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By Kyle Patrick Vealey

Entitled

Storytelling Failure in the Vale of Leven: How a Bacterial Outbreak Became a Wicked Problem

For the degree of Doctor of Philosophy

Is approved by the final examining committee:

Patricia Sullivan
Chair

Michael Salvo

Samantha Blackmon

Thomas Rickert

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Approved by: Patricia Sullivan April 18, 2016

Head of the Departmental Graduate Program Date

# STORYTELLING FAILURE IN THE VALE OF LEVEN:

# HOW A BACTERIAL OUTBREAK BECAME A WICKED PROBLEM

A Dissertation

Submitted to the Faculty

of

Purdue University

by

Kyle P. Vealey

In Partial Fulfillment of the

Requirements for the Degree

of

Doctor of Philosophy

May 2016

Purdue University

West Lafayette, Indiana

For my wife, Emily,

who has been and continues to be my strength in all things

# ACKNOWLEDGEMENTS

A dissertation is a wicked thing. In the midst of writing it, there is no easy way of telling where it begins and where it ends; its origins and trajectory are so often left uncertain. Nor are there clear signs for how to proceed and the road is rife with false starts, wrong turns, slippery slopes, and outright failures. It is a complex and ill-defined undertaking that continually escapes one's ability to define its boundaries. But, most importantly, a dissertation is an endeavor that cannot be tackled alone. For this reason, I am indebted to many, many people, all of whom have, in some form or fashion, helped give rise to this work.

First and foremost, I want to express my sincere thanks to my dissertation chair, Patricia Sullivan, for her continual patience and unrelenting support over the last five years. In many ways, the core of this project initially emerged in Pat's seminar on "Rhetorical Methodologies," where I set out to explore the rhetorical dimensions of unexpected problems, breakdowns, and failures. A few months later, when I first approached Pat to be my chair, I remember walking into Einstein's Bagels with a notebook of scribbled dissertation ideas and the helplessly vague sense that I wanted to study *when things go wrong*. Since that meeting, she has provided invaluable insight, consideration, and encouragement as I zigzagged my way from idea to idea until I found myself in the Vale of Leven. Pat's mentorship over the years has taught me to listen, to seek out rather than

dispel complexity, and to be mindful of Anselm Strauss' dictum "to study the unstudied." My hope is, if nothing else, that this dissertation lives up to and embodies many of the lessons Pat has conferred during my time at Purdue.

I am also deeply indebted to members of my dissertation committee, whose insights are both visibly and subtly woven into this project. I am particularly grateful to Michael Salvo for our conversations that have helped me invent my own way into the field and reimagine the work of rhetoric and technical communication in productive and unexpected ways; to Samantha Blackmon for always encouraging me to understand social problems as deeply rooted, systemic in nature, and in need of our sustained and continual engagement; and to Thomas Rickert for teaching me how to be theoretically rigorous and knowledgeable of the fact that there is always more to read.

This project would not have been possible without the support of my cohort: Jeff Gerding, Charlotte Hyde, Gracemarie Mike, Fernando Sánchez, Freddie deBoer, Stacy Nall, Ellery Sills, Luke Redington, and Christine Masters. In particular, I owe countless thanks to Jeff Gerding, who has been magnanimous and patient as the notion of wicked problems has increasingly bled into many of our collaborative endeavors (both present and future). His unyielding curiosity and enthusiasm have also been a constant source of inspiration. All told, he's one hell of a scholar and I am lucky to have learned so much from our conversations, collaborations, and friendship. Likewise, Charlotte Hyde has always been quick to provide unconditional support and much-needed grounding over the past few years. She has, in no small way, preserved my optimism throughout this process by reminding me that there is, indeed, a light at the end of the tunnel.

Many thanks are owed to friends and colleagues who live and work well beyond the walls of Heavilon Hall. My interest in the stories we tell when things go wrong has been deepened in many conversations and writing exchanges with Jeremy Cushman. Jeremy has helped me to see storytelling as a way of temporarily stabilizing and making sense of complex and ill-defined situations—which, in turn, prompted me to wonder about stories that intensify complexity, preserve uncertainty, and largely make a mess of things. I am also thankful for the mentorship Alex Layne has provided since my first week at Purdue. Collaborating with Alex has taught me that who we cite in our scholarly work matters and that we must approach such things as ethical matters of concern. Finally, I am wholly indebted to Nathaniel Rivers who first introduced me to the field of rhetoric and composition and who has continued to be a generous mentor and friend well after we both left the land of the Hoya.

This dissertation has many roots and none are deeper than those planted and cultivated by my family. Some of my earliest memories are of my mother sitting cross-legged on the floor of our living room, where she spent most evenings reading, highlighting, and filling the margins of large nursing books with notes written in pencil. Piled on our coffee table were numerous white legal pads filled with my mother's angular handwriting. Miraculously, between her full-time job as a critical care nurse at Rhode Island Hospital and the rarely easy task of raising my brother and me, she found enough time to transcribe and rework those notes into a book-length study of social attitudes toward exercise rehabilitation after heart attacks. In 1992, my mother defended her dissertation, *Determinants of Exercise Behavior After a Myocardial Infarction: Beliefs, Intention, and Behaviors*.

At a young age, I recall imitating my mother's nightly ritual on one Sunday afternoon as I sat and highlighted, most indiscriminately, the then-indecipherable words of a biography on President John F. Kennedy. I am not sure why I decided to adorn a chapter on the Cuban Missile Crisis with fluorescent yellow highlights, but my reasoning most likely involved a vague sense of that's just what you do with books. At many points throughout this process I have again felt like that child scribbling nonsense, but my mother, father, aunt, grandmother, and brother have always been there to provide fierce encouragement and unconditional love. This and whatever work the future may hold would be impossible without them.

Lastly, and most importantly, I owe unending thanks to my wife, Emily, for her unwavering support, patience, and love throughout this whole process. What is most clear now, in retrospect, is that this dissertation is less of a crowning achievement at the end of a long and perilous journey but rather marks the start of a new life, one that I could never imagine without you.

# TABLE OF CONTENTS

Page

LIST OF TABLES ..... ix

LIST OF FIGURES ..... x

ABSTRACT ..... xi

CHAPTER 1. MAKING PROBLEMS WICKED ..... 1

1.1 Wicked Concerns ..... 4

1.2 A Brief History of Public Inquiries ..... 10

1.2.1 Ely Hospital Inquiry ..... 13

1.2.2 Bristol Royal Infirmary Inquiry ..... 13

1.2.3 Mid Staffordshire NHS Foundation Trust Inquiry ..... 15

1.3 Conflicting Views of Inquiries ..... 15

1.3.1 Money ..... 16

1.3.2 Time ..... 17

1.3.3 Procedure ..... 18

1.3.4 Change ..... 19

1.4 Rhetorical Work of Inquiries ..... 20

1.5 Why Make Problems Wicked? ..... 24

1.6 Overview of Chapters ..... 26

CHAPTER 2. STORYTELLING AFTER THE FACT ..... 29

2.1 Domesticating Danger ..... 31

2.2 From Suspicion to Rhetorical Inquiry ..... 36

2.3 Methods of Storytelling After the Fact ..... 41

Page

CHAPTER 3. OUTBREAK IN THE VALE OF LEVEN ..... 46
3.1 Taming an Outbreak ..... 48
3.1.1 Establishing an Independent Review ..... 51
3.2 Treating Problems like Contagion ..... 56
3.2.1 Independent Review as Sensemaking Device ..... 58
3.2.2 Independent Review as Institutional Repair ..... 59
3.2.3 Independent Review as Problem Quarantine ..... 62
3.3 C.diff Justice Group ..... 64
3.4 Wicked Articulations ..... 71
CHAPTER 4. Wicked matters of concern ..... 75
4.1 The Vale of Leven Hospital Inquiry ..... 78
4.2 Reinventing an Outbreak ..... 83
4.2.1 Keeping the Inquiry Open ..... 84
4.2.2 Tracking the Outbreak's Shifting Boundaries ..... 89
4.2.3 Learning Beyond the Vale ..... 94
4.3 From Matters of Fact to Matters of Concern ..... 99
CHAPTER 5. ARTICULATING WICKED PROBLEMS ..... 106
5.1 Engaging Crisis with Caution and Care ..... 108
5.2 Reimagining the Work of Rhetoric and Technical Communication ..... 115
5.3 Learning in an Age of Wicked Problems ..... 120
5.4 Toward a Wicked Future ..... 126
REFERENCES ..... 129
VITA ..... 143

# LIST OF TABLES

Table Page

Table 1: Timeline of C.diff Justice Group's petition for a public inquiry ..... 66

# LIST OF FIGURES

Figure Page

Figure 1: Aerial photo of the Vale of Leven from the "Vale of Leven History Project" ..... 47

Figure 2: Map of the hospital district in Providence, Rhode Island ..... 112

# ABSTRACT

Vealey, Kyle P. Ph.D., Purdue University, May 2016. Storytelling Failure in the Vale of Leven: How a Bacterial Outbreak Became a Wicked Problem. Major Professor: Patricia Sullivan.

This dissertation examines the rhetorical work of a public inquiry investigation into an outbreak of Clostridium Difficile at the Vale of Leven Hospital in West Dunbartonshire, Scotland that resulted in 143 cases of infection and the tragic deaths of 34 patients. In light of these deaths and subsequent protests from local citizens, the National Health Service (NHS) Scotland launched a public inquiry in 2009 to investigate the events precipitating the outbreak. Extending rhetoric and technical communication's sustained engagement with post-accident reports, this study explores how citizens and government officials accounted for the causes, boundaries, and impact of the outbreak. Specifically, it argues that despite the NHS's initial investigation, which grounded the outbreak in local problems of practice, infrastructure, and culture, citizens and inquiry officials worked to rhetorically re-articulate the Vale of Leven Hospital outbreak as a wicked problem and, thus, a much larger and more complex matter of concern. In doing so, the study uses the Vale of Leven inquiry to reimagine the boundaries of rhetoric and technical communication as not only a form of problem solving work but also as the articulation of wicked matters of concern.

# CHAPTER 1. MAKING PROBLEMS WICKED

"We use the term 'wicked' in a meaning akin to that of 'malignant' (in contrast to 'benign') or 'vicious' (like a circle) or 'tricky' (like a leprechaun) or 'aggressive' (like a lion, in contrast to the docility of a lamb). We do not mean to personify these properties of social systems by implying malicious intent. But then, you may agree that it becomes morally objectionable…to treat a wicked problem as though it were a tame one, or to tame a wicked problem prematurely, or to refuse to recognize the inherent wickedness of social problems"

— Horst Rittel and Melvin Webber (1973)

Over the course of eighteen months, from January 2007 to June 2008, a bacterial outbreak of Clostridium Difficile (C.diff) spread across the Vale of Leven Hospital in West Dunbartonshire, Scotland, leading to the tragic deaths of 34 patients. Despite a total of 143 patients contracting C.diff within that eighteen-month period, the Vale of Leven Hospital neglected to declare a bacterial outbreak as required by the "Outbreak Policy" developed by the Greater Glasgow Health Board Infection Control Committee. Nor is there evidence that administrators attempted to formally investigate or otherwise halt the spread of the outbreak across the 136-bed hospital.

In response to the bacterial outbreak and its impact on the health of West Dunbartonshire citizens, the Scottish National Health Service (NHS), in conjunction with

the Cabinet Secretary of Health and Wellbeing, convened an independent review to investigate the events that had transpired at the rural hospital. The result of this independent review was a nineteen-page report published at the end of July 2008 that provided a narrative of events detailing the bacterial outbreak and its mismanagement by hospital administrators. As a technical document, the review's report is an effective, clear, and concise narrative free of jargon and accessible to the general public. Moreover, it accounts for an array of complex causes that may have contributed to the outbreak and subsequent patient deaths. However, while the report's coherent and accessible account of events provided the general public with an explanation of how the outbreak occurred, the story it told was not enough for local West Dunbartonshire citizens. In particular, the report failed to construct a compelling and impactful story for members of the C.diff Justice Group, a citizen-led initiative of West Dunbartonshire residents directly or indirectly affected by the outbreak. Members of the C.diff Justice Group responded by petitioning and successfully persuading the Scottish NHS to conduct a much more comprehensive public investigation into the events precipitating the outbreak and its subsequent mismanagement by hospital staff.

By April of 2009, the C.diff Justice Group succeeded and Cabinet Secretary Nicola Sturgeon announced that a full-scale public inquiry would be launched to determine what exactly went wrong at the Vale of Leven Hospital that led to the deaths of 34 people. As Michelle Stewart, one of the founders of the citizen-based Justice Group, suggested at the start of the public inquiry in 2009, "the independent review remit was quite narrow and we need to make sure that we get more than that this time. It should not just examine the

problems at the Vale but throughout NHS Scotland" (Borland, 2009). The public inquiry was concluded in November 2014 and the results of the investigation have been released as a comprehensive, 439-page account of the outbreak in addition to a web archive providing open access to all of the evidence collected, including countless stories from West Dunbartonshire citizens.

This dissertation explores the outbreak at Vale of Leven Hospital as a case study to better understand how accounts of iatrogenic harm—that is, harm caused by medical treatment—are constructed in order to facilitate and sustain learning in the aftermath of failure. Specifically, through a study of the public inquiry into the bacterial outbreak, I account for the rhetorical way in which citizens, government officials, and medical professionals articulated and sustained the failure at the Vale of Leven as a wicked matter of concern rather than a problem only solvable by medical professionals and medical professionals alone. The overall goal of this project, then, is to tell the story of how a bacterial outbreak at a small, rural hospital in Scotland emerged as a wicked problem and gained attention across the UK. This story, I argue, offers compelling lessons for scholarship in rhetoric and technical communication. Specifically, I suggest throughout this project that the Vale of Leven outbreak can help scholars reimagine the rhetorical work of technical communication as something more than problem solving; that is, as something more than making complex problems manageable, coherent, or in someway directly solvable. In what follows, I advance an argument that characterizes public inquiries as formal retrospective accounts of failure, and, furthermore, are deeply rhetorical processes of articulation that are not designed to tame events such as the Vale of Leven

outbreak but rather invent and sustain these failures as wicked problems that are matters of public concern.

## 1.1 Wicked Concerns

In their response to the initial independent review, local West Dunbartonshire citizens fervently called for a more robust account of what went wrong at the Vale of Leven Hospital and what lessons could be learned to prevent its reoccurrence in the future. The C.diff Justice Group petitioned for a retrospective account of the events precipitating the deaths of 34 patients, particularly in a way that would reflect the outbreak's complexity without explaining it away. While the initial independent review surfaced and diagnosed a number of organizational factors that led to poor quality of care and the resulting string of patient deaths, local citizen petitions to the Scottish government pushed for a more thorough investigation that would re-situate the outbreak as belonging to a different class of problems. That is, local citizens called for an inquiry into the bacterial outbreak as a matter of public concern not only for residents of the Vale but also for all NHS hospitals in the UK. They wanted, in other words, a wicked problem.

But this is not the way we have come to think and talk about wicked problems since their conception in the early 1970's. Rittel and Webber's (1973) initial introduction of the term “wicked problem” as applied to public policy was intended to differentiate social planning problems from the "tame problems" scientists engage with on a day-to-day basis. While tame problems are "definable, understandable, and consensual," wicked problems lack these "clarifying traits" in being ill-defined situations that resist traditional

solutions (p. 156). The use of the term *wicked*, for Rittel and Webber, is not intended to characterize these problems as "ethically deplorable," but to reflect their stubborn resistance to being resolved (p. 156). Wicked problems exhibit ten distinctive characteristics:

1. Lacking in definitive formulations
2. Resist being completely solved and thus have no stopping rule
3. Any solutions are neither true or false but either effective or ineffective
4. No immediate or ultimate test of a solution without either improving or worsening it
5. Prevent learning by trial and error as solutions have positive or negative consequences
6. Lack an exhaustive list of solutions
7. Possess an essential uniqueness that makes them distinctive from other problems
8. Often the symptom of another wicked problem
9. Representations and explanations of them shape the nature of problem and solutions
10. Whoever addresses the wicked problem has no right to be wrong, for they are liable for the positive or negative effects of their actions. (pp. 161-167)

These ten characteristics construct a way of understanding social planning policy, but the concept has gradually emerged as a key insight into reimagining 21st century problems in and across a number of contexts.

Like the problems they describe, Rittel and Webber's concept has traversed disciplinary boundaries, being taken up by a number of fields and professions. Environmental science, for instance, has incorporated wicked problems into their way of thinking about crises such as climate change. Wicked environmental problems have significant ecological impacts and require the attention of scientists, citizens, policy-makers, and governments alike. Similarly, design studies have also found value in describing design-related problems as wicked, such as the difficulties encountered in developing an interface to serve multiple users with differing needs. The difficulties encountered throughout the design process, in other words, are more accurately described as "wicked," rather than as tame problems to solve.

The incorporation of wicked problems into design studies has prompted a number of rhetorical scholars to consider the wicked nature of writing itself. Marback (2009), for instance, argues that wicked problems, as a descriptor, "capture the sense in which every genuine design task is unique and irreducible, a matter of inventing a solution rather than discovering an answer" (p. W400). His argument pushes for a view of design, which he sees as a distinct form of rhetorical production, as "a wicked problem, a problem of ambiguity and indeterminacy in audience and purpose, a problem of struggling with our abilities to respond to artifacts, with the capacity in our artifacts to respond to us, as well as the problem of our responsibility we have as designers [and rhetoricians] for the abilities of our artifacts to respond and elicit responses from others" (p. W415). Drawing from Buchanan (1995), Marback aligns design and rhetoric because "rhetoric is a study of the most wicked of all problems: making responsible use of the persuasive power inherent in

all artifacts" (p. W402). Leverenz (2015) applies Marback's argument to the contemporary writing classroom, urging instructors to ensure that "writing assignments are, like design problems, wicked" to provide students with opportunities for working through these kinds of complex situations (p. 6). Wicked problems, in this way, function as a descriptor for the kinds of problems rhetoric and writing are well suited to address.

