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LOST IN TRANSLATION: IDEAS OF POPULATION HEALTH DETERMINANTS IN THE AMERICAN POLICY ARENA

by

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ABSTRACT

An abstract of the dissertation of Maria Gilson Sistrom for the Doctor of Philosophy in Public Administration and Policy presented April, 22, 2008.

Title: Lost in Translation: Ideas of Population Health Determinants in the American Policy Arena

A growing body of research reveals the determinants of population health to be social, political and economic, yet health policy in the United States remains largely individualistic (Evans, Barer, & Marmor, 1994). At the same time research is revealing these structural determinants of health, measures of population health in the United States are worsening in comparison to other developed countries (Bezruchka, 2001). Explanations for this include the influence of culture, medical, public health and governmental institutions and historic development and processes on health policy. Researchers hold to a view of the policy process that is informed by science, yet policy may be informed by research only insofar as it conforms to existing ideas. Policymakers' decisions may be influenced as much by governmental institutions and the constraints of culture and political ideology as they are by compelling research. Even so, policies do change although many policy researchers contend that they can change only if associated ideas can be readily found in the policy arena. In this conception, it is ideas, not credible research, that are key to changing policy. In order to understand the translation of population

health research into policy, this study attempts to explain the presence, nature and character of population health ideas, and influences upon them, in the American policy arena for the purpose of translating research into policy and ultimately to improve population health. Grounded theory methods were employed to explore population health ideas in the policy arena, to produce substantive theory in the American policy context, and to test an extension of a theory of health policy previously developed in Britain.

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CHAPTER I. INTRODUCTION

Kindig & Stoddardt define population health as "the health outcomes of a group of individuals, including the distribution of such outcomes within the group" (2003, p. 380). The mission of population health is generally believed to be an obligation of government, in particular of public health (Gostin, 2000). Yet, although a growing body of research reveals the determinants of population health to be social, political and economic, health policy in the United States remains largely focused on the individual and individual healthcare services (Evans, Barer, & Marmor, 1994). At the same time, measures of population health in the United States such as average longevity and infant mortality are worsening or static in comparison to other developing countries and vulnerable groups continue to suffer from disparities in health and mortality (Banks, 2006; Huynh, Parker, Harper, Pamuk, & Schoendorf, 2005). One purpose of the present research is to explore the translation of population health research into policy in this discrepant environment.

Health policy may be informed by population health research insofar as the concept conforms to existing political ideas and cultural frames. Policymakers' decisions, however, may be influenced as much by institutional pathways and the

constraints of culture and political ideology as they are by compelling research. The institution of medicine, the historic subsuming of public health under the paradigm of biomedicine, and political institutions and cultural ideologies peculiar to the United States produce a context of policymaking that influences and constrains the development of health policy ideas. Yet policies do change, although frequently not as a result of research (Scott, 1998). Many policy researchers contend that policies can only change if associated ideas can be found readily available in the policy arena (M. Cohen, March, J. & Olsen, J., 1972; Kingdon, 1984; Smith, 2007). It appears that it is ideas and their temporal marketability, not credible research, that are key to changing policy (J. Lieberman, 2002; R. Lieberman, 2002; Smith, 2007). The main purpose of the present research is to understand and explain the presence, nature and character of population health ideas in the American policy arena for the purpose of improving the translation of population health research into health policy.

If, as Ervin (2005) and Swidler (1986) suggest, policy is a manifestation of ideas, ideology, and culture, and not an exercise of science informing political action (C. Weiss, 1979), then qualitative methods will be useful to explain the transformation of information in the policy process. In particular for policy studies, qualitative methods hold the prospect of enhancing depth of meaning and explanation where quantitative methods have failed to provide prediction or understanding of many policy processes (Rist, 2000). Specific methods to explore

population health ideas in the policy arena include a test of extension of previous theory (in particular, Smith, 2007) using a grounded theory approach (Strauss & Corbin, 1998) and the development of substantive theory statements applicable to the American context. Semi-structured interviews of policymakers provided insight into the influences that bear on the character of population health determinants ideas in the policy arena.

This study is important because the individualistic biomedical model of health has not met expectations to improve population health (Evans & Stoddart, 1994) and health disparities between groups are growing (Hertzman & Siddiqi, 2000). In order to sustain gains in longevity, improvements in infant mortality, progress in preventable causes of death, and to reduce health disparities, American health policy must focus on the determinants of population health to a greater extent than it has in the recent past. To attain this change, public health leaders must learn to influence the policymaking process through mechanisms other than academic research. This study reveals an "explanation gap" (Grady & Aubrun, 2004, p. 72) between policymakers' understanding of health and population health determinants and a dearth of evidence-based ideas regarding population health in the policy arena; yet it also explicates a number of influences on the translation of research ideas into policy and revealed a potential "vehicular" idea (Smith, 2007, p. 1446) that may represent a transition to greater understanding of population health.

CHAPTER II. REVIEW OF THE LITERATURE

Overview

Health policy in the U.S. is largely focused on the individual, yet a growing body of research reveals that the determinants of population health are social, political and economic. Evans, Barer & Marmor (1994), in their pivotal collection, opined that we are on the verge of a major Kuhnian shift because the powerful modernist paradigm of biomedicine as the dispenser of health has not been borne out in practice. Biomedical researchers, the public and policymakers have been searching since the 1970's for new theory to fit the growing explanatory gap in the biomedical paradigm. In 2007, however, while biomedicine has suffered in reputation, the new paradigm has yet to shift fully. American health policy remains individualistic, achievements in population health are declining (Bezruchka, 2001) and healthcare costs are intractable (Evans et al., 1994; Starr, 1982). Compelling research on the social, political and economic determinants of health have not produced healthier populations or healthy policy in the United States raising the question of whether science and Kuhn's scientific paradigms (1996) are the wrong framework from which to begin. The influences that create health policy are historic, institutional, professional and seemingly capricious. The institutions of medicine, public health and government play a role as do the processes of policymaking. Similarly, culture and our way of understanding health both

influence and are influenced by these historic, institutional, professional and frequently unpredictable mechanisms. The following is an attempt to explicate a number of these influences as they relate to the development of ideas of population health in the American policy arena.

Health or healthcare: Definitions of health and their influences on policy

The framework from which we view health influences how we experience health (Deborah Lupton, 2003) the kind of health policy we develop (Evans & Stoddart, 1994), and the institutions we build to support it (Starr, 1982). The World Health Organization defines health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or injury" (Evans et al., 1994, p. 28). Evans, et al (1994) find this definition makes the production of health policy difficult because it naturally encompasses all policy, not health policy specifically. In addition, defining population health separate from the health of individuals is problematic. Health can be politically or pragmatically defined according to the interests of the medical profession as well and this is the view to which most Americans are accustomed. Built upon a rational disease specific model of causation, health is defined as "the absence of disease or injury and takes as central the relation between health and healthcare" (Evans & Stoddart, 1994, p. 33). The need for healthcare in this simple definition is taken as given and institutions and policy have been built up around this common conception. Projections for doctors, nurses, hospital beds, and hospitals themselves have

become the measure of health need. Yet they are defined by the political and cultural milieu that accepts the need as given (Evans et al., 1994). The accepted cultural authority frame of the medical profession proffers them in its own best interests as measures to assure health, yet the state of health is too simplistically defined. Incorporating such elements as infant mortality, longevity or preventable deaths would produce very different policy outcomes. These measures are uncommonly used in the United States to inform either the definition of health or health policy largely because they do not conform to existing ideas of health and they fail to serve the mission of medicine and the healthcare industry (Starr, 1982).

The Institute of Medicine defines *public* health as those actions and policies that individuals, communities, institutions and governments take to ensure an environment conducive to health (Smedley, 2002). This definition gets closer to the concept of population health and indeed the Institute, in this policy statement, openly recognizes the population determinants of health. Still, health is not defined clearly here and like the earlier Canadian Lalonde Report, Americans have taken up the Institute's individual health and healthcare messages into policy, while leaving behind broader structural determinants (Evans & Stoddart, 1994).

A number of groups now advocate for human rights as the proper framework for health and define health as a state of well-being, similar to the World Health Organization and that of the United Nations Declaration of Human Rights (Mann, Gruskin, Grodin, & Anas, 1999). Mann averred that health policies

and programs affect human rights through preferential treatment of population groups. For example, the political processes that establish the public health research agenda may commonly favor individual risk factor research, avoiding exploration of population-based determinants (Hofrichter, 2003). Similarly, programs aimed at behavioral lifestyle change, common in American policy, are often preferred over structural strategies. These approaches marginalize populations that are unable to take advantage of health promotion (Becker, 1993) and exclude them from the benefits of society and access to public goods that determine health. Health research that fails to accommodate the subject's point of view—either through failure to include certain types of subjects in research or failure to include subjects in development of research questions and planning—ensures that such research will not adequately address the problems of those subjects and that such subjects will not be the primary beneficiaries of research. Health policies, programs and research that exclude disadvantaged cohorts of society result in further stigmatization of these vulnerable groups, limiting their capacity to achieve health.

Yet, defining health as a state of well-being and framing it in terms of human rights is also problematic. A human rights framework acknowledges the population basis of health and yet rights are given to and protect the individual. Further, Gostin describes the difficulty of defining health as a right, "international human rights law seldom provides easy answers; rather, it struggles to define and enforce human rights in the context of the legitimate powers of governments"

(2000, p. 17). The United Nations Declaration, its Covenants and their interpretations struggle with whether health itself is a right--a practically unachievable one, Gostin points out--or whether it is access to healthcare that is a right, bringing us back around to the definitional difficulties of confusing health with healthcare and defining population health in terms of the individual.

Daniel Reidpath (2005) illuminates the philosophical problem of health and population health in quoting both Margaret Thatcher, "'there is no such thing as society. There are [just] individual men and women'" and her predecessor, Jeremy Bentham,

> 'The community is a fictitious body, composed of the individual persons who are considered as constituting as it were its members. The interest of the community then is, what?—the sum of the interests of the several members who compose it.' (p. 877)

These liberal and neo-liberal viewpoints are reflected in the contrasting views of health in biomedicine and public health. Health in the biomedical view is what can be gotten from living a health promoting and virtuous life (Deborah Lupton, 2003) with plenty of healthcare. Health in the public or population health model is more than the sum of individuals' health (Reidpath, 2005) and manifests itself in measures distributed across groups of individuals (Kindig & Stoddart, 2003). While this definition remains a complicated one compared to the individual view, it does incorporate the difficult concept that health varies in populations and in ways that cannot be tied directly back to individual actions.

According to Szreter (2003), the population health approach is rooted in the early industrial era and developed in response to the effects of economic growth and urbanization on health. It is commonly accepted that economic growth produces as its natural outcome, improvements in population health—a rising tide lifts all boats--yet this appears not to be the case. Throughout history, and including the recent neo-liberal period, population health suffers initially and dramatically from rapid economic shifts (Hertzman & Siddiqi, 2000), economic growth (Subramanian, Belli, & Kawachi, 2002), and associated urbanization (Szreter, 2003, see in particular, chart on p. 425). Health improvements are not an automatic or universal consequence of economic growth (Subramanian et al., 2002) and urban population health in times of growth universally suffers before improvement occurs (Szreter, 2003). Neither are eventual improvements in health universal. Health improvements are associated with forms of governance (Daniels, Kennedy, & Kawachi, 1999), human and civil rights (House, 2003; Mann et al., 1999) and political and social policies (D. Raphael, 2003) that blunt inequities associated with economic growth and a free market. Szreter does not define population health per se except in reference to its usual measures—longevity and infant mortality—but he does attribute the current resurgence of interest in the field to recognition of "the limitations of a strongly individual-oriented methodology" (2003, p. 421) in particular that characterized by clinical epidemiology (see, Health and public health, below).

Hartley (2004) quotes Kindig & Stoddart,

> Population health is defined as 'an approach [that] focuses on interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well being of those populations' (Hartley, 2004)

Yet this is a concept and an approach to the field of population health, still failing to define the subject itself. Kindig & Stoddart, after considering the elements necessary to a definition of population health, offer a more refined definition: "the health outcomes of a group of individuals, including the distribution of such outcomes within the group" (2003, p. 381). This is the working definition of population health used in this paper, and while it supports a research and policymaking view of the field, it still lacks truly defining elements. While still not defined with ease, population health is a complex phenomenon that is usually recognized by how it is measured, its focus is the group health effects of social, economic and political environments, and it encompasses an approach to political, economic and social policy development.

Institutions, health and healthcare: The biomedical model and the history of medicine

The institution of healthcare and the profession of medicine have contributed to the development of individualistic health policy and the undermining of a population or public health viewpoint in common parlance as well as in policy.

The profession of medicine has been integrally involved in producing an individualist conception of health and in the "consuming healthcare" half of Evans' and Stoddardt's dichotomy (1994). Starr describes the rise of the medical profession and its sources of social and political power by virtue of its "cultural authority" (Starr, 1982, p. 9). In contrast, "producing health" has traditionally been the domain of public health (Evans & Stoddart, 1994). Public health, however, through medicine's authority, was subsumed under the purview of biomedicine and the production of health became synonymous with the use of one vehicle, healthcare.

Public health traditionally defines its role and approach to producing health in different terms from that of medicine. Rosen in his monumental history of public health echoes republican equality and the social contract:

> "History illuminates the public concern with health. Man is a social being. It is characteristic of human beings to associate with each other for mutual protection and advantage. Throughout known history, men living in communities have had to take account in one way or another of health problems that derive from the biological needs and attributes of their fellows. Out of the need for dealing with these problems of social life, there has developed with increasing clarity, a recognition of the signal importance of community action in the promotion of health and the prevention and treatment of disease. This recognition is summed up in the concept of public health . . . *Salus publica suprema lex.*" [the health of the public is supreme] (Rosen, 1958, pp. xc-xci)

Public health defines health as population health, or the health of the community rather than the health of the individual. Medicine, on the other hand, is distinctly individualistic and personal in its view of health. Health comes about through the

expertise and ministrations of individual clinicians for individual patients. Since most illnesses are self-limiting, a visit to the doctor often results in resolution of symptoms. The patient's belief in the physician's powers to heal is thereby reinforced as is the individual healthcare view of health.

The ability to define health is key to whether we consume healthcare in the biomedical model or produce health according to the population-based public health view. The common definition of health, however, has come about as a function of the relative power and authority of medicine. According to Starr,

> ". . . some people stand above others in knowledge and authority and in control of the vast institutions that have arisen . . . Modern medicine is one of those extraordinary works of reason: an elaborate system of specialized knowledge, technical procedures, and rules of behavior. By no means are these all purely rational: Our conceptions of disease and responses to it unquestionably show the imprint of our particular culture, especially its individualist and activist therapeutic mentality" (Starr, 1982, p. 3).

This cultural inclination, the belief in a rational science, and the evolution of physicians' cultural authority combine to define health as what you get from your doctor: "[t]he dominant belief system equates medical care with health" (Lomas & Contandriopoulos, 1994, p. 274). The ability of medicine to define social ills or deviance within the purview of medicine is a mechanism that sustains and extends the cultural authority of medicine and its delivery system, healthcare (Petersen, 1997). The medicalization of societal ills beyond specific disease entities results in professional and administrative processes and structures that serve to further define health in terms of biomedicine (D. Lupton, 1995).

The cultural authority that developed naturally between patients and physicians put biomedicine in a unique position, not only to define health, but to attain political influence and produce institutions independent from other restraining structures of society. Starr's analysis finds that the development of such authority was a product of American politics, economics and culture and a history of the profession's advantage (1982). The cultural authority of medicine alone, however, was not enough to produce the tremendous changes in belief. Historical, political, scientific and cultural forces also lent themselves to the serendipitous utility of the profession.

Prior to the "bacteriologic era" public health had been an institution largely "concerned with sanitary reform and affiliated more closely with engineering than with medicine." (Rosen, 1958, p. 181). Rosen (1958) glorifies the utility and contributions of rational science to public health that arose from the germ theory and later, the development of antibiotics. He describes the growth of ideas and an evolution of thinking that laid a foundation for the rational selection of public health interventions and policy. However, as public health gained a toe-hold in medicine through the laboratory sciences and effective new treatments, the medical profession engaged in a concerted effort to prevent encroachment on its domain. The "shifting attention from the environment to the individual" that arose with the germ theory and the discovery of antibiotics "increasingly relied on the techniques of medicine and personal hygiene." As prevention, which had long been a public

health function, began to move toward treatment the medical profession drew its boundaries and relegated public health to a subordinate position. "Doctors fought against public treatment of the sick, requirements for reporting cases . . . and attempts by public health authorities to establish health centers to coordinate preventive and curative medical services" (Starr, 1982, p. 181). Rosen extolled the tremendous public health successes achieved with antibiotics, yet this turn represented a movement toward individualism, the medicalization of prevention (D. Lupton, 1995), and the loss of population-based and structural approaches to health. As the medical profession restricted the growth of public health for its own ends, public health became dominated by the individualism of the medical profession: "the more narrow focus of bacteriology also provided a rationale for public health officials to disengage themselves from commitments to moral and social reform" that had previously characterized the field (Starr, 1982, p. 189). The limitations set on public health by the medical profession were profound. The early public health reformers of the nineteenth century, for all their moralism, were concerned with social welfare in a broad sense. Their 20th century successors adopted a more narrow and technical view of their calling. As Barbara Rosenkrantz notes, the "'dividing line' between the old and the new ideologies of public health was 'an explicit denial of responsibility for social reform'" (Starr, 1982, p. 196).

The evolving cultural frame of individual health was fostered by the medical profession. It influenced the translation from population-based health into

policies in which the structural aspects virtually disappear. The profession, consistently advocating for itself, had produced academic medical centers, specialization and specialized hospital facilities, as well as an insurance system benefiting the growth of the profession but having no bearing on the health of the population. Starr summarizes the influence of the profession on the outcomes of policy:

> "Gleaming palaces of modern science, replete with the most advanced specialty services, now stood next to neighborhoods that had been medically abandoned, that had no doctors for everyday needs, and where the most elementary public health and preventive care was frequently unavailable. In the 1960s many began to observe that abundance and scarcity in medicine were side by side. After World War II, medicine had been a metaphor for progress, but to many it was now becoming a symbol of the continuing inequities and irrationalities of American life" (1982, p. 363).

In the 1970's, medicine, after enjoying tremendous political influence based on its cultural authority, began to suffer criticism for its expensive and self-serving policies. The decline of medicine's cultural authority was in part a cultural shift. The civil rights era provoked a change in the political context of health: "health care as a matter of right, not privilege: no other single idea so captures the spirit of the time" (Starr, 1982, p. 389). In spite of this cultural shift and chronic attempts at healthcare reform since that time, ultimately, American's health as a population is not as good as that of the other industrialized countries, and its health policy remains a reflection of the individual nature of the medical institution.

Health and public health: Institutions and the science of population health

The ability to engage concepts of population health suffers from an institutional and cultural tautology: we have spent to the limit of the biomedical paradigm without improving population health at the same time the paradigm has set up a view of health that prevents us from seeing its true determinants (Evans & Stoddart, 1994). Yet, an individualist biomedicine is not the only view. Evans, et al (1994) reveal a research base in social determinants beginning in the 1970s (see also, G. Kaplan & Lynch, 1997). In addition, public health has long understood the sources of health to be social, political and economic. Prior to the Rosen's bacteriologic era (1958), public health held population health as its goal and social justice as its mission. This view took social, political and economic determinants as its underpinnings. This ethos was undermined by public health's close association with biomedicine beginning in the bacteriologic era (Rosen, 1958), yet in response to growing dissatisfaction with biomedicine the profession if not the institution of public health is rediscovering its roots and querying its recent devotion to individualistic approaches to health (Burris, 1997; Hofrichter, 2003; Kogevinas, 1998; Krieger & Zierler, 1996; McKinlay & Marceau, 2000). The profession of public health can be distinguished by an ethic of social justice among its employees, professional affiliates and advocates, while the structural institution of public health is an organization established in law and informed by governmental regulation and its history.

Beauchamp compares the idea of social justice to "market justice" as a more apt foundation of public health (p. 267). Market justice is the cultural frame taken by the "first language" (Bellah, 1985) of American individualism and is mirrored in and supported by the biomedical model of health (Corin, 1994). Beauchamp argues that public health has social justice at its root and that therefore the "second language" or republican tradition of collective action and responsibility are what should characterize public health action. The dominant discourse, most recently in the form of neo-liberalism but also well known as American individualism or market individualism (Burris, 1997), is clearly a limitation for establishing or even speaking about socially just health policy (Wallack, 2005). Like Corin (1994) and Coburn (2003), Lynch (2003) sees the starting point or distal cause of population health as the dominant discourse of neo-liberalism and global capitalism. Continued focus on the biomedical model, including individual health promotion, healthcare services, and public health programs is a function of the relatively blind acceptance of the dominant discourse of individualistic health, and the consequent search for causes and more proximate solutions.

The search for proximate or individual as opposed to distal or population-based determinants of health is currently contentious in public health. Freedman characterizes the population-based view,

> Public health is quintessentially a social enterprise . . . public health looks at patterns of health and disease in populations . . . public health focuses on the links between an individual and the environment (physical, social

> cultural, political, and/or economic) in which she lives, seeking in that linkage both an explanation for her healthy status and a potential entry point for policies and programs to address it. The primary research and analytical tool of public health is epidemiology. (Freedman, 1999, p. 228)

Yet epidemiology, the science of public health, and its application to the discovery of individual risk factors for disease has been criticized for narrowing the focus of public health policy from population-based actions to individual lifestyle behavior change (Krieger, 1999; Susser, 1998). This co-optation of public health and its basic science by biomedicine contributes to poor public health policy (McKinlay & Marceau, 1999).

Epidemiology is the study of the "distribution and determinants of disease in the human population" (Trostle, 2005, p. 4) and in the past contained a discourse closely related to Szreter's economic conception of population health (Szreter, 2003). The early method was developed by John Snow, among others, to illuminate the "appalling social conditions during the industrial revolution" that produced infectious disease epidemics (Pearce, 1996, p. 678). Epidemiology as a branch of public health "focused on the causes and prevention of disease in populations . . . the emphasis was on the prevention of disease and the health needs of the population as a whole" (p. 679). The accusation of "risk factorology" leveled at epidemiology by McKinlay (2000, p. 25) refers less to the lack of utility of epidemiology to reveal disease determinants and more to its recent use and exclusive development as a tool to reveal risk factors for disease in individuals.

McKinlay opines that there are "illnesses for which dozens, even hundreds, of 'independent risk factors' have been reported; these studies are now so common we have characterized them as reporting the risk factor du jour" (p. 28). Yet epidemiology applied in this way "focuses on the individual, blames the victim [for his or her lifestyle errors], and produces interventions that can be harmful [when the prevalence of risk factors is low in the population]" (Pearce, 1996, p. 678). Perhaps more important to the profession is that the conclusions of risk factor epidemiology are unsatisfying and socially exclusive: for example, "after many decades of risk factorology, more than two thirds of the contributors to causes of prostate cancer remain unidentified" (McKinlay & Marceau, 1999, p. 28) while the utility of individual lifestyle change as an intervention to reduce risk and ultimately disease remains utterly unproven (Becker, 1993).

The definition of the science and its history do not preclude analysis of population health determinants nor its contributions to improved population health policy. Indeed, epidemiology has been employed to great effect in the prevention and control of epidemics (Rosen, 1958), the development of the disease specificity model of causation (Berkman & Kawachi, 2000), and most recently, illumination of the population determinants of health. The narrow, individualistic focus of epidemiology as a tool of biomedicine, however, has proven dominant of late and has resulted in public health institutions being diverted from their population health mission. Epidemiologists themselves now call for a full scale return to

epidemiology as a population science (McKinlay & Marceau, 2000; Susser & Susser, 1996):

> "The dominant theoretical developments in epidemiology have effectively ignored the true dialectic that exists between people's actual chances and their real possibility of making choices. This is palpably not an entirely individual business because both the realities and the possibilities are determined by status and context. The theoretical basis for public health is overdue for a constructive reformulation and enhancement of epidemiology" (McPherson, 1998, pp. 612-613)

Social epidemiologists call for theory to reflect the embodiment of the body politic on the health of the population (Krieger, 2004) and for action-based theory to support the interpretation of population determinants research (Krieger, 2005; McPherson, 1998). McKinlay posits the need to accommodate such theory through explicit recognition of the sociopolitical value basis of the science (2000), and Trostle (2005) writes a book on the need to incorporate culture and context into epidemiologic theory.

Popay (2003) and Raphael & Bryan (2003) argue for an anthropological view of health that recognizes the effects of dominant structures and institutions on individuals and their communities. Krieger, like Raphael, finds that epidemiologic theory has devolved into technique and that it no longer provides theory to direct the conceptualization of disease and health policy. Without incorporating the societal aspect of disease causation, epidemiology and the public health actions and programs directed by it can never attend to the population roots of illness.

Hofrichter joins the social justice argument for population health with criticisms of epidemiology:

> Theories of disease causation and powerful ideologies such as individualism and the market limit critical thinking about the desirable means for confronting health inequities. A discourse based on social justice supports collective responsibility for achieving healthy communities; it also addresses the social and economic conditions at the core of health in equalities. (2003, p. 12)

The institutional call for new theory and new policy is palpable in these arguments and the research basis already exists from which to launch both. The problem, however, is less one of supportive research and more one of assuring that such research is adopted--in cultural and political arenas in general and policymaking forums in particular--in forms that are believable and actionable.

The determinants of population health

The body of research in population health determinants is impressive yet, with the exception of one substantial policy document (Smedley, 2002), there is limited political or societal understanding of the concept in the United States. Individual risk factors (behavioral, genetic, or otherwise) determine little variation in population health and are remarkably difficult to change. Rose suggests that the causes of individual cases of disease differ from those for the population as a whole (1992). In the calculation of the "global burden of deaths attributable to risk factors" for 1990, Marmot finds sixty percent of deaths cannot be attributed to any major disease risk factor (Marmot & Wilkinson, 1999, p. 8). He holds that disease

is socially patterned and produced and that the unexplained 60% are likely to be social determinants of health. Social, political and economic structures appear to determine population health. At their root appears to be income inequality and the distribution of wealth. There are three main schools of thought and areas of research regarding the association of income inequality and health: the psycho/social stress model, the neo-materialist or life course approach, and the individual income hypothesis. The first two models have social capital in common as a mechanism of population health, which may be considered a free-standing fourth approach. The individual income hypothesis will not be explored here, as it has largely been discredited as an unconfounded determinant. The following is an explication of research in population health determinants, income inequality theories and policy implications that derive from them.

