

Applying Complexity to Qualitative Policy Research: An Exploratory Case Study

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Abstract

The purpose of this research is to explore a complexity science paradigm shift, as it relates to the role, relationship, and methodological implications of complexity in qualitative policy research. The study investigated whether and how each of the major qualitative methods encompasses complexity. To better understand the role of complexity science in policy research, this exploratory case study investigated the differences, similarities, and synergies between qualitative paradigms and a complexity paradigm, by means of a tabular side-by-side comparison. The study found a majority of the qualitative inquiry strategies used for interpretation and analysis in policy research matched the elemental structures and functions of complexity. Yet the qualitative methods did not account fully for complexity. This investigation found a complexity paradigm can augment, supplement, subsume, and improve research in policy, if effectively applied. Additionally, complexity can be triangulated into qualitative inquiry as theory, data, and methodology. Finally, complexity provides a unique context in which to think about policy problems, interpret results, and answer research questions in new ways. This research puts forth foundational arguments that, a complexity science paradigm provides valuable theory and systematic methods for policy research, when conducting qualitative inquiry. This allows for capturing more complexity than with solely traditional research tools.

A researcher's goal may not be to capture more complexity. Yet further research is warranted to define and develop the appropriate role of complexity science in qualitative inquiry research in policy.

Key words: Complexity, complexity science, qualitative inquiry

Introduction

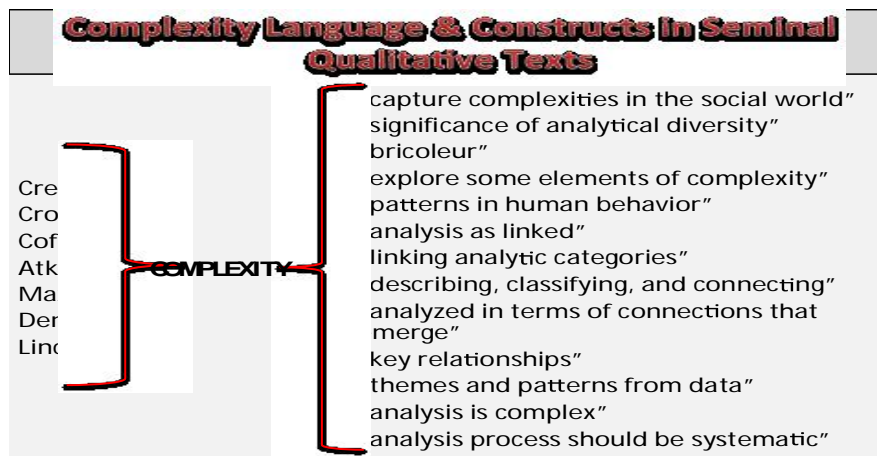
A major goal of policy research should be advancing scientific inquiry toward achieving greater understanding of the interconnected systems of policy replete with complexity. Complexity can be understood and acted upon as a science, metaphor, approach, methodology, tool, and even a paradigm. In *The Structure of Scientific Revolutions*, Kuhn asserts observation and evaluation take place within a scientific paradigm (Kuhn, 1996). For exploration purposes, I propose we are in the midst of paradigm shift with complexity.¹ As a result, this research will pursue the unique opportunities from this dramatic shift.

As a complexity advocate, this research is the means for establishing foundational rationale for incorporating complexity science, for more thorough research in policy. The method of investigation is an exploratory case study on the potential integrating complexity into qualitative policy research.

A recent review of the seminal works in qualitative theory revealed an abundance of complexity language (Christians, 2011; Coffey & Atkinson, 1996; Creswell, 2007; Crotty, 1998; Denzin & Lincoln, 2011; Fine, Weis, Wessen, & Wong, 2000; Lincoln, Lynham, & Guba, 2011; Maxwell, 2005; Tracy, 2010)(See Diagram 1 below).

It seems natural to connect the language, theories, and competing paradigms to see what could emerge and how it could strengthen policy research. My personal research relationship is as a “translator of culture,” drawing on my “own experiences, knowledge, theoretical dispositions...getting the facts on the topic” (Glesne&Peshkin, 1992, p.157).

Diagram 1.