In recent years, rhetoric and technical communication scholars have also evoked wicked problems as a way of describing the complex challenges emerging from the continually shifting technological and rhetorical terrain of 21st century work environments. Mehlenbacher (2013), for one, sees:

> Future technical communicators [operating] in work contexts where their work is not well defined for them, contexts that demand flexible problem-solving abilities…the problems that they encounter in these contexts will require expertise that no single person is likely to have (due to limited time, memory constraints, incomplete access to learning materials, or complex systems) and that necessitate ongoing sensitivity to sociotechnical mediation. (p. 189)

Technical communicators are, according to Mehlenbacher, now beset with wicked problems in their day-to-day work. The increasing prevalence of complex, messy, and wicked problems in today's work environments has moved many to reaffirm rhetoric and technical communication as a form of problem-solving work. For Johnson-Eilola and Selber (2013), technical communicators work toward cultivating "the ability to sense a problem, diagnose what forces within a context are causing the problem, and develop and implement a change within the context that addresses the problem" (pp. 3-4). In a way that

embodied Johnson-Eilola and Selber's argument, Wickman (2014) uses wicked problems as a framework for students to sustain engagement with complex and ill-defined problems at the local level. Doing so, he argues, helps "students develop strategies for rhetorical invention; define problems and develop sustainable research projects…and write for social action" (p. 25). His use of wicked problems functions as an "object of analysis" for rhetoric and technical communication projects, ultimately providing an engaging matter of concern that can be addressed from a number of disciplinary perspectives. Distancing the connection between wicked problems and technologically-mediated knowledge work, Blythe, Grabill, and Riley (2008) argue for a methodological reimagining of action research to be less focused on educating the public on environmental risks—as in the case of their involvement with the Harbor community and its response to the U.S. Army's disposal of dredged sediments within Harbor's city limits—and more involved in supporting community members as they work to address these wicked matters of concern.

While it is clear that wicked problems have increasingly become a part of the way rhetoricians and technical communicators think and talk about their work, little scholarship has explored how wicked problems are constructed in public and professional life. Rather, the concept most often serves as a descriptor to understand existing problems that, for any number of reasons, exceed our ability to manage and solve them. There are good reasons for this, the most notably being Rittel and Webber's initial use of the term: "[wicked problems] defy efforts to delineate their boundaries and to identify their causes, and thus to expose their problematic nature" (p. 167). Their use of the concept as a descriptor stems from what they see as the genesis of wicked problems: "a professional's job

was once seen as solving an assortment of problems that appeared to be definable, understandable, and consensual…but now that these relatively easy problems have been dealt with, we have been turning our attention to others that are much more stubborn" (p. 156). Rittel and Webber's discussion of these tame problems that have been "solved" does not stand the test of time, as their problems include examples such as the construction of civil infrastructure such as roads and highways; problems that have, in recent years, emerged as wicked in their own right. But what their article makes clear is that wicked problems offer a terminology that describes problems for which we are not prepared or lack an adequate understanding. In this way, Rittel and Webber's notion of wicked problems reflect what Bitzer (1968) sees as an exigence for rhetorical situations. That is, they are a particularly stubborn and ill-defined imperfection in need of attention. Coyne (2004) calls attention to this prevailing but problematic understanding: "wicked problems are not objectively given but their formulation already depends on the viewpoint of those presenting them" (p. 6). Coyne's point foregrounds Rittel and Webber's ninth characteristic, namely that particular causes and possible solutions to wicked problems do not pre-exist our approach in explaining and accounting for such problems. However, few have explored the way wicked problems take form and come to inhabit our public imagination.

Wicked problems have incorporated themselves into rhetoric and technical communication's disciplinary lexicon, particularly in ways that open up possibilities for cross-disciplinary work. In light of this, this dissertation pursues the following questions:

1. How are problems made wicked?
2. Who participates in the articulation of a wicked problem?

3. Can the construction of a wicked problem be pinned down to any single moment or is it the result of ongoing activities?
4. And what does it mean to make a problem wicked? What are the ethical implications of such an invention?

These questions moreover drive my investigation into the Vale of Leven Hospital case. In the next section, I begin to address these questions by turning attention to an unlikely source: public inquiries.

## 1.2 A Brief History of Public Inquiries

The outbreak of C.diff at the Vale of Leven Hospital is one of the most recent instances of iatrogenic, or medically induced, harm in a NHS hospital resulting in the call for a formal public inquiry into what went wrong. Public inquiries of this kind hold a significant place in civic life across the UK. Similar to presidential commissions or congressional committees in the US, public inquiries are intended to investigate important matters of concern in the interest of the public. The seminal work on the topic is Beer QC's massive edited volume, *Public Inquiries* (2011), where he describes inquiries as primarily concerned with investigating events that have resulted in serious injuries or deaths by establishing the facts of what occurred. Quoting Lord Earl Howe, Beer sees inquiries as "providing a full and fair account of what happened, especially in circumstances where the facts are disputed, or the course and causation of events is not clear. It is certainly the case that the modern model of the public inquiry often has as its central (but not only) question: what happened?" (p. 1.03).

Walshe (2003) proposes that public inquiries not only determine the causes of past failures but also aim to learn lessons that will prevent future reoccurrences. A public inquiry, then, is best understood as a "retrospective examination of events or circumstances, specially established to find out what happened, understand why, and learn from the experiences of all those involved" (p. 1). Walshe goes on to describe six general purposes that public inquiries serve:

1. Establishing the facts - providing a full and fair account of what happened
2. Learning from events - and so helping to prevent their recurrence
3. Catharsis or therapeutic exposure - providing an opportunity for resolution
4. Reassurance - rebuilding public confidence after a major failure
5. Accountability, blame and retribution - holding organisations to account
6. Political considerations - serving a wider political agenda for government (p. 2)

Historically, the scope of inquiries was limited to the establishment of facts, "with responsibility for the interpretation of those facts, making findings of culpability, and advancing recommendations for change being left to others" (p. 3).

Over time, Beer (2011) describes, public inquiries came to serve two purposes: "first, in the broadest sense, they serve the cause of public accountability" and "secondly, and more directly, they may identify wrongdoing, blameworthy conduct, or culpability by individuals, organizations, and organs of the State" (p. 2). But this second purpose was specifically downplayed by the British government's House of Commons Public Administration Committee, which "claimed that the primary purpose of an inquiry is to prevent recurrence and that the 'main aim is to learn lessons, not to apportion blame'" (p.

1.05). Public inquiries, according to the Committee, are designed to construct lessons learned so as to prevent the same mistakes and failures from happening again. In the UK, these formal inquiries often focused on issues ranging from the mishandling of government funds and corruption to engineering disasters that claimed the lives of British citizens. As many of these events involved the British government, significant pushes were made by the public to separate inquiries from government bodies. The Tribunals and Inquiries (Evidence) Act of 1921 called for inquiries to be "independent of Parliament," with their "institution [depending] upon Parliamentary resolution" (p. 1.22). But perhaps more importantly, the Tribunals and Inquiries (Evidence) Act of 1921 also determined "whether inquiries under it should be held in public or in private…[ultimately resulting in a resolution] that an inquiry should be held in public" to maintain its purpose (Beer, p. 1.24).

While formal, parliamentary inquiries date as far back as the 17th century, public inquiries as they are understood and conducted in the UK today initially arose in the early 1900s. However, it was not until 1967 that the first public inquiry into a NHS hospital took place, roughly twenty years after the publicly funded healthcare system was founded in 1946. Despite the fact that public inquiries are more often associated with technological disasters, such as the inquiry into the Tay Bridge collapse in 1879, the history of the NHS has been shaped by a number of influential inquiries, the most significant of which include: the Ely Hospital Inquiry (1967), the Bristol Royal Infirmary Inquiry (2001), and the recently concluded Mid Staffordshire NHS Foundation Trust Inquiry (2013).

### 1.2.1 Ely Hospital Inquiry

The investigation into abuse and misconduct allegations at Ely Hospital, a long-term psychiatric and mental health institution, located in Cardiff, Wales, is considered by Walshe (2003) to be "the first modern inquiry into the NHS" (p. 6). Rumors of patient mistreatment and poor standards of care were first brought to light by a member of the hospital staff, Mr. Pentilides, a resident nursing assistant. Despite a previous review of Ely Hospital that found no evidence of abuse, the then-Secretary of State for Health and Social Security, Richard Crossman, established a public inquiry and appointed Geoffrey Howe as chair to investigate the hospital's treatment of patients. The inquiry team found Ely Hospital to be, more or less, an isolated but overcrowded institution whose practices of care were outdated much to the detriment of patients. The results of the Ely Hospital Inquiry, along with Robb's book, *Sans Everything: A Case to Answer* (1967), which examined forms of institutional abuse and neglect, brought national attention to the poor quality of health and social care given to the elderly at Ely. As Walshe notes, "the Ely Hospital report was followed by (and can be argued to have precipitated) a succession of similar inquiries during the 1970s into serious failings at other long-stay institutions for people with learning difficulties, the elderly, and the mentally ill—Farleigh, Whittingham, Napsbury, South Ockenden, Warlingham Park, Darlington, St Augustine's, Normansfield and many others" (p. 6).

### 1.2.2 Bristol Royal Infirmary Inquiry

The Ely Hospital Inquiry's outcomes have resurfaced in healthcare and policy discussions given their striking similarities to the published findings from the Bristol

Royal Infirmary Inquiry, which investigated the clinical care of pediatric patients undergoing heart surgery from 1984 to 1995. Questions first arose about the hospital's patient care when Stephen Bolsin, a visiting anesthesiologist to Bristol Royal Infirmary, grew concerned over the quality of care given to pediatric patients by two cardiac surgeons. Given Bristol Royal Infirmary's unusually high mortality rate for cardiac cases, The Royal College of Surgeons and the Department of Health intervened by appointing a pediatric heart specialist to take over the cardiology department. As Walshe (2001) recounts, "in January 1995, before the new surgeon had taken up his post, a child called Joshua Loveday was scheduled for surgery against the advice of anesthetists, some surgeons, and the Department of Health" (p. 251). Joshua's death following surgery led to the establishment of a public inquiry in 1998 by the Secretary of Health. By the conclusion of the investigation in 2001, the inquiry team held interviews with 577 witnesses and reviewed over 900,000 pages of documents and 1,800 patient medical records, ultimately determining that as many as 34 children had died as the result of inadequate care during cardiac surgery. Like Ely Hospital, the inquiry team found that the Bristol Royal Infirmary suffered from a serious lack of clinical and administrative leadership, an isolated culture that cut it off from advances in medical treatment, as well as outdated systems, practices, and resources for the management of pediatric heart surgery. The inquiry proposed over 200 recommendations for policy and practice changes in the Bristol Royal Infirmary, in addition to calling for more methods for improving clinical governance.

### 1.2.3 Mid Staffordshire NHS Foundation Trust Inquiry

Colloquially referred to as the Francis Inquiry, after its chair Robert Francis, QC, the Mid Staffordshire NHS Foundation Trust Inquiry is one of the most recent instances of a large-scale public inquiry in the NHS. The inquiry examines the high mortality rate of patients admitted to the emergency room at Stafford Hospital in Stafford, England, one of two hospitals representing the larger Mid Staffordshire NHS Foundation Trust. The impetus for conducting a public inquiry came from community groups, such as "Cure the NHS," whose leader, Julie Bailey, encountered the poor conditions of care at the Stafford Hospital firsthand when her mother died as a patient there in 2007. The public inquiry revealed a number of startling (but familiar) findings. Stafford Hospital exhibited an adversarial atmosphere that perpetuated a culture of blame and fear; a reliance on meeting statistical targets for care rather than qualitative feedback from patients; low morale among physicians, nurses, and other staff members; an inability for administrators to respond effectively to system failures; and a significant lack of transparency about the hospital's existing problems. The inquiry proposed 290 recommendations for changes in policies and practices at Stafford Hospital and has been a center of quality care discussions in the UK for almost a decade.

## 1.3 Conflicting Views of Inquiries

Since 1967, the number of public NHS inquiries conducted has rapidly increased. More than a decade ago, Stanley and Manthorpe (2004) observed that inquiries into "health and social care have been issuing in a seemingly continuous stream since the

early 1990s," prompting them to suggest that we live in an "age of the inquiry" (pp. 1-2). Their description is, perhaps, even more accurate today. As Walshe (2003) argues, "the way that inquiries are used in the NHS is changing. Past models—often using internal NHS panels and conducted in private—are increasingly seen as failing to come up to modern public and professional expectations of openness, fairness, and rigor" and a "demand for public inquiries is likely to continue to grow" (p. 26). That is, "problems which in the past might have been dealt with internally, or in private are now more likely to be examined independently and externally, and made public" (p. 1). There are a number of reasons for this shift in public expectation. The most relevant of which, Walshe points out, is that such inquiries are "seen by some as the 'gold standard' against which other forms of inquiry [such as internal reviews or clinical audits] should be judged" (p. 26). However, despite this increasing call for inquiries and the notable changes in NHS policies and practices resulting from inquiries into Ely Hospital, Bristol Royal Infirmary, and Stafford Hospital, public inquiries in the past decade or so have become points of increasing conflict in and across Scotland, England, Ireland, and Wales.

### 1.3.1 Money

The most common critique of public inquiries (both in and outside of the NHS) takes aim at the high cost of full-scale investigations. Famous public inquiries, such as the Saville Inquiry into the injuries and deaths in Derry, Ireland on Bloody Sunday, cost roughly £195M to conduct (BBC Editor, 2010). The high price of inquiries is often a point of contention, particularly due to NHS inquiries drawing from the NHS's public funding. Despite legislative measures, such as the Inquiries Act of 2005, which includes a provision

to regulate investigative budgets, public inquiries continue to cost millions of pounds. Today, inquiries are also required to publish estimated and actual budgets along with their findings. The Bristol Royal Infirmary Inquiry, for instance, cost an estimated £14M. Similarly, the recently concluded Mid Staffordshire NHS Foundation Trust Inquiry accrued costs of roughly £13.6M. Criticism lodged against the costs of inquiries is compounded by news of inquiry officials continually spending over budget and revising their public estimates almost on a monthly basis. The Vale of Leven Inquiry, for one, garnered heavy criticism for exceeding its initial £4M budget estimate. BBC news reports that the Vale of Leven Inquiry's spending was "eye-watering," as the inquiry's costs eventually increased from £4M to £10M (Foulds, 2014, para 1). Overall, from 1990 to 2005, nearly £300M has been spent on public inquiries in the UK (House of Commons Public Administration Committee, 2005, p. 45).

### 1.3.2 Time

The high costs of public inquiries are undoubtedly attributable to the amount of time they take to conduct. Typically, inquiries are held over the course of several years, more often than not missing their estimated or mandated deadline for completion. Timetables for inquiry proceedings are understandably unpredictable given the large body of data—in the form of documents and witness testimonies—inquiry teams must collect, review, and analyze. For instance, the Bristol Royal Infirmary Inquiry took four years, running from June 1998 to January 2002, while the Mid Staffordshire NHS Foundation Trust Inquiry was held over the course of three years, from March 2009 to March 2011. Many, however, point to the lengthy inquiry proceedings as a deliberate strategy by

government representatives to allow pressing matters of concern to die down before issuing a direct response. This kind of political strategy is most clearly seen in the Bloody Sunday, inquiry, which was the longest running inquiry in the history of the UK, taking a total of twelve years to conduct, beginning in January 1998 and finally concluding in June 2010 (BBC Editor, 2010).

### 1.3.3 Procedure

The significant amount of time and money it takes to conduct a public inquiry is also a product of its historical lack of formal procedure. Throughout my research, I could not locate any government guidelines or procedures describing *how* to conduct an inquiry investigation. My inability to find anything was confirmed in a brief email exchange with Alan Owenson, the documents manager for the Vale of Leven inquiry, in which he informed me that no general guidelines or procedures have ever existed for inquiry proceedings. The process of investigation is simply re-invented at the start of every inquiry. As Beer describes it, the UK "has, over the years, struggled to find a format for the investigation of events of significant national concern or interest that consistently delivers results that are widely accepted, allay public concern, and help positively to shape and improve policy making and legislative reform" (Beer, 1.10). The lack of a general format for public inquiries attracts considerable criticism given their long and rich history in the UK and, as Beer points out, the inefficient resources spent on "reinventing the wheel" time and time again (p. ix).

### 1.3.4 Change

Criticisms concerning the amount of time and money it costs to hold public inquiries are made all the more compelling when you consider the inefficacy of inquiries to enact formal changes in the way healthcare is delivered in the UK. At the conclusion of a public inquiry, the report is published as a deliverable, a document Walshe (2003) describes as a long-winded account of events that is seldom read and rarely instrumental to changing policies or practices in the NHS. Sir Kennedy, the chair of the Royal Bristol Infirmary Inquiry, offers this damning critique in his Marsden Lecture at the Royal Free Hospital, entitled "Inquiries in the NHS: What's the Point?:" "Public inquiry after public inquiry has discovered the same thing. And as it has become clear what went wrong, it has become clear what is needed, but the problem remains that in some parts of the NHS the lessons are not being learnt" (Royal Free London NHS, 2014). Timmins (2013), a journalist of healthcare and policy, makes Sir Ian's point concrete when he notes:

> There is no doubt that public inquiries are surrounded by paradox and problems. On the one hand, organisations will often have sought to address the lessons that the inquiry finally enunciates years later—in the case of Francis [the Francis Inquiry, officially known as the Mid Staffordshire NHS Foundation Trust Inquiry], for example, the need for the NHS's economic and quality regulators to talk to each other. On the other – here's the paradox – inquiries can expose time and again the same problem, which appears immune to any number of repeat recommendations and new procedures. From Maria Colwell in 1973 to the 2009 report on the death of Baby P, more than 20 reports into child abuse deaths have found the core

> problem to be a failure of communication between social workers, doctors, police, probation and others, either internally, externally, or both. Nothing seems to change. (para 9)

While criticisms of public inquiries and their inability to enact change abound, much of what I argue throughout this dissertation works to challenge notions of change as inexorably bound to resolving complex matters of concern.

Discussions of public inquiry reform primarily see these formal investigations as inefficient and ineffective methods for learning and change. In the next section I challenge this perspective by shifting focus to public inquiries as highly rhetorical endeavors, ones that are not solely limited to persuading the public to accept an official account of past tragedies but rather invite us to consider the ways wicked problems take form and emerge as pressing matters of concern for further inquiry, debate, and deliberation.