Income inequality

Comparative wealth and income inequity studies have shown an association between a relative gap in income and health in the United States and other developed countries (Blakely, Kawachi, Atkinson, & Fawcett, 2004; Kahn et al., 1999; G. Kaplan, Pamuk, E., Lynch, J., Cohen, R. & Balfour, J., 1996; Kennedy, 1996). Kawachi proposes that health is an indicator of the social costs of inequality. The "relative income hypothesis" (1999, p. 6) was promulgated by Richard Wilkinson, in a series of landmark articles, most notably one that inspired the current debate about income inequality and health in 1992. Wilkinson's study,

building upon the 1970's work of Rodgers (1999) and Waldmann (1999), found that income distribution between developed countries was a salient factor determining population health (1999c). Kawachi, Kennedy & Wilkinson propose that "if this is indeed the case, then almost every group in society (except perhaps the very rich) would reap the benefits of a more egalitarian distribution of income."

Rodgers found that income and life expectancy produce an asymptotic curve: "there is a maximum life expectancy beyond which increases in income have no further effect" (1999, p. 5). Understanding that income and life expectancy data are found only in the aggregate, Rodgers proposed formulating a relationship at the community level. The relationship is complicated by its curvilinear form and Rodgers averred that this is because there is a "tendency for great dispersion of income to be associated with lower mean life expectancy" (1999, p. 6). In 1979, when this article was originally published, Rodgers concluded that "the difference in average life expectancy between a relatively egalitarian and a relatively nonegalitarian country is likely to be as much as five to ten years" (1999, p. 12). These conclusions also mirror those of Waldmann in 1992 for comparisons of infant mortality as a measure of population health (1999).

Wilkinson's pivotal 1992 article established that per capita income was significant to health only up to about $5,000 GNPc and held that it was relative and not absolute income that predicted health across countries (1999c). Nevertheless, the greatest improvements in health were still to be found in addressing the need of

the lower deciles of income of Rodgers' asymptotic curve. This phenomenon has sparked a good deal of debate regarding the direction of policy interventions (see for example, Lynch, 2003; D. Raphael, 2003).

The beginnings of Wilkinson's theory that psycho/social mechanisms are the pathways by which inequality affects health are also to be found here. Like Marmot's civil servants (1991) and studies finding an association *within* countries for inequality and health (G. Kaplan, Pamuk, E., Lynch, J. & Cohen, R., 1999; B. Kennedy, Kawachi, I. & Prothrow-Stith, D., 1999), a social gradient exists for income inequality and health that undermines absolute material deprivation as a causal mechanism. The finding that there are differences in relative income and health not only *between* countries but *within* them gives support to the idea that such differences are politically and economically mediated. Wilkinson notes, for example, that there are marked cultural differences between Sweden and Japan but that both countries have invested in redistributive policies to the extent that they have very low income inequality and in consequence have better population health than the United States or the United Kingdom (1999b). McIsaac (1999) addressed methodologic criticisms of Wilkinson's earlier study using updated data and finding the now commonly recognized relationship of inequality and mortality as well as specific cause mortality across European countries for liver disease, motor vehicle accidents, ischemic heart disease of women and other injuries in men. These relationships between preventable and causes of death that are amenable to

social policy mediation were not found for suicide and stomach cancer which apparently are not socially patterned (Durkheim's common wisdom regarding suicide apparently notwithstanding).

Kaplan, et al (1999) delivered the first report that the distribution of income affects mortality *within* a country: the United States. He found a correlation with household income and mortality among the 50% least well-off in each state. He also found significant associations between distribution of income in each state and health statistics such as low birth weight, crime, smoking, sedentary activity and medical care expenditures. Increasing inequality in the U.S. is associated with state food stamp use and welfare payments, lack of medical insurance and educational outcomes at 4th grade. The authors found no influence of median income by state and, interestingly, the strongest mortality correlations were found in the 25-64 year age range reflecting societal variables rather than congenital diseases or those caused by aging.

Kennedy (1996) found that the Robin Hood Index measures relative deprivation while the Gini Coefficient more readily reveals absolute deprivation. Structural variables such as access to care for preventable causes of death were also significant, as was adjustment for smoking in this study of specific and all cause mortality in the U.S. measured by both tools. Kawachi & Kennedy note that

> Our findings find some support for the notion that the size of the [income] gap between the wealthy and less well off—as distinct from the absolute standard of living enjoyed by the poor—matters in its own right. This

> finding in no way diminishes the importance of measures to alleviate the burden of poverty (1999, p. 66).

Interestingly, a further study found that the association between income inequality and population mortality was consistently measured by *six* different instruments (Kawachi & Kennedy, 1999b).

In another landmark article, Lynch discovered that the relationship between inequality and health can be seen between metropolitan areas *within* the U.S. (1999), introducing the neo-materialist approach:

> First, income inequality may be associated with a set of social processes and economic policies that systematically under-invest in physical and social infrastructure (such as education), and this underinvestment may have health consequences. Second, large disparities in income distribution may have direct consequences on people's perceptions of their relative place in the social environment, leading to behavioral and cognitive states that influence health (p. 79).

Lynch found that income inequality is a structural phenomenon that affects health and that growth as an economic policy without contingent social welfare policies has increased inequality. Metropolitan areas in the U.S. with higher income inequality have higher age-adjusted total mortality that is not affected by median income, household size or percent of people under 200% of the poverty line, all reflective of individual variables (see for contrast, Fiscella, 1999). The authors calculate excess deaths of 139 per 100,000 in cities of greatest inequality from preventable and therefore socially mediated causes including lung cancer, diabetes, HIV and motor vehicle accidents. The authors conclude that policy should not rely

on the rising tide of growth to improve American's health. Such policy apparently does not lift all boats.

Shaw like Lynch (1999) and Szreter (2003) finds that a 'rising tide' not only fails to lift all boats, it tends to swamp the most vulnerable craft:

> Whether we refer to mortality, morbidity, or self-reported health, and whichever indicator of socio-economic position we employ—income, class, housing tenure, deprivation, or education—we find that those who are worse off socio-economically have worse health (Shaw, Dorling, & Davey Smith, 1999, p. 211).

Shaw doesn't, however make Lynch's (1999) and Szreter's (2003) connection between neo-liberal policies of growth and consequent polarization of income and health in her article on social exclusion. She delineates categories of deprivation and cumulative disadvantage: poverty emphasizes lack of economic resources, relative deprivation emphasizes conditions of living, and social exclusion reflects the process of marginalization from society and community life over the life course. She hypothesizes that these three phenomena are reflected in increases in the *social* diseases (suicide, alcoholism, mental illness, premature mortality, among others) that are increasing in geographic areas of growing inequality. Eastern European countries illustrate these changes well due to rapid economic and social changes after the collapse of the Soviet Union. The history and culture of the region affects poverty, relative deprivation and social exclusion as well, but the majority of the health effect of inequality seems to be material while the proximate causes are behavioral. Smoking and alcoholism account for the majority of increasing

morbidity in Eastern Europe, but to intervene effectively, they must be considered in the material context that produced them. The political economy clearly determines health in Shaw's argument and consequently, in her policy recommendations to improve the health of the vulnerable she addresses the major outcomes of material deprivation (housing, employment, education).

The life course or neo-materialist approach

Plato averred that the legislature determines the extent of poverty (in Lynch & Kaplan, 1999). Lynch & Kaplan (1999) make the point that wealth distribution is an indication of social well being and summarize the theory, supporting research and challenges of the neo-materialist hypothesis. They contend that the structure--Plato's legislature--produces the material and psychological effects that influence morbidity and mortality and justify the centrality of public health in policy by doing so. Lynch and Kaplan move the debate beyond the individual income and national growth debates in developed countries by showing that the well-being of the poor always reflects changes in income inequality. They also contend that different effects differ or may not even be found at various levels of analysis. Geographic variation in the association between health and inequality, for example, may not be seen in small areas, because population homogeneity is likely to increase the smaller the geographic focus (this is also the explanation for the related association between residential racial segregation and poor health—segregated areas are homogeneous, very poor, and completely lack social supports and

structures to improve health (House, 2003)). Kaplan and Lynch (1999) offer the neo-materialist hypothesis to explain possible pathways to ill health from inequality: first, systems experience underinvestment in socially supportive policy, and second, social perceptions occur and are relative to the inequality produced by such underinvestment. The authors link the first to societies that tolerate inequality. They show evidence of such underinvestment in unique areas like comparative library books per capita and 4th grade achievement as well as high school graduation rates. Although the authors do not suggest a philosophy beyond toleration of inequality in this particular study, these phenomena are reflective of a loss of Plato's legislative understanding and lack of Aristotelian collective language and values, similar to that proposed by several authors (Beauchamp, 1988; Bellah, 1985; Wallack, 2005) and are reflective of neo-liberal economic and social policies of the last 25 years.

The neo-materialist approach examines health along the life course and has illuminated the complex relationship of disease and mortality for income and social status changes at varying times of life (Davey Smith, 1997; Galobardes, 2004; Naess, 2004). Michael Wadsworth's writings on the early life course and cumulative and critical determinants of disease (1999), like Marmot and Brunner's work (see, *The psycho/social stress model below*), seeks convincing biological pathways for ill health mediated by the social context. Blane (1999) and Bartley (1999) also view poor health as a function of life course disadvantage. Adversity--

like car crashes, kicking horse injuries (McCarthy, 1999) and suicide (Trostle, 2005)--is not a randomly distributed event. Adversity clusters and accumulates on top of previous disadvantage along the life course. "The neo-material interpretation says that health inequalities result from the differential accumulation of exposures and experiences that have their sources in the material world." (Lynch, Davey Smith, Kaplan, & House, 2000, p. 1202). Cumulative disadvantage is socially patterned and therefore, from a policy standpoint, preventable. For example, unemployment and work insecurity are functions of cumulative life course disadvantage, not of one-time lay-offs (Bartley et al., 1999). Increasing unemployment increases unemployment among the already disadvantaged disproportionate to the rest of society. Both Blane and Bartley find that the policy implications of this finding are that aid must be provided for temporary unemployment, but also to ensure that cumulative disadvantage is reduced, for Blane at critical points in the life course, and for Bartley as a component of social and wage policies.

The psycho/social stress model of population health

A great deal of research into the health outcomes of prolonged stress began with the famous Whitehall studies (Marmot, Rose, Shipley, & Hamilton, 1978) and has continued to reveal the health difficulties under which people of comparatively lower socioeconomic status labor (Marmot & Davey Smith, 1991; North, 1996). The social gradient (Blane, 1999) revealed in the Whitehall studies shows that

health and mortality are always worse at comparatively lower socio-economic and occupational rank (Wilkinson, 1996). These effects cannot be attributed to absolute material deprivation because they occur in groups which cannot be considered deprived. In this model, ill health associated with the social gradient derives from constant societal comparisons by social class and class of employment which result in prolonged stress (McEwen, 1999). Sustained stress produces biological effects that result in a number of illnesses associated with the immune, endocrine and cardiac systems.

Brunner and Marmot (1999) in a recent review of the Whitehall studies, find they are convincing regarding the increasing risk of mortality at each civil service grade in Britain. Yet, the studies have some limitations. The studies show that it is biologically plausible that the social environment produces stress and that stress can influence disease. But it isn't shown that this is what really happens. In addition, the psychological measures of stress were taken in the early study in 1978, while the physiologic measures were taken in 1991. Two such disparate measures taken so far apart cannot be compared fully. They support the phenomenon of the social gradient, and they are suggestive of a sociologic cause, but they are by no means definitive. The LiVicordia study (Kristenson, 1999) is similarly suggestive, but has some unusual outcomes that bring it into question. It did not support stress-related cardiac disease, but did show that Lithuanian men (presumably living under dramatic stress with the collapse of communism) reacted

oddly to cortisol stimulation. They returned to a stress hormone level far *lower* than their Swedish counterparts after stimulation. The LiVicordia finding that the lowest class men in both Sweden and Lithuania had comparable mortality rates is more supportive of an hypothesis of general disadvantage than a social gradient, although the social gradient in class and mortality was also seen in Lithuania. Taken together, the arguments for the causes of the social gradient are logical, not evidentiary.

Regardless of unusual findings and the scientific debate over psycho/social stress mediators, it is clear that whole classes of people are less healthy than others and that this phenomenon cannot, therefore, be individually determined. Kaplan suggests that policy actions are more important than Wilkinson's psycho/social mechanisms as causal pathways for income inequality and health:

> While there may be higher rates of adverse psychosocial outcomes in states with high inequality these may be only a reflection of the greater difficulties in life that are caused by the structural characteristics that distinguish between states with high and low inequality. From a prevention point of view it may be more important to deal with these structural features than their psychosocial consequences (G. Kaplan, Pamuk, E., Lynch, J. & Cohen, R., 1999, p. 59).

Psycho/social characteristics are patterned by socioeconomic or *material* status. Kaplan mirrors Lynch (2003), in suggesting that since the business of public health is population health, an individualistic policy focus on the psychosocial outcomes of inequality is misplaced. Policy concerns, or should concern, itself with the distal structural causes of poor population health (Hofrichter, 2003).

Social capital

Social capital theories relating health to community and social resources grew out of the Roseto studies in 1964 in which culture and community were found to contribute to reduced morbidity and enhanced longevity in a town of Italian immigrants (Egolf, 1992; Putnam, 2000a; Stout C, 1964). Social capital can be defined as the resources that communities bring together to solve problems, the idea of which has been most recently popularized in Putnam's *Bowling Alone: The Collapse and Revival of American Community* (2000b). Commonly, social capital is measured through levels of trust, neighborly reciprocity and civic participation in communities, yet, the field of public health research has been criticized for privileging social over economic aspects of social capital (Spencer, 2005). Putnam and other economists do not make this mistake. Economic capital is one, perhaps the most important, aspect of social capital and communities' ability to solve collective problems, and it is at the root of the neo-materialist hypothesis of inequality. In addition to the distinction between economic and social capital, there are two forms of social capital to consider: "bonding social capital constitutes a kid of sociological superglue, whereas bridging social capital provides a sociological WD-40" (Putnam, 2000b, p. 23). Bonding capital provides the kind of cultural and communal support that produced longer life spans in Roseto. Whereas bridging capital is that which provides connections and resources within and most importantly with larger political bodies outside communities that improve their

material standing and therefore their health, according to the neo-materialist hypothesis. While both the psycho/social stress model and the neo-materialist model subscribe to social capital as an aspect of what determines population health, it is bridging capital that is generally considered to matter in terms of income distribution and inequality.

Social capital theories are applied in both the psycho/social stress and the neo-materialist models. Ben-Shlomo and others (1999) find that beyond the individual, geographic or community areas have mortality effects:

> Although our analysis is based on areas, not individuals, it suggests that the characteristics of individuals are insufficient to account fully for differences between areas, as individuals in more variable areas appear to have worse mortality than their counterparts in more homogeneous areas (p. 49).

Likewise, Kennedy and others (1999) found the, by now, usual relationship between state level inequality and mortality but also found that self-reported health declined by income strata. They concluded that *contextual* or community inequality and individual health and income were affected but that the social context matters less at increased levels of individual income. A similar study by Kawachi (1999) found that individual risk factors predicted poor self-rated health, yet after controlling for these, so did state level measures of social capital. They concluded that mechanisms that mediate between social capital and health may differ at state and neighborhood levels and may be impossible to see at the individual level.

Interestingly, the highest income strata employed in Kennedy's study (1999) started at $35,000 which gives some insight into Marmot's social gradient as applied in the U.S. Income of $35,000 would not seem to provoke Wilkinson's invidious social comparisons (1999a) as might comparisons between modest means and incredible wealth. This fairly low top income category and the very low odds ratios given by the authors lend some insight into criticisms that these relationships may be statistically but not clinically significant. The contention that policy should be directed at the burden of disease in the most impoverished categories is supported by these weak findings.

Berkman (1999) looked at myocardial infarction (MI) in particular as a preventable cause of death that is socially patterned. The relationship of positive social support and death and disease is supported in the literature particularly for MI. Pathways are likely to be multiple but include immune and neuroendocrine functions as illuminated by McEwen (1999). Supportive social networks are a function of social capital—of individuals, families and communities and are likely to need political influence to maintain. Social wage policies and political stability as seen in the LiVicordia study are examples of policies that sustain healthful social relationships (Kristenson, 1999). Berkman finds that social support group research is promising but that naturally occurring social networks may work better and that these are supported through structural policies that promote social capital.

Kawachi (1999a) expands the social support framework further by proposing that inequality matters to health because it destroys social cohesion and therefore is a function of society and democracy. His hypothesis is that income inequality causes mortality through a *withering* of social cohesion. Its mechanisms are likely to be the psychological effect of relative deprivation as well as the loss of social investment characteristic of societies that tolerate great inequality. Kawachi's conclusions are supportive of Kaplan and Lynch's (1999) neo-materialist explanation for income inequality and population health, except that Kawachi's psychological effects (like Wilkinson's) seem direct and determinative instead of conditional.

The question of social capital and its relationship to inequality and health grow naturally out of the neo-materialist social cohesion and lack of investment hypothesis. Kawachi (1999) finds that the relationship between income inequality and health is mediated by social capital and proposes that disinvestment in social structures (schools, etc.) that produce social capital occurs in societies which tolerate inequality, very similar to Kaplan and Lynch above. In a study of social trust, which is a factor in social capital, Kawachi (1999) finds that there are associations between cardiac disease, cancers and infant mortality for specific measures of social trust. Interestingly, however, injuries in men seem to be a direct result of poverty, not affected by trust or measures of relative inequality. This study, however, like many portrayed here has significant limitations. The direction

of causal relations cannot be proven because this and most of the studies are cross-sectional: social trust, therefore, may affect health or vice versa. The level of analysis may also be a problem: measures of social trust were developed to be used at the national, not regional or community level and may run afoul of differential manifestation of effects. Finally, social capital has been soundly criticized by Lynch (2003) as being ill-defined, although it still seems to show a consistent association with underinvestment in public goods and mortality.

Another series of studies (Daly, 1998; Hsieh, 1999; B. Kennedy, Kawachi, I., Prothrow-Stith, D., Lochner, K. & Gupta, V., 1999; Sampson, 1999; R. Wilkinson, Kawachi, I. & Kennedy, B., 1999) attempts to show associations between social processes related to income inequality and health. Wilson and Daly (1999) suggest that homicide and teen pregnancy associated with inequality are adaptive functions in social groups in which life is foreshortened and risk-taking is therefore justified. In an integrated qualitative and quantitative study, Wilkinson employed multiple regression to study the association between crime and social trust and also explores an ethnography of criminals and their search for social respect (1999). The search for respectability is foundational, not only to individuals who cannot gain it from their social surrounds, but to issues of citizenship and democracy. Quoting Margalit,

> a decent society 'does not injure the civic honour of those belonging to it.' That honour and shame are so crucial to human social relations and may

> often become issues of life and death has long been recognized by social anthropologists (p. 317).

Returning to a more quantitative analysis, Kennedy et al (1999) find that income inequality has a strong indirect effect on firearm associated homicide through the loss of social capital measured at the state level. Societal levels of deprivation may therefore be a determinant of crime. The authors suggest a loss of social buffering due to increasing residential segregation may play a role.

Similar to the social capital hypothesis, Sampson (1999) finds that collective social efficacy or the ability of communities to enforce social norms including those against crime are mediated through larger social structures and the political economy. Taylor (1999) from an individual, family and community view, holds that "environments . . . that threaten personal safety; that limit the ability to develop social ties; or that are characterized by conflictual, violent or abusive interpersonal relationships are related to a broad array of adverse health outcomes" and these effects occur across the lifespan (p. 371). Kawachi's attempts to bring in race and gender pathways as covariate mechanisms are largely inconclusive (see for example, I. Kawachi, Kennedy, B., Gupta, V. & Prothrow-Stith, 1999; B. Kennedy, Kawachi, I., Lochner, K., Jones, C. & Prothrow-Stith, D., 1999; Yllo, 1999) and these studies do not offer explanation beyond the pathways that Sampson and Taylor already offered. The most intriguing effect, however, can be found in Kawachi (I. Kawachi, Kennedy, B., Gupta, V. & Prothrow-Stith, 1999)

and that is that in states with greater inequality for women, the health of *both* men and women suffer. Finally, in Kennedy's study of state level disrespect and African Americans' health (B. Kennedy, Kawachi, I., Lochner, K., Jones, C. & Prothrow-Stith, D., 1999), the most interesting conclusion reached is that *all* people who live in socially unsupportive states suffer, especially if those states are in the southern United States. Both these intriguing but poorly explored findings support a hypothesis of larger social and political structures affecting health.

Implications of population health determinants research

The recognition of social, political and economic determinants as the major source of health of populations after the failure of traditional epidemiology and the biomedical frame to elaborate complex causes of disease, raises the question of what policies or policy arenas should be used to address the problem(s). Unemployment is clearly associated with ill health (Bartley et al., 1999; Blane, 1999) as is work environment (Marmot, Siegrist, Theorell, & Feeney, 1999) but employment policy is not within the domain of public health or healthcare. Housing is another determinant closely associated with health (Kingsley, 2003; Naess, 2004; Rybczynsky, 1993; Scott, 1998) but with the exception of specific housing hazards (lead paint, for example) public health has not been a legitimate player at the housing policy table although this may be changing. Jacobs, Kelly & Sobolewski (2007) discuss local and federal housing policy, their relationship to health and the ways in which research and policy analyses have informed the improvement of

such policy. Interestingly, they reveal a "political consensus [that] emerged in the early 1990s" which fostered "the unusual passage of public health and environmental legislation through a housing law (Title X 1992)" (Jacobs et al., 2007, p. 978). The consensus and passage of Title X appears to be one influenced by entrepreneurial influences such as those hypothesized by Smith (2007, see below) rather than being purely a consequence of new health research. Similarly, Frumkin writes of a convergence of two paradigms: (1) the civil rights and environmental health movements resulting in the environmental justice movement; and (2) the broadening of environmental health to include the built environment that came about in response to health problems associated with architectural changes driven by the 1970's oil embargo, the obesity epidemic, and urban sprawl (Frumkin, 2005). As with Jacobs (2007), Frumkin's paradigms are informed by research but they did not come about in consequence of research alone. They appear to be largely influenced by the coalescence of social movements and cultural ideas. Finally, "Broken Windows" theory, Cohen's index of building deterioration, and its association with morbidity and mortality (D. Cohen, Mason, K., Bedimo, A., Scribner, R., Basolo, V. & Farley, T., 2003, p. 467) owes a debt to the field of sociology and the community policing movement. All are founded upon the research but only the implications of community policing have been adopted in the policy arena. The idea that broken windows in a neighborhood may be directly associated with gonorrhea rates is one that does not make intuitive sense in the

policy arena, although the research shows the association quite clearly (D. Cohen et al., 2000). Ideas associated with environmental health, housing and the built environment do find themselves in the policy arena, but it is unclear how they might do so in a way that is more directly related to larger measures of population health (like longevity and neighborhood income disparities, for example).

Stansfield (1999) writes of transportation as a determinant of health, as do Robertson & Minkler (1999) regarding food supplies. While there are clear implications for population health from housing and transport, with the exception of single chemical (diesel particulate matter and asthma, for example) or bacterial causes (e-coli contamination of spinach, as another example), neither the institutions of healthcare nor public health have been highly influential in making policy in these areas. The biomedical frame has so narrowed the field as to have removed any legitimate interest that public health has historically had in these arenas, even though they are the main causes of population ill health. Having become the "hand-maid" of biomedical science (Morabia, 1998) has left public health unable to address the greatest problem of its own domain: population health. At the same time healthcare has shown itself to be inadequate to the call of population health (Evans et al., 1994). Dissatisfaction with the biomedical model and the budding crisis in public health theory, however, are contributing to a call for a renewed population-based public health. The nascent field of population

health research is growing in consequence and the implications of its findings for public health, healthcare and health policy are significant.

Jarvis and Wardle (1999), inadvertently suggest a combination of individualistic and population health policy in their study on smoking. As predicted by both the psycho/social stress and the neo-materialist models, there exists a clear gradient in smoking by occupational class. *Any* measure of disadvantage predicts smoking and extreme differentials in prevalence by class. Declines in smoking prevalence (a major public health victory) have occurred exclusively in the upper reaches of the gradient; in the lower, prevalence is constant. Jarvis and Wardle (1999) propose some intriguing and rather personal reasons for this. All classes initiate smoking at the same rate, but it is the poor who are unable to quit. Apparently, poor smokers suck harder and smoke closer to the filter, giving themselves a bigger dose of addictive nicotine and lung damaging tars. The authors account for a two-thirds increase in risk of death by class associated with this apparently population-based, individual effect, raising the issue of individual behavior and personal choices. Clearly, individuals have some choice in what they do in their daily lives. Equally clearly, choices are socially, politically and economically constrained and in the case of class, smoking patterns occur as a function of economics. The authors suggest two fitting and disparate policy interventions: (1) redistribute wealth so the inequality that produces this odd pattern doesn't occur, and (2) ensure the widespread provision of nicotine replacements so

that the poor can have better success at quitting. An ironic marriage of individual and population effects would ensue if health policymakers could bring both about, yet to do so would require some political understanding that the distribution of wealth is a determinant of smoking (and death) among the poor and that the sole cause is not individual behavior or lifestyle choice as we regard it now.

More recently, Wilkinson, a main instigator of both the policy debate and population health determinants research, brings some closure (Marmot & Wilkinson, 1999). He continues to dispute the neo-materialist perspective, which acknowledges the possibility of psycho/social mechanisms for health, but holds that these are useless for developing good policy (Lynch et al., 2000; Shaw et al., 1999). Nevertheless, Wilkinson agrees that the purportedly causative biological stress pathways don't matter for policy's sake: healthy policy must address the structural problems at the root of inequality regardless of the mechanisms that produce the relationship. Indeed, Macdonald (2001) opines that the "resolution of the mechanism [for ill health] at this level [of policymaking] is not a prior condition of avoiding nonsense [in policy]." In putting to rest the mechanisms and policy debate, Wilkinson brings the psycho/social stress school of inequalities into synchrony with the neo-materialists and more importantly, with proposed policy directions. Public health may still consider itself a biomedical science in need of proving causation yet in reality, it is a political endeavor (Gostin, 2000) that must influence policy under less than scientific conditions. The next step in public

health's attempt to re-establish its efficacy in the population health domain will necessarily be to get itself connected to, recognized and legitimated in public policy domains that currently do not associate health with population health determinants. A case can already be made for influence in housing, employment, social welfare policy and population-based nicotine patch availability as shown above. Yet it is economic policy that is the most distal determinant of health (Szreter, 2003) and the arena in which the evidence suggests policy improvements should occur.