In order to explore how qualitative inquiry and complexity could co-evolve in policy research, background information is needed, as well as a statement of research perspective. There continues to be abundant interest in complexity from diverse disciplines and businesses (Johnson, 2009; Miller & Page, 2004; Pagels, 1988; Wolf-Branigin, 2013). As complexity grows in popularity applied to policy studies, it can evolve as a path to better understand research, interpret, and connect the world (Johnson, 2009). Yet what is our role as researchers, and how should we connect with complexity’s connectivity? How could a complexity paradigm and qualitative inquiry interrelate and what is their combined potential in policy?

Creswell (1998) states qualitative inquiry is the means, to explore social and human problems building complex, holistic interpretation.

Maines (1977, 1983) asserts qualitative research spans the micro-macro spectrums and includes both structural and interacting processes. Gall, Borg, and Gall (1996) add qualitative approaches realize the importance of multifaceted interpretations of human experiences, and the iterative relations within social and cultural systems. These apt descriptions of the qualitative realm match closely with common complexity vocabulary and concepts (Johnson, 2009).

So a joint exploration of qualitative and complexity paradigms can prompt us to recognize new patterns, phase transitions, and trends in policy research, while building knowledge in a more connectionist way. Givel and Johnson (2013) assert methodological analyses of public policy should be tied to the observable nature of policymaking, which is complex.

Yet policy theories do not fully account for how policymaking operates or intersects in the real world (Givel & Johnson, 2013). Miles and Huberman (1994) issue a warning about ignoring complexity and only focusing on research elements. When studying research design features of conceptualizations, data collection, coding, conclusions, and reporting close-up, it is easy to lose sight of the overall connected ecosystem they all form (Miles & Huberman, 1994).

Not only is it easy to lose sight of the ecosystem, but also of the macro systems that directly impact the research ecosystem of interest. As Youngman purports, people need to get the message that, “Everything is complexity,” and “If you don’t recognize this complexity, you are going to miss something” (Johnson, 2012, p. 3). The objective of this work is to recognize “this complexity,” as not to “miss something” in policy research.

Research Purpose

The purpose of this research is to explore and examine methodological implications of qualitative inquiry within a complexity paradigm, in a “creative and insightful way” (Tracey, 2010, p. 846). The research phenomena of interest are: Firstly, what are potential benefits to policy research integrating complexity science and qualitative inquiry? Secondly, what could the relationship between complexity science and qualitative research be to further policy knowledge building? Thirdly, what is the role of complexity in policy research? According to Corbin (2008),

The world is very complex. There are no simple explanations for things. Rather, events are the result of multiple factors coming together and interacting in complex and often unanticipated ways. Therefore, any methodology that attempts to understand experience and explain situations will have to be complex.

We believe it is important to capture as much of complexity in our research as possible, at the same time knowing that capturing it all is virtually impossible (Corbin & Strauss, 2008, p. 8). Complexity guiding the research process with interdisciplinary collaboration, along with combined methodologies, can provide a more complete representation of reality and address Corbin’s issues. Yet not all researchers are motivated to present a more complete representation of reality and respond to Corbin’s concerns. I concur with Corbin, it is important to “capture as much complexity in policy as possible,” which is a major focus of this research.

Incorporating a complexity paradigm, with complexity science constructs throughout the research process, is a means to capture more complexity than with traditional paradigms. Simply, a complexity paradigm can account for the complex processes, mechanisms, simultaneous interactions, interations, and emergence in qualitative and quantitative research (Johnson, 2009). Kuhn (1962) states paradigms *cannot* be reconciled with each other. A shift in paradigms occurs when new information and research findings substantially counter old paradigms, which this research addresses.

Specifically, a complexity paradigm is based on what interactions are observed, new kinds of questions that can be asked, how results are interpreted, and how the research puzzle pieces are bridged in the context of complexity. If the research process is based on a linear paradigm, then the research will likely be incomplete or inaccurate (Givel & Johnson, 2013). If the research process is based on a non-linear paradigm (like qualitative paradigms) and not a complexity paradigm, then the research will most likely benefit from complexity bridging constructs and systematic application of a complexity context.

