development of a series of questions for usage in a semi-structured interview format. The semi-structured interviews will be conducted with members of selected case study organisations. The questions were designed to generate the following data:

1. Data on organisational practice (already covered somewhat in the preliminary data collection).
2. Identification of theoretical framework/s inherent in practice.
3. Determining whether the organisation's integration approaches equate with the effective integration of research, policy and practice.

A basic set of questions for each organisation/agency is provided below. At this point, it needs to be stressed that the semi-structured interview format will be employed so that the interviewer is able to deviate from the set of prepared questions if any unexpected issues

emerge (Bryman, 2001). We suspect that 'unexpected' issues will most likely relate to the contextual factors/organisational set-up of a particular organisation.

1. What do you see as the role and mission of your organisation?
2. Where do you see research, policy and practice fitting in with your organisation?
3. So, would you say you follow a certain rationale in regards to policy, research, and practice?
4. Can you provide specific examples of both a positive and negative experience of integrating research, policy and practice?
5. Based on your workplace/institutional experience, are there;
 - A. factors that contribute to policy makers' acceptance of research?
 - B. factors that contribute to practitioners' acceptance of research?
 - C. factors that contribute to practitioners' acceptance of policy?
6. Alternately, are there factors that negate;
 - A. policy makers' acceptance of research?
 - B. practitioners' acceptance of research?
 - C. practitioners' acceptance of policy?

Questions 4-6, in particular, are designed to initiate dialogue on both positive and negative experiences of 'working at the interfaces'. Some questions may be modified from their above form to accommodate the contextual factors of a particular organisation. That is, the intent of a given question remains the same, but more direct reference to an organisation's strategies and practices can be made to enable the question to be relevant.

5.1.3 Transcribing the Data

All interviews, either face-to-face or telephone (depending on the location of participants), were tape-recorded and transcribed. The value in transcribing is that it helps ensure that the researchers become familiar with the content of the interviews (May, 2001). By contrast, note-taking during the interview carries the risk of researchers overlooking the particularities of phrases and language used, as their immediate interpretation of participants' responses and comments takes precedence (Bryman, 2001). The researchers may only 'hear' themes or patterns that support various hypotheses and fail to notice the disconfirming evidence or variations on given themes. Transcription, on the other hand, assists a detailed analysis of data and it ensures that the participants' comments and responses are heard on their own terms (May, 2001).

5.1.4 Analysing the Data

In relation to the analysis of data, we refer to Miles and Huberman's (1994: 246) argument that it is "very productive [to note the recurring patterns and themes that emerge in interviews] when the number of cases and/or the data overload is severe." By noting recurring themes and patterns, the collated data begins to take a meaningful shape, or series of shapes, and the implications of the data can begin to be considered. Such an approach is both suitable and helpful to this study, in terms of its ability to order and give shape to what should amount to be a substantial volume of qualitative data.

By noting recurring themes and patterns in the interview transcripts, the analysis of data for this study will be operationalised through the grounded method of 'coding'. As mentioned, the noting of recurring patterns is helpful in terms of ordering large amounts of data, as well as locating the principle themes contained within the data (eg. factors that inhibit integration). The process of coding begins with discovering abstract concepts/themes in the data (open coding) and then identifying connections between the abstract concepts (axial coding). From here, core categories in the data can be specified (selective coding) (see Figure 3). So through this process, the theoretical possibilities of the data are presented to the researchers. In turn, the researchers are provided a framework from which theory can develop (Punch, 2005).

5.2 The Brotherhood of St Laurence

5.2.1 The Brotherhood's key thrusts:

- Public policy development which draws on both the practice experience and from the findings of its researchers, continues to be a feature which distinguishes the Brotherhood from many other providers of social welfare services in Australia.
- Interaction with 'outside' practice communities enhances the immediacy and relevance of Brotherhood's research priorities and services for the wider community.
- The Brotherhood's mandate of promoting human dignity and social justice often produces politically challenging evidence. As such, the Brotherhood's 'alternative evidence' must be of a high quality to help ensure that the credibility of the findings is recognised.



5.2.2 The organisation and its aims

The Brotherhood of St Laurence was originally founded in Newcastle as a religious order of the Anglican church in 1930 and moved to Fitzroy, a then impoverished inner city suburb of Melbourne in 1933 to work with the poor. This was at the height of the Great Depression when unemployment rates were around 30 percent, and the earliest services involved the provision of food and shelter to unemployed men and their families. Although the religious order did not survive, what emerged was a social welfare agency which throughout its history has pioneered new responses to address poverty. From early on, the Brotherhood has sought not just to provide material relief to those experiencing poverty, but also to address the fundamental causes and effects of poverty and inequalities. Campaigning for justice and social reform very quickly became part of the Brotherhood's mission, and continues to this day alongside its activities in service provision to those experiencing the effects of poverty and disadvantage.

5.2.3 How the Brotherhood works to achieve its aims

The Brotherhood's first forays into public policy development emerged as a response to the poor quality housing, regarded as the 'worst slum in Melbourne', then surrounding their headquarters in Fitzroy. Films of the living conditions were made, and staff of the Brotherhood were involved in protests against unfair laws for tenants and landlords. The

clearance of the slums and their replacement by high rise blocks of flats by the then Housing Commission of Victoria, was in part due to the efforts of the Brotherhood.

In 1943, the Brotherhood recognised the need for research on which to base its programs of policy reform and provision of services and appointed a research officer to undertake this work. Since then, the employment of social researchers has been an integral feature of the Brotherhood, something which many other major welfare agencies commenced much more recently.

The high-profile Family Centre Project (1972-1975) has a crucial place in Australian social welfare history as an early initiative in which the nexus between practice, research and policy was demonstrated as being essential. Over a three-year period, Brotherhood staff worked intensively with a group of 60 low-income families with the aim of giving them more control over resources and decisions than had been the case in the more traditional method of welfare provision which these families had previously been receiving. Research was integral to the project, with data being collected from participants at all key stages, with the findings being used both by the Brotherhood in its ongoing development of programs and strategies to address poverty, and also to influence policy and practice beyond the Brotherhood. Public policy development which draws on both the practice experience and from the findings of its researchers, continues to be a feature which distinguished the Brotherhood from many other providers of social welfare services in Australia.

The Brotherhood now employs more than 600 staff and has approximately 1200 volunteers involved in its various programs. The majority of these persons are involved in providing a wide range of services to disadvantaged individuals and communities including job-seekers, children and families, young people, older people, people with disabilities, newly arrived migrants and refugees and indigenous Australians. Collectively, these programs aim towards the creation of a more socially inclusive society and reflect an ethic of mutual responsibility, social compassion and justice.

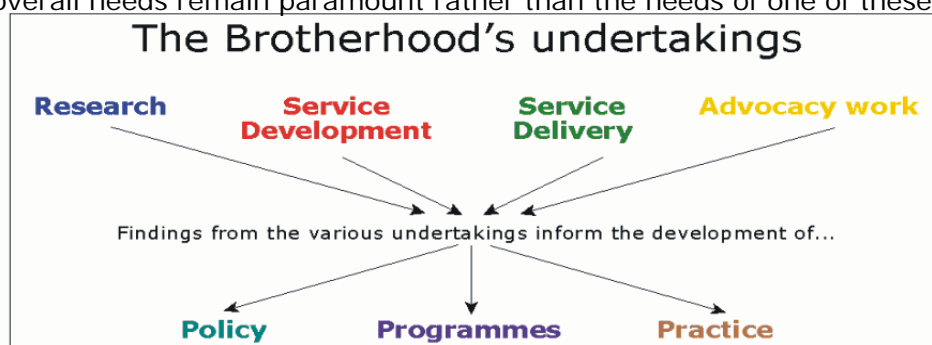
The Social Action and Research team is comprised of a group of around a dozen research and policy staff. The director of this group is a conjoint appointment with the University of Melbourne as Professor in Public Policy. As well as research conducted in-house, many projects are conducted along with a wide range of external partners, including universities, government departments, other welfare agencies and peak bodies (eg ACOSS). The Brotherhood also has an additional 5-6 staff working in the library and information dissemination, as well as a media liaison officer and community education program. Some programs of the Brotherhood (eg Ecumenical Migration Centre) also include staff involved in research and policy development in the relevant field of practice.

The Brotherhood's structure and size results in a complex 'in-house' example of working at the interfaces of research, policy and practice in order to respond to social needs. Furthermore, the findings from these undertakings are used to inform the development of 'humane' policy, programs and practice.

The input from individuals working at 'ground level' has provided the Brotherhood insight into 'immediate' community issues; as such, these insights enable the Brotherhood's research priorities to remain contemporary and relevant (as opposed to upholding research priorities at the expense of recognising new priorities).

5.2.4 Which integration approach(es) does the Brotherhood utilise?

Three distinct models of integrating research, policy and practice seem to be evident in the work of the Brotherhood, with the model adopted dependent on the prospective audience. In respect of research conducted by the Brotherhood on their own programs (in which the key aim is to improve service delivery) a 'blurring the boundaries' model seems to be in operation in which the research, practice and policy development are all part of the same system. Boundaries between these three areas are permeable and the organisation as a whole entity is involved in setting agendas in respect of policy, practice and research to ensure the agency's overall needs remain paramount rather than the needs of one of these groupings.



A 'research narratives' model is inherent in the presentation of the Brotherhood's 2005-6 Annual Report. This document, which seems to be aimed at the Brotherhood's supporters, particularly the many corporate organisations which provide financial and in-kind support for the Brotherhood's many programs, features many narratives and photographs of individual service users whose lives have been much improved as a result of their contact with the Brotherhood.

In terms of influencing public policy, the 'alternative evidence' model seems to be the best fit for the nexus between policy, practice and research. For the Brotherhood, the notion that impact of its work on national policy is highly dependent on maintaining the highest research standards is crucial. The issues which have formed the basis of the Brotherhood's policy, practice and research agendas for more than 70 years, concern the development of responses to poverty which promote dignity and social justice. Such issues attract the interest of policy makers to varying degrees over time, and the Brotherhood with its extensive and long-running involvements in practice and research is in a good position to supply alternative evidence at times when opportunities emerge for its research to influence policy. The credibility of the Brotherhood's research has often been externally validated through publication in peer-refereed journals and by participating in academic conferences or colloquia, by the time it is utilised by policy makers.

5.2.5 The Brotherhood: Conclusion

In summary, public policy development (which draws on both the practice experience and from the findings of its researchers) continues to be a feature which distinguishes the Brotherhood from many other providers of social welfare services in Australia. It is the Brotherhood's close interaction with 'outside' practice communities enhances the immediacy and relevance of Brotherhood's research priorities and services for the wider community. However, while the Brotherhood's mandate of promoting human dignity and social justice has

been a crucial facilitator of its relationship with 'outside' communities, the mandate has also often resulted in the production of politically challenging evidence. As a result, the Brotherhood's 'alternative evidence' must be of a high quality to help ensure that the credibility of the findings is recognised.

5.3 VicHealth Centre for Tobacco Control



5.3.1 VCTC's main thrusts

- The co-location and eventual merging of VCTC and QUIT has optimised communication channels between research and practice.
- VCTC's research has resonated through the linkages of tobacco control with personal, social, legal, and economic benefits.

5.3.2 Organisational set-up

The VicHealth Centre for Tobacco Control (VCTC) was established in 2000 and based at the Cancer Control Research Institute (CCRI) of The Cancer Council Victoria. As such, VCTC complements the work of the other research units with the CCRI, in particular the Centre for Behavioural Research in Cancer (CBRC) and the Cancer Epidemiology Centre. QUIT, which provides evidence based smoking cessation programs for Victorians, is also based within the CCRI. At the start of 2004, VCTC was merged with QUIT. Although the two groups have continued to have a 'separate' public face, internally the groups are collectively referred to as The Tobacco Control Unit of the Cancer Council.

5.3.3 Research resonance

By the time the VCTC was established, Cancer Council Victoria had more than two decades of involvement in tobacco control research and its staff were international leaders in their field. The specific focus of the VCTC is behavioural, legal, economic and social research associated with tobacco control. (Although the social research was merged with the CBRC, CBRC has collaborated with VCTC staff in regards to social issues.) As such, a primary aim of the centre is to undertake research with a view to effecting social policy solutions to reduce tobacco consumption. This involves researching, developing and advocating for an integrated set of solutions to the tobacco problem for the purposes of reducing ill-health, social costs, injustice and inequity.