As is seen above, a great deal of research points to determinants of population health that are rarely considered in policymaking in the United States due to some fairly unique historic influences (Rosen, 1958; Starr, 1982). Public policymaking may be influenced by such research yet—much to the chagrin of scientific experts—it is as often influenced by culture, ideology, institutions and ideas. If policymaking is more a function of these phenomena (Alexander Ervin, 2005) and less the influence of research (see Lost in Translation, below), population health research must align with these inputs to policymaking if it is to effect improvements in population health.

Lost in Translation: Gaps and explanations in the policy and research literature

Science, knowledge transfer and policy

Compelling research on the social, political and economic determinants of health has not so far produced healthier populations or healthy population policy in

the United States. Nevertheless, most public health leaders and researchers believe strongly that research will inform policy if it is properly presented. Hilary Graham holds that "improving health and promoting equity are again the organizing principles around which the health strategy is built" (2003, p. 522). She finds consensus--at least in European countries--over a resurgence of interest in redressing the social welfare insults of the recent neo-liberal period and she optimistically posits the utility of science in this mission. She carefully presents the scientific data for the existence, causes and health effects of inequality and then poses a number of useful policy strategies, also from the evidence base, to rectify the growing health inequality of recent decades. Using World Health Organization documents, Graham avers that better health clearly "turns on greater equity in health"(2003, p. 522) and that "governments are looking for a 'scientific framework for decision makers' and 'a science-based guide to better health development'" (p. 523). She holds, consistent with the population health literature, that individual lifestyle behavior change as a health improving strategy is not effective and that structural changes in economic, social welfare and civic policy are key to reducing health inequities. In particular, a scientific "framework highlights a set of interlocking processes in the production of the socio-economic gradient in health and in particular the *cumulative exposure to risks along disadvantaged pathways* framed by *wider structures of inequality"* and this framework "reveals multiple points where policy leverage can be exerted" (p. 535).

What Graham's rational work does not reveal are the less quantifiable, yet grave difficulties that interfere with logical, science-based healthy policy development. The role of neo-liberal ideology and its spawn--market individualism and social class division--in the production of inequality in particular would seem to need attention and is an almost universal theme in, for example, Hofrichter (2003).

Many public health authors and population health researchers like Graham (2003), hold to the view that policymakers desire research to inform policymaking. But the direct utility of research findings for policymaking has been under question for some time among policy researchers themselves (Beam, 1996; Davis & Howden-Chapman, 1996; C. Weiss, 1979). More politically savvy researchers recognize the need to *sell* research findings to policymakers, by translating and marketing the idea of health policy innovations. Warner (2005), using global tobacco policy as an example, proposes a framework of basic research, followed by applied research, demonstration projects, translation and selling of the scientific idea, and finally incorporating such new research into policy and practice. He proposes this framework as a way to overcome the "irresistible logic" of scientific research that is so "often resisted in the real [policy] world" (Warner, 2005, p. 977). Even Warner, however, adopts the position of a scientific expert:

> A moment's reflection will demonstrate that numerous bodies of research on tobacco and health have played essential roles in transforming global attitudes and policies toward smoking (Warner, 2005, p. 978).

Yet the role of experts' influencing policymaking is a contentious one (Weber & Schell Word, 2001). Indeed, Davis & Howden-Chapman suggest that while "innovation and system change . . . are virtually universal features of the health scene in the developed world . . . the evidence that research has had any impact on this international trend is scarce indeed" (1996, p. 865). This is not to say that research never has an effect on policies or policymakers, but that it is not the only nor the dominant influence.

> It would appear that the key contributory factors have been fiscal stringency, a narrow application of economic theory, shifts in ideology and values, political expediency, the failure of existing systems to undergo internal renewal, and the simple turn of intellectual fashion. All these seem to have had much more to do with the current wave of health restructuring than any measured consideration and application of the research (Davis & Howden-Chapman, 1996, p. 865).

Evans, Barer & Marmor (1994), in their quest to change health policy, focus on reforming healthcare alone because they believe it is a component of health and that utopian schemes such as economic restructuring, civic renewal and social justice movements espoused by Hofrichter (2003), Beauchamp (1988) and Bellah (1985) must fail. The role of healthcare in improving population health is a contentious one, however, and there is a longstanding argument that public sanitation, improved housing and economic development—not healthcare, health insurance, nor access to healthcare--are responsible for the tremendous improvements in population health that began around the turn of the last century (McKeown, 1976, 1979; Szreter, 2003). Yet neither the research supporting these

findings nor the idea that population health is a function of social, political and economic structures has found its way into American health policy. Sanderson, ironically quotes Keynes, "there is nothing a politician likes so little as to be well informed; it makes decision-making so complex and difficult" (2002, p. 5).

Irony aside, policy researchers have found that the translation of research into policy is a complicated and fraught process, and there are few uniformly successful strategies. Lavis (2003) similar to Warner's (2005) scientific sales approach offers an "organizing framework for a knowledge-transfer strategy" (p. 221) responding to complaints that raw data and peer reviewed scientific articles remain within the scientific community and are not translated into policy. The five elements of Lavis' framework include an actionable message, a target audience, a credible messenger, a communications structure for the knowledge to be transferred, and an evaluation of the effects of such transfer (2003). Yet, even with this improved framework for knowledge transfer, Lavis must acknowledge Weiss' work that it is "research in the form of 'ideas,' not 'data,' [that] most influences decision making" (2003, p. 223).

Weiss (1979) suggested that policymaking in general and scientific knowledge transfer in particular are not linear, rational processes. She offered several models of how knowledge might be driven into policy including an assumption very like Warner's (2005), derived from the natural sciences but without the selling step. The second model incorporates a problem-solving

approach in which evidence is used to solve an existing problem. An interactive model proposes that scientists, researchers and others collaborate. However "in this model, the use of research is only one part of a complicated process that also uses experience, political insight, pressure, social technologies, and judgment . . . it describes a familiar process by which decision makers inform themselves of the range of knowledge and opinion in a policy area" (C. Weiss, 1979, p. 429). Weiss' political model offers an opposing process to the natural sciences model in that policymakers have no desire to attain new evidence; they wish only to use research to justify a position already taken.

Weiss' final model, that of enlightenment, has had an enduring effect on thinking regarding transfer of research into policy and, while not an efficient approach to policymaking, seems to encompass more of the exigencies of the process than the naturalistic assumptions of many population health researchers, including efforts at selling science to policymakers (Lando et al., 2005; Warner, 2005) and promoting knowledge transfer frameworks (Lavis et al., 2003; Lavis, Ross, & Hurley, 2002). Enlightenment is a process whereby various sources of information, social and political influences, and problem definitions may come together over time to produce an idea that may find its way into policy through what Smith calls entrepreneurship or the marketing of ideas (2007). Research may contribute to the development of such ideas but not directly, and not in a way that

necessarily produces either accurate understandings of the evidence or policy that addresses a problem appropriately.

Dudley (2004), in particular notes the role of time in which enlightenment comes about through Weiss' percolation of ideas (1979), very similar to Sabatier's (1999) contention that any substantial policy change may take a decade or more to come to fruition. This concept of percolation and time to policy, however, can be foreshortened substantially, often through the effective marketing of ideas, combined with social forces. Both civil rights era legislation and tax reform in the mid-1980's are examples of the foreshortened role of time and ideas in policy change (Reich, 1988).

Although Dudley (2004) claims an evolutionary property for the enlightenment process, Weiss' model (1979) and Lieberman's (2002) related conception of friction between institutions and ideas (see, *The idea of ideas,* below) suggest a far more complex process. The propagation of ideas into the policy arena is subject to luck and caprice (Dudley, 2004; Smith, 2007), and policy outcomes are unlikely to be recognizable as solutions to problems identified in research (C. Weiss, 1979). The process by which policymakers achieve enlightenment over an idea and see it into policy (or not) is messy, inaccurate, and not guaranteed to produce useful policy. Ironically and unfortunately for population health researchers, it bears little resemblance to the rational scientific processes on which the evidence is founded nor the logical policymaking processes recommended to

public health advocates by Lavis (2002), Graham (2003), Warner (2005) and Lando (2005).

The idea of ideas: Institutions, ideas and change

The idea of ideas in policymaking is a complex and somewhat unsatisfying explanation of policy for rational, modernist thinkers. The concept is complex, difficult to define and operates in an elusive fashion to which researchers are unaccustomed. Robert Reich (1988) and Yael Yishai (1993) speak of public ideas, ringing of cultural phenomena that are fairly long lasting and which may change, but not in a predictable manner. These so-called public ideas—the role of women in society and abortion policy in Yishai's (1993) study, for example—are broadly held by policymakers and society and they form obstacles to policy change, divert policy into traditional institutional modes, or produce policy for problems which don't exist. Beam (1996) notes that policy researchers are of necessity depressed in this era in which firmly held public ideas of personal choice and individual responsibility, and heavily marketed public ideas such as supply-side economics, have raised the level of enlightenment regarding policy ideas. At the same time they have "dumbed down" the public discourse using "techniques developed for Taster's Choice coffee commercials" (p. 433). The particular marketing strategy of ideas in Beam's examples has had a deleterious effect on policymaking very much in line with Smith's (2007) and Weiss' (1979) predictions.

A definition of ideas as the cultural phenomenon of public ideas is not the only perspective, although the capricious effects noted above are common to less permanent explications of ideas as well. Smith (2007) skirts criticisms of culture theory and neo-institutionalism (Kaufman, 1998) by more or less failing to define the idea of ideas in her study of health inequality and policymaking in Britain. Reich (1988), Yishai (1993) and Beam (1996) can all be criticized for framing ideas as embedded in institutions and part of an unchanging culture. Yet policy does change, sometimes radically and unpredictably, and a definition of public ideas as part of American culture fails to explain such change. Although other, less permanent conceptions of culture are to be found (Angrosino, 1998; Swidler, 1986), Smith (2007) takes a more practical approach to operationalizing the idea of health inequality in policymaking. Like Weiss (1979) she finds that "it is ideas rather than specific *research evidence* which tend to influence policy" but interestingly she finds that "nearly all the interviewees suggested that key academic *ideas* about health inequalities have traveled into policy" (Smith, 2007, p. 1441) (see, *Smith's study of health inequality and British policy journeys,* below). Smith apparently looked for any ideas about or relating to the field of health inequalities research among policymakers and thus defined the idea of ideas as one related to the percolation of research concepts into the policymaking arena, and not that of cultural or public ideas.

Hall, in an oft-quoted article on policy and social learning, attempts to "specify more fully the role that ideas play in policymaking." Similar to Lieberman's (2002) complaint below, Hall criticizes Heclo's social learning theory for being unable to "fit" the idea of ideas into policy nor to conceive of how those ideas might change (1993, p. 276). Social learning theory holds that institutions and path dependence hold mighty sway over new ideas, even to the exclusion of the influence of interest and social groups: "policy responds less directly to social and economic conditions than it does to the consequences of past policy" (Hall, 1993, p. 277). Yet as is seen in Lieberman (2002) and Smith (2007), "the concept of social learning implies that ideas are central to policymaking" (Hall, 1993, p. 279). Indeed, Hall holds that it is these ideas that frame policy discourse, determine the goals of policy, the instruments that can be used to address policy, and even the nature of the problems policy is meant to address (1993). In a nod to the much criticized culture theorists (Kaufman, 1998), Hall suggests that such a "system of ideas" is "influential precisely because so much of it is taken for granted and unamenable to scrutiny" (1993, p. 279). Interestingly, Hall calls these ideas a "policy paradigm" (1993, p. 280) and like Evans, Barer & Marmor's proposed shift from healthcare to healthy population policy in Canada (1994), likens radical changes in the system of ideas to Kuhn's shifting scientific paradigms. Ostensibly, anomalies in the system of ideas accumulate, policy failures occur, and eventually the authority of the existing paradigm becomes undermined and may be replaced

by a competing paradigm. In his study of British economic policy, Hall found that "these changes were accompanied by substantial changes in the discourse employed by policymakers" suggesting, in line with Smith's study methodology below (2007), that an idea shift can be identified in policymakers'speech (Hall, 1993, p. 284). It is worth noting again, however, that although a competing population health paradigm exists and health policy failures are occurring in the United States, such a policy shift has not yet occurred. It will be suggested below (see, CHAPTER IV. METHODS) that it has not done so because no shift in ideas, as determined through policymaker interviews, has yet occurred. The idea of population health has not yet percolated into the policy arena (C. Weiss, 1979). Hall, in recognition of broad institutional and entrepreneurial influences on changing systems of ideas concludes that the "struggle to replace one policy paradigm with another [is] a societywide affair, mediated by the press, deeply imbricated with electoral competition and fought in the public arena" (1993, p. 287)

From the earlier discussion of medicine, healthcare and public health, it is clear that these institutions and associated ideas of health affect the forms and formation of health policy in the United States. Yet some authors contend that employing institutions and the culture that shapes them to explain policy outcomes is an incomplete (R. Lieberman, 2002) and imprecise (Kaufman, 1998) model. Institutional arguments and explanations of policy have reappeared, however, due

to the inadequacies of cold war era realist and rational choice theories of policy as well as the incompleteness of interest-driven hypotheses. Combined with Weiss' (1979) idea of ideas and Hall's (1993) further explication of systems of ideas, Lieberman offers a blended model that overcomes the short-comings of the institutional and the ideational models, and which derives and leads readily into the conceptual framework of health policy making employed by Smith (2007), below.

Lieberman (2002) finds that both the institutional model and the ideas approach suffer from the same limitations: "reductionism, reliance on exogenous factors [to explain change], and excessive emphasis on order and structure" (p. 697). Kuhn's paradigm shift can be seen to have been adapted somewhat by Lieberman (2002) as he proposes that the sources of political change are to be found in loosening up the order and structure requirements of both theories. In this area of "friction" (p. 697) are to be found the seeds of policy and political change in general. Given historic layers of institutional change that are not necessarily coherent or contiguous with each other, Lieberman avers that institutions are not static or "tethered" in the sense that they are a product of cultural equilibrium such as is proposed by the culture theorists (Kaufman, 1998) nor do the ideals or ideological constructions of such institutionalists "offer more precise pathways a country's political development might take" (2002, p. 702). Lieberman also offers that "ideational accounts," while more flexible in regards to agency, still rely on a

fairly long-term, stable characterization of the effects of ideas on policymaking and change. Both prospects fail to answer Kindgon's question, "what makes an idea's time come?" (1984, p. 1) and therefore policy to change.

Lieberman does not deny that institutions may create a "path dependence" effect on policy (p. 703) when they are stable, but that the layering of various institutional orders atop each other produces a lack of fit that may manifest itself when such ordering has reason to become severely disturbed or no longer addresses questions of policy and governance. Similarly, ideas may be stable, but they also contain the seeds of their own change. The "color-blindness" of the civil rights movement, for example, produced very color *conscious* affirmative action programs. The same path dependence and paradigm shifts can be seen in Evans' characterization of an impending, but as yet unrealized, Kuhnian shift in the American and Canadian views of what constitutes health and therefore health policy (Evans et al., 1994). The medical profession, regulatory institutions, and ideas of health do not fit the findings of population health research, yet they continue to exert a good deal of influence on the nature of health policy reform. The seeds of change having been dormant within the institution of public health, may have germinated within the population health research field, but do not appear to have yet grown into an idea whose time has come.

> So when *does* an idea's time come? The answer lies in the match between idea and moment. An idea's time arrives not simply because the idea is compelling on its own terms, but because opportune political circumstances

> favor it. At those moments when a political idea finds persuasive expression among actors whose institutional position gives them both the motive and the opportunity to translate it into policy—then, and only then, can we say that an idea has found a time (R. Lieberman, 2002, p. 709).

Smith's study of health inequality and British policy journeys

Smith (2007) would aver that an idea's time cannot come without a successful marketing strategy, rather similar to Warner's approach to selling science (2005). "It is ideas, rather than research evidence, which have traveled from research into policy" but these ideas must be considered in political context as well as enjoy "entrepreneurial processes involved in the marketing of ideas" (Smith, 2007, p. 1438). She does not discount the role of institutions--specifically the strenuous obstacle of institutional path dependence--but finds in her study of health inequality and policymaking in Britain that ideas are marketed to policymakers, more or less successfully, sometimes intentionally and sometimes by accident. Very similar to Kingdon's (1984) and another Lieberman's (J. Lieberman, 2002) policy entrepreneurs, Smith's ideas are successfully marketed through the political context. For example, the idea of behavioral lifestyle choice and health has made a successful journey into policy in Britain (Smith, 2007), Canada (Evans et al., 1994) and in the United States (Becker, 1993). Smith (2007), contends that individual behavior lifestyle ideas of health are self-evident, that they are essentially self-marketing because they fit the dominant 'policy paradigm' (Hall, 1993). A less successful or poorly marketed idea regarding health is that of neo-materialism

(Lynch et al., 2000). The idea of materialism had "traveled no further than policy rhetoric" in spite of the fact that there is far better research in support of material determinants of health than for lifestyle change determinants (Smith, 2007, p. 1442). Smith finds that this idea could not be successfully marketed because it is in too great an opposition to current, strongly held ideas: "ideas that challenged the perceived 'neo-liberal' policy paradigm were thought to be the most difficult to market to policy" by the policymakers whom Smith interviewed (2007, p. 1446). Unpopular ideas, however, are not always subject to such institutional bias. Sources of credible knowledge carry weight with policymakers as well as how such ideas are characterized. These effects apparently influenced greater acceptance of the idea of health inequality embodied in the life course perspective in Britain even though this perspective is identical to that of neo-materialism (Smith, 2007). Credibility of idea brokers as well as the political context in which ideas are posed is important to their eventual trip to policy. Smith's final example notes the "fractured" (2007, p. 1443) journey into policy of Wilkinson's (1999a) psycho/social stress model of health inequality: "Only the ideas that relate to *social capital* have traveled into policy, whilst the notion that health inequalities are a result of *income inequalities* appears to have become lost somewhere along the way" (Smith, 2007, p. 1443). The income inequality portion of Wilkinson's theory may be another unmarketable idea in the current political context, while the concept of individual stress and health is already a commonly held belief. The

political context may determine whether an idea is sellable, but so may the nature of the marketing technique used as well as the credibility of the source of information. Given Smith's detailed work on health inequality, ideas and policymaking in Britain--including the effects of institutional path dependence and political context on policymaking--the utility of the *idea of ideas* for exploring the translation of population health research into the American policymaking arena is clear.

CHAPTER III. CONCEPTUAL FRAMEWORK

This study employed a conceptual framework derived and adapted from Smith's (2007) study of health inequality and policy translation. She engaged a multi-level exploration in her study of the "journey of ideas from research into policy" in England and Scotland (2007, p. 1438). Smith elaborated three theories of research-policy relations and their influence on the translation of research. The two communities theory argues that "increased interaction between the two groups [researchers and policymakers] is essential for improving links between research and policy" (p. 1439). Yet in her research, Smith finds that Weiss' "ideas" are far more influential than is data, research or the relationship between researchers and policymakers (2007, p. 1441). Kingdon's policy windows model (1984) suggests that "issues get taken up and implemented in the policy world when a 'window' is opened by the coupling of three key streams: 'problem,' 'policy' and 'politics'" (Smith, 2007, p. 1439). Kingdon's model, however, fails to account for Smith's "fractured journeys" (p. 1444) of policy initiatives in which rhetorical language of health inequalities is taken up in policy discussion, but there is no advancement to successful policy. The third approach focuses on the marketing of ideas by political entrepreneurs. Smith avers that "the quality of research may have rather less relevance . . . than the ways in which the ideas emanating from research are received, translated and promoted by others" (p. 1440). Smith finds that the

evidence in the research-policy relationship and the ideas derived from it are conditioned by the marketing of such ideas within the political context. Similarly, the political context of policy can also be influenced by the marketing of ideas, although ideas that "become institutionally embedded . . . may be extremely difficult for ideas that challenge the dominant 'policy paradigm'" (p. 1440). See Figure 1 for a simplified conception of Smith's journey of the translation of ideas and was used to guide the methods and hypotheses of this study.

The Research and knowledge transfer element of the Conceptual Framework contains several sub-elements or axial codes whose connection to policymaking can be found in the theoretical and practical work of several recent authors (Graham, 2003; Lavis et al., 2002; Warner, 2005). Lavis (2002) finds that some types of policy are more amenable to the use of research. Graham (2003) and Davis (1996) appeal to researchers themselves to improve their relationship with policymakers in the interests of evidence-based healthy public policy, while Lomas (2000) appeals to decision-makers to return the favor. Smith (2007) and Weiss (1979) have found that policymakers decry the lack of available evidence as well as its lack of salience to issues at hand to explain why research often is not used. In addition, policymakers identify other, often more important influences on policy than that of research (C. Weiss, 1979). Lomas (2000) ties the framework of evidence, entrepreneurs, and ideas closer together in proposing his own conceptual framework of the policy decision-making process.

Lomas' (2000) framework incorporates power relationships and persuasion, similar to Smith's entrepreneurship, but it also includes values, ideologies, and beliefs about causal assumptions and health. Smith does not incorporate these elements per se, but given the uniqueness of American healthcare (Starr, 1982), varying conceptions of health (Evans et al., 1994) and American cultural individualism (Burris, 1997), Smith's political context element has been expanded in this study to account for American ideological and cultural influences on the shape of ideas and policy concerning population health.

Smith (2007) notes the heavy influence of the Political context in shaping health and policy ideas as well as the path dependent nature of policymaking in institutions. Kaufman (1998) finds that institutional mechanisms often determine the path new policies will follow and Smith notes that Political context exerts the greatest influence on the development of ideas and their translation into policy.

Smith's conception of the marketing of ideas or entrepreneurship in the shaping of policy has been taken up in several public policy commentaries. Lando & Warner advocate packaging scientific information so that it is readily applicable to international tobacco policy (2005). Beland & Chantal (2004) find that the phrasing of ideas is salient to their uptake into policy. And Smith (2007) finds this as well in her example of life course determinants of health versus the more controversial neo-materialist approach (Lynch et al., 2000). Both reflect the same

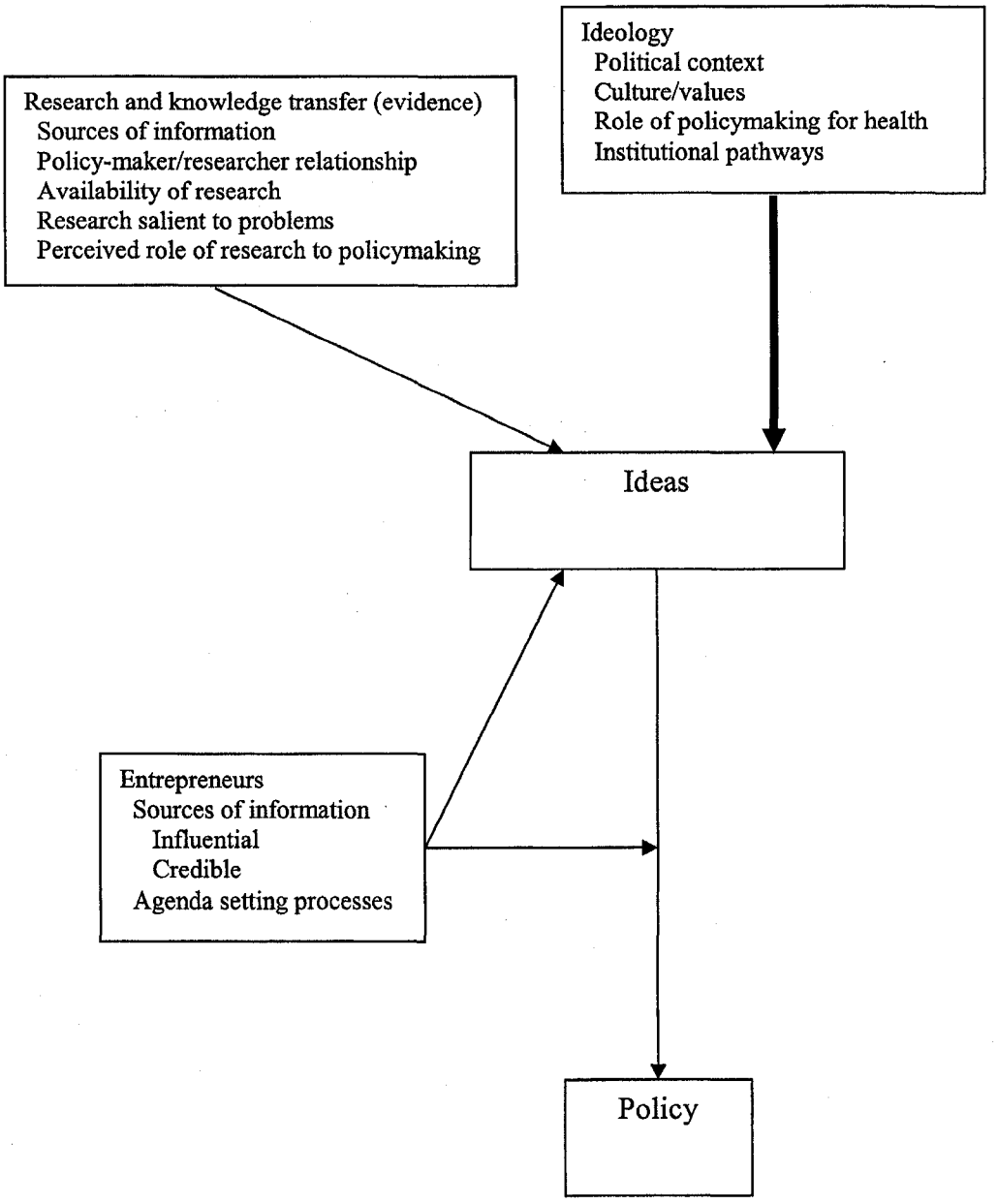

Figure 1. Conceptual Framework

material and structural assumptions about population health, yet the language of life course research is evident in policy rhetoric while that of materialism is not. Similarly, Sources of information to policymakers were important in Smith's study--some sources were credible and some not—and some sources were more influential than others (2007). More influential sources contributed to setting the policy agenda and nursing ideas along the path to policy. Smith's Entrepreneurship seems to reflect a less intentional, sometimes even accidental influence, as opposed to, for example, Kingdon's policy entrepreneurs (1984). While Kingdon portrays policy entrepreneurs as specific people, often representing strong interest groups, Smith's marketing of ideas reflects serendipitous processes in addition to planned marketing efforts.

