Ahmad Wesal Zaman
PhD student at ISE department
Roskilde University

Project Summary

Anti-Microbial Resistance (AMR) as one of the main creeping transboundary crisis of 21st century causing 70000 deaths per year now and with predictions of costing us 100 trillion USD from Global GDP and around 100 million fatalities annually until 2050 has yet to be studied in depth in social sciences. The field of AMR is dominated by medical science and there has been limited work on the filed from social sciences perspectives, whereas the political dynamics of AMR have not been subject to any in-depth analysis yet. As far as policy processes are concerned, AMR has been limited to national and local level policies and despite several outbreaks globally and the disastrous nature of the phenomena, it has not dominated the global political agenda.

This PhD project addresses an existing literature gap and it will investigate dynamics of global policy making in relation to transboundary threats and disasters through a political science lens. The cases will include one of climate change (CC) - namely, CO2 emission and antimicrobial resistance (AMR). More specifically, the PhD project will compare the global policy trajectories for CO2 emission with the current AMR initiatives. The PhD project will include combined research methods and a most similar case comparative research design using Punctuation Equilibrium Theory (PET) combined with Collective Action Theory (CAT) (Sabatier and Weible 2014; Reisman 1990).

Methodology and Methods

While using a most similar comparative research design and a combined method – namely, quantitative and qualitative methods, the project analysis will be conducted on data obtained from archival materials of UNEP and WHO, interviews of; AMR practitioners, policy entrepreneurs and AMR Policy advocates as well as secondary sources. The project will rely on archive materials and interviews mainly for qualitative analysis purposes, henceforth combine and then apply qualitative and quantitative methods by using two types of approaches - namely, large-N Covariational Analysis (COV) (quantitative) and Causal Process Tracing Analysis (CPT) in Nested Approach manner (Blatter and Haverland 2012). SPSS will be used as the main software to conduct the analysis and a
The qualitative analysis will also be used complimentary to fill and explain the gaps remaining in quantitative statistical analysis.

In this paper the focus will be to present and discuss only qualitative methods implied in the PhD project as quantitative aspects of the project is beyond the focus of the PhD course that this paper is intended for. Though, methods include all factors that impact our systematic method of gathering evidence and our interpretation of that evidence (Eplattenier 2009), this paper only presents some of the factors – not all, as it does not include quantitative methods part.

Origins of Mixed Methods

Mixed methods have developed conflicts between qualitative and quantitative research (Tashakkori and Teddlie 2008). Quantitative research (i.e., a positivist paradigm) has historically been the cornerstone of social science research. Purists call for researchers to “eliminate their biases, remain emotionally detached and uninvolved with the objects of study and test or empirically justify their stated hypotheses” (Johnson & Onwuegbuzie, 2004, p.14). Qualitative purists support a constructivist or interpretivist paradigm and “contend that multiple-constructed realities abound, that time- and contextfree generalizations are neither desirable nor possible, that research is value bound, that it is impossible to differentiate fully causes and effects, that logic flows from specific to general and that knower and known cannot be separated because the subjective knower is the only source of reality” (Johnson & Onwuegbuzie, 2004, p. 14). The beginning of Mixed methods is associated with work of Campbell and Fiske (1959) on triangulation, while later in 1980s the study actually found real flow (Maxwell 2016). There still however exists disagreements over the historical origin of mixed methods as some authors like Alastalo (2008), Brewer and Hunter (2006) and Johnson and Gray (2010) argue that early studies of mixed method can be traced to Charles Booth (1892). The general historical debate over the origins of mixed methods have always included what is considered to be qualitative and quantitative research and whether what is argued to be a mixed method is indeed one. However, the mixed methods used in this PhD project are based on studies of Lijphart (1975), Blatter and Haverland (2012) and Engeli et al. (2014) which are considered modern studies on Mixed methods.
**Most Similar Comparative research design**

A most similar comparative research design has been chosen to study global dynamics of AMR as there are several similarities between AMR and CC’s CO2 emission aspect. Both of them are future threats with consequences that are already being felt today. They are both characterized as super wicked problems since any solutions to them entail high complexities as well as the multiple conflicting value systems involved in containing the threats (Levin et al 2012). They both produce other transboundary disasters such as pandemics and climate-induced disasters. Finally, both challenges suffer from the tragedy of the commons as benefits from antimicrobial medicines and also for instance coal use is local but the costs are global.