VCTC's research and advocacy work seeks to highlight the connections between tobacco usage and broader agendas (eg. adolescent health, environmental health). In this regard, the organisation's work 'resonates' on a variety of interconnected levels. Associating tobacco use with other social issues necessitates the organisation's ongoing communication of the legal, economic, social justice and public health cases for tobacco control.

For the purposes of tobacco reform, research is considered to be crucial in order to stimulate debate as well as contribute to existing debates about the role of legislation and policy development as strategies in tobacco control. In particular, research can identify the social costs of tobacco use and the social, legal and economic benefits of tobacco control. Examining the social/behavioural functions and roles of tobacco use guides the development of appropriate interventions which may be trialled in conjunction with centres such as CBRC

and Quit. Evaluations of interventions to establish effectiveness and developing policy recommendations based on such trial feed back into policy recommendations which display a determination toward developing better policy proposals for Australia and beyond.

5.3.4 Collaboration and in-house Blurring of Boundaries

The reputation of the VCTC is further enhanced by its national and international links, which enable it to collaborate on research and policy initiatives with strategic partners across the globe. These links in turn add greater legitimacy to its attempts to influence policy and practice at a local level.

On a local level, the merging and co-location with QUIT, whose mandate includes responsibility for developing and delivering tobacco control services in Victoria and for responding to policy issues on a day to day basis, enables the VCTC access practitioners through QUIT's various services and programs. The credibility of VCTC's commitment to evidence-based approaches is strengthened by their proximity to the people undertaking the programs. It enables VCTC to immediately trade their ideas with QUIT staff (as informally as over a cup of coffee) while they are developing their projects. Also, it allows QUIT staff to provide feedback on the relevance and practice applicability of VCTC's research. A culture of trust, and perhaps more importantly, a culture of mutual recognition and respect has developed. VCTC can also take advantage of QUIT's extensive links with smokers and community organisations to conduct its research.

In comparison with the Cancer Council set-up, Ron Borland noted that the research conducted in universities is more likely to have developed from an abstract conception of what a problem might be and thus proposed interventions will often be impractical to implement. He felt that the benefits of the merging/co-location of VCTC and QUIT were analogous with the notion that "If you were trying to set up a medical association, you would not want to separate it from a hospital-type facility". VCTC had found with practice communities practice, that acceptance of programs was partially contingent on how clearly the implementation of the program has been communicated. In continuing a theme from previous case studies, VCTC had also found that the cost-effectiveness of the programs also needed to be clearly posited to policy makers and practitioners.

5.3.5 VCTC: Conclusion

In summary, the co-location and eventual merging of VCTC and QUIT has optimised communication channels between research and practice. The merging provides a pertinent example of an 'in-house' blurring of boundaries. However, another significant example of VCTC in working in the nexus, has been its efforts to make the subject of tobacco control 'resonate' at personal, social, legal, and economic levels.

5.4 Primary Health Care Research and Information Service

5.4.1 PHC RIS key thrusts

- Website 'orientation pages' and e-bulletins, as well as conference presentations, reflect a 'conduit'-type effort to connect a wide range of primary care organisations.



- The increased likelihood of practitioner uptake, if evidence contains local relevance; practitioner uptake of evidence is less dependent on methods by which data was collected.
- The importance of including resource implications within policy-directed presentations of evidence.
- The difficulties in maintaining strong links with key organisations in light of staff turnover.

5.4.2 Introduction

If there are key gaps in primary health care knowledge, how can effective evidence-based health policy be implemented?

This is the issue that the national primary health care organisation, PHC RIS, seeks to rectify. It does so by managing and sharing knowledge that will inform and influence Australian primary health care practice, policy and research. The organisation is based at Flinders University in South Australia in the Department of General Practice and is funded by the Australian Government Department of Health and Ageing. Established in 1995 as the National Information Service, the organisation changed its name to PHC RIS in 2001.

5.4.3 PHC RIS as Conduit: embedding a research culture in primary care

One of PHC RIS's principal roles is to communicate the findings of research conducted by the Primary Health Care Research, Evaluation and Development strategy (PHC RED). The mission of PHC RED has been to embed a research culture within primary health care practice. As part of this mission, PHC RED has promoted researcher/practitioner partnerships and has sponsored research projects that have developed from practitioners' identification of issues that are of importance to them.

As part of PHC RIS's 'conduit' role is the responsibility to promote the achievements of the strategy and promote the accompanying contention that interaction with potential users before, during and after the research project constitutes the best indicator of research uptake. PHC RIS's most visible 'conduit' is its website. Through designing orientation pages, PHC RIS directs its broad range of knowledge at a broad range of users. The orientation pages pitch evidence at a variety of organisational contexts, while the 'eye-catching' fact sheets and a database of PHC RIS's research projects advertise the organisations aims and findings in a user-friendly form.

PHC RIS also produces an e-bulletin (a weekly email containing information about recently published articles and reports, media releases, upcoming events, news items research grants and fellowships in the primary health care field) and presents findings at Commonwealth conferences. PHC RIS plans the Commonwealth conferences in collaboration with the Australian Primary Healthcare Institute, a government initiative that shares PHC RED's overall aim of embedding a research culture in primary healthcare. The conferences also work to strengthen networks in the broad and multi-level primary healthcare field (e.g. Divisions of General Practice, national and state health services).

5.4.4 Obstacles to embedding a research culture

In the production of knowledge, the organisation collaborates with three key stakeholder groups - primary health care researchers, primary health care policy advisers, and the Divisions of General Practice Network. The maintenance of relationships with key stakeholder groups is similarly of importance to PHC RIS. Problematically, the maintenance of relationships with key stakeholders is often compromised by staff turnover. That is, a number of individual relationships can be nurtured (that promote and secure connections between organisations) only for ties to an organisation to be threatened by departure of staff. However, the relationship that PHC RIS staff nurtured with an organisation member would have initially been established on account of the individual's role within the organisation. Therefore with the departure of an organisation member, it is within PHC RIS's right to establish a relationship with the replacement as soon as possible.

PHC RIS can provide information pages to new staff members, and the e-Bulletin can be forwarded in order to increase awareness of PHC RIS's place in the primary health care field. Of course within this dynamic, PHC RIS (or any organisation, for that matter) cannot control whether individuals read and respond to the materials, especially within a culture where employers and employees manage a substantial volume of emails on a daily basis.

5.4.5 Working with the Divisions of General Practice

PHC RIS has a close relationship with the Divisions of General Practice Network through their data collection and service provision. A further role for PHC RIS is to synthesise data from the various divisions of the General Practice Network for the Commonwealth of Australia. PHC RIS's data collation strategies have been informed by the principle that people are not interested in providing data if it is of no use to them. PHC RIS have been endeavouring to make the divisions' process of data contribution as simple as possible, for example, through minimising response burden. In the development of their data collection methods, PHC RIS have been exploring the possibilities of a web platform to help reduce the response burden for divisions and the collation burden for PHC RIS staff.

5.4.6 Acceptance at the nexus

For research to be accessible at a policy level, the interviewees noted the importance of research reports that were easy-to-read, included justified assertions and executive summaries, and were grammatically sound. For research to be relevant at a policy level, it needs to be relevant to present policy issues. Or in another sense the relevance of the research needs to be clearly demonstrated to policy makers (e.g. the 'resonance' linking of issues with popular thinking and public concerns). The practical implications and resource implications of the evidence also need to be demonstrated, although, as the participants noted, there are very few researchers with a background in health economics.

Practitioner acceptance was partially contingent on the local application of the evidence. The relevance of research to practitioners' own settings was of greater importance than the methodologies from which the evidence was generated. For instance, general practitioners were critical of the application of hospital-based trials to general practice. However, a mediating factor in accepting locally relevant evidence was whether the evidence actually

coalesced with practitioner belief systems; even 'relevant' evidence could be dismissed if it was not reflective of belief systems.

In cases where evidence has been utilised by policy makers, the evidence needs to be communicated to practitioners in a presentation that is uncomplicated and posits how the policy would be more effective than present policy-informed practice. Similarly, the policy needs to be compatible with the business of primary care and the system of primary care (e.g. consideration of the resource and practice implications of policy).

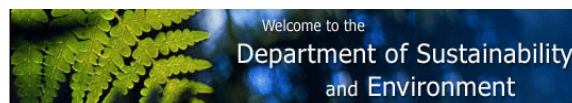
5.4.7 PHC RIS: Conclusion

In its development and utilisation of website 'orientation pages', e-bulletins, and conference presentations, PHC RIS has established a 'conduit'-type effort to connect a wide range of primary care organisations. The local relevance of research however remains pertinent in practitioners' acceptance of evidence and/or policy. The methods by which the evidence was collated appear far less a concern to practitioner communities. Similar to the ARCSHS's case-study, the participants from PHC RIS emphasised the importance of including resource implications within reports. Finally, while strong links with key organisations were observed as significantly in working effectively at the nexus, staff turnover within those key organisations could undermine these links and stall the development of relationships.

5.5 Department of Sustainability and Environment

5.5.1 DSE: key thrusts

- In the last six months, issues of communication and integration between research, policy and practice communities have been given extra emphasis within the department, as befits the 'blurring the boundaries' approach.
- Significant time constraints on stakeholders necessitates the action of 'conduits'.
- The 'resonance' approach optimises the promotion of evidence both within and outside the Department.



5.5.2 The Organisation

At the time of research, the Department of Sustainability and Environment is a government department within the Bracks' Government. The Department is overseen by the Minister for Environment, John Thwaites MLA and the Minister for Planning, Rob Hulls MLA. The Department is responsible for promoting and managing the sustainability of the natural and built environment. The combination of the natural and built environment into one Department is a deliberate move by the government to reflect the government's view that environmental issues affect every aspect of people's daily lives.

The Department delivers its policy and professional operations through nine principal organisational groupings: Environment Policy and Climate Change, Housing Affordability and Spatial Services, Capital Projects, Land and Fire Management, Natural Resources, Biodiversity, Public Land Use, Land Victoria and Heritage Victoria. These divisions are

overseen by Peter Harris (Secretary), with Sue Jaquinot and Kevin Love (Deputy Secretaries) overseeing whole-of-portfolio priorities.

There are 2700 staff employed by the Department who work in and around 90 different cities and towns across Victoria.

5.5.3 The aims of the Department

The Department seeks to provide leadership in the following areas: conservation, water management, statewide planning, urban development and public land management (including forests, coasts, alpine resorts, Crown land reserves and parks), climate change, whole-of-Victorian Government approach to sustainability, biodiversity, cultural and natural resources, and emergency management.

Examples of the Department providing leadership in these areas are initiatives that have been released in the past 2 years:

- Our Environment Our Future was released in April 2005, and the implementation plan became the Environmental Sustainability Action Statement in July 2006.

In response to sustainable productive water systems:

- Our Water Our Future 2004
- Water (Resource Management) Act: December 2005

In response to growth:

- A plan for Melbourne's growth areas
- Creating Better Places
- Melbourne 2030 Transit Cities
- Regional Matters; April 2006

In response to sustainable coast, land and biodiversity:

- Our Forests Our Future 2002
- Coastal Spaces Initiative; 2006
- Sustainability Charter for Victoria's state forests
- Native Vegetation management Framework: March 2006
- Initial planning for the White Paper on Land and Biodiversity (2007)

In response to climate change:

- Keep Winter Cool: April 2006
- Victorian Greenhouse Strategy Action Plan update 2005
- Towards Zero Waste strategy

In response to cultural heritage:

- Victoria's Heritage: strengthening our communities

In response to engaging Victorians and Government working with others:

- Effective Engagement: building relationships with community and other stakeholders 2005 (a forerunner to a range of developments in changing the way Governments interact with the Victorian community)
- The Victorian Local Sustainability Accord (a landmark in formalising partnerships between local and state governments centered on environmental priorities)

5.5.4 Which integration approach(es) does DSE utilise?

In August 2005 the Department of Sustainability and Environment Outcomes Framework was launched as part of the corporate plan. This framework guides the selection and implementation of policy and the framework approach was in response to community expectations. The framework represents inputs (resources such as staff, funding, physical assets, materials and equipment) which interact with processes which interact with outputs (goods and services produced by the program using inputs). This interaction provides sub outcomes and outcomes. The sub-outcomes are interim, short to medium term targets and the outcomes are the long term results.