In relation to the primary research questions, at present the role of complexity in policy research has not been fully established or formalized in qualitative or quantitative research. At present, the potential relationships between complexity science and qualitative policy research have not been fully established or formalized. Finally, the potential benefits of integrating complexity science and qualitative policy inquiry have not been fully established or formalized. Consequently, this research will explore a complexity paradigm for systematic application into research, to support the establishment of the role, relationships, and benefits of integrating complexity science into qualitative policy inquiry.

Theories That Inform This Research

There are a number of theories that inform this work. They range from the philosophy of science to complexity science, in order to apply directly to qualitative theory. On the macro level, there is the Popper's *falsifiability* as the means distinguish science from non-science (Popper, 2002) and Kuhn's (1996) work in scientific paradigms.

This research is a means to explore building foundations for qualitative integration of complexity, in creating scientific knowledge. Complexity science can serve as "the unifying theme" in the development of knowledge in our complex world, which is directly shaped and molded by the interactions of complexity (Rescher, 1998, p. xi). Denzin and Lincoln (2011) argue paradigms are nets that hold the ontology, epistemology, and methods of researchers. Maxwell (2009) asserts it *is not* essential to "adopt in total a single paradigm" (p. 224). Maxwell (2009) furthers, "it is possible to combine aspects of different paradigms," though assessment of compatibility is needed (p. 224). This research explores combining aspects of qualitative and complexity paradigms and assessing compatibility.

Additionally, complexity could potentially serve as the unifying paradigm in qualitative inquiry. Yet what is complexity and how can it be used effectively in policy research? There is currently no agreed upon definition of complexity science. In fact, definitions vary within and across disciplines. Complexity science is based on the simple premise that the whole is greater than the sum of its parts. It is an interdisciplinary scientific study of complex systems. The consensus view is that complex systems, like in policy, are usually made of many parts, which at times, are referred to as elements and constituent parts. These parts dynamically interact with other system parts, as well as the environment, to influence their own futures. The combination of the parts interacting at the individual or micro level, give rise to system-wide, global, or macro behaviors. The micro and macro level systems can co-influence each other, while interacting in a dynamic environment. System-wide patterns can emerge from the interdependent interactions of adaptation, from autonomous agents at the individual level (Johnson, 2009).

A focus of complexity science is to identify consistent patterns, trends, and tendencies so appropriate strategies can be developed, like for policy enhancement. Complexity science has been successful in studying physical phenomena in the fields of physics, biology, engineering, and neurobiology. Researchers now have the opportunity to apply the discoveries and insights gained from studying physical systems to policy systems in qualitative inquiry (Johnson, 2009).

According to Wolf-Branigin (2013), complex system components include iterative processes, feedback, self-organization, boundaries, emergent behavior, heterogeneity, and agent-based. Related concepts include patterns, common meaning for patterns, simple rules that guide behavior, scalability, and circuitry (Wolf-Branigin, 2013).

Understanding how a system works requires systematic questioning about complexity concepts (McCaughan & Palmer, 1994). Lemke and Sabelli (2008) detail relationships features among subsystems and levels, and support questioning to understand how systems operate. For example, what features of systems are determinate? What determines constraints on the dynamics of the system? How do the systems and environment form an interdependent ecosystem? (Lemke & Sabelli, 2008)

According to Maxwell (2009), a paradigm is comprised unique ontological and epistemological assumptions, as well as unique methodological strategies linked to its assumptions. The complexity paradigm is comprised complexity science's unique ontological and epistemological assumptions, as well as unique methodological strategies linked to its assumptions. The complexity science paradigm can subsume and bridge the metaphysics of qualitative inquiry, which includes interpretivism, critical theory, post-modernism, constructivism, and positivism. According to Maxwell (2009), the goals of qualitative studies are to understand meaning, context, and process, as well as identify unanticipated phenomena and develop causal explanations (Maxwell, 2009). The complexity science paradigm can subsume and bridge Maxwell's goals for qualitative studies.

Methods

This analysis employs an exploratory case study with qualitative inquiry as a bounded case. This allows focus on complexity in research, with holistic analysis, as to "uncover the interactions of significant factors" characteristic of complex phenomena (Merriam, 2009, p. 43). The approach was designed to present qualitative inquiry research questions, interpretation strategies, and analysis strategies in a qualitative context, for opportunities in applying complexity.