While comparative case studies analyze patterns of variation in the dependent variables with the variation in the independent variable across cases, CPT is used to look at each compared case’s mechanisms and processes.

**CPT**

Collier et al. describe a causal-process observation as “an insight or piece of data that provides information about context, process, or mechanism” (2010: 184). CPT takes the relevance of timing, interaction effects, context and configurational thinking in theory and methodology into consideration. Configurational thinking implies that we start our analysis with the following assumptions: “(i) social outcomes are the result of a combination of causal factors; (ii) there are divergent pathways to similar outcomes; and (iii) the effects of the same causal factor can be different in different contexts and combinations (causal heterogeneity).” (Engeli et al. 2014:64). A CPT approach mostly focuses on causal conditions and not just variables, however, the variable focus is more dominant in COV – (not part of this paper). CPT is a method of analysis that focuses on the process and mechanisms that link causes and effects within each specific case. (Engeli et al. 2014: 60). Both of the cases selected for this PhD project have had causal conjunctures and causal chains that have led to different policy trajectories and these causal conjunctures and causal chains are the matters of interest as they provide a compelling storyline for global policy outcomes of the two. As this study built on ontological assumption that the nature of the social world entails a causal structure. This focus on causal aspects is also a strategy to align the ontology and methodology of the study. The notion of the study will be mostly relying on path dependency, which focuses on the importance of time and timing sequences. Path dependency and causal conjunctures will help identify the stasis and change in global policy of AMR over the last 4 decades.
Archive Research

According to Roe (2005) Archives are permanently valuable records of organizations, businesses, and government (records)) main functions are: acquisition appraisal arrangement and description preservation and storage, reference and access outreach activities. Studying archives will enable the research to get as close as possible to what actually happened during the last four decades in terms of global policy processes to both CO2 emission policies and AMR. Specifically two archives of UN organizations – namely, WHO and UNEP will be studies to trace all the events that have led to two different policy trajectories. This methods relies on sources of information and as argued by Kirsch and Sullivan, it is not a systematic method of gathering evidence. However, in this case it is a relevant method to imply. Archival research methods include a broad range of activities applied to facilitate the investigation of documents and textual materials produced by and about organizations. In its most classic sense, archival methods are those that involve the study of historical documents; that is, documents created at some point in the relatively distant past, providing us access that we might not otherwise have to the organizations, individuals, and events of that earlier time. However, archival methods are also employed by scholars engaged in non-historical investigations of documents and texts produced by and about contemporary organizations, often as tools to supplement other research strategies (field methods, survey methods, etc.). Though there are different types of archive research methods such as historiographic tradition and new archivalism, but this study will take an ecological approach of archive studies. The ecological approach is far more formal in its orientation. The empirical strategy is not based on nuanced readings of the actions, understandings, or careers of individual persons, groups, or organizations. Rather, the measurement of the degree of similarity and difference of specified structural characteristics among a large number of organizations provide evidence and insight. However, the use of archival materials is never innocent or transparent. The conditions of their production and of their persistence mean that materials often offer partial or contradictory evidence for an interpretation. Recognition of the inherently political and residual features of archival material is thus a central methodological concern, the basis for significant decisions about design and analysis. (Baum 2001).
Collecting interview data

The PhD project also builds on semi-structured interviews – mainly formal (Berg and Lune 2012). The semi-structured interviews will include a number of predetermined questions and special topics, where the questions are asked at each interview in a systematic manner, but with room to maneuver for both interviewer and interviewee.

Data analysis and data interpretation

To be written

Note: I am still in early stages of my PhD project and this paper only gives a snapshot of what I will be doing and these selected methods might drastically change as the research continues.