The outcomes aimed for in the framework are: healthy and productive water systems; liveable cities and responsible development; healthy, accessible and productive coastal and estuarine systems; healthy and productive land; flourishing biodiversity; clean air and liveable climate; less waste and pollution; effective property markets; and cultural heritage. In order to achieve the outcomes in the outcomes framework, the Department is developing the capability of the organisation by building an organisation with people who have strong knowledge and understanding of the natural and built environment along with skill and expertise in community/stakeholder engagement and partnership development. The Department also collaborates with its partners (such as EPA, Parks Victoria, Department of Primary Industries, Water authorities, local governments etc) and communities to build understanding. Staffing of the Department includes office based staff working on policy, project managers leading cross agency activity and field work staff implementing projects and programs.

The Department has a large role in policy development in natural and built environment. With the Department building the capacity of its people in knowledge of the natural and built environment, the 'blurring the boundaries' approach is indicative in how the Department operates as it emphasises collaboration with service providers and community and with staff placed in both policy and field work.

In fact, issues of communication and integration have been given extra emphasis within the department in the last six months. In mid 2006, Christine Kilmartin was approached on behalf of a range of researchers who were planning to publish a book (targeting policy development practitioners) on Sustainability in the urban and built environment. Approximately 16 researchers/authors of chapters came together with policy development practitioners with request of reading the drafts and making comment on relevance to informing policy (and consequently practice). This activity proved an extremely valuable exercise for both the researchers and policy staff. A principal factor in the acceptance by policy/practice staff of researchers was a dialogue between the two that was well organised, facilitated and developed on a foundation of trust and commitment of both parties to improving decision-making for the sustainability agenda.

5.5.5 Conclusion: Issues of timing

The collaboration with service providers, community members and policy/fieldwork staff has also necessitated a 'conduit'-type approach from department staff in order to communicate the aims and content of their work in context-relevant and accessible styles. For both policy

and practice communities, the clear summary which is expressed in context-appropriate language facilitates the uptake of research. Clarity of expression is essential with attracting the attention of individuals within communities where availability of time is typically scarce. Also, the department often utilises 'resonance'-type approaches in order for the social benefits of a given initiative to be clearly communicated to 'outside' audiences. For instance, linking an environmental issue (e.g. climate control) to contemporary and popular public thought (e.g. the importance of sustainability).

It would seem that a solid evidence base is an essential back-up for policy decision-making as it helps deflect criticism of the policy, as well as providing a more substantial foundation for any action plans. However, the interviewees noted that the time taken to establish policy could run well ahead of the time to develop a solid (and therefore more easily defensible) evidence base. Consequently, a given policy would be more open to negative appraisal, both in the short- and long-term. As such, the utility of the evidence is not in question. What is in question is the validity of the evidence on which the policy is based. It is a situation that is uncondusive to inspiring practitioner confidence in policy, and indeed research.

5.6 Australian Housing and Urban Research Institute

5.6.1 AHURI...

- Operates as an 'independent and neutral' third-party translator ('conduit').
- Follows the 'two communities' model, but 'blurs the boundaries' with researchers and policy makers for specified periods of time.
- Is committed to developing the research capacity of the country.
- Provides an example of an economic model of research uptake.



5.6.2 Introduction

Through funding, conducting and promoting high quality research, AHURI seeks to inform and guide policy making in relation to complex housing issues. Therefore, the Institute works to provide decision-makers with a policy-relevant evidence base and, in the process, develop the research capacity of the country. The complex issues and difficult decisions faced by policy makers, industry and the wider community necessitate, as well as validate, the services provided by a research institute such as AHURI.

AHURI consists of two organisational set-ups. There is the institute at large - stakeholder/funding organisations consisting of nine governments and fourteen universities. Then there is the company itself, AHURI Ltd, a small, not-for-profit management company effectively situated between the government and university set-ups. The company, which is located in the Melbourne CBD, does not conduct research, nor is it committed to the research per say. Rather, it operates as 'knowledge broker', the active party in bringing the communities together. For the research and policy communities connected with AHURI, the company represents a neutral, third-party broker. As such, its operations most evidently reflect the 'conduit' model. However, it is the company as a whole that acts as conduit, rather than typically an individual or a small number of individuals.

This case study of AHURI concentrates exclusively on the approaches of its company set-up in operating at the nexus of research, policy and practice. A note before proceeding - AHURI Ltd operates almost exclusively between research and policy worlds, although it plans to increase its interaction with practitioner communities (see 5.6.6).

5.6.3 The development of the third-party Conduit

The company was set up under the Corporation Act and has an independent board of directors. It does not have any premises situated on university campuses as its operations are designed for working purely as knowledge broker. However the organisational role that AHURI Ltd has developed was not the original role it was established to perform. Originally, Ltd was more administration focused and centered on developing research priorities with government. With government priorities shaping the form of the research projects, Ltd's role was to oversee the progress and delivery of research projects. However, after two years of practice, the company's approach was criticised by governments as failing to produce policy relevant research. Or from Ltd's point-of-view, the lack of engagement between policy and research communities had denied researchers the opportunity to demonstrate the policy relevance of the research.

As a response to this, the focus of the company shifted toward a conduit-type approach. AHURI Ltd developed into a management company with a particular expertise in research management and, given the demands of the 'conduit' role, developed a strong knowledge in the field. In due course, this newly established expertise has enabled Ltd to develop a relationship of trust with both research and policy communities. Also, instead of drawing researchers out of academic environs, it contracted their expertise on specific projects for specific amounts of time.

5.6.4 Blurring the Boundaries - for a set period of time

The 'blurring the boundaries' model posits a breaking down of perceived value differences between communities. It is an action that once achieved is sustained in the ongoing relationships between the communities. By contrast, AHURI Ltd's work at the nexus includes an acknowledgement of the 'two communities' model. That is, the company recognises, and emphasises to its stakeholders, the different interests of the research and policy communities and how collaboration between the two will therefore be uncomfortable at times. In light of this dynamic, Ltd brings the communities together for specific periods of time in order to partake in a constructive engagement around a particular research project. The boundaries are blurred for a time, but Ltd does not seek to hold them together on a continual basis. Rather the company appeals to the policy community through emphasising how the researchers can 'enlighten' a priority issue that the policy communities themselves have identified. That is, the researchers can provide data, findings and information to help answer policy questions. Furthermore, the engagement of the policy community can only increase the policy relevance of the findings. For example, during the course of a research project, members of the policy community can advise the researchers of any shifts in policy thought and/or values and how the research questions can be modified in order to remain relevant. Also, AHURI Ltd has set up a project user group, which a number of policy officers from

around the country are part of. The intention here is to emphasise to the policy community that they are the end users of the research. Therefore their involvement can only increase the end product to their own needs.

Seminars and conferences present another opportunity for engagement around the research project. Within these events, AHURI Ltd sets up discussions from the policy community to critique the research. The framework is such that the policy reasons for the research are initially outlined, followed by a summary from the researchers of the project's methodology and findings. From there, a policy maker outlines the manner in which the policy community intends to utilise the research. Ltd's co-ordination of this dialogue works to increase the relevance of research for policy makers, as well as promote mutual understandings between policy and research communities.

5.6.5 The percolation of evidence

The utilitarian practices of AHURI Ltd veer more towards a 'percolation' framework than they do a utility-driven evidence framework. 'Percolation' posits that new evidence slowly seeps into the realities of politicians and practitioners. By contrast, utility-driven evidence follows the thought that knowledge should be generated in such a way that it is made relevant to stakeholders. With Ltd's wide range of stakeholders, it was felt that the tenets of UDE were not a realistic proposition; a case of too many parties (all with particular values and interests) to satisfy with one unified 'pitch'. However, on the basis of Ltd's role to develop Australia's research capacity, the company provides a strong evidence base that any government can draw upon at particular points in a policy cycle. Furthermore, it is an evidence base that has developed from a range of issues the policy community has identified. Policy uptake may not be immediate, but in the long-term, the utility of the evidence has been apparent.

While it may not strictly follow the tenets of UDE, AHURI Ltd does strive to be as relevant to policy makers as possible. For instance, it produces 4-page bulletins that include a summary of key findings and the implications of the findings for policy. They also produce synthesis bulletins that summarise six or seven projects on a particular theme. The process is such that the company revisits the projects after two or three years, synthesises the findings and then disseminates the findings in a bulletin form. So while Ltd is mindful of the difficulties in simultaneously satisfying a range of stakeholders, its practices are such that evidence is produced with the intention of being policy relevant.

5.6.6 An economic model of research uptake

Traditionally, the inclusion of data from AHURI Ltd's evidence-base in cabinet submissions and policy papers were 'hidden' from ministers as citations were removed from the documents prior to their release. In this regard, an opportunity to increase AHURI's profile within the policy community was identified. Ltd stressed to members of the policy community that an opportunity was being denied to demonstrate to ministers that their investment in the institute was being validated. Ltd's efforts have resulted in the cessation of reference-blocking in ministerial papers. As such, this cessation became a further method in bridging the nexus between the two communities; interestingly works on the purely economic

argument of 'you are investing money in the institute; therefore you need evidence of a good return'.

5.6.7 Interaction with the practitioner community

AHURI Ltd's interaction with practitioners has occurred principally through its Seminar Series, where researchers have presented to practitioner groups the results of some their key pieces of research. Also, researchers have contributed summaries of research work to a publication produced by the Australian Housing Institute, a professional body for housing practitioners. However, due to the divergent needs and interests of the practitioner community, practitioner involvement constitutes a further phase of development in AHURI Ltd's operations. Following the economic argument above, drawing out the practice implications of Ltd's evidence-base is conducive with maximising the value of the research to stakeholders. Although the capacity to identify the practice elements of research has yet to be attained, it is an 'investment' goal that AHURI has identified.

5.6.8 AHURI: conclusion

In summary, AHURI Ltd has established itself as an 'independent and neutral' third-party translator ('conduit') between research and policy worlds. Its independence and neutrality has been conducive with developing the trust of the stakeholders it deals with. At the same time, AHURI recognises the value-differences between communities. However as part of its commitment to develop the research capacity of the country, AHURI Ltd blurs the boundaries with researchers and policy makers for specified periods of time. On a final note, the company has also utilised an economic approach for working at the nexus, where evidence for stakeholders that research is being utilised is the crucial factor.



5.7 Australian Research Alliance for Children and Youth

5.7.1 Main findings from workshop

- The process of 'blurring the boundaries' can highlight differences between communities as much as it can identify common ground and common purpose between communities.
- However, evidence borne of collaboration between communities is afforded greater respect from policy and practice communities.
- Individuals who can 'switch' writing styles (e.g. 'conduits') are important in producing evidence that reaches a variety of organizational contexts.
- 'Humanising' the evidence (through charismatic speakers and/or the inclusion of 'narratives' in reports) enhances the perceived relevance of research.

Australian Research Alliance
for Children & Youth

5.7.2 Introduction

On November 24, 2006, The Australian Research Alliance for Children and Youth (ARACY), with the support of the Victorian Health Promotion Foundation (VicHealth), organised a Practitioner Workshop on 'The Integration of Research, Policy and Practice'. The workshop was held at Eden on the Park Hotel, 6 Queens Road, Melbourne, Victoria. The conference and its proceedings were considered to be an integral part of our research project as we

presented our 'models of integration' to an audience of researchers and practitioners for appraisal and feedback purposes. As part of the conference's feedback process, attendees participated in a table discussion regarding the enhancement of researcher-practitioner interactions. This case-study provides an overview of the trends and insights that emerged in the table discussion.

For ARACY, the workshop complemented its organisation's focus on the sharing of knowledge and practical experience across a range of research, policy, and practice sectors. The primary goals of ARACY have been to promote collaborative research and agenda setting for children and young people, as well as promote the application of research to policy and practice. Methods employed to achieve these goals include ensuring the participation of policy makers and practitioners at every level of decision making, and translating research into an accessible form.

For the discussion, each conference attendee was assigned to one of five tables; the same set of questions was discussed at each table. A facilitator and scribe were also assigned at each table. The questions discussed were:

1. What is already working well in terms of research-practice relationships?
2. What are the areas of concern where problems seem to emerge?
3. What are the possible strategies for addressing these (concerns)?