The instant study employs Smith's framework of ideas and influences upon them--with the addition of culture and ideology to Political context in the Ideology category—and studied the journey and translation of population health determinants research into ideas in the American policymaking arena. The four categories of the Conceptual Framework include Research and Knowledge Transfer; Ideology, including the Political context noted by Smith (2007) but with the addition of Lomas' (2000) concepts of culture and values; evidence of the percolation of ideas related to population health determinants from academic research (if any) (Ideas); and evidence (if any) of marketing or entrepreneurial

influences on the translation or propagation of such ideas into the policy arena (Entrepreneurs). Institutional pathways as part of the Ideology category were assumed to have an inordinate effect on the propagation of ideas compared to the other elements as explicated by Smith (2007), Kaufman (1998) and Lieberman (2002).

Policies themselves were not examined (although they are noted in Figures 1 and 2) because policy in the United States remains almost exclusively individualistic and there was little articulation of population health determinants ideas in policy. A policy case-study of the 2007 Health Equity Act was originally to be examined as a small case study within this study in an attempt to explore the possibility of the nascent translation of the idea of population health closer to, if not into, current policy. However, no policymaker associated with the Health Equity Act was willing to be in interviewed. In addition, on closer examination of the policy, the Health Equity Act revealed few areas of population health research or ideas and was largely characterized in terms of racial disparities in healthcare, not health in general (see further discussion of the confusion of health with healthcare in the participant panel below).

Operationalization of each term in the Conceptual Framework and data collection for each coded category is explained below (see, METHODS, below) and analysis of the relationships and influences of categories complements Smith's (2007), and employs Strauss & Corbin's method of grounded theory (1998).

CHAPTER IV. METHODS

Introduction

Although extensive research points to social, economic and political structures as determinants of population health, American health policy remains largely based on individual lifestyle behavior change strategies and support for the institutions of healthcare. Public health practitioners have had limited success translating population health research into policy using linear conceptions of policymaking as a product of scientifically informed decision-making. The idea that it is *ideas* and not research specifically that informs policymaking, and that those ideas must be marketed skillfully may be useful in influencing the development of health policy. Given this, the purposes of this study can be re-stated as such: (1) to understand the status and character of population health ideas in the policy arena; (2) to identify and understand any presence or role for population health idea entrepreneurship or marketing; and (3) ultimately to improve the translation of population health research into policy by explicating the use of *ideas* and idea entrepreneurship in the policy arena for use by public health leaders. To explore the translation of population health determinants research into ideas in the policy process this study employed a qualitative, cross-sectional interview design of policymakers. Given the findings of the preceding review of the literature, two primary and four supporting hypotheses were examined and applied:

a. Population health ideas are not widespread in health policy processes.
    i. Policymakers are aware that social, political and economic structures influence health but do not frame health policy in terms of such determinants
    ii. Academic research has a limited relationship to the policymaking process
    iii. Entrepreneurs' influences alter the translation of population health determinants into policy ideas
b. Institutional Pathways and the Political Context constrain the development of emerging ideas into policy
    i. American health policy is driven by cultural individualism

Applying the above hypotheses, this study employed grounded theory techniques (Strauss & Corbin, 1998) to test the extension of Smith's (2007) earlier theory development in Britain in the context of American cultural institutions and policy processes. In addition, the grounded theory technique allowed the generation of expanded theory, particular to the American context.

Justification of methods

Echoing past policy researchers (Beam, 1996; C. Weiss, 1979), Rist quotes Colman, "there is no body of methods; no comprehensive methodology for the study of the impact of public policy as an aid to future policy" (2000, p. 1001). These authors, like Farquhar, et al. (2006), justify the application of qualitative

methods in areas where little research has been done or where research has not been definitive. Strauss & Corbin (1998) recommend qualitative methodologies specifically in fields where the literature conflicts or reveals gaps in understanding. The complexity of policymaking--with its multiple influences, contexts and variability—has not been amenable to simple quantitative analysis or prediction as a decision making event. Indeed, Rist notes that "the notion that research *should* have an impact on decision making seems to have become more and more an article of faith," however "researchers have . . . persistently misunderstood decision making" (2000, p. 1003). Because policymaking is a complicated *process* and not a decision-making *event* (Lavis et al., 2003; Rist, 2000), it is particularly amenable to examination through qualitative methods (Strauss & Corbin, 1998). While Rist (2000) proposes qualitative research on the processes of the policy cycle, Hall's (1993), Weiss' (1979) and Smith's (2007) concept of ideas can be seen as a process necessarily *prior* to policymaking yet equally amenable, if not more so, to qualitative analysis. Smith's (2007) fractured journeys of health inequality policy and Kingdon's (1984) conception of proper timing of policy ideas suggest the multiple qualitative influences on policy as a process for which quantitative methods are not instructive. Specifically, primary qualitative data collection methods such as the semi-structured interviews in the proposed study, allow for "deeper understanding of language and experiences" (Farquhar et al., 2006, p. 236). In general, qualitative methods in naturalistic settings (Lincoln & Guba, 1985)

where participants focus on the construction of their own meaning and ideas regarding policy processes (Rist, 2000) is an approach uniquely capable of illuminating the status of population health ideas among policymakers and their role, if any, in policymaking.

Study Design

The qualitative methodology employed in this study is that of grounded theory using the approach suggested by Strauss & Corbin (1998). The main purpose for using this design was to test the extension of theory developed by Smith (2007) of influences on the processes involved in health inequalities policy development in Britain. Because this study is a test of extension, hypotheses were developed using the literature and previous policy research findings and predetermined coding categories of analysis were employed (see, CONCEPTUAL FRAMEWORK, above, and Operationalization of terms, below). However, because the American context, institutions and processes differ from those in the earlier study, open coding was also employed to identify and explore concepts, categories and substantive theory elements not found in the British study. Coding in general is a way to provide standardization to the collection and analysis of ideas (Patton, 2002). Open coding in particular is a process of identifying the meaning and content of ideas without *a priori* categorization of the data (Padgett, 1998). Depth of meaning in the coding process was facilitated by employing semi-structured interviews from a purposive sample of policymakers (see Appendix A).

Grounded theory, both for extending theory and for developing new theory, was uniquely suited to this study. According to Hesse "in natural science data is not detachable from theory" (in Lincoln & Guba, 1985, p. 29). The ideas and processes to be explored in this study were the data and they existed in the naturalistic setting which policymakers inhabited. These ideas could not be derived or explained well using other methods. In addition, the interview approach was better suited to the current research question than, for example, document analysis, because it was capable of deriving the deeper meaning of ideas from language (Farquhar et al., 2006).

Role of the Researcher

The role of the researcher in qualitative methodologies differs from the expected objective stance of quantitative researchers (Denzin & Lincoln, 2000; Lincoln & Guba, 1985). In grounded theory, it is expected that the researcher plays an active role in interpreting the data and in identifying theory statements (Strauss & Corbin, 1998). Similarly, in using semi-structured interviews, the researcher is an integral part of the research process (R. Weiss, 1994). The role of the researcher in this study fulfilled these same expectations. The study author's viewpoint was reflected in the study design, the hypothesis statements, the revisions to Smith's interview tool, and is also be evident in the analysis of data and the interpretation of theory from such data. The author's beliefs are consistent with the population health research base that social, economic and political structures determine the

health of populations, and that unique cultural, institutional and political influences prevent the adoption of such research into policy in the United States. Given these beliefs, a number of protections against loss of credibility (Denzin & Lincoln, 2000) and trustworthiness (Lincoln & Guba, 1985) were engaged to ensure the research product was as unbiased as possible (see, *Credibility, trustworthiness, and verification of interpretation,* below).

Design Specifics

Data collection

Data in this study was collected through semi-structured interviews of policymakers, staffers, and policy experts. This approach provided uniquely in-depth data on processes and ideas in particular (Padgett, 1998; Strauss & Corbin, 1998; R. Weiss, 1994) and was therefore suited to understanding population health ideas among policymakers. These interviews are considered elite (Desmond, 2004; Lilleker, 2003) and key informant interviews and had the special characteristics of each. Key informant interviews are particularly useful for allowing outsiders to understand processes from the perspective of insiders (Farquhar, Parker, & Israel, 2005; Patton, 2002). Elites are considered "those with close proximity to power or policymaking" and elite interviews are particularly useful for learning "more about the inner workings of the political process, the machinations between influential actors and how a sequence of events was viewed and responded to within the political machine" (Lilleker, 2003, pp. 207-208). Both approaches were readily

applicable to the process explored in this study and were defined by the sample selection (see, *Participant selection,* below). In addition, a pilot study of the interview tool was employed to ensure aspects particular to elite and key informant interviewing were accommodated (see, *Credibility, trustworthiness and verification of interpretation,* below)

The understandings of health inequality among policymakers employed by Smith is one that is closely related to the idea of population health determinants in the proposed study and her use of semi-structured interviews among British policymakers has proven illuminating in revealing ideas about population health as a foundation of policymaking in Britain (2007). Because the Conceptual Framework in this study was also derived from Smith and the study tested extensions of her theory, a very similar tool was employed to study the presence of ideas and the influence of related factors on population health determinants in the American policy process. Modifications to the tool were made to accommodate the different cultural, institutional and political context in the United States and, given that the United States has little acknowledged population-based health policy, accommodations were made to the interview tool to capture more basic ideas of health and health policy than are found in Smith's study (see Interview Guide, Appendix A).

Participant Selection

Participants were selected from current and former federal and state level elected legislators, staffers and former staffers to those officials, and policy experts employed in public or public policy consulting agencies ("policymakers"). Initially, participants were selected using a purposive sample of participants known to the researcher through three intermediaries. Subsequent participants were selected via a "snowball" sample of policymakers known to the initially selected group (R. Weiss, 1994, p. 25). If ideas as defined in Smith (2007), Reich (1988) and Yishai (1993) are widely held and akin to the cultural frames employed by Aubrun & Grady (2004) and Bellah (1985), then very few participants needed to be recruited for a suitably sized sample because such frames and ideas will be found in virtually all participants. Robert Weiss (1994), in contrast, holds that an interview panel of approximately 60 participants will ensure that adequate variation in opinions is represented. Grounded theoreticians recommend that data be collected until a saturation point is reached in which little new information is gained from new interviews (Denzin & Lincoln, 2000; Padgett, 1998; Strauss & Corbin, 1998). The same theoreticians suggest that pragmatic concerns of time and study budgets may dictate the size of the study panel and this appears to have been the case in Farquhar's study in which a great deal of in-depth information was revealed from very few participants (Farquhar et al., 2005). To ensure an adequate response rate, Smith's study (2007), upon which this study is based, attempted to recruit 85

participants, but interviewed only 58 participants. Given these principles and the constraints of the current study, 8 participants were identified in the initial purposive sample and 8 more were identified using the snowball sampling technique for a total of 16 participants. Saturation of ideas seemed to occur by the 12th interview, but an additional 4 participants were recruited to ensure depth of data. Half of the participants were interviewed in person in Portland, Oregon and in Washington, D.C. in the late fall and early winter of 2007-2008 and the remaining interviews were conducted by phone later in the winter. All interviews were digitally recorded, transcribed, and analyzed in full using NVivo7 software (QSRInternational, 2006).

Analysis

Grounded theory methodology requires that data inform analysis continuously and that the structure of theory be derived and revised as the data are revealed (Janesick, 2000). Strauss & Corbin (1998) describe grounded theory as inductively derived from the study of a phenomenon which is verified through systematic data collection and analysis. An inductive analysis whereby concepts, categories, patterns, and themes emerge out of the data rather than being imposed on them *a priori* (Patton, 2002) was employed in this study to explore theory development in the American policy process. In addition, categories pre-defined by this study's Conceptual Framework and the body of population health and policy research were applied to explore a test of earlier theory (Smith, 2007). Using the

constant comparison approach (Denzin & Lincoln, 2000; Strauss & Corbin, 1998) data collection and analysis in the study occurred simultaneously.

Operationalization of terms

To test the extension of earlier theory, the research terms of the Conceptual Framework for this study were divided into four areas, based on Smith's (2007) study and the population health and policy research literature reviewed above. They included Research, Ideology including institutional, political and cultural influences, the Ideas themselves, and Entrepreneurial or marketing influences on ideas. These major and axial coding categories were explored through the interview questions and operationalized for analytic purposes according to the following definitions. Operational definitions were not shared with study participants but served as the foundation for interview questions and coding for the extension of theory portion of the study (see also, CONCEPTUAL FRAMEWORK, above):

1. Research and knowledge transfer

- Sources of information: where participants have found or believe they have found or on whom they have relied for research or scientific information to inform policy
- Policymaker/researcher relationship: how participants perceive of researchers and their work as sources of policy information
- Availability of research: whether and how useful research available is to participants

- Research salient to problems: whether research is relevant to policy problems
- Perceived role of research to policymaking: how participants understand the utility (or lack thereof) of research to their policymaking efforts

2. Ideology

- Political context: political affiliation, current political composition of elected bodies
- Culture/values: participants' perceptions of health
- Role of policymaking for health: understanding and definitions of health policy; which types or areas of policy affect health
- Institutional pathways: role and influence of political and cultural institutions on health policy (the medical profession, the hospital and insurance industries, healthcare financing, laws and regulations, previous policies and the institutions of government)

3. Ideas: understanding of health determinants, individual health and population health; participants' beliefs about appropriate and effective health policy

4. Entrepreneurs

- Sources of information: sources of health and health policy information, credibility and degree of influence.
- Agenda setting processes: how health information gets into the policy process

Coding

For this study, a single type of data--transcripts of participant interviews--was analyzed using NVivo7 software (QSRInternational, 2006). The unit of analysis was the individual participant, however, coding allowed comparison by classes of individuals, by their attributes (employment or position, political affiliation, for example) and, of course, by coding category across all participants. Codable concepts were progressively identified through open coding and in particular, in vivo coding, wherever possible to retain the language of the participants as individual and group comparisons were made. In vivo coding refers to categorization labels that are verbatim words or phrases offered by participants (Strauss & Corbin, 1998). Coding was initially defined by the operational criteria listed above, however, novel terms were also identified and coded as they emerged from the data. Axial coding to identify relational links was developed through the Conceptual Framework as well as opening coding after the first few interviews and elaborated as interviewing proceeded. Axial coding is a means for identifying an "axis" categorization (Strauss & Corbin, 1998, p. 123) around which major and sub-categories can be linked together. Interpretation of major and axial categories and derivation of components of theory was informed by the Conceptual Framework developed above, Smith's (2007) policy journeys study, the body of literature on the use of research (Lavis et al., 2003; C. Weiss, 1979, for example) and the body of population health research elaborated above. New grounded theory

statements derived from the data were interpretable within these frameworks (see below) and assisted in the explication of the American context as applied to Smith's (2007) earlier work.

Credibility, trustworthiness and verification of interpretation

Janesick (2000) suggests that the concepts of validity, reliability and generalizability are not appropriately applied to qualitative research: "[t]he qualitative researcher uses inductive analysis, which means that categories, themes, and patterns come from the data. The categories that emerge from field notes, documents, and interviews are not imposed prior to data collection" (2000, p. 389), yet some parallel evaluation of quantitative study quality assurances is of necessity required when using qualitative methods. Trustworthiness is one parallel concept (Lincoln & Guba, 1985), as is credibility, and Padgett (1998) identifies several methods to improve credibility also defined as confidence in the truth of the findings. One method is negative case analysis which was employed here (see below). This procedure enhances rigor and verification of findings through a re-examination of every case after the first analysis to see if emergent themes are applicable to all cases. Negative case analysis entails the reanalysis of outlier interviews to confirm or disconfirm that its description supports newly developed theory (Padgett, 1998). Cases that are not supportive are reanalyzed for moderating influences and may contribute to the expansion of axial and selective coding and the adjustment of theory statements in consequence.

The literature can also be used to enhance credibility (Strauss & Corbin, 1998) and to verify interpretation. In this study the concept of ideas, their role in policymaking, and related concepts of institutions, culture and ideology have been established in the literature, in particular by Smith (2007), Hall (1993), Lieberman (2002), Kingdon (1984) and Weiss (1979), who have found the concepts to be vital to understanding the success or failure of policymaking. Many of the influences on ideas in policymaking such as entrepreneurship and institutions have been previously explicated (Kingdon, 1984; R. Lieberman, 2002; Smith, 2007) and these categories, themes, and patterns are incorporated in the current study to give a credible foundation to the concepts employed.

To ensure credibility in the consistent measurement of data, two approaches were used: (1) analysis of the data using NVivo7 software (QSRInternational, 2006) enabled the consistent and systematic identification of concepts in the interview data; and (2) a small pilot study was performed to ensure the interview questions, probes and prompts were understandable in terms of health, policymaking and population health; and that they elicited the pattern of ideas associated with these concepts. Two pilot study policymakers were interviewed using the semi-structure interview guide (see, Interview Guide, Appendix A) and invited to critique the interview questions in relation to eliciting health, policymaking and population health ideas. Pilot study participants answers and comments were compared and evaluated and the Interview Guides adjusted to

reflect the input of these experts in the field. Changes to the interview tool included shortening questions by removing qualifiers and sub-questions and two questions were eliminated entirely. Pilot interviewees were not compensated for their efforts but willing and interested to contribute their respective expertise, similar to Lilleker (2003).

Trustworthiness is a concept related to credibility which Lincoln & Guba characterize as the ability of a researcher to "persuade his or her audiences that the findings of an inquiry are worth paying attention to, worth taking account of" (1985, p. 290). Padgett's (1998) strategies above would seem to also apply to the issue of trustworthiness. However, Lincoln & Guba explore problems of generalizability (in the quantitative schema) or transferability (in the qualitative approach) in further detail. Transferability is the ability of other researchers to apply the findings of the present study. Anthropologic techniques of "thick" description (Lincoln & Guba, 1985, p. 125), whereby enough detail is described in the current study to allow researchers to evaluate the methods in detail and apply them in future studies is one approach used to improve transferability. Yet, it is the nature of qualitative research in general and grounded theory in particular to be specific to context and therefore of limited transferability or generalizability (Strauss & Corbin, 1998).

It is the intention of this study to be generalizable in some sense, or rather to inform policymaking at a practical level for the purpose of influencing health

policy. Strauss & Corbin (1998) hold that qualitative methods are specifically for the purpose of affecting practice, so the limited ability to transfer or generalize beyond the context of a given study is a significant problem. Given Janesick's admonition regarding the inapplicability of the concept of generalizability to qualitative research (2000), and the anthropologic nature of this study, however, Aubrun & Grady's concept of cultural frames (2004) serves to lend transferability to this research. Aubrun & Grady (2004) find that cultural frames such as views of race and food consumption practices are widely and commonly held, can be elicited from small samples and generalized to larger populations. Bellah's (1985) anthropologic study of middle class values and American ideals also relied on this approach to elicit culturally influenced frames from small panels and to generalize their results to the American population in general. Yishai (1993) draws similar generalities from his study of the role of women and its influences on abortion policy. These authors justify their approach in two ways: (1) by studying ideas that are held by small groups of people who are particularly influential over the larger population; and (2) by studying cultural frames that are likely to be unexamined, not subject to common criticism, and therefore unlikely to change. Studying policymakers is consistent with the small influential groups approach, and ideas of health are likely to fit in the realm of unexamined, slowly changing cultural frames (Deborah Lupton, 2003). For these reasons, it is believed that the current study

results are likely transferable within the American political context and will be useful to public health leaders in influencing health policymaking.

CHAPTER V. RESULTS

The Participants

A total of 16 participants were interviewed over the winter of 2007-2008. Eight were identified and approached through three intermediate contacts and the subsequent eight participants were identified via snowball sampling of the initial eight. Participants' demographics and attributes overlapped to a great extent. Six participants were health policy experts; one of whom was a Congressional staffer who had become a lobbyist recently; two who were Congressional and one who was a state level policy advisor, respectively; and two in private enterprise. Two participants were policy experts in other fields and had formerly been Congressional staffers. Six participants were Congressional staffers at the time of the study. And two more participants were lobbyists who had previously been Congressional staffers. Participant's demographics also overlapped as it was difficult, for example, to characterize as a Mid-Westerner a Congressional staffer who had lived in Washington, D.C. for 20 years. Nevertheless, some participants identified more with their home of reference than others. Two participants identified themselves as Oregonians although they lived in Washington, D.C. Five participants lived in Oregon at the time of the survey. Four participants identified themselves as Mid-Westerners, although they all lived in Washington, D.C. One participant identified himself as a New Englander, although he also had lived in

Washington, D.C. for many years. Three participants identified themselves as Washingtonians although they came from the Mid-West. And one participant identified himself as a Washingtonian (from the state of Washington) although he lived in Washington, D.C. Four participants self-identified as Republicans and 12 as Democrats. Seven were women; nine were men. Six were over 40 years of age and 10 were 40 or younger.

Properties

Since the purpose of this study was to extend Smith's grounded theory and place it in the American context, properties of the coded categories for this study were derived directly from her framework (see Figure 1, Conceptual Framework, and Operationalization of terms, above). In addition, new open coded categories were derived directly from participants' responses and developed to understand the American contextual aspect. Participant data, however, also revealed that some of Smith's categories were not directly applicable to the American context and so were modified, again according to participants' responses. In particular, the original Policymaker/research relationship and Perceived role of research to policymaking axial categories under the Research and Knowledge Transfer major category were collapsed into one axial code. Participants did not produce enough quantity or depth of data to consider each separately. Overall, participant's familiarity with academic research was limited and this was reflected in their more limited responses (see, however, Negative case analysis, below). Smith's sample included

academic researchers and policymakers which may also explain the lack of research awareness in this panel in comparison (this study sample did not include researchers, per se, although see Negative case analysis, below again).

Change and Role of government were concepts that came up frequently in participants' speech. Role of government was incorporated as a dimension of Smith's major Ideology category under the axial code of Role of policymaking for health, while Change was made an axial category of its own. Participants often spoke in terms more general than health policy or population health which justified the addition of an axial code to capture how policy changes in general and what the role of government is in making new policy. These comments could have been excluded from analysis yet they appeared integrally related to ideas that participants shared about how health policy in particular is made as well as the American policymaking context in general. A Leadership axial code was added to Smith's Entrepreneurs major code, also, because this panel noted the role of leadership in policymaking with much greater frequency than indicated in Smith's study. Agenda setting was eliminated as an axial code from the Entrepreneurs code. Although agenda setting processes were evident, both in this category and in others, there was little explicit data from the interviews to allow analysis of the concept.

Two major codes were added and one relationship between categories explicated further, according to participant responses. Smith (2007) notes that

Institutional Pathways play an important role in translating research into policy (one political adage holds that the best predictor of future policy is past policy) and this is portrayed by the darker line between Ideology and Ideas in the original framework (see Figure 1. Conceptual Framework, above). Yet in this study, Institutional Pathways seemed to influence policymaking on a scale much larger than mentioned in Smith (2007). For this reason, the axial code was removed from Smith's Ideology major code and made a major code of its own.

The second major code added was that of Emerging Ideas. As expected, few clear ideas of population health were found in the study. Nevertheless, participants frequently mentioned important policy ideas and in particular, one that may represent a transitional or "vehicular idea" (Smith, 2007, p. 1446) to that of population health in the policy arena (environmental health). To avoid losing important emerging concepts, the Ideas category was changed to Emerging Ideas and a discussion of the implications of these ideas is taken up in Discussion, below.

The relationship participants explicated over and over again was that of research information that was *"lost in translation."* Participants recognized that different sources of information were more or less credible and these concepts are incorporated into the Sources of information axial code of the Entrepreneurs major code. This axial code, however, did not adequately represent what appeared to be an explanation of a process in which information of greatly differing quality was received from many places in overwhelming quantities and that had the potential to

influence the policy process (but frequently did not). To ensure this theme was represented, a new set of relational lines has been added to the Conceptual Framework (see Figure 2) between Research and Knowledge Transfer, Institutional Pathways and Entrepreneurs major coding categories, and a discussion of its implications is also including in Discussion, below.

Finally, the Culture and values axial category was added to Smith's framework in its original version above and is retained in the new version (below, see Figure 2) to capture one hypothesis regarding the American context of policymaking.