This approach meets the needs of initial exploration, in order to lay the groundwork for later work in detailed application of specific qualitative areas (Creswell, 2007; Stake, 1995). Additionally, Yin (2008) states, in case study it is not possible to separate the variables of phenomena from context. If research phenomena are complex, then the context of complexity should not be separate.

There are criterion and rationale for sample selection of qualitative inquiry for case study.

"An adequate sample depends on the type of question posed, the complexity of the model studied, availability...of texts, and the purpose of the study." If the purpose is to generalize to theory the sample may be rather small" (Ambert, Adler, Adler, & Detzner, 1995, p. 885). The potential methodologies for this complexity research include quantitative, qualitative, and mixed-methods. The criterion required an approach that vividly colors "the meanings, motivations, and details of what...research can convey only in broader aggregates" (Ambert et al., 1995, p. 885). Qualitative inquiry fulfills those requirements. Qualitative research, by its very nature, can provide data and raise questions that no quantitative method could generate, in great part because it allows for emergence of the unexpected (Ambert, 1994). Qualitative is a natural fit with complexity since there is often congruent language and constructs in their respective systems approach (Coffey & Atkinson, 1996; Creswell, 2007; Crotty, 1998; Fine et al., 2000). The goal of this analysis is to develop arguments for complexity application to quantitative policy research.

Methodological Strategies

Whereby there is not a standardized integration method for complexity application, this research uses complexity constructs and triangulation.

With respect to this, this study focuses on *whether* and *how* each of qualitative theories encompasses complexity (Givel & Johnson, 2013). The case study employs a tabular side-by-side comparison of the five traditions of case study, ethnography, grounded theory, narrative, and phenomenology (Merriam, 2009). The comparison includes for each of these qualitative theories, how scientific questions are structured, and how scientific results are interpreted and analyzed (Givel & Johnson, 2013).

Additionally, the research addresses *if* and *how* complexity components match or benefit the qualitative method of inquiry. This research uses the structures and functions of complexity, as the means to show how qualitative traditions can vary in complexity in dramatically different ways (Rescher, 1998).

Results

The *Qualitative Inquiry Paradigm Comparisons to Complexity (CX) Paradigm* Table 1.1 includes case study, ethnography, grounded theory, narrative, and phenomenology. Comparisons and matches of qualitative inquiry paradigm and a complexity paradigm elements are investigated in areas of research questions, traditional interpretation and analysis strategies, and full accounting for complexity.

Who, what, where, how, and why questions in bounded case studies, can be used for researching complex phenomena. Traditional interpretation and analysis strategies in case study include pattern matching, synthesis, categorical aggregations, and statistically (Creswell, 2007; Merriam, 2009; Yin, 2009). Qualitative inquiry elements that match complexity paradigm's structures and functions include: pattern matching-pattern discernment in complexity; synthesis-Micro/meso/macro analysis in complexity; categorical aggregations-convergence in complexity (Lemke & Sabelli, 2008; Wolf Branigin, 2013).

Given the metaphysics, research questions, and traditional interpretation and analysis strategies in case study, complexity is not fully accounted for in this research method

Ethnography questions in research firstly include scientifically and objectively, what is culture and what is going on? Secondly, questions can impressionistically query what is culture and what is going on? These questions can be used for researching complex phenomena. Traditional interpretation and analysis strategies in ethnography include analysis cultural themes, identify patterned regularities, contextualize information into broader framework, and thick description of culture (Creswell, 2007; Denzin & Lincoln, 2011; Merriam, 2009; Whitehead, 2004). Qualitative inquiry elements that match complexity paradigm's structures and functions include: analysis cultural themes-diverse perspectives in complexity; identify patterned regularities-pattern discernment in complexity; contextualize information into broader framework-meso/macro system analysis in complexity (Johnson, 2009; Lemke & Sabelli, 2008; Wolf Branigin, 2013). Given the metaphysics, research questions, and traditional interpretation and analysis strategies in ethnography, complexity is not fully accounted for in this research method

In grounded theory, the research questions are broad and can change during data collection and analysis. These questions can be used for researching complex phenomena. Traditional interpretation and analysis strategies in grounded theory include linking categories, variations and/or consequences for relationship of categories, theoretical scheme, and relationship of theory to knowledge (Creswell, 2007; Denzin & Lincoln, 2011; Merriam, 2009).