Although questions were obviously pitched at researchers and practitioners, interaction with policy-makers was also included in the participants' accounts. Effectively, practitioners were given the opportunity to discuss their views on research, practitioner knowledge and connections with policy and program development.

'Blurring the boundaries'-related issues were predominant in the attendees' responses (eg. the importance of sustained interactions between researchers and practitioners and policy-makers). The issues were predominant in both the identification of areas already working well and the areas that were of concern. Within participants' responses, there was also identification of individual and institutional factors that could either enhance or limit a) the dissemination of research, and b) working effectively at the nexus. Similarly, participants identified obstacles in successfully acquiring a comprehensive, 'honest' overview of the interactions between research, policy and practice. Finally, strategies for addressing difficulties were posited, some of which proposed utilising positive examples of working at the nexus in a wider range of professions and/or disciplines.

5.7.3 The predominance of Blurring the Boundaries

Involvement of practitioners and policy-makers in the agenda-setting and development of research projects was felt to significantly increase the 'legitimacy' of the research outcomes. That is, the outcomes would carry legitimacy beyond academic circles. Also, having end users involved in a project from the outset contributed toward the development of a successful operating plan for new initiatives.

However, there were a number of institutional factors that could obstruct the realisation of positive collaboration. For instance, the lack of funding for 'relationship building'. Also, relationships between the three communities could be significantly undermined by disagreements borne of different expectations of outcomes and timelines. 'Blurring the

boundaries' emphasises joint decision-making and joint agenda setting, but this did not mean the process was unencumbered by tensions. In fact, collaboration between the communities could highlight difference as much as a lack of dialogue could. However, the 'blurring the boundaries' ideal is that difference can be worked through from the outset (in order to establish a 'common cause' and 'shared understandings') whereas in cases of non-collaboration differences are manifest when evidence is ultimately afforded little esteem by policy makers and practitioners.

So 'blurring the boundaries' seeks to transcend institutional differences through greater - and more consistent - collaboration. However, the discussions unearthed another factor that could complicate successful collaboration, that is, the 'property rights' to research findings. When a range of partners are involved in a project, the difficult question emerges as to whose work the project ultimately is and who has first rights to the findings. Still, despite such complicating factors, the participants' inclinations to link effective work at the nexus with 'blurring the boundaries' approaches emphasised the model's value in working at the nexus. At the majority of tables, mention was made of an ideological shift in funding organisations that promoted the 'blurring' of boundaries. That is, funding organisations' endorsement of a proposed research project was increasingly dependent on researchers' level of contact with practitioners and policy-makers. Physical location was also felt to complement 'blurring the boundaries' in that the close proximity of organisations to each other could promote relationships and communication.

5.7.4 The value of Conduits

As mentioned, the benefits of 'blurring the boundaries' could be offset by the difficulties in overcoming differences between the communities. In the face of these challenges, participants noted the importance of a 'conduit' figure. Where the interactions inherent in 'blurring the boundaries' could be fraught, the 'conduit' at least offered an avenue for researchers to disseminate outcomes.

Participants noted that there was particular value in individuals who could efficiently 'switch' writing styles. These individuals could adapt academic writing into more accessible presentations. The production of fact sheets was similarly felt to be effective in communicating research outcomes to a diverse audience. A number of initiatives were identified, such as the City of Dandenong's 'Communities for Children' and the Department of Human Services' Office for Children, where a designated individual, who was able to absorb research literature, produced accessible reports for a wider audience. For instance, with the identified initiatives, the reports would highlight the practical implications of the research for both local government and child protection workers.

The one stated concern with the 'conduit' role was that the subtleties of complex research could be "dumbed down" for wider accessibility. However, participants noted that practitioners tended not to access journal articles, preferring texts with anecdotal accounts of working in a given field. In this regard, the 'conduit' was felt to play a central role in the dissemination of research, even if - arguably - some of the complexities of the research were lost in the translation.

There were some concerns expressed that the value of the 'conduit' was not reflected in the funding frameworks of universities; grants did not allow time or people to disseminate findings as widely as possible. Compounding this was an identified push for academics to publish in high impact journals rather than in 'grey' literature. For instance, the Department of Education, Science and Training did not award points to the publishing of findings in reports, fact sheets or opinion pieces.

5.7.5 The human factor

There were a series of 'human' factors that were noted for enhancing collaboration and/or dissemination. Although not discussed in any particular depth, 'charismatic individuals' (who could champion research) were highlighted for their effectiveness in working at the nexus. At one of the tables, it was suggested that media training for researchers would be of value. The training could include building one's skill-base for interacting with journalists,. The 'human touch' of the 'research narratives' model also received some support from participants. They noted that the inclusion of human stories in research presentations was a 'powerful' tool; powerful in terms of persuasiveness and appeal for intended audiences. Participants also felt that a 'blurring the boundaries' approach was easier to undertake when relationships between researchers, policy-makers and practitioners had already been long-standing. In this sense, 'who you know' has a significant role to play. Or in cases where the researcher was also a practitioner, this individual-level 'blurring' of boundaries could lend a research project practitioner credibility from the outset.

5.7.6 The knowledge question

On the basis of participants' comments, one of our methodological aims - to acquire a range of insights into positive and negative experiences of working at the nexus - is a difficult task. For instance, it was mentioned that in evaluations of how partnerships have panned out, the parties involved may not wish to 'broadcast' any negative experiences, lest it affect future funding proposals. Thus, there were some question marks over the 'transparency' of systematic reviews of programs. Furthermore, even if reports were transparent, participants questioned whether 'success' stories could be replicated in different organisational contexts and across disciplines.

5.7.7 Altering institutional thinking

Within the participants' suggestions of strategies for improving relations at the nexus was an evident push for 'boundaries' to be 'blurred' as much as is humanly and institutionally possible. However, achievement of this would require a conscious individual and institutional commitment to the finer points of collaboration and partnerships. The commitment would include;

- Engaging "other disciplines" and domains of practice in order to challenge the underlying assumptions of researchers.
- Being committed to building relationships between communities/disciplines. More specifically, seeking to understand the stance of other communities and being open

(and keen) to talk with those community members. Continuing exposure to the other communities would facilitate this aim.

- Developing strategies for cross discipline discourse through the life of an initiative, as well as comprehensive engagement of stakeholders throughout the life of an initiative.
- Putting together a pool of advisers to draw upon during the pre- and post project phases.
- Creating a shared vision with key stakeholders.

However, participants felt that a greater valuing of research at an institutional level was necessary in order to reap the benefits of a 'blurring the boundaries'-type approach. Ideally, developing an understanding of 'cultural difference' is matched with a respect for those differences. An 'in-house' strategy for promoting this respect was to integrate research into the curriculum of practitioners, thus making research a legitimate and valued activity within practitioner communities.

Participants also noted the importance of 'institutionalising' sustainable connections between communities. 'Sustainability' addresses how relationships between communities can be sustained in the face of staff turnover. So institutionalising 'sustainability' is building in effective systems so that information and knowledge would not be reliant on one person but the system. Examples of effective systems included:

- Forums to share knowledge built into research funding.
- Involving all parties in early thinking and planning.
- Developing a team approach so the system doesn't rely on one person.

In relation to the dissemination of research, recommendations were made for dissemination strategies to become part of the assessment criteria for research proposals. Concurrent with this was using communication tools creatively and with 'user-friendly' aims in mind. For instance, using multiple types of media (video/internet/photographs) in presentations. The work of Jack Shonkoff was used as an example of creative, accessible presentations; his work can be viewed on <http://developingchild.net/members.shtm>.

5.7.8 Participants' feedback

Taken from ARACY website:

http://www.aracy.org.au/AM/Template.cfm?Section=Practitioners_Workshop_Feedback

Keynote Presentation by Professor Evelyne de Leeuw

"A very valuable framework"

"I could see the relevance to many situations"

"Excellent distillation of vast amount of information into a practical, useful framework"

Panel Presentations and Discussions

"Panel raised concepts, barriers and challenges to integrating research"

"Enjoyed the critique offered by the presentations and the interactions through the good amount of time allowed for questions"

"Really great. Case studies very helpful. All 3 were excellent"

"A real world view is very helpful"

Discussion at Tables

"It was very lively"

"Really useful"

"Well moderated, good discussion of ideas"

"Good to brainstorm what works and where the gaps are - helped to gain a vision of where to see emerging field with exciting opportunities"

"Very stimulating discussion and the opportunity to interact across the disciplines"

5.8 Australian Research Centre in Sex, Health and Society

5.8.1 ARCSHS: main thrusts

- The involvement of subject communities in research process is conducive with effective dissemination.
- The 'local' relevance of research optimises practitioner acceptance.
- Policy acceptance is predicated more on the resource implications of research.
- An avoidance of 'hierarchical games' is conducive with accelerating the development of positive relationships between researchers, policy-makers and practitioners.
- The importance of 'advocates' - "people who will not let an issue drop" - is manifest when policy makers are indifferent or resistant to compelling evidence.
- The importance of 'resonance' - ensuring that evidence is framed in a culturally acceptable and relevant manner.

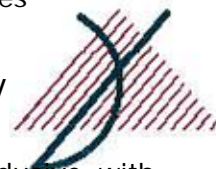
5.8.2 Introduction

The Australian Research Centre on Sex, Health and Society (ARCSHS) was originally established as the VicHealth Centre for the Study of Sexually Transmissible Diseases in 1992. This was at the height of HIV/AIDS research in Australia, and in part recognised the need for Australian research on other sexually transmissible diseases. A broadening mandate and a change in funding in the late 1990s lead to the current name being adopted.

ARCSHS is an independent research centre based within the Faculty of Health Sciences at La Trobe University which is committed to the development of knowledge and applied skills in sexual health research and evaluation. Its commitment is evident at local, national and international levels. As a research organisation, ARCSHS is especially notable for its focus on addressing community needs, whether it is through policy advocacy, evaluation strategies or upholding high quality research practice.

5.8.3 ARCSHS at the nexus

The direct involvement of researchers engaged in applied research to enhance practice, with policy makers suggests a utilitarian model concerning the nexus between policy, practice and research. Engaged with both practice and policy, researchers need to convince others in this nexus that their research is applicable and able to be readily utilised. In recent years, it has become more common for policy makers to target ARCSHS's researchers specifically for the purposes of providing evidence for a policy they need to implement. For example, implementing a vaccine for the HPP virus required ARCSHS researchers to conduct a range



of interviews in health fields to determine the best approaches for approaching and informing parents.

Notwithstanding the links made with policy makers directly by researchers, the recognition that research findings need to be disseminated in a range of ways to those who might use them in formulating practices and policies for care, education and prevention programs, has led to the establishment of the Community Liaison and Education Unit (CLEU).

The CLEU set-up employs approximately 12 staff (the majority of whom are employed on a part-time or casual basis) whose role it is to ensure that research conducted by the centre meets the needs of the communities it serves, ie those who are participants in the centre's research studies. The development of links between researchers and practitioners facilitates a strong evidence-base that at once informs, and is informed by, policy and practice.

The CLEU plays the role of a 'conduit' between the research, practice and policy communities with an interest in sexual health. This begins before a piece of research is commenced, with discussions with communities and practitioners as to what research they believe would best help them, consulting research communities about the appropriateness of research designs and methodologies, establishing reference groups to ensure a continuing dialogue between researchers and research communities as a project is implemented, and to provide continued support to communities to implement new policies and practices as a result of research outcomes. Each of these processes has the potential to contribute to the creation of supportive environments in which research can occur and may result in the building of relationships both between different research communities and between research communities and policy makers.

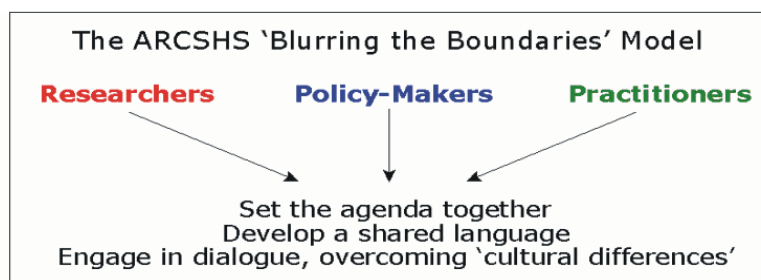
The other key role of the CLEU is to disseminate research findings from ARCSHS in ways that are accessible, comprehensible and targeted to the needs of different sections of the community. Members of the CLEU use a wide range of strategies to disseminate information including organising forums and community education sessions, using the media (general and specialist) to promote awareness of research findings and to generate discussion about the implication of these findings, and producing non-technical reports aimed at specific audiences, including policy makers.