Description of dimensions

The Properties from Smith's framework and the new open coded categories having been defined above (see Figure 2 and Operationalization of terms, above), what follows is an explication, in participants' words, of the dimensions or variation of ideas within the major and axial codes from which a grounded theory will be derived (see Discussion, below). Participants' comments are in italics with description, clarification and interpretation in non-italicized type. In some cases, the number of participants responding in similar fashion is given and in others an estimate of the proportion of participants' responses represented is given (few, some, many, virtually all, for example). These notations are made to give the reader an idea of how commonly held an idea was and the breadth of variation or dimensions of responses for each particular coded item. Major category codes (and

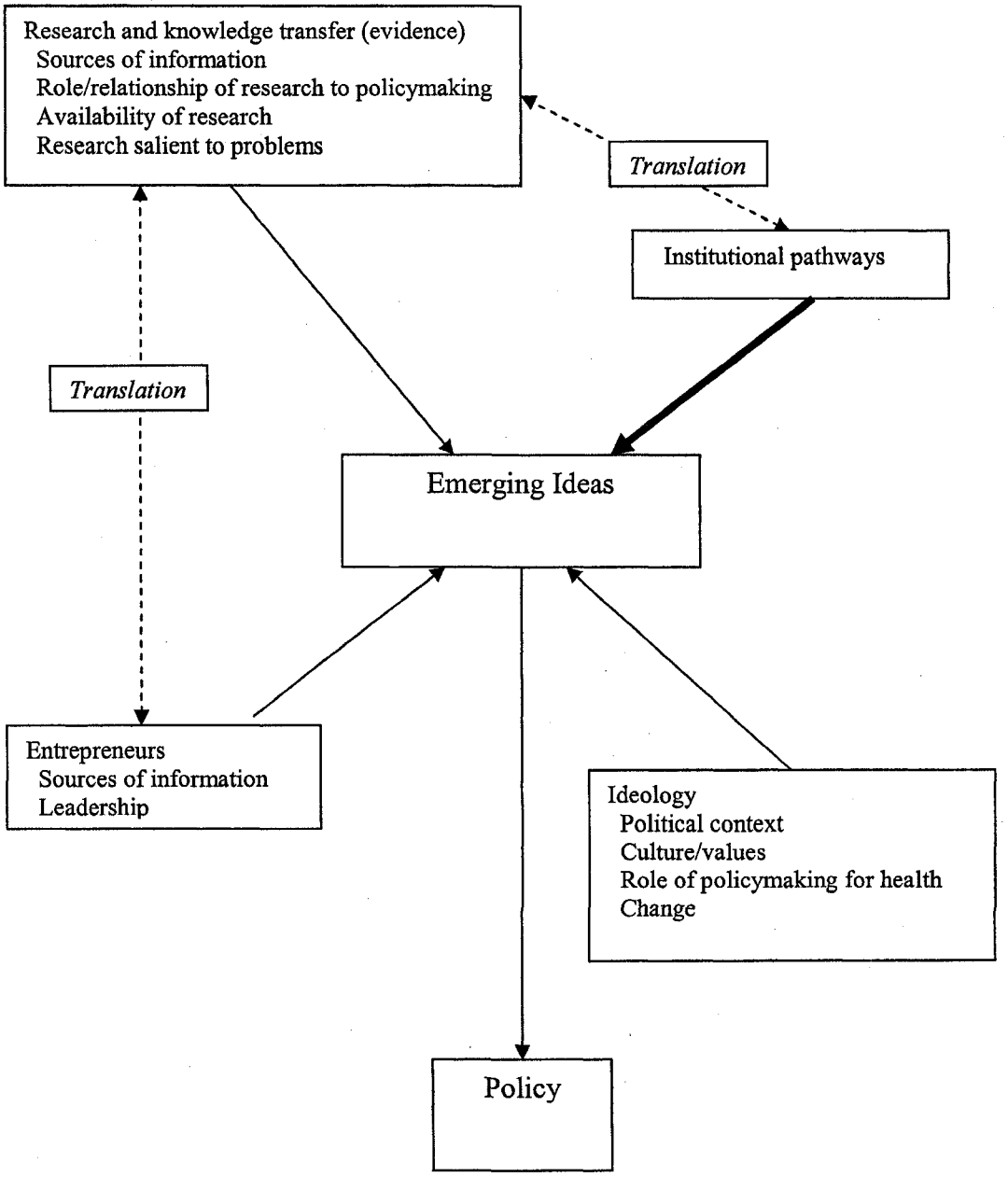

Figure 2. Conceptual Framework (revised)

some axial codes) are introduced with a single quote reflective of the code and further description beneath it. A summary table of major and axial codes and a sample of illustrative quotes is to be found in Table 1.

Table 1. Major and axial codes with illustrative quotes

Codes	Illustrative quotes
Research and knowledge transfer	
Sources of information	• *It's kind of mysterious. Issues . . . get picked up by the media and then it becomes like a snowball . ... on the news 'are you aware of this recent killer?'* • [Policymakers] *'glom' the academic research from lobbyists, from trade press articles, or from people who care about it.*
Role/relationship of research to policymaking	• *Academic research pursues questions that are interesting to the researcher . . . maybe they should think about policy?* • *If the academic had a connection to the . . . the Member. . . a personal association . . .* • *There're always people out there saying we don't know enough, the people who want to stop policy. That's the compromise that we use. People who want to do nothing, do a study.*
Availability of research	• *There's so much . . . info is spraying out of a fire hose that you don't do any research . . . we joke about the big 3 ring binder* [full of studies] *and we'd say 'thank you so much'* [sarcasm] *. . . give the research to the policymakers in a way that they can use it.* • *. . . there are so many competing interests that having to keep a big complex thing in your head doesn't work . . . you don't have to know all the research, it just needs to be distilled.*
Research relevant to problems	• [Researchers don't] *ask the question 'what does all this academic research mean for federal policy?' Translation is really important.* • *I get these great forest science research papers that are distilled with pretty pictures, but I put them in the file, I can't use them they don't mean anything to me right now.*
Entrepreneurs	
Sources of information	• [I find out about research] *mostly through talking to people* • *We're always sending stuff up the Hill to staff. We go up and lobby and say 'there was a study done that bla bla bla . . .' like that.* • *We don't read the academic journals, we find about them* [studies] *by reporting in the media, the New York Times, 'an article about a study that just came out . . . '*
Leadership	• *C. Everett Koop, we all remember that guy . . . I don't look at him necessarily as an expert, you got a million of them on Capital Hill, you need a leader, Koop was a leader.*
Institutional pathways	• *The* [congressional policymaking] *process kind of kills it* [a new idea]. • *. . . it's largely driven by who the Chairman is, who the people in control are and what their interests are . . .*

	• . . . *the* [congressional] *hearings are just a way to push the agenda of the person holding the hearing . . .* • *Does the cross-departmental* [of government agencies] *nature create difficulty* [in making policy]*? Oh yeah!* • *The federal government's a BIG institution and it's hard to get people to talk to each other.*
Ideology	
Political context	• *It'll be partly what the Committee and Members in Congress in general think are the priorities . . . then it's gonna be to please constituents and get re-elected.* • *If we addressed* [income inequality]*, everybody's ideological bias will show . . . you're dividing Democrats from Republicans over the solution.*
Culture/values	• *It's just part of the trend of the last 10-15 years, this emphasis on personal responsibility. For a long time it's been popular politically. Certainly in the last 10-15, 20 years . . .*
Role of policymaking for health	• *It's going to be crisis driven. Whatever we're currently doing isn't working and there's a threat out there—that'll be the driving factor.* • *. . . the nature of the* [population health] *question, they're just such broad topics that there's not a single policy that would get at all of that.*
Change	• *While there might be grand ideas and moral things that are correct, it just comes down to making sure the Member cares about it and that there is a compromise to get it through.* • *I think it has to come from the community but I don't know which happens first: leaders enunciating it or grassroots and a leader taking it up.* • *Congress by its nature does not tend to act unless it perceives a crisis, so if the continuing perception is there's a crisis going on in healthcare they'll do something about it.*
Emerging Ideas	• *The one thing that's missing is environmental health--in terms of a . . . healthy population.* • *To the extent that you want to address inequality of income, health is the tail on the dog.*
Lost in Translation: *"The challenge is the framing of information and translation of it into policy action is somehow getting lost in translation in the numerical data and the policy conversation"* (Process found across all codes)	

Research and knowledge transfer

"Don't talk about p levels!"

Four axial codes developed around the major category of Research and Knowledge Transfer. Sources of information, Availability of research, and

Research salient to problems originated in Smith's work, while Role and relationship of research to policymaking emerged from the participant data as Smith's two related categories were collapsed. *"Lost in translation"* developed from participant data as an explanatory mechanism or relationship between this major category and that of Institutional Pathways and Entrepreneurs.

Research and knowledge transfer: *"Lost in Translation"*

"The challenge is the framing of information and translation of it into policy action is somehow getting lost in translation in the numerical data and the policy conversation."

The concept of translation of research data or packaging of information arose with such regularity that it could not be accommodated in a single axial category. The concept was so frequently linked in participants' speech with other axial and major coding categories that two additional relationship lines were added to Smith's conceptual framework to represent translational connections between the Research, Institutional Pathways and Entrepreneurs categories. An alternative to this interpretation would be to characterize Entrepreneurs as translators and include *"lost in translation"* as an axial category under this major code. The concept, however, was so ubiquitous and not tied exclusively to the concept of Entrepreneurs that it is better represented as a relationship or process between categories than a category itself. Virtually every participant expressed the need for research to be translated for use in policy and most expressed some frustration at

the volume of information and the difficulty of translation, very much like this participant:

> *"Scientists could be better at communicating their findings, especially to a lay audience. Often times there's this huge gap between the scientist and the lay community and often that will come off as arrogance. They don't 'get why we don't get it, already' and we* [staffers] *end up being the ones who have to translate a very scientific formulation into something we can talk to our constituents about. If somebody who knew the material could explain it that would be more helpful."*

Research and information was abundantly available to participants, but needed to be put into perspective to be relevant to policymaking. To be useful, participants held that research must be translated to the public, as well as to themselves. Yet the role of the media, often the source of translated data, was according to participants, subject to oversimplification and bias. On the other hand, participants suggested scientists can be *"arrogant,"* and therefore a limited source of translation as well. Participants also spoke in terms of *"research advocacy,"* in the case below, as researchers translating data for policymaking; and in another case as research institutions marketing their research agenda to Congress. *"Research advocacy"* may be seen as a means to *"find"* research that is *"lost in translation"* and to provide a pathway to moving research into the policymaking arena (see Discussion, below).

Research and knowledge transfer: Availability of research

The sentiment of *"drinking from the fire hose"* was expressed frequently by all participants in terms of the Availability of research information. The participant

below did not distinguish between academic and other sources of research for policymaking, although the majority of participants did:

> *"In working for the Senator, it's my experience that getting info is not a problem. They have it from all sides of the argument. They have access to the best information available, best statistics, from the government, from the private sector, from public advocacy organizations, the problem at our level . . . is not too little info but too much info and how to get thru it all."*

Research for policymaking appears to be readily available, but research journals were not conducive to policymakers' reading and the majority of participants expressed a lack of relevance to policymaking. All participants noted that research may be available but it was often not accessible to policymakers, raising again the question of translating or *"distilling"* research as for this participant:

> *"Sometimes the inaccessibility of it both in terms of not reading the scientific journals and therefore not noticing when important research comes out and also if we do look at it, that's very focused on other scientists and not policymakers. I guess another problem is, there is so much information out there and distilling it and figuring out what's important and what to pay attention to."*

Few staffers used academic research directly at all. Two health policy consultants, one of whom is quoted below, and one staffer who had formerly been an academic read digests of research (see Negative case analysis, below), but this was not common to most participants:

> *"There's almost too much data to get through it and keep up to date. You need to use something like the Kaiser Family Foundation or journal digests to filter it. There's more research to answer your question than you can use."*

Most participants recognized that there were different kinds of research and they represented a range of views on biased research. One conservative participant recognized no difference between industry and academic research. At the other extreme, another participant claimed *"no Democrat ever takes tobacco lobby money"* because of industry research bias.

The participant below represents an uncommon variation in the participant panel: she values academic research because she was an academic herself. She, like all participants, recognized, however, that research must be translated and condensed to be useful:

> *"There is a difference* [between academic and other types of research]. *The nice thing with academics is they're going to tell you about the research. When you go to different groups like the Heart Association or Cancer, they all have their spin on it . . . they have an agenda that they are lobbying for. But it takes time working with academics to let them know that we can't consume 14 pages of their peer reviewed paper. I need to know in 4 or 5 bullet points what they are. A lot of academics do want to get involved in the policy process, but they don't teach it in school. I think the politicians would love them to get involved instead of lobbyists. They're so refreshing! But the format is different . . . don't talk about p levels!"*

Although the preceding participant believed other policymakers might enjoy a greater connection to researchers, it was not clear from other participants' responses that this was the case. Many policymakers found themselves at the other end of this dimension where they did not seem to value or understand research at all. They often held that the solutions to policy problems were already known and that research was useful only as a tool to support foregone conclusions.

Policymakers in general did not have time to digest research, nor was understanding research a priority in the context of other pressing matters. It is clear from these data that researchers and policymakers had different ways of using knowledge and differing priorities for policymaking. The differences between how researchers and policymakers understand and use research appear not to be well understood by researchers (Graham, 2003; Lando et al., 2005; Lavis et al., 2002; C. Weiss, 1979), however, and maybe contributing to the frustration that this former staffer, now a policy consultant, expresses in common with the majority of participants:

> *"There's so much . . . as a staffer in Congress, so much info is spraying out of a fire hose that you don't do any research, there's too much to keep up. I'm trying to manage a war or a bridge falling down or you name it . . . Academic research is okay but it needs to be packaged. So we're lobbying to build a big ass bridge and we joke about the big 3 ring binder* [full of studies] *and we'd say 'thank you so much' and we're chock full of these binders none of which I will ever open. I can show you where we recycle those binders . . . so packaging matters . . . you know, give the research to the policymakers in a way that they can use it."*

A need to digest, package or reduce available research was brought up by virtually every participant:

> *"Getting it in a form that is digestible, quickly. If I can get someone to send me a one pager on their research, then I have to put it into one point for my boss. As I'm learning this, my boss has to go from Iraq to immigration to farming to ethanol to then doing something on nutrition for infants. I get 5 minutes to brief him before we go. That's how tough it is here. We have to understand it and we have to quickly explain it and get our boss up to speed on it and able to talk about it."*

Although the health policy consultant participants used research digests to inform their work, the participant below framed the problem of availability and translation of research in similar terms to Congressional staffers.

> "[Information] *comes in so many forms, formats, and contexts that it all gets lost . . . unfortunately they don't put it into the broader context and the broader vision is not articulated, it just all gets lost. It's easy to put it aside as just one more thing, why should this stand out over everything else?"*

The same issues of complexity, information over-load and competing policy priorities were echoed over and over again in answer to every research question in the study survey. The issue of translation raised spontaneously by most participants (there was no survey question about translating research data) was variously characterized as pertaining to translation of research into layman's terms, putting research into abbreviated forms, and ensuring that information proffered for policymaking was relevant and translated into common, useable language. Although research appeared to be overwhelmingly available, participants suggested that it was *"not very well known."* The idea that was conveyed by research was apparently what was important to policymakers, not the research itself. Translation of data into *"sound bites"* helped to move research into the arena of policy ideas. Translation, because of policymaking priorities and pressures, was a continuing meme in this group of policymakers:

> *"It's a tough job, but it needs to be summarized and distilled down to some of the key elements to help move the conversation forward . . . you don't have to know all the research, it just needs to be distilled."*

Research and knowledge transfer: The role and relationship of research to policymaking.

> *"You need to have evidence of what you're advocating for, you can't just say 'this is a great idea, we believe it.' There's got to be documentation behind it."*

Unlike the following participant, many participants were not fully articulate about the Role and relationship of research to policymaking. This participant was very cogent in characterizing the role of research to policy as revealing problems or finding solutions through government funded studies:

> *"Research could drive public policy in the degree that the study is done and it shows a problem or shows a crisis or shows whatever, it could help drive policy to solve it, and the flip side is when the academic isn't proactive, it's reactive when they're requested to do its research."*

Most participants, however, found research and researchers to be more difficult to use and difficult to relate to:

> *"Academic research pursues questions that are interesting to the academic researcher . . . if they were talking to an audience that was not just other demographers* [sarcasm] . . . *maybe they should think about policy?"*

Yet, most participants, as this one below, also had some idea that researchers could contribute unbiased information to the policy process:

> *"The purpose of academic research is 'the search for truth' . . . [it] can fill gaps . . . expand our knowledge and [give] a sense of prioritization. [A]nd another vital thing is counteracting the garbage research. Qualified researchers need to speak up and say 'wait a minute this research is garbage.'"*

Although both recognized the possibility for an unbiased contribution of research to policy, two participants acknowledged the role of personal relationships with researchers:

> *"If the academic had a connection to the office, the Member or to the staff, a personal association . . . most academics aren't focused on ways that their research could be used for these issues . . ."*

Interestingly, one participant identified one study of veterans' suicide as supportive of proposed mental health legislation in Congress, not because the study was unbiased or widely known, but because of a social relationship with the researcher and recognition of the researcher as a constituent. This participant's views of research, however, unlike most participants, seemed to be somewhat ill-informed in regards to bias, uses of research and the role and relation of research to policy (see Negative case analysis, below):

> *"That's no problem at all, they get the best advice and experts, there's a constant array of Oregonians going back to Washington on Medicare, Medicaid, health issues of all kinds. "We can ask [for more information or research] if need be, but usually we don't ever have to ask, it is just delivered."*

Several participants revealed a strategic use of research for policymaking: using it to avoid policy action rather than to solve problems or identify policy solutions. The inconclusiveness of scientific research resulted in an ability to use it to support opposite sides of the same debate:

> *"Suddenly people on different ideological sides come in with 'our research says that . . .' Somebody else will walk in and say 'we don't think that's necessary, because of all the research that says that . . .' If the issue is*

> *ideological, you can get dualing researchers, then the value of the research evidence itself becomes less important. Everybody will say 'apparently the research isn't decided on this.' People on both sides pick and choose and as a long as you've got a handful of scientists on your side, you can cloud the issue."*

One other participant expressed the idea of "*dualing scientists*" and an ongoing frustration where the utility of the data for informing policy was reduced and staffers were not trained to negotiate the data: *'this is helpful* [sarcastically]*' we're just not qualified to negotiate between the two."*

At some point in the policy process, however, another participant optimistically noted that the negotiation of the science might be halted in favor of pragmatic policymaking and Institutional Pathways might take over the process, except, as was noted by three other participants, in the case where further study was the desired end:

> *"There's always some expert* [to get information from]. *But then the Congressperson will say 'okay we know enough, we don't need any more info, we need to put pen to paper.' There're always people out there saying we don't know enough, the people who want to stop policy: 'science is ever changing, we need to do more research.' That's why there're so many* [Congressional] *bills on research. That's the compromise that we use. People who want to do nothing, do a study. There ARE legitimate times when more study is definitely needed, but then that person who doesn't like the policy can say 'well we don't know enough.'"*

As many participants identified, research was used to support pre-existing policy positions. Funding was also used as a means to ensure that research supported established policies:

> *"Well like we have the child nutrition reauthorization to be renewed in 2009 so we know now we'll need some research to help us out. So we can fund studies through the IOM and CDC and NIH and the nice thing is we have all those experts at our hands."*

Six participants noted that academic research may be perceived by policymakers as more credible depending on what institution it comes from, although only two Republican participants acknowledged a positive role for private research lobbies (the American Medical Association in the case below):

> *"There are some organizations that are more well respected than others, if the study's coming from the WHO or from the CDC or from Harvard Medical School there's something that just by their name . . . you look at that one . . . the AMA, all the ones that by their history have earned the trust and respect."*

Some participants suggested a *"most favored institution"* status. Three participants noted a role for research institutions in assuring their work is funded and utilized by becoming the *"go to group"* for favorite policymakers. This situation suggested a reverse role for research institutions in the setting of policy agendae—researchers and institutions may engage in *"research advocacy"* as noted by this participant:

> *"Harvard Center for Health and the Global Environment—they made it a point to get their research out to the Hill. They seem less biased because they have Harvard next to their name."*

Most participants suggested that research could be more relevant to policy and research institutions more integral to the policy process, yet just two astute participants recognized the possibility of a loss of scientific neutrality in consequence:

> *"I don't think academic research should be beholden to the policy discussion. It would be nice if* [research] *institutions looked at what role they play within the national community and how does the research that is happening in their institution help to move conversations forward. They can play a role a as a translator. They're wanting to self promote all the time anyhow . . . 'Our institution is so important because look at what we're doing!'* [sarcasm]*"*

Research and knowledge transfer: Research salience to problems (relevance)

"I get these great forest science research papers that are distilled with pretty pictures, but I put them in the file, I can't use them they don't mean anything to me right now."

Participants commonly used the term *"relevance,"* not Smith's term, salience (2007) so this concept was incorporated into the axial category of Research salience to policy. Participants commonly held the view that research was often not relevant to policymaking. They were unlikely to translate the *"minutiae"* of research into solutions and contrary to the widespread availability of academic research (see Research and Knowledge Transfer: Research availability, above) were, indeed, often unable to find research data that was remotely or directly relevant to policy. The majority of participants, like this one, found research was readily available but not relevant to their work:

> *"[I] t's hard to make the direct link from the academic research to policymaking. Academic research isn't usually written to be read or influence the policymaking perspective. Usually it's done and then some translator or interpreter moves it from the academic research paper to the policymaking realm. It really would be very useful for academics to think about what is the larger issue . . . It doesn't ask the question 'what does all*

this academic research mean for federal policy?' Translation is really important."

At the other end of this dimension, while one health policy analyst acknowledged the problem of translation, he felt strongly that *"beyond relevance"* it was up to the analyst, not the researcher, to " figure out how to use it" [the research]. This was an uncommonly rare view, however.

All participants found research was relevant to the policy process when it applied to a particular problem waiting to be solved (Lavis et al., 2003), but as both Kingdon (1984) and Smith (2007) found, this participant noted that the Political context must also be conducive:

"It's a balance of the right research at the right time. A lot of it's timing whether or not there's the political wherewithal to solve the problem at the right time. You need everybody in place at the federal level. You need a Congress that will pass and a president that will sign."

Research and Knowledge Transfer: Sources of information

Suddenly it's okay to eat eggs! You can drink red wine now and live forever!"

Research data and academic studies were not used by policymakers, in general, to directly inform policy. Studies could be employed to select a solution to a problem already identified or to justify a policy solution already chosen. In addition, policymakers rarely used research directly for these purposes—they did not, with a single exception in this participant panel, read studies at all. The sources from which scientific information are derived, therefore, are important and likely

influence not only what research is taken up in policy, if any, but also how it is interpreted. Translation of novel research findings by the media was a common source of credible information for policymakers in this study, as well as a means to move health issues onto the policy agenda:

> *"Clearly if it's a hot issue, some new studies come out on this, that in itself can help to get it picked up and read. Not just novelty, if it's a big issue then people are* [already] *aware and the new study really moves things forward . . . the media loves any controversy.*

Yet the media was a *"mysterious"* source as well for several participants, implying some doubt about credibility, although its power in setting the policy agenda was not in doubt:

> *"It seems like issues for one reason or another get picked up by the media and then it becomes like a snowball. Exactly how that happens, I don't know . . . 'are you aware of this recent killer?' I'm not sure how those get up to the top."*

Participants commonly identified sources of research data that were not academic or media sources, like the Congressional Research Service and other governmental agencies and services: *"We use a lot of stuff which is basic numbers . . . which is sometimes quite academic, but . . . we use the stuff collected by the government."*

Government sponsored research had limitations in the Political context, however, and research in this context may NOT have been used because of its particular source. The participant below characterized the Institute of Medicine as a liberal institution and therefore not useful for policymaking across political parties.

No other participant mentioned the IOM, yet the need to attend to conflicting ideologies in policymaking was universal among participants:

> *"For some folks* [research] *informs more than others. It depends on the recipient. Some people believe IOM is just a liberal democratic think tank and others feel they should get their research from industry. My Republican counterparts think this and it's just fascinating. To me if the IOM says this, it's not going to help me in negotiating . . . but next year* [with the new Presidential election] *things will change."*

The trade press, lobbyists and advocacy or interest groups all served to translate academic research for policymakers, all participants but one recognized that these data were skewed to the interests of the messenger. Conservative participants explained the use of industry sources of research as one of *"balance,"* while Democrats were more likely to reject industry sources as biased, even when they interpreted academic research, very much like this participant:

> *"They* [policymakers] *'glom' the academic research from lobbyists, from trade press articles, or from people who care about it.* [Academic research is] *considered independent, if it's academic it must be true* [but] *people use it for their advantage, to bring it to the Members' attention."*

One Republican participant valued interest and advocacy group information more highly than academic sources, mentioning universities as an after-thought:

> "[If we needed more information to inform policy] *certainly the AMA and folks like that within the healthcare arena . . . and just some of the general population kind of groups--the AARP for example--would certainly be somebody that we would turn to* [and] *there're certainly universities and some of the things they do."*

Participants constantly referred to the need for research to be translated for them, often through a credible source. Leaders as credible sources, however, seemed

more important for their ability to set the policy agenda, than for ensuring evidence-based policy:

> *"I think it's the packaging. C. Everett Koop, we all remember that guy. He looked goofy, he wore a funny uniform, and had a funny beard and he spoke straight talk . . . I don't look at him necessarily as an expert, you got a million of them on Capital Hill, you need a leader, Koop was a leader."*

One participant did look to research literature as a source of solutions, but only in the case of relevant policy problems and after interpretation of the research through other sources. Otherwise, she, like most participants, got her information, *"mostly through talking to people."*

Institutional Pathways

"The process kind of kills it."

The Institutional Pathways category was derived from Smiths's (2007) Ideology category. All participants referred, often and energetically, to the mechanisms by which policy was made at the federal level. So often and with such energy, that a major and not an axial category arose from the data. Smith (2007) recognized that Institutional Pathways were a dominant influence in the policy process in her earlier study in Britain, but did not separate it as a major category. In the American context, Institutional Pathways seemed to operate independently, not only of the major Ideology category, but surprisingly, also of the Political context axial category of the Ideology major code.