Qualitative inquiry elements that match complexity paradigm's structures and functions include: linking categories-interconnectedness in complexity variations and/or consequences for relationship of categories-emergence in complexity (Johnson, 2009; Lemke & Sabelli, 2008; Wolf Branigin, 2013). Given the metaphysics, research questions, and traditional interpretation and analysis strategies in grounded theory, complexity is not fully accounted for in this research method.

Narrative research questions firstly ask what are the interactional moments and experiences that mark a life? Secondly, what is the chronology of unfolding events? These questions can be used for researching complex phenomena. Traditional interpretation and analysis strategies in narrative include description in large context for larger meaning of story, patterns of meaning, chronological linking, progressive/regressive, forward/backward, zoom in, zoom out, and rhetorical structures flexible and evolving as process (Creswell, 2007; Denzin & Lincoln, 2011; Merriam, 2009;).

Qualitative inquiry elements that match complexity paradigm's structures and functions include: description in large context for larger meaning of story - macro analysis in complexity; patterns of meaning - pattern discernment in complexity; chronological linking - interconnectedness in complexity; progressive/regressive, forward/backward, zoom in, zoom out-scalability in complexity; and rhetorical structures flexible and evolving as process - evolving process is basic of complex system (Johnson, 2009; Lemke & Sabelli, 2008; Wolf Branigin, 2013).

Given the metaphysics, research questions, and traditional interpretation and analysis strategies in narrative, complexity is not fully accounted for in this research method. Phenomenology research questions ask what is the experience of the individual or group?

These questions can be used for researching complex phenomena. Traditional interpretation and analysis strategies in phenomenology include identify significant statements, create meaning units, cluster themes, develop essence, textural descriptions of what happened, structural descriptions of how phenomena experienced, and exhaustive composite description (Creswell, 2007; Denzin & Lincoln, 2011; Merriam, 2009). Qualitative inquiry elements that match complexity paradigm's structures and functions include: create meaning units - diverse perspectives in complexity; cluster themes -self-similarity in complexity; textural descriptions of what happened - iterative processes in complexity; and structural descriptions of how phenomena experienced - feedback in complexity (Johnson, 2009; Lemke & Sabelli, 2008; Wolf Branigin, 2013). Given the metaphysics, research questions, and traditional interpretation and analysis strategies in phenomenology, complexity is not fully accounted for in this research method.

Finally, there is no specified context for inclusion of policy systems nested in a mega or global system in the qualitative methods. All systems are nested in global social, economic, and environmental systems (Johnson, 2009). No complex system in policy operates in isolation. Also, there is no specified context of determinates of dynamical possibilities and constraints, in policy systems in current qualitative research practices. These constraints in the current form qualitative paradigms do not enable a full account of complexity.

Table 1.1 Qualitative Inquiry Paradigm Comparisons to Complexity (CX) Paradigm (structures & functions)			
Metaphysics: Interpretivism Critical Theory Post Modern Constructivism Positivism	Research Questions	Traditional Interpretation & Analysis Strategies	Given the metaphysics, research questions, traditional interpretation & analysis strategies, do traditional paradigms fully account for complexity in research?
Case Study	Who, what, where, how, and why propositions within bounded case. Yes, can be used for researching complex phenomena.	*Pattern matching-pattern discernment in CX *Synthesis-Micro/meso/macro analysis in CX *Categorical aggregations-convergence in CX Statistically	No. Need attention to: 1.Context of research system nested in mega or global system. 2. Determinates of dynamical possibilities & constraints in systems of study.
Ethnography	1. Scientifically, objectively what is culture-what is going on? 2. Impressionistically, what is culture- what is going on? Yes, can be used for research of complex phenomena.	*Analysis cultural themes-diverse perspectives in CX *ID patterned regularities-pattern discernment in CX *Contextualize info into broader framework-meso/macro system analysis in CX Thick description of culture	No. “
Grounded Theory	Broad & can change during data collection/analysis Yes, can be used for research of complex phenomena.	*Linking categories-interconnectedness in CX *Variations, consequences for relationship of categories-emergence in CX Theoretical scheme Relationship of theory to knowledge	No. “
Narrative	What are interactional moments & experience that mark a life? What is the chronology of unfolding events? Yes, can be used for research of complex phenomena.	*Description in large context for larger meaning of story-macro analysis in CX *Patterns of meaning-pattern discernment in CX *Chronological linking-interconnectedness in CX *Progressive-regressive-forward backward, zoom in, zoom out-scalability in CX *Rhetorical structures flexible & evolving as process-evolving process is basic of complex system	No. “
Phenomenology	What is the experience of the individual or group? Yes, can be used for research of complex phenomena.	ID significant statements *Create meaning units-diverse perspectives in CX *Cluster themes-self similarity in CX Develop essence *Textural descriptions of what happened-iterative processes in CX *Structural descriptions of how phenomena experienced-feedback in CX Exhaustive composite description	No. “