## 1.4 Rhetorical Work of Inquiries

With this my focus on the role of public inquiries in constructing wicked problems, there are a number of places where this project could situate itself in rhetoric and technical communication scholarship. It speaks and contributes to the growing body of work on the rhetoric of health and medicine; particularly work that examines the divide between medical experts and the general public's knowledge of medicine (Heifferson & Brown, 2008; Segal, 2008; Leach & Dysort-Gale, 2010). In a similar vein, it builds on scholarly work addressing citizen participation in risk communication and environmental policy decisions (Grabill & Simmons, 1998; Simmons, 2007; Blythe, Grabill, & Riley, 2008). The

project even has a family resemblance to work on report genre as a form of social action in technical and scientific contexts (Miller, 1984; Rude, 1997; Cargile Cook, 2000). Each of these areas of consideration offer a compelling place to start.

My focus on public inquiries commissioned in the aftermath of tragic patient deaths, however, most clearly resonates with rhetoric and technical communication's enduring concern for ethically and socially responsible accounts of socio-technical disasters (Sauer, 1993; Sauer, 1994; Dombrowski, 2000; Dragga & Voss, 2006), such as investigations into accidents involving steamboats (Brockmann, 2002), hazardous mines (Sauer, 2002), and space shuttles (Moore, 1992). Since the Challenger space shuttle broke apart 73 seconds into its flight, resulting in the death of its seven crewmembers, rhetoric and technical communication scholars have sustained an interest in the ways post-accident account are constructed, specifically focusing on how organizations and government agencies investigate techno-scientific failures to determine just exactly what went wrong and what lessons can be learned. As Zoetewey and Staggers (2004) describe, we live in a world "with round-the-clock news, whenever a space shuttle burns up on re-entry, a ferry slams into a pier, or an airplane falls from the sky, news people and expert commentators begin almost instantaneously to speculate about the possibilities. Our need to know what happened runs deep" (p. 233).

Such investigations, Zoetewey and Staggers note, all too often derail when they become too concerned with identifying a single, technical cause that precipitated the failure. Sauer (1994), for one, argues that simple accounts of disasters are problematic: "the problems of organization, interpretation, and meaning inherent in visual

reconstructions of the accident are magnified when writers attempt to reconstruct a single, chronological or linear narrative of the disaster" (p. 394). Strangely, the attempt to make a unified account of events is ineffective: "post-accident investigative reports and accident analyses are univocal and represent a single context or point of view; events in the narrative must support the report's conclusion in a logical, chronological narrative…a 'snapshot' of the disaster at a single moment of crisis" (p. 394). Simplicity in accident investigation reports, in other words, tends to ignore a constellation of contributing factors, such as communication practices and social contexts. Sauer, however, reasons that the urge to narrativize complex problems into linear and coherent accounts stems from the way accident reports are typically used in the development of public policy. As she describes in the context of mining collapses: "when accidents occur, investigators…interview miners and document conditions at the site that might provide clues to the source (or sources) of the disaster. In their final investigation report, writers must transform the diverse and often conflicting local accounts of individuals into a single narrative that reflects the agency's technical perspective" (p. 74). While problematic, accident investigators tend to retrospectively construct coherent, linear accounts to clearly identify a manageable and well-defined problem for organizations, regulatory industries, or government agencies to address, often by developing public policies to prevent an accident's reoccurrence in the future. Investigators must shape their account of the accident in ways that will persuade organizational and government bodies to enact changes in policy and/or practice.

Coogan (2002) likewise sees retrospective accident investigations as deeply rhetorical endeavors. In his discussion of accident reports developed by the National

Transportation Safety Board (NTSB), Coogan argues that investigations often aim to persuade the Chicago Transit Authority (CTA) to implement policy changes that would increase the safety of the city's metro system: "because the NTSB is not a regulatory agency that can compel compliance but a quasi-independent federal agency that must persuade all responsible parties to heed its recommendations, the agency recognizes that a large part of its work is rhetorical" (p. 277). Public inquiries into the NHS are likewise empowered by their persuasive appeal to policy-makers. As mentioned above, Walshe (2003) notes, "inquiries rely on their credibility and persuasive power to achieve change—they have no formal powers or authority at all. For this reason, effective communication and dissemination are very important" (p. 3). However, Walshe immediately rejoins by indicating that "few people will actually read the full report" and thus many of the report's proposed recommendations go unheard (p. 3).

If we limit the rhetorical impact of public inquiries to an assessment of its persuasive power—and, ultimately, to its ability to move policy makers to enact change—then inquiries prove to be inefficient methods for retrospectively accounting for failures and extracting lessons to be learned from them. However, I move here to consider public inquiries as deeply rhetorical, but in a way that extends beyond traditional notions of persuasive discourse. Rhetoric, as I use it throughout this study, is a situated practice that allows people to facilitate and sustain inquiry, debate, and deliberation over matters of public concern.

It is from this rhetorical basis that I call for a reimagining of rhetoric and technical communication as not only problem-solving work but also as deeply involved in the

articulation of wicked problems. Using the Vale of Leven Hospital outbreak and inquiry as a case study, I trace how citizens and government officials shaped and reshaped the outbreak of C.diff as a wicked matter of concern in need of national attention.

## 1.5 Why Make Problems Wicked?

It is important that I pause here to address a foreseeable and frankly understandable concern. Why make problems wicked? Why make already pressing matters of concern bigger and more complex? Why intensify rather than render such problems manageable, or in Rittel and Webber's terminology, tame? In making problems wicked, do we not risk delaying solutions and feasible change(s)? These are valid questions, ones that have, in many ways, plagued me from the very outset of this project. And what's more, these questions reveal risks not only for how we talk about wicked problems, but also how we understand the work of rhetoric and technical communication. In other words, does this inquiry shift the focus from rhetoricians and technical communicators as problem-solvers to seeing them as troublemakers? Possibly. But I wager that there is value in causing such trouble.

Take, for instance, the work of troubleshooting, which involves an array of diagnostic practices that allow one to locate sources of disruption that have slowed or halted a system's operation. Etymologically, troubleshooting derives from repair work on telephone lines in which skilled "trouble-hunters" locate and mend damage to the physical telecommunication network. Troubleshooting, in this way, involves locating, representing, defining, and framing sources of disruption as particular kinds of problems.

Troubleshooting, as I describe it here, resonates with Cushman's (2014) argument that professional accounts of problem-solving work often conceal the ways we come to see and recognize problems in the first place. Drawing from Donald Schön's work on reflective practice, Cushman sees "problem-setting" as a rhetorical practice whereby professionals temporarily stabilize complex and ill-defined situations by framing them as recognizable—and thus manageable—problems. This project takes Cushman's understanding of problem-setting one step further by considering the work of rhetoric and technical communication as not only a form of problem solving but also as involved in destabilizing or intensifying problems; particularly by blurring their defined boundaries in order to reimagine how we understand them and who is capable of addressing them.

The answer to why make problems wicked, then, is grounded in how people respond to them as matters of public concern. While Rittel and Webber are understandably cautious about this in their 1973 article, wicked problems resist attempts to define their boundaries and thus cross a number of disciplinary, institutional, and professional boundaries. As Mirel (2004) points out, "in [wicked] problem solving uncertainty prevails; one area after another gaps occur between the information that problem solvers possess and the information required to resolve the problem" (p. 22). Because wicked problems transcend any single discipline, institution, or profession, they often impact a diverse body of stakeholders that can and should participate in addressing them. Wicked problems concerning the U.S. healthcare system and increasing conflicts over insurance costs are not problems for medicine and medicine alone to solve. Rather, such problems require a diverse body of stakeholders to be brought to the table. As Mirel

notes, wicked problems are inexorably "tied to the interests of diverse stakeholders" (p. 23). What this means is that wicked problems often draw in interested parties that have much at stake in the matter of concern but are often marginalized or outright excluded from discussions of them. This exclusion results, in part, from rendering complex issues into tame, manageable problems, as is often seen across disciplines such as medicine and engineering. To make a problem wicked, then, is one way to challenge a problem's boundaries by gathering various perspectives around a pressing matter of concern that calls for sustained inquiry, debate, and deliberation.

## 1.6 Overview of Chapters

Throughout this chapter, I have situated the outbreak of C.diff at the Vale of Leven Hospital and its subsequent public inquiry to determine what went wrong and what lessons can be learned to prevent similar events from reoccurring. Turning to criticisms of public inquiries (in terms of time, money, procedure, and change), I highlight prevailing perspectives that see inquiries as social ceremonies for domesticating danger—ceremonies that many critics see as re-legitimating institutions in the aftermath of crisis and pacifying public calls for justice. Challenging this perspective, I move to understand public inquiries as deeply rhetorical processes of articulation that enact, rather than represent, wicked problems.

Chapter two describes the methodological approach I take in my rhetorical study of the Vale of Leven Hospital inquiry. To do so, I first provide an overview of approaches scholars have taken in their discussions of public inquiries, focusing in particular on

prevailing methods of narrative analysis. Assessing the suitability of these methodological perspectives to the Vale of Leven Hospital inquiry, I describe the limitation of existing approaches, pointing specifically to the ways in which they neglect to consider the active role of citizens in shaping the inquiry's proceedings. In light of this need, I propose a methodology for understanding the rhetorical work of public inquiries, drawing insight from theoretical frames and concepts such as boundary objects, institutional and extra-institutional rhetoric, articulation work, and matters of concern. My proposed rhetorical methodology, I argue, enables a reimagining of what rhetorical work public inquiries accomplish, what kinds of stories they tell throughout their investigation, as well as what lessons they offer government officials, medical practitioners, and local citizens.

Chapter three recounts how the C.diff outbreak was first detected at the Vale of Leven Hospital and the initial investigation conducted by an independent review team to determine what happened that lead to 34 patient deaths. Specifically, I compare the initial investigative report's findings with stories constructed and circulated by the C.diff Justice Group, emphasizing the way C.diff Justice members describe the outbreak as a national public health concern rather than as a professional matter in need of correction. My findings illustrate the way stories told by local West Dunbartonshire citizens in the aftermath of the outbreak and the initial independent review allowed them to shift the institutional conditions that prevented their participation in the investigative process and to successfully call on the UK government to establish a formal public inquiry into the Vale of Leven outbreak.

Chapter four turns to examine the second investigation into the C.diff outbreak and the findings that emerged from the five-year inquiry. Focusing on the stories told through witness testimonies used throughout the *Vale of Leven Hospital Inquiry Report* (2014), I explore the inquiry team's account of the outbreak and the recommendations they make for changing policies and practices at the Vale of Leven Hospital. Specifically, this chapter focuses on the rhetorical negotiations of the inquiry's terms of reference; that is, the scope of investigation established at the outset of the inquiry and modified throughout the inquiry's proceedings based on the team's findings.

Chapter five concludes by discussing the implications of the inquiry into the Vale of Leven Hospital outbreak for scholarship in professional and technical communication, public rhetorics, and the rhetoric of health and medicine. Specifically, my study calls for a sustained engagement with the notion of wicked problems as a theoretical framework for rhetoric and technical communication. My research points to the need for a better understanding of not only how rhetoricians and technical communicators work to address complex and ill-defined problems in technical, scientific, and medical settings but also how they are well-suited for inventing and sustaining wicked problems across professional and public life.

# CHAPTER 2. STORYTELLING AFTER THE FACT

> "Change itself is a story, and stories are acts of change. The stories we read, watch, hear, create, and enact are powerful interpretative acts. They provide security and continuity. They create resistance, opposition, and conflict…Stories document our habits, successes, failures, and lessons learned. They place our culture's defining events, oddest moments, and strategic messages into common narratives we assimilate, refine, and then pass on to next generations"
>
> —Brenton D. Faber (2002)

In their landmark article, Rittel and Webber (1973) introduce ten characteristic traits of wicked problems. While each of these traits, as I have discussed in the previous chapter, possess deeply rhetorical dimensions and implications, I want to focus for a moment on the ninth characteristic, which reads: "the choice of explanation [of a wicked problem] determines the nature of the problem's resolution" (p. 166). In a way that is reminiscent of Kenneth Burke's conception of rhetoric, Rittel and Webber point out that the "choice of explanation is arbitrary in the logical sense. In actuality, attitudinal criteria guide the choices" we make in articulating wicked problems (p. 166). That is, the way we construct accounts of wicked problems in turn shapes how we comport ourselves in relation to such problems as well as how we aim to address them. I call attention to Rittel

and Webber's ninth characteristic of wicked problems in order to foreground my methodological approach to understanding the Vale of Leven public inquiry and the rhetorical work it and similar inquiries accomplish throughout the investigative proceedings. In other words, if we want to explore the rhetorical dimensions of public inquiries, we need to better understand the larger contexts of such investigations.

In this chapter, I foreground my methodological approach to understanding and describing the Vale of Leven inquiry and the stories constructed in the aftermath of the hospital's C-Diff outbreak. My methodological position is grounded in the Vale of Leven case itself and has evolved out of Sullivan and Porter's (1997) understanding of methodology as "local, contingent, malleable, and heuristic" way of producing situated knowledge (p. 78). Moreover, Sullivan and Porter highlight the importance of attending to a researcher's methodological frames; that is, the personal, cultural, and social lens through which researchers actively shape how they approach, interpret, and interact with particular sites of study. I reflect on the theoretical commitments to help me, as Law (2004) articulates it, understand the rhetorical dimensions of public inquiries "without attempting to build a single discursive account" of them (p. 94). Specifically, I lay out my theoretical commitments that have significantly shaped how I see and understand the stories emerging in the aftermath of the outbreak and throughout the subsequent Vale of Leven inquiry. To be clear, these commitments are not pre-established methodological approaches and they do not point toward a straightforward "select-and-apply approach" to research design (Sullivan & Porter, 1997). Rather, they are the frames of reference that brought me to the

Vale of Leven case and sustained my interest in it while also being continually revised as I dug into the inquiry itself.

The overall purpose of this chapter is to describe my methodological approach to making sense of the public inquiry into the Vale of Leven outbreak. Most scholarly treatments of storytelling call attention to the way stories help us construct and solve problems. Specifically, stories allow individuals, communities, and organizations to (1) impose narrative coherence on complex and unstable situations, such as twenty-first century work environments, (2) afford an interpretive and inventive methodology for making sense of present circumstances in light of past experiences, and (3) circulate as informal networks for learning and knowledge-sharing. Drawing on Boje's (2008) notion of antenarrative, I move to understand storytelling as much more than an explanatory device for imposing coherence and order on complex, messy, and ill-structured situations. Storytelling, in other words, does far more than help us make sense of the world—in many ways, stories can help enact and sustain our most wicked problems.

## 2.1 Domesticating Danger

Public inquiries are, for the most part, understood as a form of narrative. However, such narratives often evoke deep suspicion. Indeed many have described public inquiries into the NHS as socio-political rituals designed to cover up the root causes of iatrogenic harm while pacifying the public with assurances that the matter is being handled. Brown (2000), for one, critiques public inquiries as social ceremonies intended to "re-establish dominant myths by offering acceptable interpretations for the events, and hence re-

establish the legitimacy of social institutions" (p. 48). Brown's description of public inquiries as rhetorical constructs is grounded in a somewhat underdeveloped understanding of rhetoric, particularly as persuasive discourse intended to manipulate the public into accepting "certain contestable ideas" (p. 48). His focus is on the Allitt Inquiry, which was conducted to examine child abuse at the Grantham and Kesteven Hospital in the UK. According to Brown, the inquiry team's investigation led to the "allocation of responsibility and blame," the reduction of "anxiety both within the medical profession and within society generally by offering an explanation which promotes fantasies of comprehension and control," and the false presumption that the inquiry's narrative "should make discernment of similar occurrences (i.e., attacks/murders committed by nurses) easier in the future" (pp. 48-49). The report produced by the Allitt Inquiry was a "monologue, a univocal representation that omits, marginalizes, and selectively highlights in its suppression of interpretive plurality" (p. 67). In doing so, the report "ameliorated anxiety by rendering events apparently more comprehensible (by purporting to explain how and why things happened the way they did), thus increasing feelings of control over the present and future among significant stakeholder groups" (p. 68). The result is a view of public inquiries as "cathartic ceremonies and the reports they produce as public discourse myths, which help modern societies cope with mysterious events and broker anxiety by enticing us to engage in fantasies of control" (p. 68).

Much of Brown's critique is rooted in an understanding of public inquiries as narratives that render complex, messy situations into coherent and rational accounts (I will return to this point later in this chapter when I review existing approaches to analyzing

public inquiries). Boudes and Laroche (2009), for instance, characterize public inquiries as constructing stories to "*domesticate* dangerous and hostile events" (p. 392; emphasis mine). In other words, they see inquiries as designed to compress a complex series of events "into a single, simple story, however shocking or frightening this story might be," and in doing so, "reduce the scale of the event" (p. 392). And there are a good number of reasons to see public inquiries this way, the most evident being the legislative language used to describe inquiries and their purpose in civic and professional life. Inquiries are intended to establish facts, particularly in recounting what happened in the past that led the serious harm or death of patients. Moreover, they are conducted by government officials appointed to serve as investigators in determining root causes of failure. Coming from departments external to the NHS, these government officials are seen as objective and neutral investigators. And as mentioned above, many see public inquiries as institutional strategies for defusing pressing political matters.

Echoing many of Brown's arguments, Gephart (2007) characterizes the inquiry narrative as "contrived rhetorical products—artifacts created to persuade us to accept a contestable interpretation of events" (p. 135). These narratives, in other words, are designed to close down further inquiry, debate, and deliberation by providing an official account of events. What is striking about both Brown's and Gephart's perspective on public inquiries is their unyielding focus on the inquiry report as a rhetorical artifact. Gephart, for one, describes inquiry reports as rhetorical in so far as they function as an "exercise in power used to support the legitimacy of social institutions" (p. 135). And this is, in large part, premised on their understanding of what rhetoric is and what rhetoric does:

"rhetoric is the art of speaking and the study of how people understand…a rhetorical analysis [of inquiry narratives] addresses how stories and narratives persuade readers and hearers of their authenticity, and how story features such omissions shape interpretations" (p. 134). Moreover, for Gephart, rhetoric and narratives circulate through texts—and, in the case of public inquiries, through organizational texts. As a result, Brown and Gephart's respective analyses of public inquiries are predominantly text-based and largely focused on examining the rhetorical strategies used to re-legitimate social institutions and manipulating the public in some manner.