Participants spoke of policymaking almost exclusively in terms of the institutions and processes of Congress and the government. In addition, they commonly conflated health policy with healthcare policy--even those few participants who recognized the difference constantly reverted to synonymous language—and tended to reinforce perceptions of Institutional Pathways in consequence, as this participant reflects:

> *"On the Congressional level* [a new policy] *mostly goes to relevant committees, the Congressional process begins in the committees. Each Senate and House both have committees that focus on healthcare issues and then there's just a giant group effort as they write healthcare legislation. And the president's involved. It's huge."*

As the preceding participant expressed, political feasibility and leadership played roles within the committee structure but the "*national tide of these huge* [healthcare] *issues"* seemed to, according to several other participants, on occasion, drive all three:

> *"It's largely driven by who the Chairman is, who the people in control are and what their interests are and then beyond that there's going to be the pressing issues of the day which, beyond healthcare, are access to healthcare and the cost of the system . . ."*

Some staffers used the institutional resources of government agencies to understand policy issues: *"There's certainly the resources that are available on Capital Hill, the Congressional Research Service, the GAO, the departments themselves have reports and studies."*

Three other participants recognized the role the governmental research agencies contribute to agenda setting and the posing of research questions themselves as part of their own institutional missions. The same staffer from the preceding quote relied on the resources of government to establish a research link to policymaking, but found, like the other three, that this pathway can also be subverted by the Political context:

> *"The Congressional hearings process should unearth important academic research. We're set up to bring experts in and learn from them and so often that's not the case because the hearings are just a way to push the agenda of the person holding the hearing . . .* [If] *it's a very political issue, very partisan, it's hard to make it work."*

Participants' recognition of the influence of Institutional Pathways on policymaking took several forms. Some noted it in terms of how and where information and research were obtained (use of the Congressional Research Service, above, for example). Some noted that the hearings process could be both useful and excessively influenced by the Political context. Lobbying and interest group influence were occasionally noted. But overall, the strongest responses came from the survey question regarding the influence of the departments of government, their missions and administration, on how policy was or was not developed for health. The number and strength of participants' responses regarding the constraining forces of separate agency missions exemplifies the difficulty of developing comprehensive policy when the priorities of these governmental

agencies conflict. The following two participants gave typically strenuous responses:

> *"Absolutely, oh my God, God. The Department of Agriculture, there are more people in the DOA than there are farmers in the US and what are they growing? So you've got Ag policy that is upended by economic policy. People spend $12 million a month storing the extra sugars we can't use . . . the subsidized sugar that is destroying the everglades we're spending $8 million to save while we're subsidizing the sugar that is destroying the everglades. We grow so much corn that we . . . dump corn in the Mexican markets so they can't make money on their own corn. We've got an agriculture policy that forces them to move here to work but an immigration policy that won't let them . . ."*

Similarly,

> *"Does the cross-departmental nature create difficulty? Oh yeah! You know who makes sure the food is safe? Is it USDA, FDA or APHIS? All these different people have a piece of it and it gets difficult to explain why somebody has tainted strawberry pudding. Did somebody fail to inspect the strawberries in Mexico, or the processing plant in Texas, or the school cafeteria who opened it up incorrectly? There are all these different angles and we're not particularly good at tracking these things. You see it all the time, there's the disjointed nature and things fall between the cracks."*

This participant elaborated how the departments of government and the structure by which they are administered hindered the development of policy and, like two other participants, proposed a mechanism to overcome agency conflict:

> *"It's going to involve HHS, DOS, agencies within them, and it's difficult, it could involve NIH and CDC. The federal government's a BIG institution and it's hard to get people to talk to each other sometimes. You almost need some sort of mechanism to encourage those talks. Sometimes, I've seen bills written where there's a provision that says HHS and DOJ and someone else will create an inter-governmental coordinating council to implement this new policy."*

Several participants offered potential solutions to the problem of cross-departmental conflict. Some of these solutions had proven ineffective, as the one described by this participant:

> *"You have DHHS which is nominally in charge but if you think about it in terms of pollutants, you have the EPA, if it's unemployment you have . . . whoever does unemployment. Housing, transportation, etc., it's very stove-piped and maybe there's a solution to a particular population health problem outside the DHHS but they don't talk to each other. They never know. Sometimes* [processes that bridge the departments] *work but most of the time it's difficult because people come to the process with their agenda. I'll give an example, water. There's no department of water. There's the EPA, which deals with drinking water, there's the Army Corp of Engineers which deals with water resources like dams, and FEMA which deals with too much water and flooding, and those people never talk. There used to be a Water Resources Council coming out of the President's office back in the 80's and they could never, they were eventually disbanded because the Army Corp wanted to build levies and FEMA wanted to address flood plains, and EPA wastewater and sewage, they just could never get it together. People were terrified because they would have to report somebody else and they would have to stop doing things the way they did. I'm assuming the same thing happens in health."*

Another solution offered by one participant required coordinating agency leadership:

> *"If you're really going to deal with health in a comprehensive manner, it needs to be thought of in almost every agency. The State Department, Department of Transportation . . . everywhere! It can cause a bureaucracy nightmare where your right and left hands aren't talking. There needs to be some sort of leadership, which you would think would be the Secretary of HHS coordinating what was going in the health arena. But within HHS, even NIH and CDC don't talk to each other well. We would hope that there is some one in charge of coordinating all the different initiatives in all the different agencies."*

Ensuring that potential policies proffered were simple (and therefore likely to remain within one agency's domain) was both a commonly proffered solution as well as being identified by most participants as a policymaking problem. Important to this study, this participant and several others offered an example of one policy problem that may represent a "vehicular" idea (Smith, 2007, p. 1446) for bringing population health ideas into the policy arena (see, Emerging Ideas, below):

> *"People are beginning to focus on [environmental issues] more again now. It's more tangible. For all those things it goes back to the issue of whether it's tangible and simple enough to have specific policies."*

Another pragmatic approach--codifying or institutionalizing policy--was seen by one participant as a practical way to ensure its success. This solution, like that of proffering only simple policies offered by many participants, would tend to bolster or reinforce Institutional Pathways, ensuring that policies conform to existing mechanisms:

> *"At some point you have to institutionalize the policy. Somebody has to be responsible for conducting the campaign for the government if it's going to be a public policy. I mean agency responsibility which involves assigning people to it. For example, the CDC has a general charge to deal with disease control and prevention. Some of that's very institutionalized. They have specific programs for things like stroke and smoking. But if you don't have a specific program then it's harder to get a focus, get them to actually act, even though it's part of their general program, if there's not a specific program, it's harder to get them to focus on it."*

As with all participants, the following participant conflated health with healthcare to articulate Department of Health & Human Services as the leading health policy

agency. Unlike other participants, however, he found that better advice could be received on policy in this coordinated department. He, like all participants, however, acknowledged the difficulty of getting any agency to take on a problem that was not perceived as part of its mission. His mention of healthcare as a business sector conformed to the expressions of four other participants who pointed out the Institutional Pathways associated with moneyed interests, balancing interests, and the interests of industry:

> *"We concentrated on HHS, but the more agencies involved, it means that you can get better advice. Then again it can also make the process of achieving consensus more cumbersome. It's harder to get people to take responsibility for a problem--particularly a population based problem--where the solution or the policy may not fit the mission of a particular agency. Also healthcare generically is the first or the second biggest part of our economy and the network of interests involved complicates the issue of achieving consensus and getting action."*

Given common public perceptions of the role of business and lobbying in policymaking, there were surprisingly few iterations of the idea in participant interviews acknowledging the powerful role of industry and the Institutional Pathways through which they influence policy. Two staffers referred to a balance of interests in forming policy. The same two conservative staffers referred to *"constituents"* as the driver behind policy ideas, but in this instance they referred to voters, not industry. A former Democratic staffer also noted the role of moneyed interests in developing policy and a participant who was running for office noted, *"it's the insurance companies,"* who *"are running the railroad."* These influences

can be characterized as either Political context or Institutional Pathways categories. The latter, however, characterizes the avenues through which such influences are felt and are part of the institutional structure of government (regardless of Political context).

Entrepreneurs

"Al Gore could do a movie?"

Upon first analysis of the study transcripts, it appeared that entrepreneurs played almost no role in translating research into ideas or getting research ideas onto the policy agenda. Yet, as participants' responses were analyzed further, it became clearer that suggestions regarding *"research advocacy,"* media influences on prioritization of policy issues, lobbyists' influences and even the use of digested or translated research publications are all, in a sense, entrepreneurs of information, although they may be more serendipitous in nature compared to Smith's (2007) or the common understanding of the term. These influences can be unintentional (as in the case of crisis oriented media coverage) or planned and paid for (lobbying, for example). Source of information is an axial category under both the Research and Knowledge Transfer and the Entrepreneurs major categories. Given that research was not well understood and that Sources of information are the vehicle by which most marketing of ideas took place, there is a great deal of overlap and the two axial categories could have been collapsed into one in consequence. They have not been collapsed in this analysis because the Research and Knowledge Transfer

category spoke specifically to sources of research information, while the Entrepreneurs axial code encompassed information sources for a broader range of data and influence.

According to participants, Leaders could play the role of entrepreneurs for research, policy development and/or agenda setting. This participant and three other older participants mentioned the Kennedy administration's 50 mile hikes as instrumental in health and fitness policy. This participant also represented the role of personal experience in informing policy, both in his reminiscing about the President's Physical Fitness awards and Pierre Salinger's hike:

> *"The goofiest example that was so effective was when John Kennedy and his staff took 50 mile walks. That changed the country. Fat Pierre Salinger smoking his 5 dollar cigars went on a 50 mile hike. You know it worked. The presidential fitness award came out of that. I sat in the school assembly and never got one of those. But I was envious of the guys who did . . ."*

Celebrities and personal stories also acted as entrepreneurs of information in the policy process according to several participants, usually as elaborated by the media:

> *"You'd be surprised how a very compelling story or narrative, something that suddenly grabs everybody's attention and whether its Terry Sciavo or Christopher Reeve, suddenly, it's Michael J. Fox! This one story that everyone can relate to, can also drive it* [the policy process], *even if they're not individually impacted."*

Doctors were clearly identified as poor entrepreneurs by one participant who also noted the importance of the relationship between the source of information and reception by policymakers. The relationship was commonly held among participants, while the view of doctors was not commonly expressed:

> *"Doctors are assholes, we never get help from doctors. Their arrogance is huge. They waste our time. The people we get the best info from are MPHs, RNS, and the nurses' associations . . . They can speak English. I tell you when the doctors come in, they're the worst. As individuals they're difficult to deal with. They expect the red carpet, they demand things, they threaten us, they're rude, they're really dumb* [entrepreneurs]."

Participants who were lobbyists noted the role of lobbyists as entrepreneurs of information and policy: *"We're always sending stuff up the Hill to staff. We go up and lobby and say 'there was a study done that bla bla bla . . .' like that."* She and several others seemed to have good relations with policymakers because they were all former staffers to Members of Congress, denoting another type of Institutional Pathway that effectively constrains or shepherds policy development. She and other lobbyists also characterized themselves as translators of research. The same participant suggested that information can be marketed in very subtle ways, but this was not mentioned by other panel members: *"As a lobbyist it's our job to make the Member of Congress think that it's their job* [to develop new policy]."

Overwhelmingly, participants noted that information that was successfully taken up into policy was determined by timing and condensed data that were translated through several people and processes:

> *"If you think you're getting a Congressman to listen to an expert you're not. You'll find staffers who rely on other staffers* [for policy information]. *You have 30 minutes to turn your boss' vote. It might be determined by that it's good policy or by the state you're from. All politics is local."*

Researchers were not understood as Entrepreneurs of information by participants for the most part--with the exception of the idea of *"research advocacy"* (see

below)--and staffers generally did not use research to inform policy. Uncommonly, this participant did use research experts to inform her policy work, although it seems almost a personal relationship that she refers to. She represents an extreme of this coding dimension (see Negative case analysis, below) although this example is not dissimilar to the personal relationship expressed by another participant to a friend who was also a local researcher (see below):

> *"Also we've got Robert Wood Johnson . . . But I can always ask CDC a question and they can go to the individual experts or to NIH and they get me the PIs from different grants and they tell me what's going on. Sometimes I just want to know from the scientists what's happening."*

Entrepreneurship is a personal relationships endeavor. Being the "*go to*" group was one example of the concept of *"research advocacy"* mentioned by several participants—the possibility that researchers or their institutions could act as the advocates of their own research agenda:

> *"It's probably important to make sure you're meeting the policymakers face-to-face and establishing relationships with them so they know who the research institutions and researchers are and they come to trust them."*

One participant mentioned an interesting example of the *"accidental"* entrepreneurship of research. A study was picked up and used for policymaking, not because the staffer was familiar with the research base but because he had a personal relationship with the researcher, denoting again the importance of both personal relationships and timeliness in getting information on the policy agenda:

> *"A good example might be that PSU recently did a study on the increase of suicide by veterans . . . and so Mark* [Kaplan, the researcher] *as it*

> *happened, his wife is a friend of mine and she made me aware of it and he got me a copy of the study and . . . then Mark was called to testify at a hearing."*

Two participants elaborated on the ways in which groups can advocate best for their policy interests, including *"research advocacy."* Interestingly, they both characterized governmental agencies as also needing to sell their policy agenda as well: *". . . quite frankly it's even the role of people who operate programs in their agencies* [to influence policy information to their own ends]."

Constituents can act as Entrepreneurs, but their role is not necessarily one of supplying credible information, *"there're very few bills that make it through on their philosophy* [alone, just] *being on God's side."* Although constituent complaints may act as a kind of idea marketing process, *"every Congressman and Senator got an avalanche of calls and letters* [regarding a catastrophic health insurance policy] *and town hall seniors were turning up telling them that the program wasn't working and it got changed."*

The two participants below describe shaping information for interest groups and the media to drive policy ideas from *"outside,"* using the Political context, and in doing so summarize well the opinions of all participants regarding the marketing of policy ideas:

> *"We tended to be very entrepreneurial or problem oriented, which is sort of a test as to whether a solution would fit a problem. Then we'd see if there was an organized interest group that was excited about it, is there media attention for it? Is the solution simple and dramatic which makes for better copy and a more satisfying outcome?"*

And similarly,

> *"There are different messages that need to be conveyed to different audiences if you're going to win an argument and it can't be just the data by itself, that's not going to be compelling. Even the legislature may say on its own this is a really important issue . . . they're going to be more successful in their implementation of new policy if they've got a broad coalition saying we agree with you. This is important because they're elected by those folks, they do the work of their constituents, it's a relationship we can't ignore if we're trying to figure out how to write the policy, come up with it and implement it."*

The media clearly played a role as a Source of information and marketer of ideas, influencing policymakers' personal choices as well as the interpretation of research, as for this participant:

> *"I saw 'Supersize Me' and we vowed never to drink pop or eat fast food . . . I ran into Morgan Spurlock and we went to a screening at the Library of Congress and he had it catered by McDonalds. But I thought that film explained things really well. It told the story* [of diet, marketing and obesity]."

Similarly, the New York Times came up several times as a source of credible research information for the development of policy, "*the New York Times, an article about a study that just came out . . .* " as well as an entrepreneur of ideas, "*if you work for my boss, he reads the New York Times and he'll come up with an idea from there.*" Local media could also act as an entrepreneur of information although this participant's comment below seems to contradict the influence of Institutional Pathways somewhat—she was saying that the people at home matter, not the procedures established in Washington: *Every day when I was*

up on the Hill the Member got clippings of the local paper. They don't really care what people think in DC." The media clearly shaped priority policy issues, but participants often didn't understand how, *"something that's new or different . . .it's kind of mysterious."*

Ideology

Ideology: Culture

"Because that's the type of people we are, very individualistic, and we like to take personal responsibility for things."

The category of Ideology employed in the study framework included several subcategories. The Political context of policymaking was an original element of Smith's (2007) framework, but several other elements were adjusted to accommodate the American context as expressed by participants. The influence of cultural beliefs and values about health, including American policymakers' understanding of the difference between individual and population health (if any) is one important addition to the framework. A common assumption, and one originally proposed for this study, is that American individualism is a dominating idea influencing policymakers and health policy (Beauchamp, 2002; Bellah, 1985; Burris, 1997; Wallack, 2005). Participant data, however, showed a more nuanced range of ideas related to American individualism. Most participants recognized an individual responsibility 'meme,' yet several recognized the combined American cultural concepts proposed by Bellah (1985) and Wallack (2005) (the republican

versus the individualistic tradition). At a further extreme, several participants recognized a political use for this concept and did not believe it to be necessarily rooted in the American tradition. Two of the Republican participants saw cultural individualism as part of the American spiritual tradition:

> *"It's enduring because it's this idea that people should take personal responsibility for their health. This goes back to Old Testament stuff. Where people believe that somebody got sick because they had sinned. That's a belief system that's very primitive . . . it certainly fits with this American ethos about individualism."*

Below one of the Republican participants who had suggested a spiritual root to American individualism combined an issue of science (that smoking causes lung cancer), with the cultural concept of American individualism and personal responsibility. In apparent contradiction, he suggests cultural norms supersede science. This may be resolved by considering the first a statement of medical cultural authority (Starr, 1985, see REVIEW OF THE LITERATURE, above) and evidence of the influence of the medical community on cultural understandings of the determinants of health (D. Lupton, 1995; Deborah Lupton, 2003):

> *"I think it has to do with the American ideal, I guess, of personal responsibility, let's face it you smoke, you get lung cancer. I mean there are parts of healthcare that are probably luck of the draw, genetics or nothing you did to yourself, you know, caused that. But . . . unless you prove that smoking doesn't hurt you, no, it's clear that the decisions you make affect your health. I don't see how you disprove that. I mean for the last 50 years that's been the mantra of the medical community, so I don't see them changing their minds."*

Three participants recognized American individualism as a foundation of health policy, but felt that the Political context influenced cultural understandings of health, the uses of policy to address health in particular, and the role of government, in general, to further a conservative political agenda:

> *"It just gets overshadowed, overwhelmed, so often these things are looked at as individual because it is an individual lifestyle kind of choice that the federal government doesn't necessarily [want to] play a role there. I think from 1994 till 2006 a lot of that was very ideologically driven."*

And another example:

> *"It's just part of the trend of the last 10-15 years, this emphasis on personal responsibility. You see it in healthcare, in welfare reform, in taxes, in almost every policy area. For a long time it's been popular politically. Certainly in the last 10-15, 20 years it's been tougher to enact policy that does not involve a personal responsibility component."*

And finally,

> *"My perception is that it's become a stronger element in the last 10 years . . .there is a strain of this one Ranger American character . . .that competes with a community, 'takes a village to raise a child' kind of approach. It's part of the---excuse me--right wing conservative movement that has been in ascendancy politically. They've just pounded away on this because it advances their political agenda. We don't need social programs like Social Security, Medicaid and Medicare because people are poor because of personal choices* [sarcasm]. *People who are sick, it's because of personal choices. Barry Goldwater . . . Reagan was the one who first made a big deal of it. But it seems to be sharper in the Bush administration. Tapping into that strain of American culture."*

Beyond American individualism, participants' conceptions of individual health and population health were at times crystal clear, but often confused and in particular confused with the idea that healthcare produces health. The conception of

individual actions making up the collective is common to a neo-liberal political philosophy (D. Raphael, 2003) but does not allow for a dimension of population health that is independent of individual health. Nevertheless, it was representative of a continuum of ideas in the policy arena, consistent with a limited view of population health. The following represents the majority participant view of individual versus population health:

> *"I suppose if you have a number of unhealthy people in a community, perhaps it makes an unhealthy community but the issues are different in that so much of individual health is personal, is about your background and your genes and how you take care of yourself. They're very much connected but I think of them in different ways."*

In addition, this participant and others linked population health to environmental health expressing an intermediate understanding of how political and social structures affect health.

The participant below elaborated a *"fractal"* conception of community health, which interestingly, corresponded to the socio-ecological model (Krieger, 2003) which is a commonly applied theory in population health, but of which the participant was unfamiliar beyond his own characterization. In general, participants did not hold that every individual had to be healthy in order for a community to be healthy. This participant's conception did not allow for a dimension of population health that was independent of individual health yet he clearly recognized population determinants of health in his statements about economics, and physical, social and spiritual health. Other participants' responses showed this same

contradiction in that they recognized the role of economic inequality in health but they all failed to integrate it into their personal health views or their language about health policy:

> *"Well, [population health is] fractal, reproduced on a larger and smaller scale. When you have different people as part of a community who are not healthy, the community is not healthy. Like a head of broccoli, if there's a bad part the whole thing goes bad. If there are segments of a population or community or individuals in the community that are falling below a healthy economic circumstance then it has less health as a community than it could have. The other part of this is those different elements of health are interrelated. As economics diminishes, physical or social or spiritual health may diminish. People's health is affected, not only by themselves but by those around them."*

Several participants viewed health in personal or individualistic terms, yet readily explicated the contradiction between health and healthcare in policy (one referring to population or community health and the other to healthcare for individuals) and saw clearly the difference between population health and healthcare policy (although the conflation of health with healthcare was a constant in this study):

> *"So much of what's framed at the federal level is access to health and the cost of the healthcare system as opposed to the way I kind of framed [health] for myself which is personal health and being active, nutrition and that kind of thing. I think health is certainly on the radar of Congress and federal policy makers but slightly different than the way I look at it. I guess I've been blessed to be very healthy so access to healthcare hasn't really been an issue . . . [population health is] not my frame of mind so much, I guess."*

In the following two statements, participants illuminated two contradictions stemming from ideological influences in our understanding of health: (1) social determinants of health or health as an issue of economic equality *"rubs"* people in

the political arena the wrong way and appears to prevent its consideration; and (2) compelling cultural norms prevent policymakers from consideration of data that do not conform to these norms. In this way, cultural values may influence policymaking, obscuring the role of research:

> *"As you translate data to a person what you're up against . . . are cultural norms around personal responsibility and self reliance and everything else that tends to get in the way of compelling data and propose policy solutions that are being raised around that data."*

And,

> *"In this country we've got a lot of focus on individual responsibility. The other approach* [social determinants] *rubs a lot of people the wrong way. To get into a discussion of poor versus rich, maybe we should be focusing on economic equality more than just access to healthcare."*

Ideology: Political context

"I know this will shock you but sometimes politics raises its ugly head."

The influence of the Political context as an aspect of Smith's (2007) Ideology category was a common thread among participants. It was somewhat difficult to separate from Institutional Pathways and some overlap naturally developed. Institutional Pathways, however, became a separate explanatory category from Ideology because in participant data it took on a character much larger than that of Ideology, in general, and Political context, in particular. As with every category, health and healthcare were often spoken of in the same breath but some of this conflation was explained as a part of the Political context of

policymaking—an arena in which these two concepts were virtually always spoken of synonymously.

Money in the Political Context played a role for participants, both in derailing policy:

> *"I think the number one issue in health policy right now is figuring out how to finance it. And that's where it seems to, this always ends around, everybody recognizes a huge issue, everybody wants to get something done about it and it always seems to hits the rocks when it comes time to pay for it,"*

and as the driver of the entire Political context:

> *"We have lost our way politically. Neither party is dedicated to the overall health of the society. Meg Greenfield said the business of Washington is not making policy, but making politics . . . your priorities are where you spend your money."*

For some participants, leadership and policymakers' more personal political interests played a big role in setting the policy agenda:

> *"It'll be partly what the Committee and Members in Congress in general think are the priorities on a particular issue and then it's gonna be to please constituents and get re-elected."*

A less cynical view was presented by one legislative staffer:

> *"My boss excluded, I think political gain can sometimes drive it. I think that wanting to help the situation is definitely more pervasive but sometimes political gain can influence how you manage it."*

One participant saw a role for research within the Political context of policymaking. Health guidelines signaled an area of political compromise because they were monetarily and politically inexpensive:

> *"People do look to the government and the science to get some guidelines on our health--it doesn't cost a lot of money to do this. For those that are very fiscally conservative, this is palatable* [policy]."

Yet another participant, however, showed a rare and deeper understanding of health determinants and suggested that the Political context prevented consideration of them:

> *"There's people who can go to the Cleveland Clinic and there's people who can't. If we addressed that issue, everybody's ideological bias will show. We'll say if we raised the minimum wage or provided universal healthcare you could eliminate these biases . . . But then you're dividing Democrats from Republicans over the solution."*

Rarely, a conflict between the evidence base or research and policy in the Political context was evident, but, in general, among participants there was no common view that research was used as the foundation of new policy solutions:

> *"Hopefully you want* [the policy problem] *to be scientifically based* [but] *there're politics going on here which sometimes prevents Congress from getting the exact right answer. You try to keep everybody happy and each side has constituencies whether they be senior citizens, the pharmaceuticals, the hospitals or whoever. Every side is in there advocating for their own best interests and sometimes the best interests of one party is not in the large national interest."*

The Political context does change, however, and as has been seen in state legislatures recently, health policy may be on the agenda in new forms in the near future. All the Democratic participants mentioned the importance of the changing political scene:

> *"Politically there's not going to be any huge healthcare reform, it's not going to happen until we get a new administration, either Democratic or Republican, it won't happen with this administration in its lame duck year."*

Ideology: Role of policymaking for health

"Policies that would address income inequality seem so massive, they're almost beyond the scope of what Washington can realistically do."

This subcategory of the Ideology code originally encompassed only the Role of policymaking for health, an area that included operational definitions like understandings of health policy and effects of various types of policies on health (see, Operationalization of terms, above). Yet, as interviews progressed, it became clear that the broader role of government, both for population health in particular and the governance of society in general, was also an aspect of both the larger and the sub category. In consequence, participants' views on the role of government in general were included here as a dimension of the Role of policymaking for health. This participant expressed an expansive dimension of the role of government, both a regulatory aspect and a coercive one, that was common to Democratic participants:

> *"The more options you give people the healthier they are. Make walking the easiest decision in the world . . . Tobacco should be outlawed. Make it hell to get cigarettes."*

Because of the profile of several experts in the sample panel, transportation was probably over-represented as an idea related to health. These participants were Democrats and tended to have a more expansive view of community health and they clearly identified a role for government beyond the individual. Nevertheless, these same participants tended to characterize health frequently in terms of their

own individual practices (diet, exercise) and, like all participants, regularly confused health with healthcare.