As Anne Mitchell noted, it is the extra time spent after a given project is completed, that constitutes ARCSHS' greatest impact on policy and practice communities. Her experience has been that policy makers and practitioners rarely read academic articles, and even when they do, they are doubtful of the articles relevance to their interests. They will however be more likely to read a two-page summary or a poster (that includes links to a website). Likewise academics can attend related conferences (eg. nursing or school conferences) to present a summary of findings.

ARCSHS have also contributed reports to the public domain of resonance-type approaches to evidence dissemination. For instance, the case study of Hillier and Mitchell (1994) regarding how the organisation attracted greater organisational and public interest in health issues affecting gay youth. Through crafting a publicity campaign that related the health issues to the theme of individual safety, they increased the receptivity of communities to their health issues. Their previous campaign had focussed on the more contentious issue of 'morality', and it had attracted a far less receptive response.

5.8.4 Blurring the Boundaries

As members of the CLEU may also be members of research communities, ie the communities which are the subject of particular projects, for some projects the model of research, policy and practice integration may be more akin to the 'Blurring of the boundaries' model. Working within communities of which one is also a member enables to CLEU to go beyond merely building links with particular communities by interacting with them more actively on a research level (eg. developing a common language and setting the agenda together). This would seem particularly likely in research communities (eg HIV/AIDS) in which there is a tendency for researchers, policy makers and practitioners to all identify as members of the one community.



The experience at ARCSHS had been that relatively quick establishment of relationships with practitioners, policy makers and the communities of study was dependent on the avoidance of 'playing hierarchical games'. For instance, with ARCSHS research work on sex workers a number of the research participants were invited to serve on a research committee to help determine an appropriate methodology (e.g. selection of interview questions, procuring participants) for the project. As well as this, the participants would assist in the analysis of data and read drafts of the research report. In short, the participants were not excluded from any 'behind-the-scenes' decision-making in the process.

ARCSHS organisational emphasis on community involvement in the research process was also conducive to the dissemination of research findings. That is, the participant's involvement would subsequently produce community anticipation towards the release of research outcomes. This anticipation would simultaneously increase the possibility research being integrated into practice. Admittedly this was contingent on whether the particular community had the capacity to apply the outcomes to practice, but regardless a positive response by practitioners was more likely. By contrast, a lack of community involvement equated with a general lack of interest in the research outcomes.

Through their interaction with school teachers, youth workers and practitioners in the HIV field, for example, the ARCSHS staff have found practitioners to be (comparatively) more open to change, as well as more respectful of research in general. This openness can be partially attributed to the involvement of communities of study. However, the representativeness of the research to their local and daily work experience also contributes to this acceptance. Acceptance can occur even when there is no accompanying policy framework. In short, local representation optimises practitioner acceptance.

5.8.5 Research advocates

It was emphasised however, that practitioner enthusiasm for research did not necessarily correspond with policy maker's enthusiasm for research. Policy resistance to new evidence was most commonly attributed to apprehension over the research's resource implications. In cases where evidence was compelling in its implications, but received policy resistance, continuing support from advocates and committed practitioners was required to optimise the likelihood of future uptake. Essentially, advocacy work would need to be sustained until, from a political perspective, it would seem an appropriate time to implement resources appropriate to the evidence implications.

5.8.6 ARCSHS: Conclusion

Through the ARCSHS's case study a number of observations have been made in relation to working effectively at the nexus. For instance, the involvement of subject communities in research process facilitates effective dissemination and practitioner acceptance. Policy acceptance, however, is predicated more on the resource implications of research. Also, an avoidance of 'hierarchical games' works in tandem with promoting the development of positive relationships between researchers, policy-makers and practitioners. As an organisation ARCSHS is also a prime example of the importance of research advocates and the persuasiveness of 'research resonance'.

5.9 Reflection on the case-studies: action at the nexus for integration of decision-making

Although a range of organisational set-ups have been detailed through the seven case studies, a number of trends were consistent across the organisational contexts. The trends involve the following:

- Translation, and the associated process of summarising evidence, may feel like a 'dumbing down' process for researchers, but the process increases the likelihood of evidence reaching policy and practice communities (where availability of time is a determining factor in whether evidence is taken into account by said communities). In this sense, lack of time necessitates the 'conduit' approach.
- The presentation of evidence must include consideration of its resource implications for policy and practice.
- The process of 'blurring the boundaries' may reveal differences between communities as much as it does commonalities. However, the significant input of these communities in research projects optimises policy and practitioner esteem of research outcomes.
- The importance of 'advocates' (e.g. in relation to the promotion of 'alternative evidence') is manifest when policy makers are indifferent or resistant to compelling evidence.
- Regarding 'utilitarian research, policy and practice', generating evidence for the purposes of immediate policy/practice uptake is difficult where an agency or organisation 'serves' a wide range of stakeholders. In response to this quandary, the building of a credible evidence base (with future uptake in mind) takes precedence.

On the other hand, in situations where trust has been established between communities, policy makers sometimes directly contact an institute asking for them to provide evidence on a politically pertinent issue.

The most evident trend, however, has been the non-exclusivity of any one approach for a given organisation. The seven organisations have each utilised a range of approaches for working at the nexus of research, policy and practice.

6. Discussion and identification of further challenges in understanding the nexus between research, policy and practice

For this project we have reviewed the literature about the integration between research, policy and practice. Explicitly, we have not limited ourselves to the health domain, but have looked at literature, materials and practices from others sectors such as education, environment, development and aid assistance, social work, housing, and political science. Somewhat to our surprise, we have found that the discourse around evidence of effectiveness, and the utilisation of that evidence in policy and practice as it plays out in the health arena is quite different in those other arenas. For instance, the current dominance of a drive towards knowledge *translation* is hardly evident in sectors outside health. In those sectors, there seems to be perhaps a more acute recognition of the fluidity of different types of knowledge, and ways in which the generation of those types of knowledge has a bearing on integrating research, policy and practice.

*The discourse around evidence of effectiveness should take better account of the (re)sources of knowledge and how those impact on actions by stakeholders in research, policy and practice towards a seamless generation and application of knowledge. **Specifically**, there may be a role for VicHealth in advocating the validity of these different (re)sources for knowledge, and an explicit recognition of the role of the different stakeholders in the generation and application of different types of knowledge.*

Another thing we have observed in our literature review has been the fact that there may be an insufficient appreciation of the political nature of the integration issue. The health domain may be characterised as somewhat naive in assuming that the methodologically 'proper' generation of evidence will lead to the uptake of that knowledge in practice and policy circles. As Weiss (1979, 1998, 1999) and Vedung (2000) have pointed out, research utilisation by decision makers follows its own particular rationalities.

*Players at the nexus between research, policy and practice should be aware of the different rationalities decision-makers deploy in integrating research, policy and practice. **Specifically**, there may be a role for VicHealth in creating an information resource on how decision makers have acted previously on the generation and utilisation of specific research enterprises, with a view to move more proactively to establish a better 'fit' between research and decision making.*

We also have briefly reviewed the notion of knowledge management. Appropriate knowledge management recognises the inherent power issues related to the accumulation and management of evidence and knowledge. VicHealth has a new Research Policy Framework that should be able to inform a knowledge management approach that enables the integration of research, policy and practice.

***VicHealth is in a unique position**, based on a substantial track record in connecting innovation in research with Victorian health promotion activities, to establish an explicit knowledge management approach cognizant of the inherent political nature of the connection between knowledge and decision making. This knowledge management approach will have to draw on insights on the usage and power*

dimensions of knowledge, and will have to be integrated with all operations of the organisation and its stakeholders.

In our research, we then moved to exploring factors that would facilitate or hinder integration. We found that in many cases, be it in the health domain or elsewhere, value systems are different across research, policy and practice sectors. Whereas quality of research may be valued more by communities of practitioners, the timeliness and acuteness of research is more valued by policy makers. There is one aspect that is valued equally high by practitioners and policy makers: clarity and conciseness in research presentation and recommendations.

*If policy makers or practitioners invite researchers to propose research activities to review issues or suggest possible solutions to problems, the tender document must be specific about expectations regarding both the quality of the research as well as its anticipated timeliness. Regardless of these, the specification of parameters for the conciseness and clarity of the research report and its recommendations will be important for increasing the potential for its uptake. **Specifically**, VicHealth may want to consider the establishment of a set of general parameters for quality, timeliness and presentation of research, which may be adapted to specific environments and actors.*

Our inventory of some thirty theoretical frameworks that reflected on particular activities at the nexus between research, policy practice with a view to overcome differences in values, beliefs, perspectives and expectations between the three led to a categorisation into seven categories, which could then be grouped into three perspectives: the institutional (re-)design category of theories looks at changing the rules of the game at the nexus; four categories of theory consider structural approaches to bridge the nexus, including the generation and representation of evidence; and two categories suggest communication modalities that are appropriate for acting at the nexus. Although the mere fact that we could identify several dozen of theories that had engaged with our integration issue was quite rewarding, it also complicated our search for the one 'Theory of Everything'. In trying to make sense of the theoretical field, we endeavoured to appraise the overlap, complementarity, and supplementarity between the categories and found that, apart from a degree of hierarchy between the three broad groups (rules of the game → structures → communications) each of them have reliability and validity within their own context and discipline. Though understandable, this is not entirely acceptable for a field that is awaiting more definite answers rather than pronouncements that 'a lot of things seem to work under a variety of conditions'...

The research presented in this report should be publicised widely with a view to exposing it to critique, validation, and – when appropriate – further refinement.

***Specifically**, VicHealth or any of its constituent research partners may want to consider (the financing of) follow-up research that would address the following questions:*

- if applied to one discrete arena of health issues (e.g., tobacco control, obesity or the interface between the arts and health) which of the seven categories yields the most explanatory or predictive power in successful integration of research, policy and practice?*

- *if the answer to the first question remains that all seven are overlapping and complementary, can they be amalgamated into one coherent theoretical framework that allows for adequate operationalisation in order to generate enhanced explanatory or predictive power?*
- *to what extent can either the answer to the first or second question inform a knowledge management and research policy framework to be refined by VicHealth and other stakeholders in the field?*

We have asserted that one contextual parameter for the successful application of any of the seven theoretical categories is the notion of networking. Actor-Network Theory, or a range of political theories that addresses social and policy networking, are providing insights at a higher aggregate level into the development of integrative approaches to research, policy and practice. In fact, VicHealth has already a track record in funding or supporting network research (e.g., Farquharson, 2003, Lewis, 2005a, 2005b) and should mobilise that knowledge in order to further enhance its activities at the nexus between research, policy and practice.

*Stakeholders with an interest in acting at the nexus between research, policy and practice must be cognizant of the networking issues and principles that govern integration or separation of actors and factors. Insights into network structures and knowledge of ways and means to reconfigure (components of) networks is critical to effective operations at the nexus. Network mapping tools must be made available to these stakeholders in user-friendly manners so as to facilitate entrepreneurial activity towards (network) integration. **Specifically**, there may be a role for VicHealth to provide access to, or provide resources for the development of, such network mapping tools. Moreover, for the future effectiveness of the VicHealth Research Policy Framework (and a knowledge management approach) it seems crucial that the organisation itself urgently maps the dynamics of the networks it is engaged in.*

In our case study research, most of our findings from the literature were confirmed: all organisations engaged in our study used at least two, and often more, of the categories that we had developed. Indeed, all of the case studies were actively engaged in networking activities, where in some cases more structural components were emphasised, and in others more communicative action. The variation in approaches, however, seems to have been dictated more by history, policy environment, and to a considerable degree personal attributes of the leadership (charisma, political instinct, flexibility and communicative ability) than by any profound grounding in scientific evidence, leave alone theory. All interviewees expressed a deep interest, though, in the eventual findings of this project as it would enable them to fine-tune existing activity or explore new venues at the nexus.