While Brown and Gephart's understanding of rhetoric limits and impairs the way they read public inquiries, their approach is firmly grounded in prevailing notions of narrative—particularly "official narratives"—as a form of problem-solving work. And in many ways, this problem-solving work, according to Johnson-Eilola and Selber (2013), uses narratives to "sense a problem, diagnose what forces within a context are causing the problem, and develop and implement a change within the context that addresses the problem" (pp. 3-4). Such narratives likewise solve problems when they provide a coherent account of accidents to public policy officials in order to enact change. Coogan (2002) makes this point clear in his discussion of accident reports developed by the National Transportation Safety Board (NTSB) to persuade the Chicago Transit Authority (CTA) to implement policy changes that would increase the safety of the city's metro system. NTSB investigations, according to Coogan, are founded on a "party system," involving participation from operators, safety organizations, and government regulators to produce effective recommendations for change. However, unlike Brown and Gephart's approach,

Coogan proposes a methodology for understanding these collaborative reports as designed to not only increase public safety by accounting for whom or what participates in the report's construction but also through the study of "those ideographs that define or disrupt the common concern" which enable diverse perspectives to collaborate and articulate a particular problem or issue (p. 281).

Likewise, the narratives constructed in the aftermath of unexpected problems need not conform to the caricature developed by Brown and Gephart. Wells (1990), for one, illustrates this point in her discussion of the MOVE report, which detailed the results of the Philadelphia Special Inquiry Commission's (PSIC) investigation into the police raid on the home of prominent members of MOVE, a black liberation group. Running counter to traditional approaches to commission reports, which often narrate a coherent account of events in a linear fashion, the MOVE report "uses narrative as its sole structure principle, disperses its commentary among the episodes of the narration, and segments the narrative into numbered, sequential, but discontinuous 'findings'" (p. 209). The MOVE report, in other words, "cannot finally produce a coherent instrumental analysis of the events it recounts" because it acknowledges the deeply complex and social dimensions of the events under investigation. As Wells sees it, commissions such as the PSIC "express a faith in narrative," one that proceeds from the belief that official stories need not render complex events into a simple, linear, and coherent plot (p. 211).

As Coogan and Wells both point out, the narratives developed in the aftermath of problems, failures, and accidents need not conform to Brown and Gephart's respective views of inquiries. Brown and Gephart's views likewise limit our understanding of the

rhetorical work taking place throughout an inquiry's proceedings. That is, by largely characterizing inquiries as social ceremonies that manipulate the public, such approaches inadvertently reduce inquiries down to the investigation's findings and its concluding report. The rhetorical dimensions of inquiries, as a result, become limited to the report itself as a technical document. Brown and Gephart's methodological approach to public inquiries is premised on (1) the rhetorical function of inquiries being the construction of explanatory narratives that simplify the complex and (2) the capacity of an inquiry's report to encapsulate the entire investigative process into a text-based account of events.

In the next section, I move to consider an alternative way of thinking and talking about the rhetorical work of public inquiries, specifically in a way that considers how people create and sustain wicked problems throughout an investigative process. To do so, I turn to Rice's (2012) notion of rhetorical inquiry to reimagine what it means to conduct an inquiry into a matter of public concern.

## 2.2 From Suspicion to Rhetorical Inquiry

While inquiry has long been discussed in rhetorical scholarship (Nelson, Megill, & McCloskey, 1986; Simons, 1990), Rice's (2012) recent study of inquiry, public subjectivity, and crisis in urban development provides a compelling place to reconsider rhetorical inquiry in general and public inquiries in particular. Arguing for rhetoric's role in response to crises of urban planning, Rice challenges the idea of the "distant public" that is unengaged with local issues of over-development. That is, Rice is concerned with the way communities and publics respond to the negative effects of development in urban settings,

particularly focusing on the need for a different public subjectivity for addressing these problems in sustainable ways. As she argues, "my approach…understands publics and their discourse as the best site for making interventions into material spaces. In other words, rhetorical theory and rhetorical pedagogy can make a difference to the current development…by helping to shape different kinds of subjects who can undertake different kinds of work" (pp. 7-8). Rice points to inquiry as one way of cultivating publicly engaged subjects that are able to intervene in urban development crises through considering the fact that they are "situated within many complex networks" and reflecting on how they can rhetorically leverage such networks to make sustainable change (p. 163). The key to such change, for Rice, is reimagining what she calls *rhetorical inquiry*.

I want to call attention to Rice's notion of rhetorical inquiry because it offers a productive alternative to the way Brown and Gephart characterize the process of public inquiries in the UK. While Rice does not directly address formal public inquiries (the cases she analyzes are all situated in the U.S.), I see her critical description of rhetorical inquiry as a kind of methodological response to Brown and Gephart, a response that specifically challenges their understanding of rhetoric and its role in the formal investigative process. As discussed above, Brown and Gephart's respective look at inquiries characterizes them as social rituals designed to manipulate the public in the hopes of re-legitimizing institutions and stifling institutional change by promoting inaction. In contrast, Rice sees rhetorical inquiry as a way of situating one's self within a number of complex networks of relations and, in doing so, allows one to see material and rhetorical possibilities for social change (p. 168). Citing the public's response to the B.P. oil spill—and subsequent calls for boycotts—

Rice suggests that "no matter how good it feels to drive past a B.P. station, truly sustainable thinking demands that we think about this crisis across incongruent and asymmetrical networks" (p. 164). Because Rice's focus is on developing engaged citizens capable of enacting change in development crises, her notion of rhetorical inquiry asks individuals to reflect on the ways "we are already part of multiple networks…we are already in a relation to others and the world…[and] transformative rhetoric thus requires that we learn how to think of ourselves within these multiple networks, and also how they might be otherwise construed" (p. 164).

Rice's discussion of rhetorical inquiry resonates with the public inquiry held in the aftermath of the Vale of Leven outbreak in a number of ways. Most importantly for this study, the concept of rhetorical inquiry helps us move beyond Brown and Gephart's view that inquiries are social rituals that mediate and manipulate crises in their communication with the public. As Rice argues: "crises and controversies"—which the Vale of Leven outbreak certainly counts among—"are networks, and they invite our investigation into them" (p. 168). To make this clear, Rice differentiates rhetorical inquiry into crises from "the epistemic discourse" that inevitably emerge in the aftermath of such events. She writes: "within epistemic discourse, our aim is to find a perspective whereby the question can be answered. Inquiry, however, is not a pretext to a greater telos; it is its own telos" (p. 168). Rather, inquiry is an embodied habit that continually reflects on one's position at the nexus of various competing networks. Such inquiry is not a "precursor to anything else" but is a sustained reflection that engages in what Law and Urry (2005) term a performative ontology (p. 168). By performative ontology, Rice describes rhetorical inquiry as a kind of

investigation into the diverse and heterogeneous networks of relations that compose crises. Rather than asking questions typically posed in epistemic discourse in the aftermath of crisis—such as "what happened?"—rhetorical inquiries consider: How are crises composed? What networks of complex relations connect together to form these crises? How might these complex relations be modified or adjusted in ways that enact change? Importantly, these questions do not call for definitive answers. Rather, Rice suggests, "the performative ontology of inquiry asks investigators to occupy a different kind of subject position. Instead of seeking resolution, the inquiring subject seeks to uncover the composition of a given scene" (pp. 168-169).

In addition to asking these different kinds of questions, the process of rhetorical inquiry is deeply rooted in not only epistemic concerns but ontological and ethical ones as well. Rice connects her notion of rhetorical inquiry to Actor Network Theory in general and the method of network tracing developed by Law, Urry, and Latour. Describing the empirical dimensions of network tracing, Rice characterizes rhetorical inquiry as making a similar shift from epistemic to ontological considerations: the "use of ontology here is not a facile sense of reality. [Rather,] reality is created through networks of rhetorical acts" (p. 172). In other words, rather than only representing crises by mining them for a definitive answer to *what happened*, rhetorical inquiry is more "concerned with ontology—or a remaking of reality—[whereby] discourses of inquiry can perform such remaking of meaning through an investigation of co-constitutions" (p. 173).

My sustained engagement with Rice's notion of rhetorical inquiry is purposeful. Specifically, I see her discussion of how people respond to crises through inquiry practices

as productive to my study of the Vale of Leven inquiry in two distinct but interrelated ways. First, the notion of rhetorical inquiry helps broaden the scope of this study by calling attention to the limitations of Brown and Gephart's conflation of the entire inquiry proceedings with an inquiry's final report. Using Rice's rhetorical inquiry as a methodological starting place, my study sets out to examine the various networks of inquiry that take place throughout the public inquiry's investigation. That is, my methodological approach to making sense of the Vale of Leven inquiry moves to consider not only the final inquiry report but also the various other networks of relation that both compose crises as well as the investigative process that accounts for such crises after the fact.

Second, Rice's description of rhetorical inquiry also calls attention to the way inquiries do not need to produce definitive answers or solutions to problems but, rather, can perform a much more ontological and ethical—and I would add rhetorical—role in enacting institutional learning and change. Toward the end of her study, Rice describes rhetorical inquiry as a kind of methodology—one that aims to "constitute new kinds of subjects who imagine themselves different as public beings" (p. 186). As I contend throughout this chapter, rhetorical inquiry can also function as a methodology for understanding public inquiries as deeply rhetorical processes of articulation that both invent and sustain wicked problems as matters of public concern.

In the next section, I suggest a methodological approach to thinking about public inquiries as a form of storytelling that is not bounded or limited to the official narrative constructed in an inquiry's final report.

## 2.3 Methods of Storytelling After the Fact

The above narrative approaches to public inquiries limit our understanding of the rhetorical work taking place throughout an inquiry's proceedings. In other words, by largely characterizing inquiries as social ceremonies that manipulate the public, they inadvertently reduce inquiries down to the investigation's findings and its concluding report. Insight from science and technology studies (STS) as well as rhetoric and technical communication, however, helps to reframe and reimagine public inquiries as an assemblage of situated activities taking place over time involving various people, places, and things. Public inquiries are, to use Latour's phrasing, collectives that cannot be reduced down to their component parts.

My methodological approach to public inquiries reflects a renewed interest in stories and storytelling in rhetoric and technical communication scholarship (Barton & Barton, 1988; Blyler & Perkins, 1999; Adler-Kassner, 2008; Moore, 2013; Cushman, 2015). This interest in stories and storytelling is, perhaps, most evident in Faber's (2002) work on narrative as an agent of change. For Faber, narratives are embodied forms of "insider knowledge," that function as "internal constructions that distinguish…what members of an organization value. At the same time, these narratives denote the various identities that members claim" (p. 227). Faber's point here ties back to discussions of socialization in technical communication scholarship (Larson, 1996; Beaufort, 2000; Sullivan, Martin, & Anderson, 2003; Flanagin & Waldeck, 2004; Carter, Ferzli, & Wiebe, 2007), specifically in that narratives establish the social identities and roles available by providing "the

framework from which new members may choose their own organizational identity" (p. 227).

While narratives constitute the internal discourses of an organization, images are, for Faber, the view from the outside. Such images necessarily "exist *apart* from the organization as something it often attempts to assume but not as something it absolutely controls" (p. 227). That is, an organization's external image is a reflection of how people see it from an external perspective, a point that Faber compares to notions of "corporate *ethos*" (p. 228). Organizations undergo distress when the relationship between its internal narratives and its external image are in strict conflict. To demonstrate how organizational distress takes form, Faber points to his work with a city-owned cemetery that was at risk of being sold by city leaders. The cemetery's internal narrative depicted itself as a "viable civic enterprise…[that] preserved and promoted a vital link with the past" for citizens (p. 229). This narrative was in conflict with its external image from the perspective of city leaders who only saw the cemetery of possible "revenues, expenses, break-even pricing, and possible net worth" (p. 229). As Faber argues, organizational change takes place as a "discursive process of realigning the organization's discordant narratives and images," resolving the conflict between internal and external perspectives (p. 231). While Faber's conception of narrative change is helpful in connecting stories to rhetoric and technical communication work, his emphasis on narratives providing coherent resolutions to disruption faces similar limitations as Brown and Gephart.

To develop a theoretical framework for understanding public inquiries in this way, I turn to the work of Boje (2008) and his notion of antenarrative. Boje defines

antenarrative as a "performance of stories [that are] a key part of members' sensemaking and a means to allow them to supplement individual memories with institutional memory" (1991, p. 106). Boje's later work, *Storytelling Organizations* (2008), updates this definition to include retrospective, reflexive, and prospective sensemaking practices (p. 13). This redefinition of storytelling accounts for sensemaking narratives that do not necessarily have a clear beginning, middle, and end; instead, it sees fragmented stories, embodied responses, and other unacknowledged narratives as interactive processes of organizational sensemaking (p. 41). These stories thus can reinterpret—and reenact—past events; they can be a way to negotiate conflicting and contradictory understandings of present circumstances; or they can function as a way to predict future organizational behavior (p. 43). Importantly, Boje's definition of storytelling extends well beyond the textual. Including media such as orality, visuals, and architecture, organizational storytelling embeds collective memory in a variety of environmental fixtures.

In contrast to traditional forms of narrative whereby a story is understood to be a complete recounting of events, Boje's notion of antenarrative points to the "fragmented, nonlinear, incoherent, collective, and non-deterministic aspects" of past events (Yolles, 2007, p. 75). That is, antenarrative helps us to methodologically consider the limits of traditional narratives, specifically attuning researchers to the storytelling work that happens at the edges of completed and coherent narrative accounts. As Boje describes, antenarratives "are (or can be) a collective co-construction of multiple participants, each with a fragment, none with the overarching conception of the story that is becoming,

raveling and unraveling, picking up contextual elements in some quarter, dropping some in performances in other areas" (Yolles, p. 76).

In many ways, reading the Vale of Leven Hospital inquiry calls for an antenarrative approach. That is, the Vale of Leven Hospital challenges Brown's argument that inquiries mash diverse perspectives and stories together into one governing narrative. It certainly presents a single narrative—but it also keeps the diverse stories that make up that narrative accessible to the broader public (i.e., through the extensive online archive of inquiry materials and witness testimonies). Focusing solely on an inquiry report's narrative, in other words, neglects to consider the way such investigations unfold in public where "ideas can be generated, public vocabularies created, and social conditions articulated" (Lay, 2000, p. 34). In doing so, I have argued for a methodological approach to public inquiries that sees them as deeply rhetorical processes of articulation that not only provide coherence to problems but also enact and sustain them. Reading the Vale of Leven Hospital outbreak and inquiry in this way, I suggest, foregrounds how citizens and government officials worked to enact the outbreak as much more than a problem to be solved but rather as a wicked and exceedingly complex matter of public concern in need of national attention. Moreover, the methodological approach I have described throughout this chapter emerged from the need for a better way of understanding the Vale of Leven outbreak and the public inquiry that took place in its aftermath. It is not, in other words, a direct defense of public inquiries as an institution. Rather, my goal throughout the chapter has been to point out the limitations of treating public inquiries as a cohesive unit of analysis, particularly in critiques of inquiries that reduce them to social ceremonies designed to manipulate public

perceptions and re-legitimate the reputation of a particular institution. In doing so, I highlight the value of bracketing—if only temporarily—our suspicions toward inquiries as official, homogenous accounts of the past and instead embrace the rhetorical work of storytelling as one way of enacting and sustaining problems that call for a different kind of response from local, national, and global stakeholders.

# CHAPTER 3. OUTBREAK IN THE VALE OF LEVEN

"Deferred action is present exploratory action. The first and most obvious effect of this change in the quality of action is that the dubious or problematic situation becomes *a* problem. [That] situation as a whole is translated into an object of inquiry that locates what the trouble is, and hence facilitates projection of methods and means of dealing with it"

—John Dewey (1929)

"When accidents occur, investigators…document conditions at the site that might provide clues to the source (or sources) of the disaster. In their final investigation report, writers must transform the diverse and often conflicting local accounts of individuals into a single narrative that reflects the agency's technical perspective"

—Beverly Sauer (2002)

The Vale of Leven is small conurbation located in the West Dunbartonshire government council area of Scotland. The Vale is situated between Loch Lomond in the north and the River Clyde to the southwest, just under an hour from the Glasgow city center. Toward the western edge of the Vale is the town of Alexandria, the largest community in the conurbation and home to the Vale of Leven District General Hospital. Built in 1955 on endowed land, the Vale of Leven Hospital was commissioned by the

Henry Brock Memorial Cottage Hospital in order to accommodate and serve the Vale's growing population. Within a year, the Vale of Leven Hospital replaced Brock Memorial as the primary care provider for the conurbation, converting the cottage hospital into a geriatric long-stay unit for the chronically ill. By 1977, all geriatric patients were transferred to the Vale of Leven Hospital and the Brock Memorial was eventually demolished later that year. By 2007, when the outbreak of C.diff first began to spread across the 136-bed facility, the Vale of Leven Hospital served an estimated 78,000 people across the Vale as part of the National Health Service (NHS) Greater Glasgow and Clyde ("NHSGGC," n.d., para 1).

Figure 1: Aerial photo of the Vale of Leven from the "Vale of Leven History Project"

The driving purpose of this chapter is to show how the outbreak of C.diff was first discovered at the Vale of Leven Hospital and how the NHS initially investigated the incident in order to determine what went wrong and what lessons can be learned. Specifically, I focus on how the outbreak was framed as a problem that could, in many ways, be tamed and thus rendered manageable to solve. What the findings of this chapter make evident is that the official remit, or scope of investigation, of the NHS's initial independent review rhetorically shaped the investigation's understanding of the outbreak as a local problem stemming from a variety of issues at the Vale of Leven Hospital. That is, the official remit prevented the investigation from situating this outbreak into a much larger context of healthcare in the UK. I unpack the rationale of this approach by drawing connections between the independent review's investigation and the ways such technical accounts of failure are used in the creation of public policy decisions. To demonstrate how the outbreak was re-articulated as a very different kind of problem (that is, as a much more wicked matter of concern) in the public inquiry, I turn to the petition launched by members of C.diff Justice Group. In doing so, I foreground the ways the outbreak was re-articulated throughout the public petition for a formal public inquiry to be held into the outbreak and its significance across the entire NHS system.