Other participants combined the process of governance and policymaking with expansive views of the role of government but focused on healthcare as health policy. In this case, the participant noted the role of preventive policy in particular as well as the influence of interest groups on such policy:

> *"Before food labeling laws, you couldn't eat healthfully and that wasn't that long ago. You could make things more coercive, like tax policy, taxing cigarettes has a significant impact on smoking. There's been talk about taxing junk food . . . people can make healthy choices and the issue is how to encourage them. We had the Presidents Council on Physical Fitness, but in terms of things that have been sustained, it's been pathetic . . . So many of the disease groups, the Heart Association, have tended to focus on research to cure heart disease that people already have and less on things that would prevent heart disease. Some of the policies involve interest group opposition, which is true of everything in healthcare. Taxing junk food would get the grocery manufacturers, but they've been beat in this before. We're getting closer to a critical mass toward doing something about these things. It's very much an emerging issue that's getting hotter all the time."*

The Political context and Institutional Pathways also related to the role of policymaking for health. This participant explicates the practical approach commonly expressed by others:

> *"First you have to acknowledge there is a problem. Amongst policymakers, (a) that there is a problem, and (b) that they want to address it. If they want to address it, it comes down to the politics of it and if there is a solution available. In our offices, we come up with a problem or the senator would say, 'here's the data and here's how we'd like to approach it, how would you feel about spending time and money on it?'"*

Most participants viewed the role of policymaking for health in practical terms, that is, in ways that they could actually get policy made. Very much like the preceding participant, the participant below articulated a large part of the policy process, including the use of media, political influence, and local solutions as policy precedents. He also mentioned the idea of markets as a source of policy solutions, suggesting the limits of the role of government and lending further credence to the concept of American cultural individualism as a current political influence (Burris, 1997):

> *". . . basically we were trying to solve problems. We needed two things: a problem definition, something through the literature or the newspaper or just talking to people: 'here's a health problem, somebody ought to have a solution.' Then somebody out there would propose a solution or we could reason logically as to what the solution was. In the case of smoking, obviously it's a problem, it's the biggest cancer killer in the US is lung cancer, almost exclusively caused by cigarette smoking. So here's a population problem that jumps out at you. Then the question is 'what's the array of policies that might cause people to stop or reduce their smoking levels and what are the politics that will get those policies done?' We talk in terms of public policy basically. You talk to everybody and see what catches your attention, a newspaper story about it that gives it some notoriety. It's around that this is a problem and experts' studies can be very persuasive but we tend not to read the professional journals, maybe digests or summaries on what's just been published that's hot. In terms of a solution, something that's worked in some city or is an effective program, what somebody in the field has come up with that's out there in the field. Then we go check out what people think it is. In this country we're wary of government solutions, a lot of reliance in both parties on the private market being a better solution than a publicly generated solution."*

The next panel member approached health policymaking in a practical way as well. She provided justification for NOT using complex academic research as the basis

for policy. Here too, the limitations of the methods of governance and policymaking were evident, reflecting a link between the Role of policymaking to the constraints of Institutional Pathways or the ways in which policy actually gets (or does not get) made:

> *"The best policies are the simple ones, simple to understand, and simple, straightforward--the shorter the bill the better the chance of passage. Somebody may have a research based solution, but if it takes 200 pages of text to put it into practice, you're never gonna get it. The shorter, simpler, easier, the potential fix, the more attractive it's going to be. To some extent, that's because we've got to sell these fixes to other people in Congress, to the American people to the White House or the White House has to sell it to us. So the more complicated the solution, the more chance people will misunderstand, misconstrue, or actively sabotage it. If you've got an easy solution, that's the one we're going to look at first. That sounds kind of awful, but the problem is from a policy perspective the more complicated the solution, the harder it is to get agreement on."*

Another participant also made apparent the limitations of using research in the health policymaking process. She spoke both to the process of policymaking for health and to the ideological underpinnings of that process, in common with other participants:

> *"From an ideological perspective which side do you want to cheat towards? That's an ideological question. Dealing with science is tough, it's so easy to get a second opinion. And it comes down to an ideological argument about where we should spend our money and which side are you're gonna favor."*

Participants had various ways of speaking about population health and therefore experienced some confusion about what it was and what it meant in regard to policymaking. Two participants immediately characterized it as public health and

felt that public health policy was often only addressed in crisis. The first made a contrast between the relationship of public health to individual health and policymaking:

> *"Population health comes and goes. It's very crisis oriented. Right now the focus is much more on personal health, access, health insurance, especially when it comes to preventive care, the focus is much more on how we get it so that everyone can see a doctor. These problems are small."*

The second made a contrast between policy failure and crisis or current threat:

> *" Especially when it comes to public health or population health, however you define it. It's going to be crisis driven. There has to be some threat out there that is not currently being met or that we're worried about. Whatever we're currently doing isn't working and there's a threat out there and it needs to be addressed—that'll be the driving factor."*

Those participants who held an expansive view of the role of government seemed to at least consider that population health determinants might have a role in health policymaking, albeit one that would be difficult given current Institutional Pathways and the lack of simplicity associated with the such policies:

> *"One of the reasons* [that population health determinants are not considered in health policy] *is the nature of the question. They're just such broad topics that there's not a single policy that would get at all of that."*

The following participant represented the more expansive view of the role of government and the relationship of environmental health to population health as an emerging issue (see Emerging Ideas, below). Here population health seemed to emerge on the coat-tails, as it were, of another more acceptable idea—that of global warming. Smith notes the existence of "vehicular ideas" (2007, p. 1446) that carry

other less well-acknowledged ideas into the policy arena and this may be an example of one such idea:

> *"I think [population health is] very important for policymakers because it does encompass so many different aspects, for example, global warming. Population health has a great deal to do with that. It's not something that a lot of policymakers focus on here because it is so broad. And policymakers like specific things they can fix."*

This same participant saw, as did many of her colleagues, the need for simple solutions and simple problems as driven, not by the Institutional Pathways as largely characterized in this paper, but by the Political context category—what policymakers can fix, presumably to please constituents and ensure re-election.

Even given the emerging connection between environmental and population health, for those who recognized it as important, it was still often constrained by conceptions of healthcare policy: *"I think [population health] is a very big issue. I would agree that it gets lost in the conversation around the healthcare system."* The opposite view was justified in the same fashion by this participant:

> *"I don't think [population health] is a big issue, it's about healthcare. It morphs into a different topic and it becomes part of a bias . . . people don't think about health, they think about healthcare so the healthcare debate changes.*

A more conservative participant preferred to characterize population health in terms of healthcare services to the poor, and the role of government as limited to this role only:

> *"I disagree* [that US health policy is based on individual lifestyle concepts] *. . . the whole healthcare legislation fight is making it more accessible to*

> *those who are in the lower end of the SES quandrant. We have Medicare, Medicare, Social Security, it's all about making it more available to those that can't afford it."*

In contrast, the idea of income inequality (a population health determinant) was 'toyed' with by several participants. Each, however, recognized Institutional Pathway and Ideological category constraints that limited its consideration:

> *"I feel like I ought to say a lot about* [income inequality as a determinant of health] *because my friend challenged me on it and proposed something to Sr. Kennedy and I wasn't totally convinced of the evidence. It may be because I'm used to thinking of health policy, but just trying to get insurance for everybody is a thorny enough task rather than trying to get everyone at a certain income level."*

Virtually all participants recognized the now time-tested idea that income was related to health. Two participants also associated income and class status as determinants of health:

> *In the U.S. we have a hard time, or we're uncomfortable talking about the fact that if you're sick you're going to live longer and that if you're poor you're going to die sooner. Because that would indicate that there is a certain amount of inequality built into the system. We have a hard time addressing that because everybody likes to pretend they're middle class."*

All participants--those with conservative and expansive ideas of the role of government and whether or not they held any notion of population health--consistently voiced the Role of policymaking for health within the narrow perspective of healthcare: *"As a country we have to look for the common good--easy to say, hard to do--which should be a minimum level of healthcare."* Those

with expansive ideas of government did so because the Institutional Pathways constrained the ability to make this kind of policy.

Ideology: Change

"When you're at the federal level it's tougher—national policy is very hard to get consensus to effect change."

Although the idea of policy change was implicit in this study, participants introduced it spontaneously (outside the semi-structured survey) and frequently enough that a new axial code was created to accommodate their thinking and its relationship to other aspects of the conceptual framework. Participants elaborated on the role of constituents and leadership to evoke policy change, and they decried the constraining role of Institutional Pathways at the federal level that prevented the initiation of new policies. One participant, addressing the question of individual lifestyle as the basis for health policy in the United States suggested a unique, grassroots mechanism for policy change to a more population based view:

> *"If we're able to identify where personal choice isn't enough* [that would be a place to evoke health policy change] . . . *The classic is 'I don't smoke yet I go to a bar and it's smoky and I have to breathe it and that's not my personal choice.' It's somebody else's that gets in the way of yours."*

Many other participants noted the role of local or regional policy change efforts and their influence at the national level. Some expressed that it was difficult to make change because of the constraining influence of Institutional Pathways at the federal level:

> *"There's a disjoint between the general public and people involved in policy in DC. Everything is really pragmatic up here. Their arguments are right, but it doesn't really matter up here. Because everyone thinks they're right. While there might be grand ideas and moral things that are correct, it just comes down to making sure the Member cares about it and that there is a compromise to get it through. It's not as easy to make change as people think."*

Several participants implied that change was easier at the local level and that grassroots endeavors can *"trickle up"* to the federal level:

> *"The American people! They need to demand it. Sometimes the greatest innovations come from the local level. You can see that with public health like smoke free restaurants and how that's happening at state and city levels. Like menu labeling and things like that."*

Although, other participants were unsure if the relationship of change was one of trickling up or trickling down and used a chicken and egg metaphor to describe diffusion of change:

> *"It's a chicken or egg kind of thing but if people have the demand for local produce and farmers markets and those kind of health things within the community does that help draw that or does the farmers market need to be there to get people to go?"*

Here as in the Entrepreneurs major category, the role of leadership was prominent for most participants: *"I think it has to come from the community but I don't know which happens first: leaders enunciating it or grassroots and a leader taking it up."*

Yet participants were clear that there were also regional influences that effected change in a differential manner that they were unable to fully explain:

> *"It's absolutely different by region based on leadership. Rochester NY was almost exactly like Portland in the 70's and they decided against light rail and it changed the whole place. People who live in Rochester now are completely different."*

Crisis also came up regularly, from all participants, as a reason policymakers act to change policy:

> *"Congress by its nature does not tend to act unless it perceives a crisis, so if the continuing perception is there's a crisis going on in healthcare they'll do something about it."*

This seemed to be related both to the Political context (policy actions that serve the political needs of policymakers) and Institutional Pathways (Institutional Pathways could not be overridden to gain action unless a problem had gained sustained, high level and media attention).

Several participants used crisis to explicate why healthcare and not health is on the policy agenda:

> *"You need an ongoing crisis, especially at the Congressional level, something has to be continually wrong. It has to impact a lot of people. . . those are the best issues, when a lot of people are affected and it doesn't go away; like rising costs of health insurance. Everybody is affected, everybody pays for it, so it's constantly in front of everybody's face."*

In contrast, two participants held that no policymaker at the federal level actually intends to DO anything about healthcare—the business interest is too strong to counteract the crisis of healthcare financing.

Leadership in the form of policymakers' personal experiences may also drive policy change, but according to one participant, in the absence of strong

personal leadership, there must be a crisis or overwhelming and sustained constituent or grassroots demand:

> *" I've been amazed at my time on the Hill how much if you have a Chairman who's interested in addressing something that means a lot. But without that, I think it does take a national tide of something to for it to remain and capture the attention of Congress, remain a priority."*

Although the question of whether Congress intended to address healthcare costs or not (related to the interests of the healthcare business sector) was intriguing, few participants elaborated on this idea in an articulate enough fashion that it could be coded and explored. Consistently, crisis was evoked as the reason for policy change:

> *"It's interesting what makes action occur? You just never know. If you'll remember Andrew Speaker and the TB event where he was on the airplane and such? That causes how much of an uproar?! There were hearings, we appropriated more money for it, and that was just a one person event. There are many other issues, obesity, or uninsured, everyday where people in the US are dying and it just doesn't get that sexy attention as this one person who may have or not had contagious TB, and that just got this whole government to stand up! I meant it got money! It really was just unbelievable, unbelievable."*

Emerging Ideas

Several ideas related to population health emerged from participant interviews. These ideas are characterized as emerging because not all ideas were represented by every participant and few are integrated into policy. As with Smith's policy journeys, some of these ideas have traveled some distance toward policy (prevention and quality of care as a cost modifier for example), some are still very

conceptual (population health and inequality), while others seem poised for consideration in the policy arena yet may depend on changing Political context or generational change issues (Medicare as a model for universal healthcare, for example).

This study was intended to show that the concept of population health is not readily available in the policy arena and therefore is not under consideration as a component of health policy decision-making. Interestingly, however, it appeared that environmental health issues have made some headway into the policymaking arena and that participants in this study often characterize the subject in terms of community or population health. It may be that population health requires the translation of environmental health to be considered in policy, very much like Smith's (2007) understanding of the comparative journeys of life course and income inequality concepts into health policymaking in Britain (see REVIEW OF THE LITERATURE, above).

Emerging Ideas: Prevention

The idea of prevention has traveled fully into the policymaking arena: *"And yet there's a different attitude now and I see things shifting* [regarding individual lifestyle behaviors and health], " and cultural ideas about health are shifting toward prevention. The four participants who expressed these views encompassed healthy choices for individuals as well as regional and national policy issues having to do with agriculture, transportation and regional approaches to health including things

like farmers' markets. These approaches might characterize what one participant called *"accidental health policy"* in that agricultural, transportation and food delivery systems policies are not generally considered to be health policy although they have affects on population health. Nevertheless, they are beginning to be characterized this way among these few policymakers.

The idea of a generational change and preventive health policy is evident here:

> *"The children are getting it now and teaching it to kids is the key. It seems like policymakers are not keeping up with younger people, that generational issue again."*

Yet, the Political context can thwart new preventive policy ideas that arise outside the policymaking arena:

> *" To an extent Republicans have come a long way and they embrace things like prenatal care and some of these issues that they used to not think were very important but now they give widespread support. But to talk about that too much, you would start to point towards other solutions that some people aren't ready for."*

Nevertheless, the role of time, media and the changing Political context--very similar to Kingdon's multiple streams theory (1984)--was commonly believed among Democrats to ensure preventive health ideas would eventually emerge fully in the policymaking arena: *"We're getting closer to a critical mass toward doing something about these things. It's very much an emerging issue that's getting hotter all the time."*

Emerging Ideas: Quality healthcare and universal access

There was a great deal of dissatisfaction with the current healthcare system among all but one participant. The inadequacy of current healthcare policy is widespread in the literature (see, for example, Asch, 2006) and recognized by most participants: *"It's like we're playing whack-a-mole, and then we'll be done. If you can cure these diseases, people will stop dying."*

Both the quality and universal access ideas regarding healthcare have been available policy solutions in Kingdon's policy primeval soup (1984) and Cohen's garbage can model (1972) but they are characterized as emerging ideas here because it is unclear how far they have journeyed into policy, according to Smith's conception (2007). The quality movement has been completely evident in the research base and in policy documents but many of these policy documents come largely out of the Institute of Medicine which one participant described as *"a liberal think tank"* and thus not a credible source of information in the Political context. Similarly, Shi & Singh (2004) find that conservative elements in the Political context (largely the insurance industry and the American Medical Association) have blocked policy progress on universal access six times over the past century. Political considerations, therefore, may explain the failure of these two issues to be taken up on policy agendae. The participants below make a compelling argument, however, that generational shifts may change the situation, indeed the quality agenda is becoming apparent in administrative policy (see for

example, the Deficit Reduction Act of 2005 and the changes to reimbursement for hospital-acquired conditions). As is seen throughout this study, however, health is usually defined in terms of healthcare when considering quality and universal access:

> *"People are starting to be more willing to make some big changes. Medicare is socialized medicine, it's government run. Our parents and grandparents have it, and as the baby boomers age people's attitudes about what it means to get medical care from the government are going to change."*

Similarly, this participant expressed a growing frustration with the healthcare industry but as with several other participants, came to the same conclusions about universal healthcare:

> *"This country is eventually going to move towards a universal healthcare system. Americans will realize we're the only industrialized country without it. People are paying a lot right now and they're realizing they don't get a whole lot for what they're paying and they're not paying it to their local doctor. They don't feel like their healthcare company is giving them any better service than the government would. And as the population ages and gets on Medicare, it takes good care of people and there's not a lot of overhead. It'll become a more attractive option."*

Showing a related emerging theme on the quality of healthcare, this participant combined a population-based approach with an expenditures argument in a way that began to reveal ideas about evaluating healthcare in terms of the whole population:

> *"How many people do you have to put on heart medication for the rest of their lives to avoid how many heart attacks? We treat a tremendous amount of people to avoid a couple of heart attacks . . . What are really getting for it? We could be treating people better and more cheaply than we are.*

> *There's no market for healthcare. People consume healthcare because they have to. There are very few options."*

Emerging ideas: Inequality and population health

Only two participants recognized the conflation of health with healthcare as a problem for conceiving of population health as a policy consideration:

> *"The way it gets talked about publicly, it's pretty tough to have any health policy conversation that is transformational without talking about a population health model or conversation, having the population based health policy conversation that is integrated into a conversation about access and adequate healthcare."*

These two participants represented one end of a dimension in professional preparation among the study panel. Both were health policy consultants with extensive backgrounds in research and management and were highly placed political advisors. In addition, these two participants represented much more sophisticated views about income inequality as a determinant of health: *"To the extent that you want to address inequality of income, health is the tail on the dog."* Three other participants who discussed income inequality represented a more modest understanding of this issue and the idea of population health.

Income inequality, a component of leading population health frameworks, is commonly conceived of as the major determinant of poor population health in developed countries (Lynch & Kaplan, 1999; Wilkinson, 1996) although not commonly in the United States. Several participants, however, had heard of the concept. Some expressed doubt as to whether it was a true association and whether

it could be encompassed in policymaking given Institutional pathways for decision-making, or the constraining role of the American Political context. Yet there was consideration of the idea in the participant panel and recognition of it as an emerging idea:

> *"One of my friends has been involved in inequality as a determinant of health. The question is though what do you do about it? It has to do with the stovepipe effect. The problem is the disjunct between the people who work on income inequality or SES issues and people who work on health issues. If you could see a solution within the healthcare system, that would make it easier. But that doesn't get at the basic driver, if you believe those inequality studies.*

Another participant rather casually dropped the idea of distribution of income, a major tenant of income inequality theories and a determinant of population health, as a reason that population health based policy does not get made: *"Off the top of my head I would say, it's the redistribution of resources among Members' constituencies* [that prevents consideration of social determinants of health in policy]."

Several participants had an inkling of this concept (for example, the related idea that individual income, socio-economic status, and education are related to health status) yet no participants seemed to have integrated the idea into a view of population health or of health policy that was consistent or actionable. Most recognized Institutional pathways and Ideological constraints behind the lack of policy:

> *"If we addressed that issue, everybody's ideological bias will show. We'll say if we raised the minimum wage or provided universal healthcare you could eliminate these biases in the system . . . But then you're dividing Democrats from Republicans over the solution."*

One participant recalled the commonly accepted notion (even in the United States), that wealth equates with health. In his statement, however, he does not recognize relative income inequality as a major source of ill health. And, as all participants tended to do, he conflates health with healthcare as the outcome of low socio-economic status and poor health:

> *"That's an endless debate . . . how best to deliver healthcare to make it more affordable and more accessible to those in the lower SES occupations and I guess that will affect population health."*

This idea of income and health, then, seems to be both an well established and an emerging idea. Interestingly, the Republican participant in the preceding quote clearly makes the connection between health and income, while it is the Democrats who are recognizing more global relationships between income inequality and health. The distinction may lie in the role of government: Republican participants did not see a role for government to intervene in an expansive fashion, while Democrats did. The above participant implied that affordable accessible healthcare need only be provided by government to the poor people. Everybody else has private insurance.

Emerging ideas: Environmental health as community or population health

Environmental health issues were one of the few topics in which policymakers seemed to readily understand concepts of population health as opposed to personal or individual health. Environmental health concepts were conveyed by many participants in terms of climate change and global warming, air quality and pediatric asthma, and agricultural, energy and transportation policies. Rarely, participants recognized energy and economic policy as contributing to environmental health and therefore population health.

> *"The one thing that's missing as a determinant of health is environmental health--in terms of a healthy community or healthy population if you think about it as a whole, if you think about it as a living organism . . ."*

The participant below represented a more expansive view of the role of government and the relationship of environmental health to population health as an emerging idea. Here population health seemed to emerge as part of another more familiar idea—that of global warming. Smith notes the existence of "vehicular ideas" (Smith, 2007, p. 1446) that carry other less well-acknowledged ideas into the policy arena and this may be an example of one such idea:

> *"I think* [population health is] *very important for policymakers because it does encompass so many different aspects, for example, global warming. Population health has a great deal to do with that."*

As above, the idea of population health rode on the coat-tails of environmental health for this participant who was trained in environmental issues. The idea of

population health seemed to gain some traction here--*"I think it means both personal health and community health and also ecosystem health"*--and one wonders if this is because environmental health is acceptable, whereas income inequality is impractical as other participants have noted, in the Political context. Another participant's comment showed important links to the Political context of policymaking as well as the role of leadership, the latter of which was a common idea among study participants, although not seen as clearly in Smith's study (2007):

> *"It hasn't really emerged because we haven't had anybody who has made the leap. A few people have done it . . . but the other side would say this is socialist . . . It's a leadership issue. On either side of the aisle there are 100 Democrats and 100 Republicans who don't go to committees, they don't do anything. So there's really a small group of folks who are in charge. The Republicans have been in charge for 20 years so you're going to start seeing new stuff. Healthy schools, Smart Growth, the Republicans wouldn't allow that."*

Tests of rigor

Several tests of rigor were employed in this study to ensure that the concepts derived from the analysis were credible, trustworthy and potential reproducible. Negative case analyses (Strauss & Corbin, 1998) were performed for participants whose responses were unusual relative to the rest of the sample. Comparisons to the literature were made to ensure that concepts employed and derived had been tested before. Finally, as an extension of Smith's (2007) theory, this study itself serves as an example of reproducibility, albeit within a different context and with some degree of variation.

Negative case analyses

There were four participants whose answers were frequently extreme in terms of the coding dimensions and other participants. Two participants were health policy consultants who were highly placed political advisors. Both had a combination of extensive knowledge of health evaluation services research, political processes, and health policy. They were more likely to understand less commonly understood frameworks (that income inequality determines population health, for example) and more accepting of academic research. Unlike most respondents, they not only recognized the common conflation of health with healthcare policy, but recognized a need for it in the existing Political context. They recognized a need to conflate health with healthcare to move policy questions forward, as well as the role of government in improving health through policies other than those related to healthcare. Most participants seemed to accept the former almost as an implicit cultural notion. Both liberal and conservative participants recognized the latter, but conservatives, not surprisingly, took a restrained view of the role of government.

One participant who was a Congressional staffer was formerly an academic herself and this was reflected in her responses. As with the two health policy advisors above, she was not only familiar with, but read basic and applied health research, although she had a less keen understanding of population health and

income inequality. This may be because her area of academic expertise did not include health policy per se.

A fourth participant's responses reflected the opposite end of several code dimensions from the preceding three. His answers were often superficial and frequently he answered without contemplating the question. His answers always reflected Medicare and Medicaid as the answer to class associated problems of healthcare coverage (regardless of the question). Although he was one of few participants who articulated a concept of income and health, he always conflated health with healthcare in his answers. This conflation was not at all unusual but his dogmatism about the role of government in healthcare in combination seemed to be. In addition, he was the only participant who didn't seem to question whether the information that was delivered by various Sources of information was objective or relevant, but assumed that the policy problem was always clearly understood and that whatever information came in was appropriate and applicable (which posture is aligns well with Kingdon's primeval policy soup (1984) and Cohen's garbage can (1972)). Lilleker (2003), Smith (2006) and others recognize particular difficulties when interviewing elites candidates, in particular elected officials and political appointees. These interviewees tend to be less cooperative with structured interviews in the first instance and less knowledgeable—more likely to stick to political talking points—in the second and third instance. This participant, as it turned out, was not only a highly placed political advisor but a former Republican

speechwriter which may explain his persistent and seemingly simplistic viewpoint, very similar to Lilleker's findings (2003).

None of these four negative cases was far outside the representation of their peer panel members, yet they did push the dimensions of several collective responses to a further extreme than if they had not been represented. Considering that these participants represented 25 percent of the panel, it is likely that they do not actually represent negative cases at all but that they reflect the more extreme dimensions of the range of positions that would normally be found. In addition, the diversity of preparation, age and experience in the whole panel, but in particular in this group of four, is likely to be representative of the policymaking world at large which is not a homogenous group. In particular, two of these four participants were most articulate regarding population health and inequality and may represent a vanguard or *avante garde* of emerging ideas in the policy arena.

Comparisons in the literature

Most of the conceptions employed in this study and the conclusions drawn below were readily available in the literature, although they were often not specific to the health policymaking arena and not for the purpose of informing population health researchers to influence the policy process. Many authors have studied and written of the difficult relationships between research and policy (Lando et al., 2005; Lavis et al., 2003; C. Weiss, 1979). The same relationships were found in this study. Kingdon's (1984) and Cohen's (1972) Multiple Streams and Garbage

Can frameworks of policymaking were readily evident in this study and served as an alternative framework to the assumption of (or wish for, in some cases) an evidence-based policy process. Aubrun & Grady (2004), Lupton (1995) and others find a cultural basis for the way research ideas and the policy process operate. Although the concept of cultural values surrounding health and the role of policymaking were explicitly added to accommodate the American context, the data here show a more purposeful role for cultural values in the Political context, very much like Lieberman (2002) and Kaufman (1998) (see, however, Researcher's Reflections, below). Finally, and most importantly, this study was intended to be a direct extension of Smith's policy study, although in a different context. Consequently, with the exception of those elements explicitly derived from the new context (and a few that were revised because of the new context), virtually every element of the study has been employed in the literature in the recent past. Although the results and interpretations must differ, this study is a successful reproduction of Smith's (2007) grounded theory in the American context.

Researcher's reflections

The role of the researcher in qualitative research is an active one and, necessarily, judgments, concerns and even wonderment arises out of this relationship. As an extreme liberal, I found myself judging the few conservative panel members as quite superficial and not very knowledgeable about health. One

conservative panel member, however, was uniquely refreshing and by her articulate and well-researched viewpoint aided me in keeping my judgments in check.

Two conservative panel members gave extremely long interviews (close to 2 hours each), both wandering far away from the original questions with no apparent focus or target. At the end of these interviews, one participant asked if I would like donate to and work on his campaign and the other asked me out on a date. Clearly other interests were of concern and operating in these two interviews that I did not recognize or control until they came to a close. Although their transcripts were voluminous, these participants nevertheless reflected viewpoints common to the rest and no harm seemed to have come to the data by my inattention to these participants' differing realities.

Participants with health policy expertise of any variety were more likely to believe there to be a prominent role for research in policymaking. Except in one case (see Negative case analysis, above) it was never clear that they actually read and used academic research. They all spoke as if they completely understood the viewpoint and purpose of academic research for the most part, but revealed in subsequent questioning a lack of understanding of the details of research and the research process as a researcher would understand it. A more structured interview, perhaps with questions about which journals or what studies they had most recently read, might have elicited more of the 'truth' here. Yet the obvious disconnect between research as researchers understand it and policymaking was both

concerning and intriguing and understanding the quantitative relationship seemed less relevant in this context.

Some participants waxed eloquent with little or no prodding. Others were very reticent. I had some concern that the more eloquent panel members would overwhelm the study conclusions and that I would not be able to draw out the ideas of the more reluctant participants. Overall, however, the properties coded for each participant were consistent and with few exceptions (see Negative case analysis, above) they all expressed variation within the established dimensions. I was concerned about quantifying numbers of particular responses because some participants were far more articulate than others and the nature of the semi-structured questionnaire meant that I could not be sure that I elicited all that every participant thought about a particular issue or question. Instead, I tried to recognize issues mentioned, if not elaborated, by all participants and use the more articulate answers to reflect the ideas of the less articulate. Answers that were not represented by every participant were subject to Negative case analysis.