*The results of this research project and any other related (follow-up) project should be communicated widely, by means of a range of modalities (including workshops, counseling sessions, presentations) to actors directly involved, but notably to actors that should be involved, in acting at the nexus of research, policy and practice. **Specifically**, VicHealth may be expected to develop a strategy to engage these actors and sustain this engagement.*

References

- Abrar, S., Lovenduski, J., & Margetts, H. (2000). Feminist ideas and domestic violence policy change. *Political Studies*, 48, 239-262.
- Ahrendt, H. (1970) *On Violence*. Harcourt, Brace & World, New York
- Bernier, J., Rock, M., Roy, M., Bujold, R. & Potvin, L. (2006). Structuring an inter-sector research partnership: a negotiated zone - reply to commentaries. *Soz Praventiv Medicine*, 51, 352-354.
- Birckmayer, J. D. & Weiss, C. H. (2000). Theory-based evaluation in practice: What do we learn? *Evaluation Review*, 24(4), 407-431.
- Blomquist, W. (1999) *The policy process and large-N comparative studies*. Ch. 8, pp 201-232 in Sabatier, P., ed. (1999) *Theories of the policy process*. Westview Press, Boulder
- Booth, Tim. (1988) *Developing Policy Research*. Aldershot: Gower Publishing Company Limited.
- Boutilier, M., R. Mason & I. Rootman (1997) Community action and reflective practice in health promotion research. *Health Promotion International*, 12 (1) 69-78
- Breton, E., Richard, L., Gagnon, F., Jacques, M. and Bergeron, P. (2006) Fighting a tobacco rollback: A Political Analysis of the 1994 Contraband Crisis in Canada. *Journal of Public Health*, Vol 27, pp. 77-99
- Briss, P.A., S. Zaza, M. Pappaioanou, J. Fielding, L. Wright-De Agüero, B. I. Truman, D. P. Hopkins, P. Dolan Mullen, R. S. Thompson, S. H. Woolf, V. G. Carande-Kulis, L. Anderson, A. R. Hinman, D. V. McQueen, S. M. Teutsch, J. R. Harris and The Task Force on Community Preventive Services (2000) Developing an evidence-based guide to community preventive services—methods. *American Journal of Preventive Medicine* 18 (1) 35-43
- Bryman, A. (2001). *Social Research Methods*. Oxford: Oxford University Press.
- Börzel, T.A. (1998) Organizing Babylon: On the Different Conceptions of Policy Networks. *Public Administration* 76 (2):253-273
- Callon, M. (1986) Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay, in John Law (ed.), *Power, Action and Belief: A New Sociology of Knowledge?*, Sociological Review Monograph No.32, London: Routledge & Kegan Paul
- Canadian Health Services Research Foundation (1998). *Communication Primer* (1st edn). Accessed 1 September 2006, http://www.chsrf.ca/knowledge_transfer/pdf/comprimer_e.pdf
- Caplan, N. (1979). The Two Communities Theory and Knowledge Utilization. *American Behavioural Scientist*, 22: 459-70.
- Caplan, N. (1975). *The Use of Social Science Information by Federal Executive, Social Research and Public Policies*, (ed) G. Lyons. Hanover, NH: The Public Affairs Center, Dartmouth College.

Choi, C.K., Pang, T., Lin, V., Puska, P., Sherman, G., Goddard, M., Ackland, M.J., Sainbury, P., Stachenko, S., Morrison, M. & Clottey, C. (2005). Can scientists and policy-makers work together? *Journal of Epidemiology and Community Health*, 59, 632-637.

Churchman, C.W. (1967). 'Wicked Problems' *Management Science*, 14 (4)

Cochrane, A.L. (1999) *Effectiveness And Efficiency: Random Reflections on Health Services*. The Royal Society of Medicine Press, London

Crisp, B.R. (2004) Evidence based practice and the borders of data in the global information era, *Journal of Social Work Education*, 40 (2004), pp. 73-86

de Leeuw, E. & Skovgaard, T. (2005). Utility-driven evidence for healthy cities: Problems with evidence generation and application. *Social Science & Medicine*, 61, 1331-1341.

de Leeuw, E. (2006). Connecting the dots. *Sov Praventiv Medicine*, 51, 1-2.

Eddy, D.M. (1990). Resolving conflicts in practice policies. *Journal of the American Medical Association*, 264(3), 389-391.

Eddy, D.M. (1990). Practice policies - guidelines for methods. *Journal of the American Medical Association*, 263(13), 1839-1841.

Eldredge, N. & Gould, S. J. (1972) *Punctuated equilibria: An alternative to phyletic gradualism*. In: *Models in palaeobiology*, ed. T. J. M. Schopf. Freeman & Cooper.

Exchange Findings (2006). Communicating health research: how should evidence affect policy and practice? *Exchange Findings* (5).

Farquharson, K. (2003) Influencing Policy Transnationally: Pro-and Anti-Tobacco Global Advocacy Networks *Australian Journal of Public Administration* 62 (4), 80-92

Gabbay, J. & A. le May (2004) Evidence based guidelines or collectively constructed "mindlines?" Ethnographic study of knowledge management in primary care. *BMJ* 2004;329:1013 (30 October), doi:10.1136/bmj.329.7473.1013

Gray, J., White, M. and Barton, A. (1995). *Investigating the Dissemination of Public Health Research*. Unpublished report. Department of Epidemiology and Public Health, University of Newcastle-Upon-Tyne, Newcastle-Upon-Tyne.

Grol, R. & Grimshaw, J. (2005). From best evidence to best practice: effective implementation of change in patients' care. *The Lancet*, 362, 1225-1230.

Guba, E.G. & Y.S. Lincoln (1989) *Fourth Generation Evaluation*. Sage, Newbury Park

Guba, E. & Y. Lincoln (1981) *Naturalistic Evaluation, improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass publishers.

Guyatt, G.H., B. Haynes, R. Jaeschke, D. Cook, T. Greenhalgh, M. Meade, L. Green, C.D. Naylor, M. Wilson, F. McAlister and W.S. Richardson (2002) *Introduction: The Philosophy of Evidence-Based Medicine*. In: Guyatt, G. & D. Rennie, eds. (2002) *User's Guide to the Medical Literature: a Manual for Evidence-Based Clinical Practice*. AMA Press, Chicago

Hammell, K.W. & Carpenter, C. (2004). *Qualitative Research in Evidence-based Rehabilitation*. Edinburgh, UK: Churchill Livingstone.

Hanney, S.R. (2004). Personal interaction with researchers or detached synthesis of the evidence: modelling the health policy paradox. *Evaluation and Research in Education*, 18 (1 & 2), 72-82.

Hanney, S.R., Gonzalez-Block, M.A., Buxton, M.J. & Kogan, M. (2003). The utilisation of health research in policy-making: concepts, examples and methods of assessment. *Health Research Policy and Systems*, 1(2). Accessed 15 August 2006, <http://www.health-policy-systems.com/content/1/1/2>

Hargreaves, A. (1996). Transforming knowledge: blurring the boundaries between research, policy and practice. *Educational Evaluation and Policy Analysis* (18) 105-122.

Hillier, L. & Mitchell, A. (2004). *Shifting the discourse about same sex attraction from the 'moral' to the safety and rights arenas: a collaboration between research in the community and those who liaise between them*. Social Change in the 21st Century Conference, Centre for Social Change Research, Queensland University of Technology.

Howlett, M. (2002) Do Networks Matter? Linking Policy Network Structure to Policy Outcomes: Evidence from Four Canadian Policy Sectors 1990-2000. *Canadian Journal of Political Science / Revue canadienne de science politique* 35(2) 235-267

Huberman, M. (1990) Linkage between researchers and practitioners: a qualitative study. *American Educational Research Journal*, 27, 363-391.

Innvaer, S., Vist, G., Trommald, M. & Oxman, A. (2002). Health policy makers' perceptions of their use of evidence: a systematic review. *Journal of Health Services Research Policy*, 7: 239-244.

International Development Research Centre (2004). *Making the Most of Research: Research and Policy Process*. Ottawa, IDRC, Accessed 1 September 2006, http://www.idrc.ca/evaluation/policy/ev-67986-201-1-DO_TOPIC.html

Jacobsen, N., Butterill, D. & Goering, P. (2003). Development of a framework for knowledge transfer: understanding user context. *Journal of Health Services Research and Policy*, 8 (2), 94-99.

Kenis, P. & V. Schneider (1991) *Policy networks and policy analysis: scrutinizing a new analytical toolbox*. In: Marin, B. & R. Mayntz, eds. *Policy Networks. Empirical Evidence and Theoretical Considerations*. (Ch. 2, pp. 25-59). Campus/Westview, Frankfurt/Boulder

Kingdon, J. (1984) *Agendas, Alternatives and Public Policies*. Boston Toronto: Little Brown & Company.

Kingdon, J. (2002) *Agendas, Alternatives and Public Policies*. 2nd edition Boston Toronto: Little Brown & Company.

- Klein, R. (2003) Evidence and policy: interpreting the Delphi oracle. *Journal of the Royal Society of Medicine* 96, 429-431
- Klijin, E.-H. & J.F.M. Koppenjan (2006) Institutional design. Changing institutional features of networks. *Public Management Review*, 8 (1) 141-160
- Kogan, M. and Henkel, M. (1983). *Government and Research: The Rothschild Experiment in a Government Department*. London: Heinemann.
- Krastev, I (2000). *Post-communist think tanks: making and faking influence*. In D. Stone (ed), *Banking on Knowledge: The Genesis of the Global Development Network*, London: Routledge.
- Kuhn, T. (1970) *The Structure of Scientific Revolutions*, 2nd edition. University of Chicago Press, Chicago
- Latour, B. (1988) *Science in Action: How to Follow Scientists and Engineers through Society*. Harvard University Press, Boston
- Laumann, E. & D. Knoke (1987) *The Organizational State*. Wisconsin: University of Wisconsin Press.
- Leeuw, E. de (1989) Concepts in health promotion: the notion of relativism. *Social Science & Medicine*, 29 (11), pp. 1281-1288
- Leeuw, E. de (1999) Healthy Cities: Urban Social Entrepreneurship for Health. *Health Promotion International*, 14 (3) 261-269
- Lewis, J. M. (2005a) *Health Policy and Politics: networks, ideas and power*. IP Communications, Melbourne.
- Lewis, J. M. (2005b) A network approach for researching partnerships in health. *Australia and New Zealand Health Policy*, 2, 22-27.
- Lindblom, C. & D. Cohen (1979) *Usable knowledge*. New Haven, Yale University Press
- Lipsky, M. (1980). *Street-level Bureaucracy*, New York: Russell Sage.
- Lohr, K.N., Eleazer, K. & Mauskopf, J. (1998). Health policy issues and applications for evidence-based medicine and clinical practice guidelines. *Health Policy*, 46, 1-19.
- Marston, G. & Watts, R. (2003). 'Just the facts Ma'am': a critical appraisal of evidence-based policy. *Just Policy*, 30, 32-46.
- May, T. (2001). *Social Research: Issues, Methods and Process* (3rd edn). Philadelphia, PA: Open University Press.
- McAdam, R. & S. McCreedy (2000) A critique of knowledge management: using a social constructionist model. *New Technology, Work and Employment*, 15 (2) 155-168

McQueen, D.V. & L. Anderson (2001) *What counts as evidence: issues and debates*. Ch. 3, pp 63-82 in: Rootman, I., M. Goodstadt, B. Hyndman, D.V. McQueen, L. Potvin, J. Springett & E. Ziglio, eds. (2001) *Evaluation in health promotion. Principles and perspectives*. WHO Regional Publications, European Series, No. 92, Copenhagen

Merriam, S. (1998). *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.

Miles, M.B. & Huberman, A.M. (1994). *Qualitative Data Analysis* (2nd edn). Thousand Oaks, CA: Sage.

Mitroff, I.I. & R. Mason (1980) Structuring ill-structured policy issues: further explorations in a methodology for messy problems. *Strategic Management*, 23

Mitroff, I.I. & T.R. Featheringham (1974) On systematic problem solving and the error of the third kind. *Behavioral Science*, 19, 383-393

Nahapiet, J. and S. Ghoshal (1998) Social capital, intellectual capital and the organizational advantage, *Academy of Management Review*, 23, 242- 266

Neilson, S. (2001). *Knowledge utilisation and public policy process: a literature review*. IDRC (International Development Research Centre) Evaluation Unit.