## 3.1 Taming an Outbreak

Popular cinematic representations of outbreaks often depict the spread of contagions as a visible matter of urgency. Once detected, these cinematic outbreaks mobilize teams of medical professionals, epidemiological experts, and government officials,

setting them to work in containing the contagion's spread among an ensemble of infection control procedures, sterilized tents, decontamination showers, and hazmat suits. What has assembled all of these actors, then, is a clear and present danger: a very real contagion that can be empirically traced back as the cause of various deaths. The 1995 film, *Outbreak*, for example, heroically depicts Dustin Hoffman's character, Colonel Sam Daniels, as an expert virologist from the United States Army Medical Research Institute of Infectious Diseases, who is in search of a contagion's so-called patient zero, a white-headed capuchin monkey on the loose in Cedar Creek, California. In many ways, what characterizes a contagion as a compelling cinematic antagonist is the fear typically associated with a viral or bacterial strain being largely invisible, spreading indiscriminately from person to person. This fear, of course, is also reflected in real world cases of outbreaks, such as the recent incidents of Ebola infections in and outside of the U.S.

The outbreak of C.diff at the Vale of Leven Hospital was not such a clear and present danger. While C.diff, like both the fictional virus in *Outbreak* and the very real Ebola, is an invisible threat to people, its presence in a medical setting is not exactly rare. Indeed, C.diff is made all the more invisible because of how common and mundane it is to encounter in hospitals.

So what is C.diff? *Clostridium Difficile* (or "C.diff" for short) is a hospital-acquired, or healthcare associated, infection (HAI) that is most often contracted by patients following heavy or prolonged use of antibiotics. According to the Center for Disease Control and Prevention (CDC), C.diff is "estimated to cause almost half a million infections in the United States in 2011, and 29,000 died within 30 days of [their] initial diagnosis" ("FAQ

on C.diff," 2015). A study of C.diff infections in the UK at the time of the Vale of Leven outbreak found that "the total number of cases reported from all acute hospitals was 3,174 in the period December 2007 to May 2008. The overall incidence rate for all hospitals for all ages for the 6-month period as 1.52 per 1000 AOBD [acute occupied bed days]" (Health Protection Scotland, 2008, p. 12). A C.diff infection presents itself as colitis, or the inflammation of the large intestine, due to the bacterium slipping its way into a patient's gut and replacing all of the intestine's health bacteria, resulting in the development of fevers, loss of appetite, intense nausea, gastric distress, and abdominal pain. Combined with severe dehydration and whatever condition brought the patient to the hospital in the first place, C.diff presents any hospital unit with a significant but invisible danger. And this is most evident in the fact that the C.diff outbreak at the Vale of Leven Hospital continued to spread unchecked and largely undetected for a full 18-months.

The discovery of the outbreak was, for all intents and purposes, a complete accident. An independent researcher at the Scottish Salmonella, Shigella, and C.difficile Reference Laboratory, identified an unusual strain of the bacteria (what ended up being labeled as "Type 027") in two patients who died at the Royal Alexandria Hospital just under 20-miles away from the Vale of Leven. As the public inquiry report indicates, "coincidentally, an isolate from a stool sample taken from a deceased [Vale of Leven Hospital] patient during a post-mortem on 17 March 2008 was sent for ribotyping, and was also discovered to be the 027 strain" (p. 48). This patient in question had a history of contracting C.diff during or after visiting the Vale of Leven Hospital and repeatedly required hospitalization due to the infection. Additional samples from both the Royal Alexandria and the Vale of Leven

Hospitals were tested and strain 027 kept popping up. Concurrently, with the increasing number of cases being identified by the independent researcher, word of the infection cases spread and in June 2008 a regional news outlet, *The Dumbarton and Vale of Leven Reporter*, requested information on the number of patients infected with C.diff at the Vale of Leven Hospital as well as the number of patients who had died because of it. As the public inquiry report states, "that request provoked a review of all cases of [C.diff infections]…with a focus on the period 1 December 2007 to 31 May 2008, and it only then became evident that there had been a persistent problem with [C.diff infections] and associated deaths during that period.

### 3.1.1 Establishing an Independent Review

In response to these increasing numbers of identified cases, the Scottish NHS in conjunction with the Cabinet Secretary of Health and Wellbeing, convened an initial independent review to investigate the events that allowed the C.diff infection to spread unchecked for so long. The independent review was established in 18 June, with the provision that the review's investigation and subsequent report would be completed by 31 July 2008 at the latest. As the independent review team describes in the report's foreword, "this was a relatively short timeframe, particularly given it was during the peak summer holiday period, but was necessary given the seriousness of the events at the Vale of Leven Hospital" (Independent Review, 2008, p. 1).

The driving purpose of the independent review was twofold: to find out what happened at the Vale of Leven Hospital that led to the outbreak going undetected for so long and to make recommendations to prevent its reoccurrence in the future. Specifically,

the independent review's official remit, or scope of investigation, asked the review team to examine:

> The circumstances where *C.difficile* either caused or contributed to the deaths of 18 patients at the Vale of Leven Hospital during 1 December 2007 to 1 June 2008, to review (a) the adequacy of the surveillance systems at the hospital during this period, (b) the adequacy of infection control procedures at the hospital during this period, (c) the adequacy of current surveillance and infection control arrangements, (d) the adequacy of relevant facilities to prevent and contain *C.difficile* at the hospital, such as the availability of hand hygiene facilities, (e) what notifications were given by the Vale of Leven Hospital to NHS Greater Glasgow and Clyde Health Board Infection Control Committee and Health Protection Scotland, (f) what procedures were followed for informing the Scottish Government of what action has been taken or could be taken, and to make recommendations about the procedures and systems that should be adopted at the hospital so that good infection prevention and control procedures are in place. (Independent Review, 2008, p. 6)

The highly specified remit for this independent review is in stark contrast to the more open-ended remit of an internal investigation established days before the review began. The remit of the internal investigation focused on the review of "all correspondence from April 2006 with regards to the Vale of Leven C Difficile issue and, in particular, from December 2007 with regards to who knew about the C Diff cases, what action did they take and who did they report matters to" (Vale of Leven Inquiry, 2014, p. 382). While it is clear that the scope of this first, internal investigation was narrow and limited to a review of any and all

communications about the outbreak over the period of a year, the formal public inquiry conducted from 2009 to 2014 found that "the information the [first, internal investigative] team gathered…did not in fact limit its conclusions to the terms of that remit" (p. 383). The detailed and focused remit of the independent review, as well as their short timeframe, in turn, prevented the review team from investigating matters beyond the scope of items (a) through (f).

A large part of the independent review's final report details their method of investigation. Asked by the Cabinet Secretary for Health and Wellbeing to purposefully include patients and their family members into the investigation, members of the independent review team conducted a series of in-person and phone interviews with those who were most directly affected by the outbreak of C.diff. Additionally, the team reviewed "a large number of documents including reports, audits, inspections, data and minutes requested from the Vale of Leven Hospital and NHS Greater Glasgow and Clyde" (Independent Review, 2008, p. 7). Information gathered through interviews with staff, patients, and relatives, as well as the hospital's documentation, allowed the review team to point to several distinct but interrelated problems that all may have contributed to the outbreak.

The independent review's findings can be grouped into three distinct but overlapping categories: problems of practice, problems of infrastructure, and problems of culture. First, the review team revealed significant problems in day-to-day clinical practice, including: inadequate communication between medical staff and patients about the risks of C.diff or other HAIs; the use of alcohol-based hand sanitizer rather than using soap and

water as required when caring for patients with C.diff; vague instructions for visitors on proper infection control precautions such as the use of gloves during visits; cross-organization contamination from medical staff wearing uniforms both in and outside of the hospital; and the infrequent use of audits for tracking the outcomes of antibiotic prescriptions. Second, the independent review points out how many of these problems of practice are direct results from issues with the hospital's overall infrastructure. Problems of infrastructure include: limited space for patient isolation when infected with C.diff; poor ventilation in patient rooms; an overall lack of care and investment in the building; use of patient rooms for storage of personal items and medical equipment; inadequate number of sinks or washing basins throughout the ward; no agreed upon standard for alerting medical staff and administration of an unusually high number of infections; and overall confusion about the hierarchy and organizational structure of the hospital. Together, issues of clinical practice and with the facility's infrastructure together seem to solidify or exacerbate problems of culture at the Vale of Leven Hospital. Problems of culture include: descriptions of C.diff to patients and their families as a "wee bug;" the overall "shabby" look of the building reflecting a pervasive sense of low staff morale; confusion regarding hospital leadership among both staff and administration; and the lack of agency for vital members of the staff, such as the ward charge nurse.

The review's findings narrate a story of a rural hospital that has, as Vaughn (2007) suggests, slowly come to normalize deviance in the day-to-day care of patients and suffers from the lack of proper systems to detect and contain contagions like C.diff. In response to

these problems, the independent review offers eight recommendations to ensure that a similar outbreak does not reoccur in the future:

1. Review current infection control policies and procedures to ensure they are in line with the NHS' best practices
2. Review current antibiotic prescription policies to ensure they are in line with the NHS' best practices
3. Revise infection control processes to clearly identify clinical responsibilities for medical staff, patients, and their families
4. Construct a plan of action to increase the presence and support of the charge nurse to improve leadership
5. Consult with patient representatives to improve processes for communicating and educating patients and their families
6. Develop a maintenance plan for the hospital facility with a particular focus on isolation procedures
7. Ensure consistency with regard to death certificate documentation by medical staff
8. Conduct a follow-up audit to assess the implementation of these recommendations

In many ways, the recommendations offered by the independent review reflect an understanding of the outbreak as a complex but clearly defined and manageable problem. Moreover, these recommendations—and the follow-up assessment that took place one year after the publication of the independent review—frame the outbreak as a problem the NHS can more or less solve. In the next section, I turn to consider how the independent review

articulated the outbreak as a manageable problem to solve and explore the limitations of the review's approach.

## 3.2 Treating Problems like Contagion

As Sauer (2002) and others have noted, the authoritative tone of post-accident accounts, such as the independent review into the Vale of Leven Hospital outbreak, stems from the coherent narrative such accounts present in response to the question, "what went wrong?" The veracity of these post-accident accounts has long been called into question, particularly their aim to represent the real, root causes of a socio-technical failure. However, as is clear from the above description, the independent review does not identify a singular cause for the outbreak. Rather, as I suggest, the independent review works to articulate the outbreak as a "tame problem." Recalling my discussion of Rittel and Webber's differentiation between the wicked and tame nature of problems from Chapter 1, tame problems are stable exigencies that exhibit clearly identifiable borders. Moreover, as Conklin (2005) describes, a tame problem "is one for which the traditional linear process [of problem-solving] is sufficient to produce a workable solution in an acceptable time frame" given that such a problem is "well-defined and stable," "has a definitive stopping point, i.e., when the solution is reached," and "can be objectively evaluated as right or wrong" (p. 9). In other words, I suggest that the independent review, in part, reflects the work of Rittel and Webber's fictitious system analyst, "who were commonly seen as forebears of the universal problem-solvers. With arrogant confidence, the early systems analysts pronounced themselves ready to take on anyone's perceived problem,

diagnostically to discover its hidden character, and then, having exposed its true nature, skillfully to excise its root causes" (p. 159).

Working from this understanding, I suggest that the independent review worked to stabilize the outbreak as a tame and manageable problem for the NHS to solve. This suggestion, however, is, importantly, not an indictment of the independent review. Rather, I want to call attention to the way the initial review's investigative process was, from the very outset, designed to render the outbreak into a tame problem in need of a solution. Such stability, Cushman (2014) points out, is necessary for work to get done in professional contexts. Drawing from the work of Donald Schön, Cushman suggests that the "practice of problem setting—or of interactively naming, framing, and constructing temporarily stable ends from unstable situations—is the artistry of professionals and is therefore crucial to the work, research, and pedagogies of technical communication" (p. 328). Achieving this kind of stability is indeed important for most, if not all, professions. However, as I argue throughout the remainder of the chapter, working to frame problems as tame and stable is not the only option available to us. To argue this point, I foreground three salient characteristics of the independent review that shaped the way it framed the outbreak as a tame problem. Specifically, I discuss the independent review's function (1) as a sensemaking device; (2) as a method of institutional repair; and (3) as a form of problem quarantining wherein the outbreak is understood as an isolated problem stemming from local practices, infrastructure, and culture at the Vale Hospital.

### 3.2.1 Independent Review as Sensemaking Device

First and foremost, the independent review functions as a kind of sensemaking device. According to Weick (2001), sensemaking is a process through which meaning is imposed on experiences. Weick argues that organizations are increasingly overwhelmed by highly uncertain situations that nonetheless require action. This pervasive uncertainty is often the result of encounters with unusual, strange, or unexpected events that slow or outright halt everyday work. In other words, our encounters with the unexpected draw our attention to uncertainty and necessitate that we make sense of it. This is particularly the case in instances of what Roitman (2014) calls crisis narratives, which are post-hoc stories that "all proceed from the question, what went wrong?" (p. 42). Such narratives are told retrospectively and help us enact order in highly uncertain, unstable, and shifting situations. According to Weick, "sensemaking involves the ongoing retrospective development of plausible images that rationalize what people are doing…from which [we can] extract cues and make plausible sense retrospectively, while enacting more or less order into those ongoing circumstances" (Weick, 2009, p. 131). Drawing from Taylor and Van Every (2000), Weick contends, such "circumstances are 'turned into a situation that is comprehended explicitly in words and that serves as a spring board for action'" (p. 131).

As one of the initial investigation into the Vale of Leven outbreak, the independent review worked to make sense of the events that led to patient deaths. In doing so, the independent review imposed a certain sense of order and meaning onto the events that precipitated the spread of the outbreak. By virtue of making sense of these events through a textual account, the independent review worked to *stabilize* the outbreak in a way that was

clearly comprehensible to various stakeholders, including patients, relatives, medical staff, and NHS officials. This textual stability is achieved, according to Weick, in three ways: “First, sensemaking occurs when a flow or organizational circumstances is turned into words and salient categories. Second, organizing itself is embodied in written and spoken texts. Third, reading, writing, conversing, and editing are crucial actions that serve as the media through which the invisible hand of institutions shapes conduct” (p. 131). As a textual account, the independent review framed the outbreak as a manageable problem so that the NHS could, in Weick’s words, “identify a series of controllable opportunities of modest size that produce visible results and that can be gathered into synoptic solutions” (p. 427). In the context of public policy, Head and Alford (2015) call this a rational-technical approach to policy-creation, which entails "formulating corporate objectives for the organization, delineating discrete programs related to those objectives, setting out clear outcomes for each program, [and] drawing up action plans for achieving those outcomes” (Head & Alford, 2015, p. 720). That is, the independent review’s approach to make sense of the Vale of Leven outbreak was action-oriented and intent on framing the outbreak as a manageable problem for the NHS to solve.

### 3.2.2 Independent Review as Institutional Repair

The driving motivation behind the independent review was, ostensibly, not only to stabilize the outbreak as an identifiable problem but also to generate actionable recommendations in order to prevent its reoccurrence in the future. In this way, the second salient characteristic I want to foreground in the independent review is its overall design as a form of institutional repair. This notion of institutional repair is important in

Ureta's recent work, *Assembling Policy: Transantiago, Human Devices, and the Dream of a World-Class Society* (2015), wherein he examines the case of Transantiago, a large-scale public transportation initiative in Santiago, Chile, to argue that public policy is an assemblage of human and nonhuman actors. Part of his argument focuses on the use of institutional "scripts" to smooth over the complexity of public policy issues and to render such problems as manageable in situations where stakeholders possess conflicting values. This is often done through what Ureta calls "discursive repair," which encompasses "the techniques actors use to maintain practices, institutions, and technologies that form a system" (Qtd. in Ureta, 2015, p. 141). The emphasis in this description of discursive repair is on the *maintenance* of institutions, particularly in ways that realign its public perception with its intended mission. Ureta makes this evident in suggesting that "repair practices, then, are never solely directed at keeping a certain infrastructure working but also, centrally, at maintaining a certain ordering scheme, and hence must be considered as political to the utmost" (p. 18). In the case of the Vale of Leven outbreak, the independent review was established not only as a measure to generate recommendations for ensuring a similar outbreak would never occur in the future but also as a way to frame the institutional problems as manageable issues for the NHS to solve.

Ureta's notion of discursive repair work is likewise reflected in Lok and De Rond's (2013) ethnographic study of institutional maintenance in the Cambridge University Boat Club. Specifically, they argue that institutions persist and gradually change due to "maintenance work" conducted by "institutional custodians," for "institutions are sustained, altered, and extinguished as they are enacted by interacting human beings in

concrete social situations" (pp. 185-186). That is to say, such maintenance work is required in order to ""overcome [the] entropic tendencies that characterize most institutions" (p. 195). Drawing on their ethnographic account of exchanges throughout the 2007 season of the Cambridge University Boat Races, Lok and De Rond argue that minor breakdowns in practice (such as interpersonal conflicts between coaches) prompt a specific kind of maintenance work, or what they call "containment" (p. 186). According to their ethnographic account, the containment approach to minor breakdowns "pragmatically smoothed over" the situation of conflict in order for the "flow of practice [to be] normalized despite small divergences from the relevant scripts" (p. 197). Lok and De Rond's use of the term "containment" is indicative of the way these minor "incidents were initially dealt with by means of different forms of maintenance work that contained them by downplaying their significance" (p. 198). As they suggest, "rather than seeing this downplaying as an accurate reflection of the actual significance of these breakdowns, we see it as part and parcel of the maintenance work that contains incidents to maintain the normal flow of practice for as long as possible" (p. 198). In response to major breakdowns (a category which we might rightly see as appropriate for the Vale of Leven outbreak), institutional actors moved from a containment approach to what Lok and De Rond call a "restorative" approach to maintenance. Major breakdowns include those that "threatened the validity and viability of the very organizing principles" that hold institutions together (p. 199).