(Sources:Denzin& Lincoln, 2011, Johnson, 2009; Lemke &Sabelli, 2008; Wolf-Branigin, 2013)

Discussion

There is no perfect accounting for complexity in policy research or in life. As Pagels (1988) asserts, “Life can be so nonlinear” (p. 71). It is difficult for the human mind to fully grasp what is going on with complexity, unlike simple systems based on Newtonian, linear physics. With complexity, deep logical structures that would otherwise be hidden finally render the world comprehensible, according to Pagels (Pagels, 1988). Deepening our grasp on existing policy problems is what awaits us in the new scientific territory of a complexity paradigm (Pagels, 1988).

Furthermore, the benefit of a complexity paradigm is it can augment, supplement, subsume, and improve policy research if applied effectively. There is no accepted standardization of effective complexity application, as of yet. This research is step in that direction. While studying the qualitative research features close up, it is “easy to lose sight of the overall ecosystem they form” (Miles & Huberman, 1994, p. 307). Additionally, considering what qualitative policy inquiry misses without a complexity context is important to address in future research.

Triangulation, as a process to guard against single methodology or investigators bias, is the means to integrate complexity in a variety of ways in policy research. The function of triangulation is to locate and uncover understanding of research phenomena from various aspects of empirical reality (Denzin, 1978). Denzin’s triangulation typologies of data, theory, and methodology can also benefit from complexity, as an additional means to triangulate. Also, using complexity methodologies (ex. agent-based modeling simulation, network analysis, data mining, scenario modeling, and sensitivity analysis) in addition to traditional qualitative methodologies, can potentially verify, substantiate, or validate findings.

Triangulation with complexity warrants further exploration and research. Current qualitative research methods and policy theories give a nod to complexity but rarely apply it systematically in the full context of complexity science. Yet another benefit is complexity can provide the means to think about policy systems, interpret results, and answer questions in novel ways. Also, the methodological sections of most qualitative research are “thin” (Miles & Huberman, 1994, p. 309).

Incorporating complexity can add to methodological sections, and thickness in analysis. A complexity context can better address how patterns arise in policy systems and how the specified pattern was selected (Pagels, 1988).

“There are many ways of getting analyses right, according to Miles and Huberman (Miles & Huberman, 1994, p. 309). They suggest the “mechanics of analysis are formidable or even elusive” preventing full explicitness (p. 309). Conducting qualitative analysis means living with not only ambiguity but also complexity (Miles & Huberman, 1994). Complexity and ambiguity go hand in hand since there is no way to control systems (Page, 2009). “Coming to terms with complexity” by integrating it partially or fully into the research process, can provide a “form that clarifies and deepens understanding” (Miles & Huberman, 1994, p. 309). Maxwell (2009) states, “Choosing a paradigm or tradition primarily involves assessing which paradigms best fit with your own assumptions or methodological preferences” (p. 224). Yet few policy researchers hold assumptions about complexity science or prefer complexity methodologies. Whether due to the newness of complexity science or lack of foundational texts on the integration of complexity into qualitative inquiry, researchers still need to come to terms with complexity.