Nutley, S., I. Walter & N. Bland (2002) The Institutional Arrangements for Connecting Evidence and Policy: the Case of Drug Misuse. *Public Policy & Administration* 17 (3) 76-94

Nutley, S. (2003). *Bridging the policy/research divide: reflections and lessons from the UK*. National Institute of Governance Conference, Canberra.

Nutley, S. & P. Homel (2006) Delivering evidence-based policy and practice: lessons from the implementation of the UK Crime Reduction Programme. *Evidence & Policy* 2 (1) 5-26

Overseas Development Institute (n.d.). *Theoretical frameworks*. ODI - Research and Policy in Development, Accessed 11/09/06, <http://www.odi.org.uk/rapid/Tools/Theory/Index.html>

Pawson, R. & N. Tilley (1997) *Realist Evaluation*. Sage, Thousand Oaks

Pawson, R. (2006) *Evidence-based policy: a realist perspective*. Sage, London

Pease, B. (2007) *Critical Social Work Theory Meets Evidence-Based Practice in Australia: Towards Critical Knowledge-Informed Practice in Social Work*. In: Yokata, K., ed. (2007) *Empowering People Through Emancipatory Social Work*. Sekai Shisou Sha, Kyoto

Pinch, T.J. & W. Bijker (1984) The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. *Social Studies of Science* 14 (3) 399-441

Punch, K.F. (2005). *Introduction to Social Research* (2nd edn). London: Sage Publications.

- Quine, W.V. (1953) *From a Logical Point of View*. Harvard University Press, Cambridge MA
- Roe, E (1991). Development narratives or making the best of blueprint development. *World Development*, 19, 287-300.
- Sabatier, P., ed. (1999) *Theories of the policy process*. Westview Press, Boulder
- Sabatier, P. & Jenkins-Smith, H. (eds) (1993). *Policy Change and Learning: An Advocacy Coalition Approach*. Westview Press.
- Sauerborn, R., Nitayarumphong, S. & Gerhardus, A. (2000). Strategies to enhance the use of health systems research for health sectors reform. *Tropical Medicine and International Health*, 4(12), 827-835.
- Saunders, L. (2005). Research and policy: reflections on their relationship. *Evidence & Policy*, 1(3), 383-390.
- Sehon, S.R. & D.E. Stanley (2003) A philosophical analysis of the evidence-based medicine debate. *BMC Health Services Research* 3: 14
- Short, S. (1997). *Elective affinities: research and health policy in Australia*. In H. Gardner (ed), *Health Policy in Australia*, Melbourne, VIC: Oxford University Press.
- Skok, J.E. (1995) Policy issue networks and the public policy cycle: A structural-functional framework for public administration. *Public Administration Review*, 55 (4) 325-332
- Springett, J. (2001). Appropriate approaches for the evaluation of health promotion. *Critical Public Health*, 11(2), 139-51.
- Stone, D. (1997) *Policy Paradox. The art of political decision making*. W.W. Norton, New York/London
- Stone, S. (2002). Using knowledge: the dilemmas of bridging research and policy. *Compare*, 32(3), 285-296
- Sutton, R. (1999). *The Policy Process: An Overview*. Overseas development Institute. London.
- Upshur, R. (1997) Certainty, probability and abduction: why we should look to C.S. Peirce rather than Gödel for a theory of clinical reasoning. *Journal of Evaluation in Clinical Practice*, 3 (3) 201-206
- Van Beveren, J. (2003) Does health care for knowledge management? *Journal of Knowledge Management*, 7 (1) 90-95
- Van Buuren, M.W. & Edelenbos, J. (2004). Conflicting knowledge: why is joint knowledge such a problem? *Science and Public Policy*, 31(4), 289-299.
- Vedung, E. (2000) *Public policy and programme evaluation*. Transaction publishers, London
- Weiss, C. (1977). Research for policy's sake: the Enlightenment function of social science research. *Policy Analysis*, 3(4): 531-545.

Weiss, C.H. (1979) The many meanings of research utilization. *Public Administration Review*, Sep/Oct, 426-431

Weiss, C. (1998) *Evaluation: Methods for studying programs and policies*, 2nd ed. Prentice Hall, Upper Saddle River

Weiss, C.H. (1999) The interface between evaluation and public policy. *Evaluation* 5 (4) 468-486

Widdershoven, G.A.M. (1999) Euthanasia in The Netherlands: Some First Experiences of Evaluation Committees. *Hastings Center Report*, July-August 1999, 47-48

Widdershoven, G.A.M. (2005) Book Review of: Euthanasia, Ethics and Public Policy. An Argument Against Legislation (by J. Keown). *Journal of Medical Ethics*, doi 2005;31:e006

Zahariadis, N. (2003) *Ambiguity and Choice in Public Policy. Political Decision Making in Modern Democracies*. Georgetown University Press, Washington DC

Zaza, S., P.A. Briss, K.W. Harris (2006) *The Community Guide to Preventive Services. What Works to Promote Health?* Task Force on Community Preventive Services, Oxford University Press, Oxford.



School of Health and Social Development

Appendix 1

Expression of interest

An investigation into integrating research, policy and practice

Introduction

The interfaces between research, policy and practice are vastly more complex than commonly understood. Although several models have been proposed for the translation of (intervention) research evidence into (health) policy and (health promotion) practice there is very little empirical evidence on effective pathways to drive the intricate dynamic relations between research, policy and practice towards better, more effective, and more easily implementable approaches.

The tender document lists as some of the barriers to improving these dynamic relations an assumed primacy of research evidence in decision making; an assumption of policy making and its implementation as a rational logical process; the belief that power and knowledge are independent of each other; the assertion that the medical profession dominates policy and practice change; the notion that institutional structures and formal processes are rigid; and a belief that the use of values and use of evidence might be dichotomous.

Birckmayer & Weiss (2000) have demonstrated that application of theory-based evaluation (TBE) yields better research information on various elements of success and failure of health promotion programs. The VicHealth call for Expressions of Interest, also, asks specifically for a theory-driven assessment of the integration of research, policy and practice. The currently used literature on 'knowledge translation', though, draws more on sets of 'grounded models' than on specific theories. This submission therefore intends to review *theory* only, and its applicability to said integration. The consequence is that this submission at times seems relatively abstract. However, we do believe in the adage that nothing is more practical than a good theory.

Background - theory

The interfaces between research, policy and practice are troublesome, but do not provide a conceptual and analytical framework that would integrate perspectives towards *solving* this problem. The social and political sciences, however, have suggested different approaches that would lead to enhancing these relations:

- Weiss' typology of knowledge utilisation for policy development;
- De Leeuw and Skovgaard's utility-driven evidence (UDE) framework; and
- Mazmanian and Sabatier's policy implementation theory.

Weiss (1979, 1998) proposes six models to explain how knowledge (or, in our terms, *evidence*) is used in the policy development process:

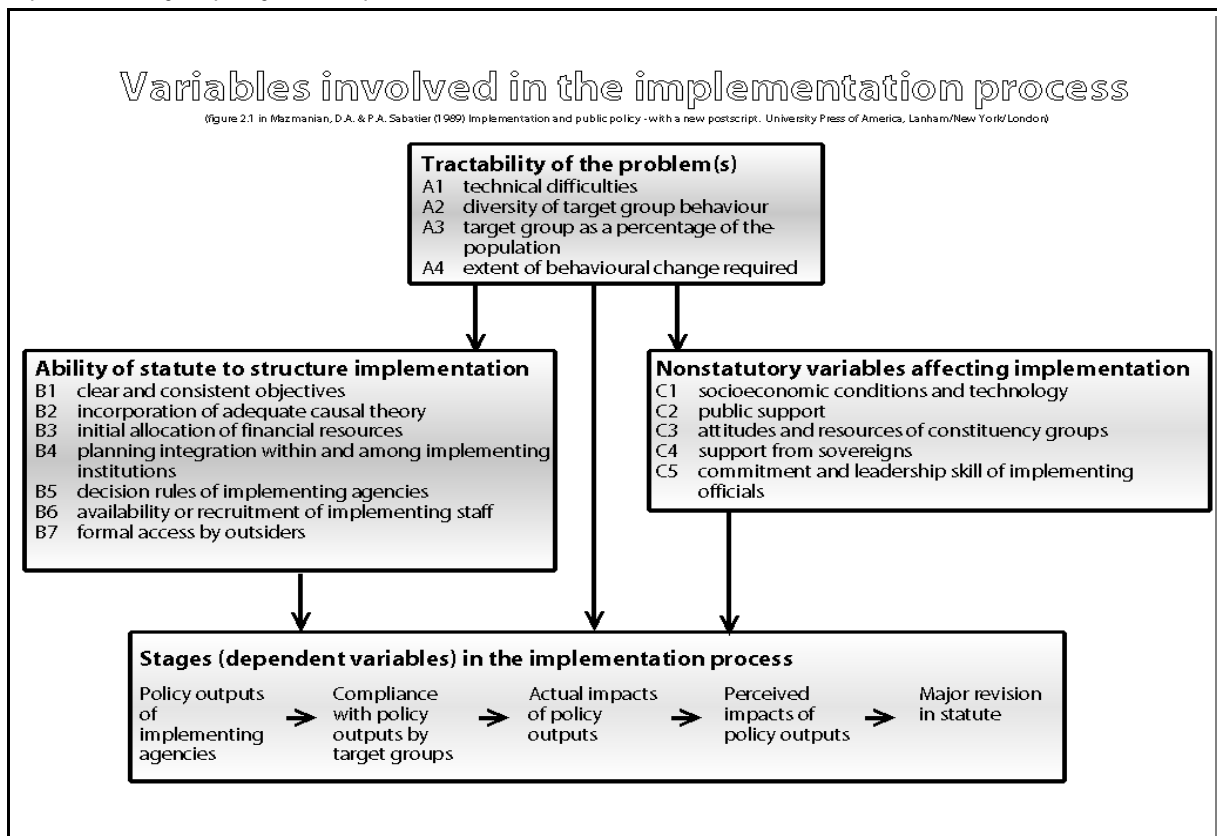
- The *knowledge-driven* model: new knowledge will lead to new applications, and thus new policies. An example could be fundamental research into nuclear resonance signals, leading to the development of NMR and MRI scanners, the emergence of which led to medical technology assessments to assist governments in deciding where and how the costly new technology could be implemented.
- The *problem-solving* model: research findings are actively sought, and used for pending decisions. In its ideal form, health impact assessments are an instrument in this model; HIAs supposedly are commissioned to guide decision-making related to proposed profound environmental and social change operations.
- In the *interactive* model incremental policy change is interactively driven back and forth by emerging research outcomes. The current Swedish national health policy is an exemplary application of this model, taken some twenty years to establish.
- The *political* model leads to research being used to support partisan political positions. Debates around the acceptability of nuclear power demonstrate the different political connections to different research perspectives.
- In the *tactical* model, the fact that research is being undertaken may be an excuse for delaying decisions, or deflect criticism.

- And in the *enlightenment* model, concepts and theoretical perspectives that social science research has engendered permeate the policy-making process, rather than single studies or research programmes having a discernable impact on policy priorities.

In short, policy developers actively identify those pieces of evidence to further or limit their political agendas, which in turn are linked to their political survival, which is ultimately connected to their constituencies' agendas.

This is precisely what De Leeuw & Skovgaard (2005) have identified as the issue in their analysis of the application of evidence generated in the WHO European network of Healthy Cities: of the abundance of evidence generated in this project over nearly two decades, only very few pieces found a dissemination among cities beyond the setting where the evidence was originally generated. Looking closer at those pieces of evidence that *were* in fact disseminated, they found that this process only takes place when all its partners believe that the evidence is generated *for a purpose that serves their agenda*. This idea of *Utility-Driven Evidence (UDE)* implies that only a process of careful, deliberate and patient negotiation between partners at the interfaces between research, policy and practice would yield agents of change. Two explicit evaluation paradigms have in fact taken this perspective into account: Guba & Lincoln (1981, 1989) have proposed a framework of *Fourth Generation Evaluation (4GE)* or 'naturalistic' evaluation (applied in the health promotion realm by Boutilier, Mason & Rootman (1997) who call it 'community reflective action research'). Pawson & Tilley (1997) have proposed a similar framework called *Realist Evaluation*. This framework appears to employ less scientific rigour, though.