### 3.2.3 Independent Review as Problem Quarantine

While much of Lok and De Rond's analysis is applicable to the independent review's investigation, the report's method and findings most clearly align with the containment approach to institutional maintenance. Unpacking this further, the third salient characteristic I want to foreground here is the independent review's approach to containing the outbreak as an isolated and local problem stemming from local practices, infrastructure, and culture at the Vale of Leven Hospital. In other words, I take the title of this section, "Treating Problems like Contagion," one step further and suggest that the independent review quarantined the outbreak as an inextricably local issue. The initial independent review worked to keep the outbreak local by policing the definition and boundaries of it as a problem. That is, despite the review's statement that their findings must be "seen in the context of an increasing problem [with C.diff] affecting hospitals across Scotland," they confine their discussion of the problems and subsequent recommendations within the official scope of their investigation (p. 3).

Admittedly, my suggestion here amounts to the idea that the independent review kept its focus on local problems because the purpose of their investigation was to keep their focus local. In other words, one might object and claim that the independent review did exactly what it was officially convened to do. However, it is clear from their report's executive summary—as well as from the findings from the Vale of Leven Hospital's internal investigation—that the outbreak at the Vale of Leven Hospital reflected an increasing rate of C.diff in particular and HAIs in general across various medical facilities throughout Scotland. This is most evident in the independent review's selected use of a NHS study

entitled, *Report on the Review of Clostridium Difficile Associated Disease Cases and Mortality in all Acute Hospitals*, which was published during the review's investigation. Specifically, the review focuses on the NHS findings that indicate unusually high rates of C.diff at the Vale of Leven Hospital, and use that empirical evidence to frame the outbreak as the inevitable result of local practices, infrastructure, and culture. However, the NHS report also finds an increasingly high rate of C.diff infections at a number of other hospitals, such as Aberdeen Royal Infirmary, Victoria Hospital, Kirkcaldy and Wishaw General, and Woodend Hospital.

Ultimately, in localizing the outbreak as a problem stemming from the specific practices, infrastructure, and culture at Vale of Leven Hospital, the independent review quarantined the issue by demarcating clearly defined boundaries. But there are risks inherent to constructing problem quarantines. As Sauer (2002) reminds us, post-accident accounts, such as the independent review, operate in a larger institutional ecology and are designed to focus and draw connections between local failures and larger, systemic problems. In the context of the mining accidents, she states, "if these [post-accident] documents represent accidents as local failures of training or practice, agencies may underestimate the magnitude of risk within the industry as a whole" (Sauer, p. 84, emphasis mine). The independent review works to tame the outbreak by depicting the deaths of patients as direct results of local failures. Sauer, again, highlights the dangers of quarantining problems: "when technical documentation provides an inadequate picture of the events, conditions, and decisions that create disaster, agencies are paralyzed and writers cannot create policies and procedures to prevent disaster in the future" (Sauer, p. 65).

Localizing the outbreak, in other words, prevents the lessons it offers from being transportable and thus treats local failures as clearly defined and manageable problems in need of solutions.

As I stated at the outset of this section, my analysis of the independent review is, importantly, not an indictment of it as an investigative process. Rather, I want to point out the ways the review worked to frame the outbreak as a particular kind of problem—one that is stable, local, and, ultimately, in need of a concrete solution—in other words, a tame problem. In the following section, I turn to what is at stake in treating the Vale of Leven Hospital outbreak as a tame problem. Specifically, I examine the way members of C.diff Justice Group, a grassroots community comprised of local Vale of Leven residents, families, and patients, call for a formal public inquiry by re-articulating the outbreak as a much more complex, ill-defined, and wicked matter of concern.

## 3.3 C.diff Justice Group

Four months after the publication of the NHS' independent review, members of the community-based coalition, C.diff Justice Group, submitted a petition for the Scottish government to conduct a formal public inquiry into the Vale of Leven Hospital outbreak and its significance for all NHS hospitals. Specifically, their "Public Petition No. PE01225" called for:

> The Scottish Parliament to urge the Scottish Government to instruct, with immediate effect, an independent public inquiry under the Inquiries Act 2005 into the outbreak of C.diff at the Vale of Leven Hospital so that wider lessons for the

> whole NHS can be learned and that the inquiry involves, and publicly funds, all relevant individuals, groups and organisations affected by the outbreak to determine the inquiry's terms of reference and identify the issues to be examined. ("PE1225")

Their petition specifically calls for a deeper investigation into (1) what went wrong at the Vale of Leven Hospital that led to the deaths of so many patients and (2) why the full extent of the problem was not detected and adequately addressed? In doing so, C.diff Justice destabilizes the initial independent review's account of the outbreak in order to draw out wider lessons to learn for the way healthcare is delivered across the NHS. In this section, I suggest that in calling for a public inquiry, members of C.diff Justice began to re-articulate the outbreak not simply as an event in the past but rather a pressing matter of public concern. Specifically, the petition for a public inquiry frames the outbreak as a wicked problem that cannot be confined or quarantined to one particular hospital. Indeed, their petition goes so far as to call for a full-scale formal inquiry to consider not only the outbreak in Vale of Leven but also similar cases across all Scottish hospitals.

Table 1: Timeline of C.diff Justice Group's petition for a public inquiry

| | |
|---|---|
| June 18, 2008 | Independent review convened by the Cabinet Secretary |
| June 26, 2008 | Review team informed of official remit of investigation |
| July 31, 2008 | Independent review concluded |
| August 2008 | Publication of the independent review's report |
| January 6, 2009 | C.diff Justice Group submits "Public Petition No. PE01225" |
| January 27, 2009 | "Public Petition Nov. PE01225" reviewed by petitions committee |
| April 22, 2009 | Public inquiry established into the Vale of Leven outbreak |
| October 1, 2009 | Public inquiry team commenced their investigation |
| November 1, 2011 | "Public Petition Nov. PE01225" formally closed |

C.diff Justice's petition resulted from their general dissatisfaction with the independent review's findings. In particular, the petition outlines three distinct but interrelated problems with the initial review. First, the time provided to conduct the investigation was inadequate. As the independent reviewers indicate, the brief timeline was understandable given the pressing nature of the outbreak. However, members of C.diff Justice counter by arguing that with the report being "prepared in five weeks," the initial review team did not conduct a "comprehensive investigation into the circumstances and procedures that allowed such a tragedy to occur" ("PE1225"). Second, and relatedly, the

abbreviated timeframe for their investigation prohibited the review team from examining information or evidence beyond their official remit. Moreover, despite this narrow remit, the independent review was being leveraged as evidence that no further investigations—most especially not a public inquiry—were needed for lessons to be learned. NHS official Margaret McGuire coupled the independent review's findings with the *Report on the Review of Clostridium Difficile Associated Disease Cases and Mortality in all Acute Hospitals* to publicly announce that the "outbreak at the Vale of Leven was not reflective of the wider picture across the NHS Scotland" ("PE1225/C"). The issue here, of course, is that the scope of the independent review more or less predetermined how the review team understood the outbreak—that is, as a problem rooted in a particular hospital's outdated infrastructure, inadequate policies, and poor patient care. The outbreak, in other words, was being touted as a local problem—precisely because the independent review's investigation could only examine its local occurrence at the Vale of Leven. Third, due to the official remit's narrow focus, the recommendations and lessons offered for the Vale of Leven could not be mobilized to other hospitals across Scotland. In fact, in their petition, members of C.diff Justice cite Professor Brian Toft, "the leading UK patient safety specialist with Coventry University," who indicated that the independent review "was not fit for purpose" in minimizing similar outbreaks in the future ("PE1225"). Ultimately, the narrative of events provided by the initial review provides a nuanced but brief explanation of what went wrong, the lessons of which are not transportable beyond the walls of the Vale of Leven Hospital.

The overall aim of the petition is to call for a public inquiry that will conduct a comprehensive investigation and draw out wider lessons to be learned. To strengthen this

call, the petition rhetorically frames the outbreak as a different kind of problem—that is, as a wicked problem in need of greater consideration. Members of C.diff Justice, in other words, begin to articulate the outbreak as a pressing matter of public concern by foregrounding and, in many ways, preserving its complexity as an ill-defined and continually evolving problem. The petition documents carefully point out the exceedingly complex and diffuse nature of the problem at hand, specifically in ways that make it evident that the significance of the outbreak is not confined to the Vale of Leven:

> The scale of the outbreak at the Vale of Leven Hospital was unprecedented…I am equally clear about the fact that the issue is not restricted to the Vale of Leven…it affects people, hospitals, and care homes throughout Scotland. The incidence of C.diff is rising: year on year, the trend has been upwards. New strains are being diagnosed as we speak. At this point, no one is quite sure about the toxicity of the new 078 strain that has been discovered…a public inquiry would enable us to learn lessons not in a piecemeal way but in a comprehensive way. ("PE01225")

Moreover, by calling attention to the scale of the outbreak, they likewise acknowledge how important a public inquiry would be to better understanding the continually shifting and evolving nature of the problem. Unlike the independent review's approach to stabilizing the outbreak, the petition documents foreground the slippery and diffuse nature of C.diff. New strains of C.diff are continually being identified and, as they point out, "no one is quite sure about the toxicity of the new 078 strain" ("PE01225").

In acknowledging the blurry boundaries of the outbreak's significance across "people, hospitals, and care homes throughout Scotland," members of C.diff Justice gather

a new and diverse assembly of stakeholders around the outbreak ("PE01225"). That is, as a problem for hospitals across the country, deaths associated with C.diff infections not only impact the 34 Vale of Leven patients and their families. Instead, the outbreak is articulated as assembling a public:

> Instead of simply getting to the root of the problem at the Vale of Leven, a public inquiry should examine a number of wider questions. We know that there is a problem in the UK, but the parameters of an inquiry need to satisfy not only the relatives of those who died at the Vale of Leven Hospital but people throughout Scotland who are just becoming aware of C.diff's impact…it raises wider questions, and the more the issue is raised in public, the more people will come forward. ("PE01225")

Ureta (2015) describes this assembling of public as a "crisis configuration" (p. 14). Exploring this idea in the context of Chile's failed *Transantiago* system, he suggests that a crisis configuration must revolve around issues that are "understood as quite open, undefined situations that put into question existing systems of control…issues do not exist in themselves but always related to a certain public that feels affected by them" (p. 14). However, in Ureta's view, public acknowledgement of particular issues is not enough for a crisis configuration. Rather, "the crisis configuration needs to include scripts in the form of exemplars of individuals and groups who are experiencing a certain displeasure because of the issue. Such exemplars are endowed with the task of connecting the issue at hand with a 'social' realm and, by doing so, transforming its resolution into a 'social problem'" (p. 15). Part of this work, I suggest, involves articulating (or, in the case of the Vale of Leven

outbreak, re-articulating) problems in ways that maintain and preserve them as "open, undefined situations that put into question existing systems of control" (p. 14). The petitions for a public inquiry enact this kind of crisis configuration by destabilizing the independent review's account of the outbreak, opening up space for thinking about the problem as a much more wicked matter of concern.

Overall, C.diff Justice's petition documents do not present an account of the outbreak that neatly falls in line with Rittel and Webber's (1973) list of ten traits of wicked problems. However, in calling for the public inquiry, C.diff Justice rhetorically frames the outbreak as a wicked matter of concern in three different ways by:

1. Engaging with the C.diff outbreak as a problem with no definitive formulations—that is, as a problem without a clearly defined boundary. Infections of C.diff are not only on the rise, but new forms of it are emerging, the impact of which they do not and cannot fully know. The outbreak, like Timothy Morton's notion of a hyper-object, continually exceeds our understanding and cannot be fully grasped due to its continually shifting and expansive nature.
2. Recognizing that there is no escaping or getting outside of such an outbreak—that is, by acknowledging that all users and participants in the NHS system are deeply entangled with it. As members of C.diff Justice note, they had no idea they and their loved ones were immersed in such an unprecedented problem, and thus came to see that such a wicked problem cannot be understood by breaking it down to its component parts. Rather, lessons need to come from tracing the very roots of the problem, wherever they may lead the inquiry.

3. Gathering together an assembly of new stakeholders to demonstrate the far-reaching impact of the C.diff outbreak and the need for more than one discipline, profession, or organization to continually engage such a wicked problem. In doing so, members of C.diff Justice enroll not only patients and local residents affected by the outbreak but also all those who consider themselves NHS users and participants across the UK.

What these indicate, I suggest, is that members of C.diff Justice do not reflect the commonplace but deeply problematic characterizations of citizen participants, which Grabill (2007) describes as "people who know nothing and who rant emotionally about irrelevant issues" (p. 14). Following Grabill's lead in taking this everyday rhetorical work seriously, I see members of C.diff Justice as engaging the outbreak as a deeply complex and ill-defined problem that is in need of sustained inquiry, debate, and deliberation.

As Table 1 shows, the petition for a public inquiry into the outbreak was successful. By April 2009, the formal inquiry was established and eventually began its investigation by early October. It is important to note that C.diff Justice's petition began the process of articulating the outbreak as a wicked problem—a process that, as I will argue in Chapter 4, continues throughout the public inquiry investigation.

## 3.4 Wicked Articulations

Throughout this chapter, I have argued that the initial independent review conducted into the spread of C.diff at the Vale of Leven Hospital rhetorically framed the outbreak as an isolated problem stemming from the hospital's local practices, infrastructure,

and culture. Conforming to its official remit, or scope of investigation, the independent review constructed a stable account of what went wrong at the Vale of Leven Hospital—an account that provided medical staff, government officials, and policy-makers with concrete recommendations on how to prevent similar outbreaks from reoccurring in the future. Calling attention to its role as a sensemaking device, as a form of institutional repair, and as a problem quarantine, I suggest that the independent review aimed to articulate the outbreak as a tame and manageable problem or series of problems to solve. This argument is, in a way, best encapsulated by the passage from Dewey's lectures, *The Quest for Certainty* (1929), that serves as an epigraph for this chapter: "the risky character that pervades a situation as a whole is translated into *an object of inquiry* that locates what the trouble is, and hence facilitates projection of methods and means of dealing with it" (p. 178, emphasis mine). Stabilizing a complex series of events in the past, the independent review imposes a certain order and logic on the outbreak, ultimately articulating into an object of inquiry.

As a form of technical documentation, the independent review's account of the outbreak embodies many of the rhetorical principles at the heart of technical communication. Most clearly, the independent review is designed to make sense of and stabilize the problems surrounding the Vale of Leven outbreak. In this way, the independent review reflects Longo and Fountain's (2013) understanding of technical communication as "the process of ordering scientific and technical knowledge and practice" (p. 167). They forward a view of technical communicators as developing "scientific, technical, and business documents that not only convey information but also *create systems*

*of order* that *influence the routine practices*" in and across professional organizations (p. 166, emphases mine). As both a sensemaking device and a form of institutional repair, the independent review sought to impose a certain order onto the events and conditions precipitating the outbreak as a way of stabilizing them as problems to be fixed. In this way, the independent review reflects the enduring notion that technical communicators not only transmit and translate complex information to others but rather are full-fledged authors in articulating meaning. Using the metaphor of a train, Slack, Miller, and Doak (1993) describe the work of technical communication as articulating identities: "any identity might be compared to a train, which is constituted of many different types of train cars in a particular arrangement (or articulation). Each car is connected (or articulated) to another in a specific way that, taken as a whole (as a series of articulations), constitutes the identity *train.* Any specific train is thus a specific, particular set of articulations—an identifiable object with relatively clear-cut boundaries" (Slack, Miller, & Doak, 1993, p. 26). Articulation, then, involves the construction of order and maintaining clearly identifiable borders. And in doing so, the independent review does manage to stabilize the problems as coherent sites for changes in the Vale of Leven Hospital's practices, infrastructure, and culture.

If the independent review is an articulation of the outbreak as a stable and manageable problem to be solved, then the petition developed by members of C.diff Justice is a push toward re-articulating the outbreak as something much more wicked. As Slack, Miller, and Doak point out, "specific articulations are non-necessary; that is, there is no absolute necessity that they be connected in just that way and no guarantee that they will

remain connected that way. So, for example, we could disconnect (disarticulate) and reconnect (rearticulate) cars in a different order to constitute a new identity train" (pp. 26-27). In re-articulating the outbreak as a wicked problem, members of C.diff Justice highlighted just what is at stake in these kinds of post-accident accounts. As Slack, Miller, and Doak describe it, "when an articulation is effective, it is said tone powerful in that it delineates what is real and possible from what is not…articulation thus points to the fact that any identity is culturally agreed on or, more accurately, struggled over in ongoing processes of disarticulation and rearticulation" (p. 27). To ensure that wider lessons were learned beyond the Vale of Leven, their petitioning necessarily involved re-articulating the outbreak as a wicked matter of concern. In the next chapter, "Wicked Matters of Concern," I continue this line of argument by examining how the outbreak was further articulated as a wicked problem throughout the public inquiry's five-year investigation.

# CHAPTER 4. WICKED MATTERS OF CONCERN

"How might a text make room within for whatever it also necessarily leaves out, for what is not there, not made explicit? How might a simple text respect complexities? These are questions about texts, but they might just as well be addressed to policies, to therapies, to technologies, to methods of representations, to objects, or to scientific formalisms"

—Annemarie Mol and John Law (2002)

"The very lack of resolution can be seen as a form of learning—not the kind that necessarily leads to regulatory change or institutional reform, though both did happen in the disaster's wake…but rather the kind that, through its very incompleteness, reveals the impossibility of taming a cataclysmic event through necessarily imperfect managerial solutions"

—Sheila Jasanoff (2007)

In the previous chapter, I suggested that C.diff Justice's call for a full-scale public inquiry rhetorically reframed the Vale of Leven Hospital outbreak as a much more complex problem—that is, as a much more wicked matter of concern than initially portrayed throughout the initial independent review's investigation. Specifically, I suggested that this

was largely a result of the independent review being designed to make sense of the outbreak as a manageable problem to solve. In doing so, the independent review stabilized the complexity surrounding the events precipitating the spread of the contagion. The independent review, in other words, is a representative sample of what Pinch and Bijker (2012) call "mechanisms for the closure of debate" (p. 37). In their study of the various narratives surrounding the development of bicycles in the 19th century, they point out how variant, and often failed, bicycle designs are retrospectively forgotten. Specifically, they call attention to the ways early designers developed solutions based on the needs of imagined, potential, and (lastly) real users. Pinch and Bijker see these solutions working as a form of closure, which necessarily "involve the stabilization of an artifact and the 'disappearance of problems. To close a technological 'controversy,' one need not solve the problems in the common sense of that word. The key point is whether the relevant social groups see the problem as being solved" (p. 37). We might say, then, that the independent review acted as a textual artifact that sought a similar form of closure, specifically by stabilizing the outbreak as a manageable problem to solve.