Finally, there were some silences and contradictions in the data that evoked some wonderment. The whole panel commonly conflated health with healthcare, regardless of whether participants recognized a difference between the two concepts in earlier responses. Megan McArdle (Body Counting. *The Atlantic Monthly*, April 2008) describes it this way: "some research indicates that the emotion precedes, and governs, the higher cognition—that logic is, literally, an

afterthought" (p. 28). Aubrun & Grady (2004) describe the same lack of logic as an unexamined cultural value that may be commonly expressed by "people who ought to know better." Panel members' logical processes seemed to work under some circumstances but when it came to the issue of healthcare, no other viewpoint, no matter how evidence-based, was spontaneously entertained. Although the initial purpose of the study was to examine the influence of American cultural individualism as the root of health policy in the U.S., this proved infeasible because the cultural aspects of the study were elusive of definition. In the study, the cultural value that was clearly articulated (but ultimately described as a political maneuver by participants) was that of individual responsibility. Perhaps the conflation of health with healthcare should have been the cultural value requiring explication in this study and not American individualism, although the concepts are related (see, Deborah Lupton, 2003; Starr, 1982). Regardless, the failure of logic is an important finding (although not fully explicated here) that has implications for the relationship of research to policy. Population health researchers may be operating on incorrect assumptions and in the wrong cultural context if they insist, as many do (Lando et al., 2005), that policy be evidence based and that policymakers want it to be so (Graham, 2003).

CHAPTER VI: DISCUSSION

The hypotheses

Two hypotheses and four supporting statements were tested in this study and based on them, theory statements were derived from the data. The first hypothesis, that population health ideas are not widespread in the health policy process, was confirmed and unsurprising. In Smith's study, the British government's philosophy of inequality as the major determinant of health informing health policy was marginally effective at influencing population health ideas in the policy arena. The dearth of such ideas in the American context is not surprising given the complete absence of such philosophy here.

The supporting hypothesis that policymakers are aware that social, political and economic structures influence health but do not frame health policy in terms of such determinants was also confirmed in this study. All participants recognized the relationship of income to health, fewer recognized the relationship of income inequality to health, even fewer recognized the relationship of class structures to health, and no participants articulated the relationship of, for example, racism to health. Race and racism are well-researched determinants of health but no questions were included in this survey regarding such. Participants spontaneously mentioned income and class determinants (no questions regarding this were included in the survey, either).

A second supporting hypothesis, that academic research has a limited relationship to the policymaking process, was similarly confirmed. According to participants, research plays a utilitarian role in policymaking, usually that of confirming pre-existing policy solutions. The concept of *"research advocacy"* as a solution to the limited use of research in policymaking, however, came out of this discussion and will be discussed further below (see Implications, below).

Finally, the third supporting statement for the first hypothesis, that entrepreneurs' influences alter the translation of population health determinants research into policy ideas, was confirmed although not in Smith's original conception (2007). Smith articulated a fairly direct relationship of influence by certain people and processes to market the idea of health inequality in the British study, but this direct association on health policymaking was not clearly evident in this study. Respondents articulated the influence of leaders on policy ideas in general in the policymaking arena, the effect of media on policy actions in particular, and they spoke of some cultural ideas associated with policymaking. Their utterances about health, however, were more limited. One participant recognized *"accidental"* influences on health policy—health effects that may happen as an unintended consequence of, for example, employment policy. Some research ideas had influenced population health ideas in the policy arena, but participants had difficulty articulating them without prompting. There was a *"significant fog factor"* associated with the idea of population health and often

participants' related research ideas could be characterized as individualistic, not necessarily population-based (as with obesity, for example). Although their discussion was limited on this topic, participants expressed some emerging or "vehicular" ideas (Smith, 2007, p.1446) to population health (see Implications, below) that are subject to entrepreneurial processes and may reflect an early version of an evolving idea of population health.

The second hypothesis, that Institutional Pathways and the Political context constrain the development of emerging ideas into policy, was also confirmed, although again not in the fashion conceived of by Smith (2007). Institutional Pathways played a dominant role in Smith's conceptual framework, but in the American context it appeared to exercise *the* dominant influence on the policymaking process, constraining the ways in which research could be used, policy problems and solutions conceived, policy processes controlled, and finally, the ways in which policy is or is not implemented. The influence of the Political context was as expected in this study as in Smith. Policymakers concerns with re-election, the philosophical inclinations of the Executive and the political phenomenon of the "*crisis du jour*" dictated the breadth of policy thinking in general.

The final supporting idea of the second hypothesis, that American health policy is driven by cultural individualism, was not confirmed. This element was added to the Ideology element of Smith's conceptual framework (along with

Institutional Pathways and the Political context) based on a commonly held assumption that the American cultural ideal of individual responsibility is reflected in policy. Many authors elaborate upon this concept as it relates to policy (Deborah Lupton, 2003, for example) but a more nuanced view, inconsistent with individualism as the dominating cultural influence, was expressed by participants. At one extreme, participants espoused the traditional *"Lone Ranger"* philosophy as influencing the policy process. At the other extreme, participants viewed American individualism as one aspect of American society that had been marketed effectively by the conservative Executives and Congresses of the past 10-20 years. American individualism had been essentially used as a political tool in this view and was likely to be unseated in the coming national elections. This variation in belief is not fully consistent with an unexamined, widely held common cultural value (Angrosino, 1998; Aubrun & Grady, 2004; A. Ervin, 2005). This finding raises the interesting question that cultural value as an explanation for the status of American health policy in general and for the influence of research on health policymaking (or lack thereof) in particular is not complete.

Derivation of theory

According to Strauss & Corbin (1998) a theory in the qualitative grounded theory tradition is "an explanatory scheme or concepts related through statements of relationship, which constitute an integrated framework that can be used to explain phenomena in terms of who is involved, what actions they take where and

when, and finally why they take these actions" (p. 25). Denzin & Lincoln (2000) say of Strauss & Corbin's style of grounded theory development that it "provides not only understanding but prediction" because of the use of systematic methods to "discover reality and to construct a provisionally true, testable, and ultimately verifiable theory of it." (2000, p. 524). Similarly, the use of tools to improve validity and reliability (generally referred to as rigor in qualitative methodologies), and employing hypothesis testing can lead to "confirmation or disconfirmation of the emerging theory" as well as reproducibility. (2000, p. 524). Yet there is some argument in the literature (see, Denzin & Lincoln, 2000; Patton, 2002, for example) that Corbin & Strauss' quantitative characterization of qualitative methods theory development is desirable or justifiable. Corbin & Strauss' more restrictive method of grounded theory has been employed here yet Denzin & Lincoln's explication of theory as "truth, but with a small 't'" is appealing to the novice qualitative researcher as theory that is "modifiable as conditions change" (2000, p. 524). Given the rigor with which this study was performed, the existing foundation in the literature for virtually all study concepts and findings, that it is an extension of a previously derived grounded theory, and the confirmation of all but one of the proposed supporting hypotheses, allows for some prediction and a predictably dry (some participants even said *"ho hum"*) set of theory statements as follows:

> Population health ideas are not widespread in the American health policy process. Although policymakers are aware that social, political and

economic structures influence health, they do not frame health policy in terms of such determinants. Academic research has not shaped population health ideas directly in the policy arena because research data, in general, is lost in the translation to policy. Policymakers often use research for purposes of defending or deflecting existing policy stances but because research is not considered relevant, timely, accessible or simple enough to be applied in the policy process, policymakers tend not to use it for identifying policy problems or their solutions. The institutional pathways of American government produce the context and requirements of the policy process and exert the greatest influence over the policymaking process. Similarly, although many policymakers articulate a cultural tradition of individual responsibility as one foundation of governance, American cultural individualism is used in the political context as a tool to further specific conservative policy agendae, including health policy.

"Ho hum" though the theory may be, it suitably explains every instance of participants' utterances, is completely grounded in previous literature and extends Smiths' theory well into the American context. In consequence, it is likely to be predictive and reproducible. Two important elements, not included in the derivation of theory, but offered as solutions to the problem of policy uninformed by research and ideas constrained by the policy process arose out of this research and require mention (see, Implications, below).

Limitations of methods

There are several limitations to this study and its methodology. The participant panel was not randomly selected, nor does it necessarily represent a wide range of participants. The resulting data may be biased by this method of participant selection. In addition, the original study on which this study was based was performed in Britain (Smith, 2007) and the interview guide, the Conceptual Framework and the interpretative frame were developed within that particular social and political context. Although the concept of health inequality used in the British study is closely related in the scientific literature to that of population health determinants used in the current study, it is possible that these two concepts are viewed differently in the two different study populations (British and American). It is clear that the participant panel had limited familiarity with concepts of population health which is a significant and not unexpected finding. It does, however, limit the interpretation of population health ideas in the American policymaking arena. Finally, cultural frames and policy research in particular and the qualitative methods used here in general cannot be subject to customary quantitative methods of protecting against bias and confounding. Nevertheless, the meaning of ideas derived from this approach is capable of providing greater insight into the problem of ineffective health policy than are more quantitative methods. In addition, several strategies have been employed to minimize difficulties with transferability and application in the field (see, *Credibility,* above). T.S. Eliot's

words are appropriate to this study: "[w]e had the experience but missed the meaning, and approach to the meaning restores the experience . . . . In a different form." (in, Janesick, 2000, p. 394)

Implications

The conception of policy change as a Kuhnian paradigm shift in which theories lose salience as anomalous research and data coalesce has not been made manifest in spite of the expanding mass of population health determinants research, growing health disparities and stagnating population health gains in the United States. Failure to understand policymaking as a process of ideas influenced by culture, institutions, politics and the marketing of ideas hampers the translation of research into policy and ultimately to improve population health. Hall (1993) and Kingdon (1984) contend that without relevant ideas swimming around in a "primeval policy soup," there is no opportunity for appropriate policy to be made. Population health research may have been *"lost in the translation"* to policy in the United States through Institutional Pathways and the Political context, as both this and Smith's (2007) study revealed, but it is also lost through public health's allegiance to the research process and its failure to understand the importance of ideas in the policy process (Rist, 2000; C. Weiss, 1979). This study explored the presence and character of ideas of population health determinants in the policy arena and illuminated the influences of American culture, politics and institutions on health policy, bringing some transparency to an opaque process. To improve

population health, public health researchers must understand how research is translated into ideas, how ideas gain traction in the policy arena, and how to market those ideas to achieve better population health policy. It is hoped that this study will provide a basis for improving such understanding and, through its findings, provide the tools for public health to promote effective population health policy change in the future.

Although the theory derived from this study is predictably constrained in the American context, there were two implications postulated by participants that are important and require explication in the future. Population health researchers and researchers in general tend to hold a logical way of thinking and this thinking extends itself to the way in which researchers propose that research informs policy: directly and logically. What researchers fail to understand is that information does not *"sell"* itself (Lando et al., 2005) nor is it likely to inform policy in a rational way (C. Weiss, 1979). Participants in this study suggested a type of *"research advocacy"* akin to lobbying that would aid researchers to be the *"go to"* source when research or information for policymaking is needed. Lando (2005) recognized the idea in her study of international smoking policy as does Lomas (2000) in his conceptual framework of the policy process. In this study, however, one participant actually practices as a researcher turned policymaker and, by her own report, has been able to influence policy in her realm of expertise with some success. A case

study of this participant and others like her might aid researchers in understanding the policy process better and, more importantly, how to better influence it.

The idea that research institutions should advocate for their research agenda and findings in Congress arose in this participant panel as well. Harvard was given as an example of an institution that lobbies Congress successfully over research findings and is a model that could be emulated by other institutions. Interestingly, one of the major research centers of population health and social epidemiology is located at Harvard. The single participant who recognized the term *"income inequality"* is from Boston and recalled having heard the phrase from a *"researcher friend."* Personal relationships such as this one and that represented by another participant's researcher friend being asked to testify before Congress, although anecdotal, may represent an alternative pathway by which research is translated into ideas in the policy arena. It is not generally researchers' inclination to use personal or lobbying tools to inform policy, nor necessarily research institutions' mission to market policy ideas. Yet given the dearth of research ideas or even understanding of the utility of research in the policy arena discovered in this study, it would behoove researchers to recognize alternative means of influencing the process, studying them, and attempting to develop researcher/policymaker relationships further.

The other important idea with implications for the future of population health ideas in the policy arena and worthy of further study, is that of "vehicular"

ideas (Smith, 2007, p. 1446). Smith mentions these ideas as those that carry another related idea into the policy arena. These ideas can be viewed as political compromises or ways of marketing ideas that are palatable and they were mentioned by participants in this study as well. These ideas are "pitched [by entrepreneurs] to avoid obvious conflict with government ideology" (Smith, p. 1446) and have resulted in the idea of life course stress being taken up in health disparities policy language in Britain, but not the material-structural inequality language of the same theory (although they represent identical phenomena). In this study, the vehicular idea that arose was environmental health, although the idea is not intentionally marketed by entrepreneurs in the way that Smith's life course stress idea was. Although not without ideologic controversy, concepts of environmental health, global warming and climate change arose commonly in participants' speech in this study and many participants were able to relate concepts of population health to them. Environmental health seems to represent an *"accidental"* population health policy idea and a vehicular notion, employed by some participants as a link between their conceptions of individual and population health. Further study of the role of vehicular ideas in policy development would aid researchers in understanding how research finds it way into policy and how best to shepherd it there more effectively.

Given the findings of this study, there are a number of practical actions public health researchers can take to ensure that health policy is informed by

population health research. Participants to this study unanimously and repeatedly espoused the need for timely research, translated into lay language and reduced to a few relevant points. Public health researchers, by virtue of their training in epidemiology and a professional obligation to disseminate results of outbreaks (for example), are generally skilled at translating scientific data for the public but they have not commonly used this skill for policymaking, with the exception of those institutions that have marketed themselves to legislators (Harvard, in the example given by participants). Turning the epidemiology tool of public dissemination to population health research would be an easy step for researchers. In addition, however, as this study made clear, policymakers do not read the research literature. It will be necessary for public health researchers to publish, not only in their professional journals, but to translate their studies into lay language and market them in the popular press. Newspaper coverage of issues has been shown to influence policymakers more than the general public, and indeed the New York Times was a major source of policy ideas for policymakers in this study. In addition, the local press, because of its accessibility to constituents, was cited by participants as a source of pressing policy issues and ideas as well. Press releases to major and local journal outlets regarding population health research findings could be a useful next step when a researcher has a manuscript accepted to a peer reviewed journal and, if done consistently could result in widespread marketing of ideas from a credible source of information (the media).

The need for translated research synopses was noted over and over again by participants in this study. More importantly, participants desired that summarized research findings were directly relevant to policy problems and solutions already being addressed in the policy arena. Participants consistently noted that academic research is not currently relevant to solving policy problems. The question of relevance is clearly vital to the translation of population health research into policy. Yet public health is itself a policymaking institution. That its research products are not considered relevant to policymaking is a challenge to the profession (see , Review of the Literature, above in relation to this challenge and the relevance of public health policymaking in general). The implication of these findings is that public health researchers must tailor their research to address those problems that currently challenge policymakers. To incorporate a consideration of policy relevance into the development of research questions and study design clearly has implications for research funding, the speed with which studies must be completed (to be timely for policy needs), and, most controversial, the interests of academia in general and of academic freedom in particular, none of which can be addressed within the scope of this paper. However, a practical way forward may be to identify and study those vehicular ideas that may bring population health research closer to the policy arena. For example, current research on place of residence, environmental pollutants and childhood asthma may foster the vehicular idea of environmental health. In addition, public health researchers may need to collaborate

in studying phenomena outside their usual domain, both to foster those vehicular ideas that link individual and population health ideas in the policy arena, and to promote *"accidental"* population health policy. For example, recent research on the effects of high neighborhood unemployment rates on the epidemiology of trauma might be useful to *"whoever does unemployment policy."* Clearly this type of research, to gain traction in the policy arena, must be performed not only in collaboration with research disciplines other than public health, but in direct response to current policy problems (and be translated and marketed as above). Agricultural policy, economic policy, and environmental policy, for example, are all determinants of population health. Advocating for those policies that have good population health outcomes, regardless of whether they are within the obvious purview of population health research, may also be a workable vehicular approach to evidence-based health policy. The results of such research, however, may only *"take"* in a different Political context. Research and policy solutions may well be ignored or marginalized as policy problems or solutions in the current context. To be relevant to policymakers, then, researchers must not only understand what is on the policy agenda, but also what political opportunities and palatable vehicular ideas exist in the current Political context. To draw a final parallel with the implications of Smith's (2007) study, environmental pollution, residence and childhood asthma research may have more relevance in the coming Political context than in the current one.

The question of the dominating influence of Institutional Pathways and what researchers may do to overcome constraints on population health ideas in the policy arena is a final and not readily solved problem with implications for public health researchers. One implication is that public health researchers may need to understand, accept and use Institutional Pathways in the same way that the more pragmatic participants to this study have done:

> *"First you have to acknowledge there is a problem. Amongst policymakers, (a) that there is a problem, and (b) that they want to address it. If they want to address it, it comes down to the politics of it and if there is a solution available. In our offices, we come up with a problem or the senator would say, 'here's the data and here's how we'd like to approach it, how would you feel about spending time and money on it?'"*

A parallel approach for public health researchers' might be to

(1) recognize a problem and develop associated vehicular ideas (if any);

(2) explore the Political context for opportunities conducive to introducing relevant (translated) research ideas; and

(3) cultivate leaders, patrons, and interest groups willing to spend time and money on the relevant research idea and policy solution.

Ultimately, the implication of this study is that to be effective, public health researchers must step outside the research domain to act as advocates for their findings and to improve population health through policy.

Final conclusions

"Nothing comes to mind, no."

Ironically, in spite of 30 years of compelling research, very few ideas of population health determinants are found in the American policy arena:

> *"As you translate data what you're up against are cultural norms around personal responsibility and self reliance and everything else that tends to get in the way of compelling data and policy solutions that are being raised around that data."*

Institutional Pathways and the Political context alter the translation of research into policy:

> *"The other approach [social determinants] rubs a lot of people the wrong way. To get into a discussion of poor versus rich, maybe we should be focusing on economic equality more than just access to healthcare,"*

as do Entrepreneurial processes:

> *"it's kind of a mysterious* [how issues get on the policy agenda].

Although policymakers voiced ideas of changing policy:

> *"As a country we have to look for the common good--easy to say, hard to do—,*

with a few exceptions such as this,

> *"The one thing that's missing as a determinant of health is environmental health--in terms of a healthy community or healthy population if you think about it as a whole, if you think about it as a living organism . . ."*

they spoke within the confines of a single, constrained policy domain,

> *"which should be a minimum level of healthcare."*

Clearly, the evidence of population health determinants is *"lost in translation"* to policy and researchers must find a way to influence the policymaking process if they are to have an impact on health through their work.

The findings of this study are particularly relevant at a time when American health policy is failing (Bezruchka, 2001; Evans & Stoddart, 1994) and traditional scientific methods have proven largely ineffective at influencing such policy. Moving away from a conception of policymaking as influenced directly by scientific research and understanding the influence of cultural definitions of health, institutions and politics on policy may release researchers from older misconceptions about how policy is made. Public health practitioners, researchers, and policymakers may then be able to influence processes of idea generation and promulgation toward policies that address the determinants of population health, and with hope, contribute to improvements in the health of the population.

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Appendix A

Interview Guide

'Lost in Translation: Population Health Ideas in the American Policy Arena'

Opening script

Thank you for agreeing to give this interview.

I'd like to begin by saying a little bit about the research project and then I'll explain a bit more about this interview.

As you know, the project focuses on the presence and character of population health ideas in the American policy arena. It is informed by two years of doctoral research and the advice and guidance of experts in the field at Portland State University. This study will involve a series of interviews with policymakers, staffers, population health researchers and experts, in general, and a group of legislators and staffers who became involved in drafting a population health bill in 2006/07.

I am hoping that interviews with people who are directly involved in policymaking will provide some insights into the relationship between research and policy. In today's interview, I am hoping to find out a bit more about population health ideas in the policymaking process for health inequalities in the United States. I am particularly interested in the presence and character of those ideas and by which sources of information they are influenced.

If it is OK with you, I would like to digitally-record this interview. After the interview, I will transcribe the interview in full and e-mail you a copy of the transcript. If you feel you would like any of aspects of the interview not to be included in my research, or if you feel I have misunderstood anything that you said, you will have the opportunity to suggest changes to the transcript. I will treat our conversation as confidential and will hold the transcript securely.

Your participation is, of course, entirely voluntary so if at any point you want to terminate the interview, or turn off the recorder, that is fine. The interview should not last much more than half an hour.

Have you had time to look over the consent form I sent you before hand? Are you happy to sign it? [Ensure form is signed]. Do you have any questions about the study or anything else before we start?

Section 1 – Understandings of health:
1A) There are many ways in which people think about health. What does 'health' mean to you? How might you define it?

1B) Is there a difference in your mind between one's personal health and the health of communities or populations? How might you describe that difference?

1C) The World Health Organization suggests 10 things that make populations healthy or unhealthy. From this list, which would you call the top three most important determinants of population health? [Use index card here]

- Socio-economic or occupational class
- Stress
- Early life experiences
- Social exclusion
- Work
- Unemployment
- Social support
- Addictions (including tobacco)
- Food
- Transportation
- Are there some missing from the list? What would you add?

Section 2 – The policymaking process:
1A) Let's move on now to policymaking: As you know, I have chosen population health as the focus of this research but, before we discuss this, I want to ask whether you think this *is* a big issue for policy at the moment or whether there are other, more pressing issues?

- *If they think PH is a big issue:* Why do you think population health should be a major issue on the policy agenda in the United States?
- *If they think other issues are more important:* Which issues and why?

1B) If an issue like population health [or participant's other issue above] is acknowledged as a policy 'problem' that requires action, what happens next?

- What kind of information is sought and to whom do you turn for such information?

1C) In terms of official policy documents (White Papers, proposed bills, etc.) relating to population health [or participant's other issue above], who would decide that a new policy is needed?

- What would you expect the driving factors behind the desire for a new policy to be?
- Who directs the content of official documents and who would be involved in the writing process?
- What role would evidence or research play in informing the direction of a new policy document?

1D) Health in general and population health in particular, seem to be 'covered' by many governmental departments. How might the cross-departmental nature of these issues lead to difficulties in formulating policy?

1E) Having discussed some of the factors that are likely to get an issue onto the policy agenda, can you tell me which factors are likely to lead to an issue maintaining high-level policy interest?

- *If they haven't already, mention the media / pressure groups, ask*: What role do people working outside policymaking communities play in the policymaking process?

Section 2: The role of population health research in the policy process:

2A) If it is decided that more evidence is required in relation to health or population health, are there particular experts from whom advice is sought?

- Do you know who might be contacted specifically by the policymaking departments?
- Through what processes do particular individuals become known to policymakers as 'experts'?

2B) What is the role of *academic* research in the policymaking process for health or population health?

- How / where do policymakers find out about academic research and ideas?
- What factors are likely to lead to research being picked up and used in policymaking?
- How does the role of academic research differ from other kinds of research and information used by policymakers?

2C) What do you believe the role of academic research should be in relation to policy?

2D) In terms of the available research relating to health or population health, to what extent do you believe this kind of information is informing policy?

- Do you think most policymakers have a good awareness of the available research?
- Are there any specific research ideas which you believe are particularly influential for health or population health at the moment?

2E) What are the difficulties in using the available research to inform policy?

2F) There now seems to be a great deal of research revealing social, political and economic circumstances as important determinants of population health, yet it doesn't seem as if there are many specific policy initiatives focusing on this area. Why do you think this might be?

2G) One of my key interests is the way in which lifestyle-behavioural ideas seem to have dominated the health policy agenda for so long - Why do you think this approach to health has been so enduring?

- Can you think of any ideas powerful or practical enough to dislodge lifestyle-behavioural approaches from the policy agenda?

2H) What do you believe is most likely to facilitate the transfer of research ideas onto the policy agenda?

Section 3 – Concluding questions:

3) We're almost at the end of the interview and I'd like the chance to ask you whether you feel that there's anything important that we haven't yet touched on, or whether there's anything else you'd like to add to what you've said already?

- Are there any papers/documents you think I ought to read?
- Is there anyone you think I ought to contact in relation to this study?
- Can you think of anyone who would like to participate in this study?

Thank you very much for taking the time to answer these questions. Before I go I would like to ask you a few final questions which are designed to help me reflect on the research process to improve it in the future, as well as establish what type of feedback, if any, you would like me to provide you with at a later date:

- Would you like to comment on the way this interview has been conducted?
- Would you like to receive feedback about the outcome of the study?
  - If yes, how? (e.g. via email/telephone) ***NB Check appropriate contact details.***
- OK, that covers everything I wanted to ask you today. Do you have any questions about the study that you would like to ask me?

Thank you once again for your input. You should have my contact details from my emails to you. If you think of any questions you would like to ask, or if you think of anything you would like to add to what you've said today, I would be delighted to hear from you.

Appendix B

Informed Consent

You are invited to participate in a research study conducted by Maria Sistrom from Portland State University, Department of Public Administration and Policy. She hopes to learn about the connections between ideas about population health and their effects on policy development. This study is being conducted in partial fulfillment of Maria Sistrom's doctoral degree, under the supervision of Stephanie Farquhar, Portland State University, School of Community Health.

You were selected as a possible participant in this study because you are a public health leader, a policymaker, legislative staffer, or policy expert. If you decide to participate, you will be asked to answer at length some questions regarding health, population health, health policy, and policymaking in general. Your answers will be taped and transcribed. Although the group that you belong to (policymaker, area expert, staffer) will be identified, your personal identifying information will be removed at transcription so that you cannot be personally identified with your answers.

While participating in this interview, it is possible that you may feel uncomfortable answering some questions or that you may be inconvenienced by the amount of time needed to answer (the interview should take approximately ½ hour). Your answers will be kept confidential, as described above, and every effort will be made to perform your interview in an efficient fashion. You may also choose to terminate the interview or revoke your consent to be interviewed at any time. You may not receive any direct benefit from taking part in this study, but the study may help to increase knowledge which may help others in the future.

Any information that is obtained in connection with this study and that can be linked to you or identify you will be kept confidential by removing identifying information from transcribed data. Your participation is voluntary. You do not have to take part in this study, and it will not affect your relationship with Portland State University. You may also withdraw from this study at any time without affecting your relationship with Portland State University. If you have concerns or problems about your participation in this study or your rights as a research subject, please contact the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, Unitus Building, 6th Floor, Portland State University, (503) 725-4288 / 1-877-480-4400. If you have questions about the study itself, contact

Maria Sistrom at 3455 SW US Veteran's Hospital Rd, Portland, OR, 97239, or (503) 494-3869.

Your signature indicates that you have read and understand the above information and agree to take part in this study. Please understand that you may withdraw your consent and the taped interview at any time without penalty, and that, by signing, you are not waiving any legal claims, rights or remedies. The researcher will provide you with a copy of this form for your records.

_____ _____

Signature Date