In summary, when the generation of evidence is based on a set of values that, through negotiation, is shared between researchers, policy-makers and community stakeholders, this evidence will be adequately reflected in policy. The establishment of policy per se, however, does not necessarily mean that such policy will be actually implemented (as seen above, in some cases this is a deliberate strategy cf. one of Weiss' models, by some called 'symbolic policy'). Mazmanian & Sabatier (1989) have identified sets of factors (or 'independent variables') that determine the implementability of policy (the 'dependent variable'):

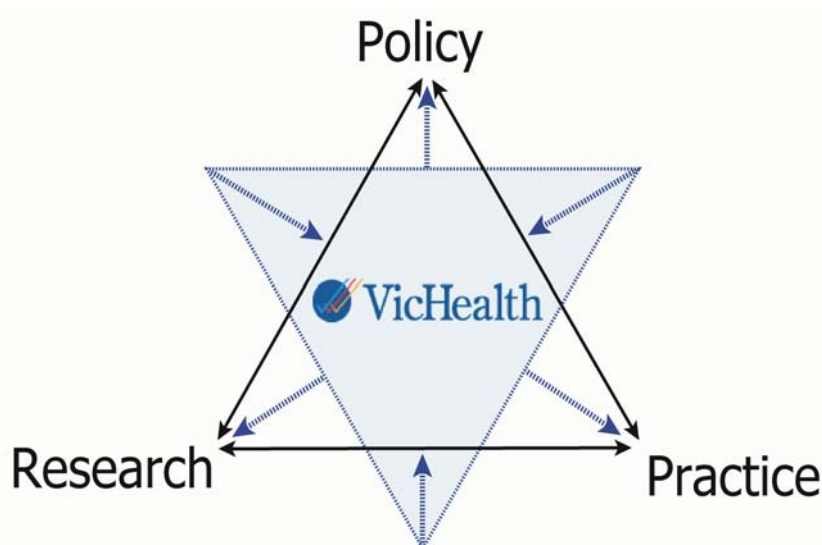


Clearly, the UDE process would lead to putting in place a degree of favorable independent parameters for the implementation of policy into practice. These negotiation processes would ideally have incorporated A1 through A4, C1 through C4 (thus with the exclusion of C5 - commitment and leadership skill of implementing officials!), and B1-B2 (thus excluding most of the parameters relating to the ability of an agency to structure implementation).

Finally, it will be helpful to be explicit about our value-base when it comes to notions of *research* and *evidence*. Whereas we are proponents of 4GE, or naturalistic evaluation paradigms, this does not necessarily mean that we value certain types of research methodology and their subsequent evidence pieces over others. In fact, the outcome of the negotiated research (methodology) environment could well encompass the entire spectrum of methodologies from heavily quantitative experimentation and RCTs to interpretative qualitative studies. We share the perspective of McQueen and Anderson (2001) quoting Butcher:

A piece of evidence is a fact or datum that is used, or could be used, in making a decision or judgement or in solving a problem. The evidence, when used with the canons of good reasoning and principles of valuation, answers the question why, when asked of a judgement, decision, or action.

In the remainder of this submission we will refer to the above theoretical foundation as the *UDE Model*.



Background - The VicHealth Model

VicHealth places itself deliberately at the complex interface between policy, research and practice described above. Beyond the direct endeavours to influence these three elements, VicHealth has framed its remit also to include the interaction *between* these three (cf. the *Public Health Research @ VicHealth: A Review of Key Challenges* report). In a pilot re-

view of the literature and initial assessment of work of similar health promotion foundations around the world we have not seen any similar positioning. This requires further exploration, though. In this model we have chosen to deliberately *exclude* the word *health* in conjunction with research, policy and practice. As VicHealth appropriately works with other sectors such as the arts and sports, the inquiry should therefore consciously include insights from those sectors, as should realms like social and community development, child care and education, tourism and wellness, etc.

Research questions

1. Does a literature review yield further comprehensive theoretical frameworks, apart from the UDE model presented above, that provide explanatory power and pathways for integrative action?
2. Can any government or non-government agencies or organisational approaches (including, but not limited to the health promotion realm) be identified nationally or internationally that explicitly endeavour to engage in influencing research, policy and practice, and their interactions, in order to integrate the three fields towards more effective interventions for health?
3. Combining the findings of (1) and (2) - can any case studies be identified, possibly in focused fields (thus transcending the rather '*fuzzy logic*' that is sometimes associated with health promotion programmes) that demonstrate strengths and weaknesses of (a) the current theoretical models, (b) the remit of the agencies/approaches, and (c) strategic alliances between stakeholders in the research-policy-practice arena?
4. Can the findings of (3) be made relevant and applicable to VicHealth's research and practice visions?

Details of the organisation

Entity name School of Health and Social Development, Deakin University

Entity status	Deakin University is a body politic and corporate established by the Deakin University Act 1974 in the State of Victoria
Registration for GST	yes
ABN Number	56 721 584 203
Place of Incorporation	Victoria
Postal address	221 Burwood Highway, Burwood, Victoria 3125
Principal office in Victoria	Waurin Ponds, Geelong, Victoria 3217
Contact person	Evelyn de Leeuw
Telephone	(03) 9244 6500
Facsimile	(03) 9244 6261
Email	evelyn.deleeuw@deakin.edu.au

Ability of Deakin University to undertake this work

A project with this scope would merit more profound investigation than can be realised in a six month time frame. Should we be successful with this expression of interest, we would prefer to see this as a pilot study for a more thorough PhD study, possibly funded through an ARC/VicHealth Linkage Grant.

Having said this, we do believe that this 'pilot' would enable the research team to provide valuable strategic and operational insights for VicHealth.

The School of Health and Social Development, in which the project is to be based, comprises research and teaching teams in the areas of health promotion, public health, disability studies, social work, and occupational science and therapy (with close to a hundred staff). The School has a strong record in working in partnership with a range of collaborators, including local and state government, educational institutions, and NGOs. Most of the School research is embedded in the Centre for Health Through Action on Social Exclusion CHASE, with other efforts in, for instance, the Built Environment Research Group BERG, the Centre for Health and Risk Behaviours and Mental Wellbeing CHARM, and the Centre for Physical Activity and Nutrition Research CPAN. Such collaborations sustain and strengthen the School's research agenda.

The disciplinary diversity within the School is a strength and keeps research teams 'on edge' - the '*evidence debate*', for instance, is not taken for granted but plays a critical role in research directions in all teams.

With a healthy operating budget of approximately 5 million AU\$, four full professors, eight A/Prof positions and another eight Senior Lecturers, and 174 C1 publications (international peer-reviewed) in 2005 the School has more than adequate research support capacity.

Academically, research at the interface of research, policy and practice is a driving force in the agendas of all teams. Our very close organisational ties with the Cochrane Health Promotion and Public Health Field mean that, within the School, evidence-based health promotion and public health are an inspiration for research and consultation efforts in areas as diverse as Nature and Health, Health and Social Impact Assessment, Domestic Violence, and Child Development Studies.

Professor Evelyn de Leeuw is an international expert on health policy development and health promotion. She has researched, and written extensively, on healthy public policy (as early as 1989), its development (specifically in Healthy Cities, from 1986), and its troublesome relation with evidence, epidemiology, and stakeholder interests (1993).

Dr Beth Crisp has an international track record in professional development and the transfer of knowledge in the social work realm. Dr Karen Stagnitti is an expert in professional development and research in occupational science and therapy.

CV of Chief Investigator - Evelyn de Leeuw

(attached; appendix 1)

Proposed workplan

Preamble - consistent with the theoretical framework outlined above, and in line with others yet to be explored, it is critical that each stage of this project takes place in close communication with the client (VicHealth) as well as commensurate disciplines beyond 'health promotion'. It is particularly important to

engage and mobilise those disciplinary positions within and outside the School of Health and Social Development that would have different conceptualisations of the interfaces. Dr Karen Stagnitti (OT) and dr Beth Crisp (Social Work) will act as such.

Stage 1 of the proposed work will identify theoretical frameworks with explanatory power (i.e. they comprise of a series of statements that allow for hypothesis testing and refinement: if ..., then ...) at the interface of research, policy, and practice. These frameworks would include the UDE model mentioned above, the Lin & Gibson (2003) assertions mentioned in the tender document, but also Roger's *Diffusion of Innovation* work, Latour's *Actor-Network Theory* (2005), a framework proposed by Bowen & Zwi (2005), the empirical work by Bowen & Martens (2005), a review carried out by Choi et al. (2005), and recent work from the realm of quality assurance in medical care, allied health and social work settings around implementation of protocols (e.g. Grol & Grimshaw, 2003, or Øvretveit & Gustafson, 2003).

Stage 2 of the project involves *operationalisation* of the theoretical frameworks: what *measurable* (qualitatively, quantitatively) parameters, indicators and variables will have to be compiled in order to test the theory. This is a critical prerequisite for the next stage of the project, as the consistency, coherence, and applicability of these operationalisations will guide the selection of *case studies*.

Stage 3 will thus focus on the identification of case studies of endeavours, nationally and internationally, where government and non-government agencies and organisations *explicitly* act at the interfaces between research, policy and practice in order to translate knowledge effectively into policy which factually can and will be implemented in practice. The identification of such endeavours (i.e. case studies) will start parallel with *stage 1*, but a selection and assessment of *potentially effective* case studies can only take place once the theoretical frameworks have been operationalised. It is likely that case studies will have to be limited to those actions within agencies and organisations with a *focused scope*: they would either entail specific populations, phenomena, or determinants of health.

Stage 4 entails a preliminary analysis of theories, operationalisations, and selected case studies. This analysis will be presented to the VicHealth for debate and further refinement.

Stage 5 will encompass 'knowledge translation', taking into account the theoretical and empirical findings of stages 1-4: how can these best be applied to the current vision and organisational set-up of VicHealth. It is considered critical that at this stage – or as soon as a relevant opportunity arises within the time frame of the project – the research is also presented, for validation purposes, to an international conference audience.

Research Team

Professor Evelyn de Leeuw (CI) Health & Social Development
 Dr Beth Crisp Social Work
 Dr Karen Stagnitti Occupational Science and Therapy
 Research Fellow (level B - tba) Political Science; Philosophy of Science

Timeline and deliverables

month \ task	1	2	3	4	5	6
Theory review		1				
Operationalisation						
Case study selection			2			
Linking operational theory with case studies				3		

- Guba, E.G. & Y.S. Lincoln (1989) *Fourth Generation Evaluation*. Sage, Newbury Park
- Guba, E. & Y. Lincoln (1981) *Naturalistic Evaluation, improving the usefulness of evaluation results through responsive and naturalistic approaches*. Jossey-Bass publishers, San Francisco
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-network-theory*. Oxford University Press, London
- Lin, V. & B. Gibson (2003) *Evidence-Based Health Policy. Problems and Possibilities*. Oxford University Press, Melbourne
- Mazmanian, D.A. & P.A. Sabatier (1989) *Implementation and Public Policy. With a new postscript*. University Press of America, Lanham/New York/London
- McQueen, D.V. & L. Anderson (2001) *What counts as evidence: issues and debates*. Ch. 3, pp 63-82 in: Rootman, I., M. Goodstadt, B. Hyndman, D.V. McQueen, L. Potvin, J. Springett & E. Ziglio, eds. (2001) *Evaluation in health promotion. Principles and perspectives*. WHO Regional Publications, European Series, No. 92, Copenhagen
- Pawson, R. & Tilley, N. (1997) *Naturalist Evaluation*. Sage, Thousand Oaks
- Potts, M., N. Prata, J. Walsh & A. Grossman (2006) Parachute approach to evidence-based medicine. *BMJ* 333, 701-703
- Rogers, E.M. (1995) *The Diffusion of Innovations*. The Free Press, New York
- Rychetnik, L., P. Hawe, E. Waters, A. Barratt, & M. Frommer (2004) A glossary for evidence based public health. *Journal of Epidemiology and Community Health*, 58, 538-545
- Suskind, R. (2006) *The One-Percent-Doctrine*. Simon & Schuster, New York
- Weiss, C.H. (1979) The many meanings of research utilization. *Public Administration Review*, Sep/Oct, 426-431
- Weiss, C. (1998) *Evaluation: Methods for studying programs and policies*, 2nd ed. Prentice Hall, Upper Saddle River
- Øvretveit, J. & Gustafson, D., (2003) Improving the quality of health care: Using research to inform quality programmes. *BMJ*. 2003 April 5; 326(7392): 759–761.