The petitioning by members of C.diff Justice, in turn, worked to destabilize the independent review's account of the outbreak. Their petition reflects what Sebastian Ureta (2015) calls a "crisis configuration," wherein a particular account or representation of reality is called into question, or deterritorialized, while "opening the ground for the reterritorialization of another" (p. 14). That is, a crisis configuration is "never only a moment of rupture and confusion…a crisis is always also a moment of transformation, of intervention" (p. 45). Moreover, Ureta emphasizes the importance of crisis configurations

as emerging from "individuals and groups who are experiencing a certain displeasure because of the issue," and the way they perform in "connecting the issue at hand with a 'social' realm and, by doing so, [transform] its resolution into a 'social problem'" (p. 15). This element of transformation, as I see it, is deeply rhetorical. This is particularly evident in the rhetorical roots of the term *krisis*, which Rice (2012) traces back to Aristotle's sense of a "practical judgment that must be made in contingent situations that have no clear solution" (p. 32). A form of *phronesis*, or practical wisdom, *krisis* "can be called rhetorical insofar as *phronesis* always ends in rhetorical production or action" (p. 33). Crises produce particular worldviews, orientations, and understandings—and, in the case of C.diff Justice's petition, reframing the outbreak as a kind of crisis necessitated that it be considered a matter of public concern. Similarly, Callon and Latour (1982) might call this crisis configuration a form of *enrollment*, which entails the assembling of people around a particularly pressing issue. Indeed, Bijker (2012) argues that one engages in enrollment by challenging existing understandings of problems and redefining them in ways that draw new stakeholders.

Given the prevailing critiques of public inquiries today, one could reasonably imagine that the success of C.diff Justice's petition would only really result in a further taming of the outbreak into a manageable problem stemming from the local contexts at the Vale of Leven Hospital. Indeed, as Boudes and Laroche (2009) argue, inquiries are often seen as attempts to "domesticate dangerous and hostile events," and, as such, function as social ceremonies for determining precise causes of failure, assigning blame to all responsible parties, and re-legitimizing existing systems and institutions in the eyes of the

public (p. 392). However, as this chapter will make evident, the five-year public inquiry investigation into the outbreak and its subsequent findings confound these expectations and, furthermore, weave a much more complex and compelling story.

Throughout this chapter, I examine the public inquiry into the Vale of Leven Hospital outbreak, focusing on the way the inquiry team resists the urge to tame or domesticate the outbreak as a manageable and localized problem. Specifically, I argue that the public inquiry rhetorically works to further articulate the outbreak as a wicked problem that must be addressed not only at the Vale of Leven Hospital but also across all NHS medical facilities in Scotland. In what follows, I build this argument by providing a brief overview of the context surrounding the establishment of the inquiry, and then examining how the inquiry team articulates the outbreak throughout the investigative process. Unpacking the significance of this, I then turn to consider what lessons rhetoric and technical communication can garner from the Vale of Leven inquiry as well as address some of the limitations of public inquiries as a method for institutional learning and change. My goal in doing so is not necessarily to exalt public inquiries but rather to foreground the rhetorical work they perform in articulating pressing matters of concern.

## 4.1 The Vale of Leven Hospital Inquiry

In response to C.diff Justice's petition, on April 22, 2009, Nicola Sturgeon, the Cabinet Secretary for Health and Wellbeing, announced the Scottish government's decision to hold a full-scale public inquiry into the Vale of Leven Hospital outbreak. Despite arguments made by members of C.diff Justice on the need for the investigation to

take place immediately (to ensure that witnesses would not forget vital details in their testimonies), the public inquiry was scheduled to begin as soon as the police finalized their investigation into determining whether the outbreak was the result of deliberate medical negligence (Vale of Leven Hospital Inquiry, 2014, p. 3). Cabinet Secretary Sturgeon appointed Rt Hon Lord Coulsfield to act as chairman of the public inquiry. The police investigation concluded roughly two months later in June 2009, and the public inquiry officially commenced. Initial progress was immediately halted, however, due to Lord Coulsfield falling ill and being incapable of fulfilling his duties as chair. By late July, Cabinet Secretary Sturgeon met with and appointed Rt Hon Lord Ranald MacLean, a retired Scottish judge, as the new chair of the inquiry team.

The inquiry team's luck did not improve. The beginning of the investigation was beset with difficulties, ranging from a disagreement on the deadline of the inquiry's findings (which I will elaborate on in the next section) to a lack of response for requests for relevant documents and records from NHS Greater Glasgow and Clyde officials (a problem that persisted three years into the inquiry). However, despite these difficulties, the inquiry's investigation comprised of 7 phases. *The Vale of Leven Inquiry Report* details these phases as proceeding in the following order:

1. Document recovery
2. Collection of witness statements
3. Preliminary hearings
4. Appointment of experts
5. Oral hearings

6. Written follow-up questions
7. Warning letters

The document recovery phase of the inquiry collected roughly 10,000 documents throughout the inquiry, which totaled to approximately 100,000 pages of evidence (Vale of Leven Hospital Inquiry, 2014, p. 19). During the document recovery phase, the inquiry team simultaneously worked with a number of lawyers and police officers to take official witness statements from relevant parties, including medical staff, patients, and the families of patients. While not officially required in an inquiry investigation, Lord MacLean conducted preliminary hearings as a way of "engaging those parties and in raising public awareness of the inquiry both locally and nationally. [These hearings] also provided a focus of attention for local people, since it had by then become apparent that the main hearings would have to take place outwith the Dumbarton area" (p. 21). Based on their examining of collected documents and witness statements, the inquiry team then appointed subject-matter experts from "nursing, microbiology, and medicine" to help them make sense of their evidence, particularly evidence related to specific patient medical records. Conducting oral hearings was the lengthiest phase of the inquiry's investigation, spanning from June 7, 2010 to 28 June 2012 (p. 22). Held in the Maryhill Community Central Halls in Glasgow over the course of 126 days, the inquiry team heard from patients, relatives, medical staff, and other experts. Following the oral hearings, the inquiry team followed up with particular witnesses and experts to clarify parts of their testimonies. The final phase of the inquiry—that is, before the findings were pulled together into the report—involved the sending of "warning letters" that informed particular individuals that information about

them would be included in the final report. These warning letters were intended to provide individuals with the opportunity to respond to witness testimonies or other information gathered throughout the investigation (p. 30).

After 5 years of investigating the Vale of Leven outbreak, the inquiry team published a 439-page report narrating the complex series of events that led to the death of 34 patients. The report, in total, comprises of 19 chapters, each detailing a particular element of the outbreak, such as a description of the inquiry's process of investigation; an explanation of C.diff and the dangers it presents; an overview of how the outbreak was detected and its impact on the Vale of Leven Hospital; an analysis of why medical staff were unable to detect the outbreak; survey of national systems, policies, and standards of care; a detailed look at the organizational changes occurring at the Vale of Leven Hospital prior to and during the outbreak; and narrative accounts from patients and relatives, among others. Notable among those chapters is the inquiry's detailed list of lessons learned and subsequent 75 recommendations for change at both the local and national level. Additionally, the inquiry maintained an active presence on the investigation's public website, which provides a wealth of information on the inquiry itself (including thousands of pages of evidence, investigative documentation, timelines, and witness statements). The website, unlike the report, was not necessarily a deliverable published at the end of the investigation. Rather, a provision of the investigation required the inquiry team to "ensure that the material on the inquiry website allows the public to be kept as fully informed as possible as the inquiry proceeds" (p. 18). Like serialized narratives, the story constructed by

the public inquiry unfolded slowly over time and aimed to sustain engagement with a larger body of stakeholders.

The comprehensive report and website are not the only tangible outcomes of the inquiry. Since the investigation's conclusion, there has been evidence of positive improvements in healthcare associated infections (HAI) control both at the local and national level. Inspection officials with Healthcare Improvement Scotland have recently report that the Vale of Leven Hospital has followed through on the inquiry's recommendations, and have specifically improved in their delivery of geriatric care. Indeed, inspectors have "found evidence that NHS Greater Glasgow and Clyde is performing well in relation to the care provided to older people at Vale of Leven Hospital," the only exception being that many patients have found the hospital's food somewhat unappetizing (Burns, 2015, para. 8). These improvements at the Vale of Leven Hospital in fact seem to reflect larger improvements at the national level as well. A recent article out of the *Nursing Times,* a UK-based news outlet focused on medical and nursing-related issues, cites Cabinet Secretary of Health, Wellbeing, and Sports Shona Robison as indicating that "cases of C.difficile…fell to among their lowest levels on record during 2014" (Ford, 2015, para. 9). John Connaghan (2013), NHS' chief operating officer, states that there have been reductions [in cases of C.diff infections] of over 79% since 2007/8" (para. 2).

Admittedly, these local and national outcomes are not necessarily evidence of the efficacy of the Vale of Leven inquiry. However, what they do signal is a sustained engagement with the Vale of Leven outbreak and the rhetorical intent of the inquiry to extend the significance of the outbreak across all NHS hospitals in Scotland. These

outcomes, in other words, call attention to how the outbreak shifted from what Latour calls a matter of fact (a relatively stable series of events that the independent review could explain) to a matter of concern. I will return to this point later in the chapter. But before doing so, I want to turn to examine *how* the inquiry rhetorically framed the outbreak, specifically focusing on the way the inquiry articulated its emergence in the Vale of Leven Hospital as an exceedingly complex, ill-defined, and wicked problem.

## 4.2 Reinventing an Outbreak

There is an immediate difficulty in attempting to provide a comprehensive overview of the inquiry itself. This is not, however, only the result of the inquiry's vast collection of information, evidence, and materials throughout the five-year investigation (although, that is, in part, a contributing factor). Rather, as I suggest throughout this section, the narrative account constructed by the inquiry team directly acknowledges that the outbreak is not as clear-cut and easily defined of a problem as it was previously treated in the initial independent review. In other words, the outbreak cannot be understood as a problem easily broken down and rendered into a flow chart of sorts that neatly detail the exact connections amongst all of its component parts. The story is a lot messier than that. But in acknowledging this complexity and resisting simplification, the inquiry team does not necessarily constrain their ability to explain, in concrete terms, the complex series of events precipitating the outbreak's spread across the hospital. Rather, I suggest that in recognizing and, in many ways, preserving the complexity of the outbreak, members of the inquiry team were able to develop a better understanding of not only what caused the outbreak but

also its impact on the past, present, and future of the Vale of Leven Hospital as well as its significance across the entire NHS system. Working to develop this point, in this section I move to delve a little deeper into the investigation and its subsequent findings to demonstrate that the Vale of Leven Hospital inquiry rhetorically articulated the outbreak as an exceedingly wicked problem (without, of course, using that particular moniker). In what follows, I develop this argument by considering three distinct but interrelated elements of the Vale of Leven inquiry: the official remit or terms of reference for the investigation; the inquiry's process of investigation in examining and tracking a wide range of interconnected problems contributing to the outbreak's emergence; and the report's move to scale up their approach to drawing out the lessons learned for not only for the Vale of Leven Hospital but for medical facilities across Scotland and beyond.

### 4.2.1 Keeping the Inquiry Open

At their core, public inquiries are designed to be inquisitorial rather than adversarial. That is, rather than investigating in order to collect evidence for adjudicating blame, as one would do in courtrooms and other legal contexts, a public inquiry aims to conduct a "retrospective examination of events or circumstances, specially established to find out what happened, understand why, and learn from the experiences of all those involved" (Walshe, 2003, p. 1). Unlike the initial independent review, the Vale of Leven inquiry established a much wider remit or terms of reference (as they are more commonly referred to in the context of full-scale inquiries) to guide its investigation wherever it may lead. The inquiry's seven terms of reference were negotiated on July 29, 2009 in a meeting

between Cabinet Secretary Nicola Sturgeon and the newly appointed chair Lord MacLean (Vale of Leven Hospital Inquiry, 2014, p. x). The terms were as follows:

1. To investigate the circumstances contributing to the occurrence and rates of C.difficile infection at the Vale of Leven Hospital from 1 January 2007 onwards, and any increases in such rates during that period and in particular between 1 December 2007 and 1 June 2008, with particular reference to the circumstances which gave rise to deaths associated with that infection
2. To investigate the management and clinical response at the Vale of Leven Hospital to the C.difficile infection rates during that period and to any such increases, and the steps taken to prevent or reduce the risk of spread or recurrence of the infection
3. To investigate the systems in place at the Vale of Leven Hospital to identify and notify cases, increased rates of infection outbreaks and deaths associated with C.difficile infection, including the action taken to inform patients, their relatives and the public and the steps taken at the Vale of Leven and in NHS Scotland generally for recording such incidents including for the purposes of death certification
4. To investigate the actions of NHS Greater Glasgow and Clyde in response to the occurrence of C.difficile infection at the Vale of Leven Hospital, including informing patients and their relatives of the risks of such infection and the measures that should be taken to assist prevention and control

5. To investigate the governance arrangements of NHS Greater Glasgow and Clyde in relation to, and the priority given to, the prevention and control of the infection
6. With reference to experience within and beyond Scotland of C.difficile, to establish what lessons should be learnt and to make recommendations
7. To report by 30 September 2010 unless otherwise provided by the Cabinet Secretary for Health and Wellbeing. (4)

I include terms of reference in full here to highlight what members of the inquiry team themselves see as important, namely, their breadth of scope. The differences between the inquiry's terms of reference and the independent review's remit are, in some ways, subtle but significant. Rather than limiting the investigation to a narrow timeframe of the outbreak, the terms of reference here leave the investigation's scope open ended, only limiting it to infections documented from "1 January 2007 onwards" (p. 4). Moreover, the inquiry's scope is far more encompassing to include not only local problems stemming from the Vale of Leven Hospital's practices, infrastructure, and culture, but also policies, procedures, standards, and regulatory oversight from NHS Greater Glasgow and Clyde.

It is clear from numerous points in the inquiry report that these terms of reference were highly contested, particularly the timeline established in the final point. Lord MacLean emphasizes this directly in his foreword to the report: "On 29 July 2009 I met the then Cabinet Secretary for Health and Wellbeing, Ms. Nicola Sturgeon, in Glasgow…[and] she was very keen on a time limit because, as she said, she wanted a short and sharp inquiry. She expected a report and recommendations on her desk by October 2010" (Vale of Leven Hospital Inquiry, 2014, p. x). Citing previous experience working on large-scale public

inquiries, Lord MacLean explains that he "demurred to such a time limit and explained that [he] did not consider it possible to fulfill the terms of such a wide remit within that time scale," suggesting, instead, a "time limit of 'as soon as possible'" (p. x). However, his suggested timeline was rejected on the basis that the inquiry team could request an extension from the Cabinet Secretary if needed. As Lord MacLean reflects at the conclusion of the inquiry's investigation, "I am clear that this was a mistake…[and] if anything, the whole experience shows the futility of imposing time constrains on an inquiry like this, simply because one cannot at the outset know what lies ahead of an inquiry's investigation" (pp. x-xi). As the inquiry team states, "until the work of an inquiry is well under way any prediction about a time limit cannot be accurate and may be totally unrealistic," particularly in light of unexpected problems that emerge throughout an investigative process, such as the difficulties in procuring records and other relevant documents from NHS Greater Glasgow and Clyde officials.

The inquiry's timeline, however, was not the only contested point in the terms of reference. The wide and open-ended scope of the investigation also drew criticism from representatives of NHS Greater Glasgow and Clyde. Weeks into their investigation, the inquiry team received notice from the NHS Central Legal Office that Greater Glasgow and Clyde officials objected to the terms of reference's inclusion of "evidence being led on aspects of the quality of nursing care provided to patients" (Vale of Leven Hospital Inquiry, 2014, p. 5). Their objection requested, "no evidence should be allowed or taken into account concerning various aspects of the quality of nursing care…at the Vale of Leven Hospital in the period to date" (p. 5). The objection specifically cites aspects of nursing care

such as “hydration of patients; preparation of fluid balance charts and completion of these; nutrition of patients;” and other day-to-day nursing responsibilities (p. 5). Given the open-ended terms of reference, the objection on behalf of the nursing staff is understandable, particularly given the typical power dynamics that often assign blame to nurses. However, in order to keep the investigation's scope as open as possible, the inquiry team repelled the objection, suggesting, “the fallacy underlying [the objection’s] argument is the assumption that the care planning for a patient who is suffering from [C.diff] can be properly managed without regard to all that patient’s problems” (p. 6). Significant here, I suggest, is the inquiry’s refusal to discount potential information and evidence at the outset of their investigation. In doing so, they resist ruling out possible avenues of examination that may lead them to better understand what went wrong at the Vale of Leven Hospital.

While the open-ended nature of public inquiries often garners intense disapproval, the inquiry team worked to protect their investigation's wide breadth. One might suggest that their attempts to protect the terms of reference does not necessarily suggest that the outbreak be considered a wicked problem, most clearly because their subsequent investigation could just as easily resulted in a further taming of its causes and impact at the Vale of Leven Hospital. However, by keeping the inquiry’s scope as open as possible (both in terms of time and potential avenues of investigation), the inquiry team manages to resist treating the outbreak as being a particular kind of problem, or having, in Rittel and Webber’s (1973) words, a “definitive formulation” (p. 161). And in doing so, as I turn to explore next, the inquiry approaches the outbreak as not a byproduct of several different

problems but rather as emergent from a web of deeply interconnected issues at both the local and national level.