Simply, can qualitative inquiry in its current form and practice account for Wolf-Branigin’s complex system components and concepts? Simply, can qualitative inquiry in its current form and practice account for Lemke and Sabelli’s (2008) relationships among subsystems and levels. If research in policy cannot account for components, dynamics, and relationships among subsystems and levels in complex systems, there is opportunity. Simply, if a research phenomenon like policy is complex, then a paradigm should be able to systematically address its complexity. Current qualitative paradigms by themselves are not adequate to systematically and fully address complexity. Consequently, a complexity paradigm should be included in policy research. The inclusion of complexity completely, or to a limited degree, is an issue for future exploration. There is a role for complexity in qualitative policy research.

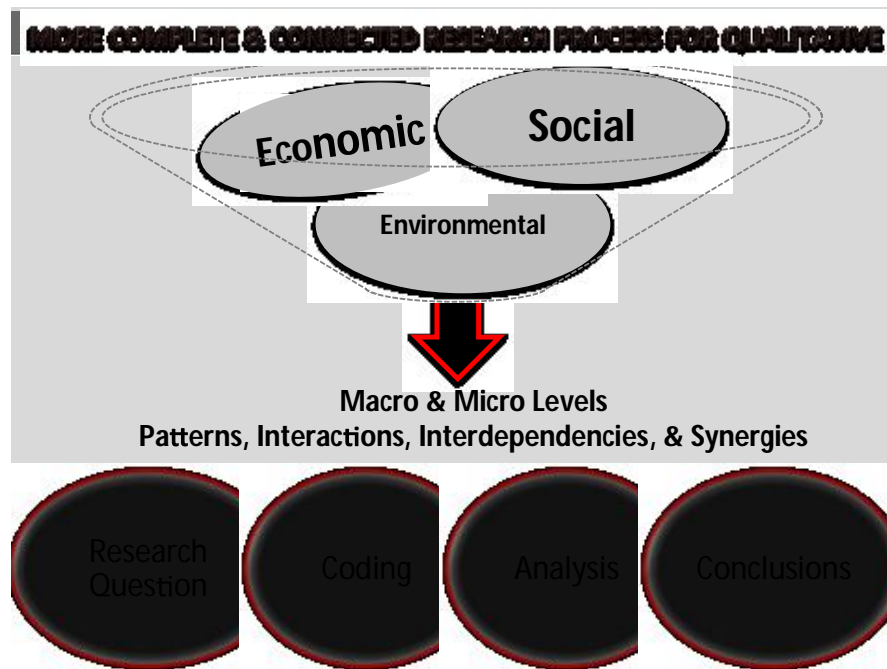
Conclusions

What could the relationship between complexity science and qualitative policy research be?

This research provides initial arguments for combining quantitative inquiry paradigms and a complexity paradigm. Certainly more exploration and research is needed. For example, applying complexity to a policy case study and comparing results to traditional approaches is needed and planned, in order to further this research. There is potential to unify qualitative inquiry under a single complexity paradigm and allow for a more complete and connected research process. Though not all researchers aspire to a more complete or connected research process. Additionally to consider for future research, complexity can provide the means for a more complete and connected context for qualitative methodology.

Furthermore, complexity guiding the research process of all qualitative methodology, for a single policy issue, has the potential for more completeness in representation. Also, complexity guiding the research process and methodologies can potentially offer a more complete representation of reality. (See Diagram 2 below).

Diagram 2



So now, how do we proceed and make our connections to complexity, in order to make good science and better inform the practice of policymaking? Hammersley(2008) offers sage advice, “the pursuit of new paradigms that will make social science a transformative enterprise in personal and social terms, discourages and detracts from the careful, painstaking thought and investigation required, including the methodological reflection that is necessary, if progress that can be made is to be achieved” (p. 181). This research supports progress. Methodological reflection is key as are the interconnections with complexity as a potentially transforming paradigm.

Certainly complexity is not a perfect paradigm, nor the panacea to all our research challenges. Yet, whether positivism, constructionism, interpretivism, critical inquiry, or postmodernism, complexity provides a strategy and context to “look at the research task with greater clarity and a better sense of direction that we would otherwise have done” (Crotty, 1998, p. 216). Some like Pagels say the future of the world lies with people that master the new paradigm of complexity (Pagels, 1988). I say the future lies in investigating even deeper, the relatively unexplored frontier of qualitative policy inquiry and complexity paradigm integration.

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Notes

ⁱA full assessment if we are in a paradigm shift is beyond the scope of this research.