### 4.2.2 Tracking the Outbreak's Shifting Boundaries

Reading through the Vale of Leven Hospital inquiry report is, in and of itself, a dizzying experience. As a technical document in general and as an example of the post-accident investigation genre in particular, the report does not present the most accessible account of the outbreak. This is largely due to the inquiry's comprehensive discussion of social, cultural, and medical factors that led to the emergence of the outbreak. Unlike the independent review, which clearly identifies a host of distinct problems that resulted in the outbreak going undetected and unchecked for so long, the inquiry presents a much more muddled picture of events. Specifically, the inquiry does not isolate problems of practice, infrastructure, or culture from one another; rather, one gets a sense that the outbreak emerged from an array of deeply interconnected problems that each, in their own way, compound or intensify one another. One comes away from the report, in other words, with a sense that the outbreak lies at the center of a vast web of problems that extend far beyond the Vale of Leven Hospital. We can say, then, that the poor placement of hand-washing stations near patient rooms is not a problem we can isolate and fully understand without considering a host of other deeply related problems. As the title of this section indicates, thinking about the outbreak as the epicenter of a web of problems required members of the inquiry team to track the complex relations that continually shaped and reshaped such problems in the day-to-day care of patients. Let me make this point clearer by offering a concrete example from the inquiry's findings.

In the early 2000's, the Vale of Leven Hospital, which comprised of 234-beds, offered a range of services to local residents. As the inquiry characterizes, "the hospital's 'front door' was an Accident and Emergency (A&E) Department which dealt with well over 20,000 attendances each year" (p. 110). The A&E Department's role at the hospital was to prioritize the admission of patients based on their reasons for an unscheduled visit. If needed, the A&E would admit patients to their Acute Medical (AMU) and Acute Surgical (ASU) units, which, were largely specialized in inpatient and outpatient gynecological care. In 2005, the NHS Argyll and Clyde system, which managed and oversaw operations at the Vale of Leven Hospital, "incurred a cumulative budget deficit of £82M," leading to its dissolution by 2006. Reorganized under the newly established NHS Greater Glasgow and Clyde, the Vale of Leven Hospital suffered a drastic reduction in surgical and anesthetic services—a reduction that worsened the hospital's history of poor physician recruitment and retention. Shifting the hospital's services to primarily those provided by the A&E, AMU, and ASU, the Vale of Leven gradually became an acute, short-term care facility. However, following a poor inspection and review of the Royal Alexandria Hospital's maternity and emergency care services, the NHS Greater Glasgow and Clyde transferred the Vale of Leven's gynecological and A&E departments to the Royal Alexandria. By then, stripped of its strongest units, the Vale of Leven's future in delivering care to local residents became increasingly uncertain—an uncertainty that continued up to and through the outbreak of C.diff in 2007 and 2008. As characterized in the inquiry's report:

> Prolonged uncertainty over the future of the [Vale of Leven Hospital] had damaging effects on recruitment, staff morale, and the physical environment of the [Vale of Leven Hospital]. The hospital environment was not conducive to good patient care. It is hardly credible that in 2007 and 2008 a care environment existed in which gaps in floor joints were covered in adhesive tape. There was a lack of wash-hand basins in wards and toilets, and commodes were not fit for purpose. (p. 2)

The inquiry situates the bacterial outbreak at the center of a vast web of cascading problems that span beyond the Vale of Leven's walls to include large budget deficits, NHS-wide reorganizations, and unfortunate transitions in services. As the above passage indicates, these problems most clearly manifested in the physical environment of the hospital. The inquiry cites one witness reflecting that they always associated hospitals with places where "everything sort of smelt of disinfectant and everything was always being cleaned…and in the Vale I didn't ever really see any evidence of that. Even there was plaster falling off the walls, the buildings weren't maintained properly…there was always a stench of urine and/or feces and nothing ever looked particularly clean. There was never any time where every holder for hand gel had actually hand gel in it" (p. 162).

These large-scale problems manifested not only in the physical environment at the Vale of Leven but also throughout the day-to-day work of medical staff. One of the most pressing questions posed by both members of C.diff Justice and the public inquiry team was: how did such an unprecedented outbreak go undetected for such a long period of time? This is a confounding question given the wealth of policies, systems, and procedures

designed to prevent the spread of infections from patient to patient. However, "despite all the guidance in place, no [C.diff] outbreaks were declared…between 1 January 2007 and 1 June 2008" (p. 57). The inquiry suggests that this may be, in part, a result of the hospital's reorganization under the management of NHS Glasgow and Clyde, causing new and updated national standards of care not to be fully implemented at the Vale of Leven. Indeed, interviews with medical staff indicate that they were, for the most part, "not aware of policies such as the Loose Stools Policy, the *C.difficile* Policy, and the Outbreak Policy…some nurses had had some training in infection prevention and control, but nevertheless the Loose Stools Policy was generally not followed in a number of respects such as isolation, stool charts, and care planning" (p. 279). Without the day-to-day medical staff knowing about these detection polices, they necessary information never made it into their patient documentation, and thus never reported to members of the infection control team. This proved to be an issue given that at the Vale of Leven Hospital, "the definition of a potential outbreak of [C.diff] included 'two or more linked cases of unexplained illness (or isolates), which indicate the possibility that they may be due to a known or unknown infectious agent'…the presence of an outbreak can be confirmed once linked cases of infection with indistinguishable organisms are demonstrated" (p. 43). To link individual cases, and thus to detect the presence of a widespread outbreak, requires a process called ribotyping, which isolates particular strains of bacterium such as C.diff. While the hospital's laboratory was fully capable of ribotyping bacteria, many patients were either not tested for a HAI or were awaiting delayed test results. These delays, in particular, were significant, given that patients exhibiting symptoms of C.diff were not placed in isolation

until the laboratory confirmed the infection. Moreover, medical records indicate that due to the lack of space for proper isolation, medical staff were "cohorting" (that is, the practice of grouping patients with similar illnesses together) many patients with confirmed cases of C.diff (p. 276).

Medical staff and administrators at the Vale of Leven Hospital never declared an official outbreak of C.diff because, in large part, they did not realize they were in the midst of one. And given the fact that the hospital's systems, policies, and procedures for infection control were not capable of detecting the widespread presence of an infection, the outbreak was, in many ways, unknowable. Examining these events in retrospect, the inquiry team deems this a systemic problem in need of attention. However, they are also clear to indicate that even now, a comprehensive understanding of the outbreak escapes even them. In fact, they go so far as to suggest that the number of patient deaths associated with the outbreak, listed officially at 34, is most likely an underestimate. That is, how many patients actually died as a result of the outbreak cannot be definitively identified, due to a number of documentation problems in the hospital's medical records, inaccuracies in existing death certificates, and the difficulties of identifying the primary cause of death in postmortem examinations. Uncertainty remains, and the inquiry is not quick to dispel it. Rather, their uncertainty over the outbreak's full impact shapes their overall treatment of the outbreak as an ill defined and continually shifting problem. Indeed, after wading through the inquiry's narrative account of the outbreak, it is clear that the problems precipitating its emergence and spread across the Vale of Leven are not easy to discern or isolate. In fact, as I have suggested, the outbreak is presented as a continually shifting series

of events that cannot be neatly contained or fully known (even from the safe distance of retrospect). The more we come to know about the outbreak, the more its seem to boundaries shift and coalesce. In documenting the events occurring at the Vale of Leven Hospital as dynamic and entangled in a larger web of issues, the inquiry articulates the outbreak as a wicked problem. Recall, for instance, Rittel and Webber's (1973) suggestion that "every wicked problem can be considered a symptom of another problem" (165). As I pointed out in the above discussion of the investigation's terms of reference, the inquiry's account depicts the outbreak as a problem "with an evolving set of interlocking issues and constraints," which resists any definitive formulation of it (Conklin & Weil, 2007, p. 3). Being unable to fully understand a wicked problem often makes it difficult or altogether impossible to solve. However, as I turn to next, in foregrounding the outbreak as situated in a larger network of complex problems, the inquiry is able to extract lessons to be learned for not only the Vale of Leven but for hospitals across NHS Scotland.

#### 4.2.3 Learning Beyond the Vale

One of the criticisms driving C.diff Justice's petition for a public inquiry was the way in which the independent review confined (or, as I suggested, "quarantined") the problems precipitating the outbreak to local practices, infrastructure, and culture at the Vale of Leven. In doing so, the lessons learned generated by the independent review would likewise remain quarantined at the small 136-bed hospital. Part of C.diff Justice's petitioning involved re-articulating the outbreak as a much larger and far-reaching matter of concern: "the scale of the outbreak at the Vale of Leven Hospital was unprecedented…I am equally clear about the fact that the issue is not restricted to the Vale of Leven…it

affects people, hospitals, and care homes throughout Scotland…a public inquiry would enable us to learn lessons not in a piecemeal way but in a comprehensive way" ("PE1225"). This call eventually became built into the inquiry's terms of reference: "with reference to experience within and beyond Scotland of C.diff, to establish what lessons should be learnt and to make recommendations" (p. 4). The goal, then, was to not only understand what went wrong at the Vale of Leven Hospital, but to draw out lessons that were crucial to the delivery of quality healthcare throughout Scotland and beyond.

The importance of widening the scope of learning became apparent to the inquiry team throughout the five-year investigation. While the terms of reference largely prohibited them from conducting a comparative study, the inquiry devotes an entire chapter to surveying similar investigations into C.diff outbreaks at hospitals across the UK. Partially confirming Walshe's (2003) suggestion that public inquiry reports are rarely read in full, members of the inquiry team began to identify striking similarities between the Vale of Leven outbreak and problems that have been documented at a number of hospitals in Scotland, England, and Ireland. As a case in point, the report cites a past investigation into a C.diff outbreak at the Stoke Mandeville Hospital in England, in which the chair of the investigation noted:

> I said in the immediate aftermath of the Bristol report (into children's cardiac surgical services at Bristol Royal Infirmary) that it was not possible to say with confidence that events such as those which took place at Bristol would not happen again. What happened at Stoke Mandeville demonstrates that they are still happening. Patients died when their deaths could have been avoided. It is a matter

> of the greatest regret that the lessons of Bristol have not been learned and incorporated into every corner of the NHS. (p. 407)

The chair's lament makes it clear that while failure in healthcare can never be completely eradicated, the greater failure is not learning from these events. The Vale of Leven inquiry continually reiterates this point throughout, linking its investigation to others that have occurred at Tunbridge Wells Hospital in Kent, Ninewells Hospital in Dundee, and at hospitals under the Northern Health and Social Care Trust in Northern Ireland. In connecting the Vale of Leven outbreak with similar occurrences, the inquiry team makes an implicit argument about the need for institutional learning to extend beyond the boundaries of particular hospitals in the UK. For instance, if the Vale of Leven Hospital had drawn upon the lessons offered from the outbreak of C.diff at the Stoke Mandeville Hospital, it could have been clear that the practice of cohosting places patients at greater risk of dying from their infection and that "the immediate isolation of symptomatic patients was crucial to the control of outbreaks" (p. 408). The major takeaway, then, from the Vale of Leven inquiry is that the outbreak is part of a larger network of similar occurrences, all of which call for significant institutional learning and change.

Taking lessons extracted from a particular, local context and generalizing them to a national-scale is not necessarily a pragmatic or entirely safe approach to change. Scott (1998), for one, offers a critique of large-scale government initiatives that work to construct national standards or practices decontextualized from "exceptionally complex, illegible, and local social practices" used in day-to-day (p. 2). Taken in the context of medicine, it is reasonable to say that modifications in the delivery of care for an elderly, chronically ill

patient will not necessarily be applicable, let's say, in a pediatrics ward. The Vale of Leven inquiry attempts to navigate this concern throughout the conclusion of the report: "[C.diff] has been the focus of the inquiry, but I am in no doubt that, although it was the failures in how [C.diff] was managed at the Vale of Leven Hospital that governed the work of the inquiry, the recommendations should have a more far-reaching impact" (p. 412). In doing so, the 75-recommendations that conclude the inquiry are not presented as prescriptive changes that, when applied broadly, ignore local contexts and circumstances; rather, I suggest the lessons are framed as heuristic. That is to say, the lessons are presented as flexible frameworks for situated action. Take, for instance, their recommendation for communicating the risks of C.diff with patients: medical staff "should ensure that patients, and relatives where appropriate, are made aware that [C.diff] is a condition that can be life-threatening, particularly in the elderly" (p. 413). The proposed recommendation springs from many testimonies from patients and relatives indicating C.diff was often referred to as a "wee bug" by medical staff, thus downplaying the dangers presented by the infection (p. 11). The lesson offers a flexible framework for ensuring better communication between medical staff and patients while not being applicable to the Vale of Leven Hospital alone.

The lessons from the Vale of Leven outbreak are not strictly confined to those outlined in their report. In many ways, the inquiry's sustained engagement with the dangers C.diff presents to hospitalized patients spurred further engagement by healthcare officials across Scotland. Indeed, several initiatives have sought to put the lessons from the Vale of Leven inquiry into practice. For instance, researchers from various universities and hospitals across Scotland have formed the Scottish Healthcare Associated Infection

Prevention Institute (SHAIPI). Funded by a £4.2M government grant, SHAIPI "will establish a virtual hub of 19 investigators from the universities of Dundee, Edinburgh, Glasgow, Glasgow Caledonian, St. Answers, and Strathclyde" in "developing new interventions to prevent the spread of infection" in hospital settings (Ford, 2015, para. 2-3). Additionally, the Academy of Medical Royal Colleges and Faculties has developed a working group to examine cases of systemic failure across the NHS, and how "health service could learn from these past failures" (Call for Action, 2015, para. 5). The working group is, in part, addressing one of the prevailing concerns of the Vale of Leven inquiry, namely, that lessons from past failures are not being learned: "while there have been responses to the individual published reports of inquiries and reviews into failings in care, there is little evidence to suggest that we are tackling the underlying systemic failings which exist" (Call for Action, 2015, para. 13). In calling public attention to the outbreak, I suggest, the inquiry worked to marshal together others in extending its call for institutional learning and change beyond the Vale of Leven.

My goal in calling attention to these initiatives is not to offer evidence for the efficacy of public inquiries (my goal, in fact, is to do somewhat of the opposite). That is, I see in the future work proposed by SHAIPI and the Academy of Royal Medical Colleges a not very subtle understanding that public inquiries are not the solutions to eliminating future outbreaks. Rather, I suggest that the Vale of Leven inquiry offers lessons that have fostered and sustained engagement with a particularly complex and ill-defined problem. Moreover, in articulating the outbreak as a wicked problem, I see the inquiry as drawing together a network of investigations into similar outbreaks and other systemic failures in

the delivery of healthcare, researchers and clinicians from various hospitals across the UK, and an engaged public who understand the impact such failures have on all users and participants of the NHS system. By way of conclusion, in the following section I turn to consider the rhetorical implications of Vale of Leven inquiry and its account of the outbreak as a wicked matter of public concern.

## 4.3 From Matters of Fact to Matters of Concern

Throughout this chapter I have argued for an understanding of the Vale of Leven inquiry as a deeply rhetorical process that throughout its five-year investigation articulated the unprecedented bacterial outbreak as a wicked problem in need of national consideration. Constructing such an account of the outbreak was not an easy story to tell. From the very outset, NHS officials (unsuccessfully) sought to impose limits on the timeline of the investigation, as well as what evidence could or could not be pursued. As a result, the inquiry's terms of reference, which determine the scope of the investigation, remained open, allowing the inquiry team to explore a wide breadth of problems, the relationships among those problems, and their significance across NHS Scotland and beyond. The most tangible deliverable of the investigation is clearly the inquiry report. At 439-pages, along with thousands of pages of relevant evidence, such as witness and expert testimonies, archived on the investigation's public website, the inquiry provides users and participants of the NHS system with an account of the outbreak as a massive local and systemic failure. With every reading of the inquiry's documents, I come away thinking about Weick's (2001) contention that "the massive scale on which social problems are

conceived often precludes innovative action because the limits of bounded rationality are exceeded…People often define social problems in ways that overwhelm their ability to do anything with them" (p. 426). And much like the time-crunched investigators in the initial independent review, I find myself looking to make sense of it all, that is, looking for ways to clean up the overwhelming mess (while also, simultaneously, coming to doubt the value of making problems wicked). Doing so appears, in the mess of things, to be the most pragmatic option. As Hutter (2007) contends, such investigations are designed to "lead to changes in corporate or national protocols for risk management" (p. 80). To conclude this chapter then, I want to consider some of the limitations that are evident throughout the Vale of Leven inquiry case and, in turn, draw out some of the implications of the investigation for rhetoric and technical communication.

The Vale of Leven inquiry is, of course, not without fault. That is, despite my attempt to draw a clear connection, Vale of Leven inquiry's treatment of the outbreak does not fully (or neatly) align with commonly held understandings of wicked problems. This is most clear in their attempt to draw out a broad range of lessons learned. Given the impact of the outbreak on the public in general and the local community in particular, the inquiry's lessons provided no recommendations on how to further involve patients and their relatives into the prevention and control of cross-hospital infections; the one notable exception is recommendation 58, which states: "Health Boards should ensure that there is a lay representation at Board infection prevention and control committee level in keeping with local policy on public involvement" (Vale of Leven Hospital Inquiry, 2014, p. 417). This is somewhat ironic given the immense amount of information and evidence provided

by patients and relatives throughout the inquiry's investigation (so much so that an entire chapter of the report is devoted to surveying their testimonies about the physical conditions of the hospital and the care they or their relatives received while hospitalized). Thus, while the inquiry certainly extends its understanding of the causes and impact of the outbreak beyond the Vale of Leven, their proposed recommendations make no direct efforts to change the public's involvement in addressing the exceedingly wicked problem. This is, in part, due to the difficulties of proposing ways of solving problems that, by definition, often resist such solutions (a point I will come back to in the following chapter). In addition to the lack of public participation in the recommendations, there is also little addressing the role of communication in preventing and controlling infectious outbreaks. As Sauer (2002) reminds us, it is easy for such reports to focus on the technical aspects of failure at the expense of neglecting its social and cultural dimensions. While the narrative constructed throughout the inquiry report sustains engagement with these social and cultural dimensions, its concluding proposal for change does not do them justice.

If we pan out from the Vale of Leven inquiry, we can also consider some of the larger concerns with public inquiries in general. Most importantly, they do not provide government officials, medical professionals, or users of the NHS system with a silver bullet for completely eradicating systemic failures such as the outbreak of C.diff. Nor are they neutral instruments for representing past events. As a means of institutional learning and change, they are fraught with biases and social issues (consider, for instance, the relatively low number of inquiries chaired by women or the complete lack of inquiries chaired by a woman of color). Moreover, inquiries often give an air of democratic truth finding. That is,

they can be seen as representative of the Habermasian ideal, whereby disinterested citizens come to inquire and debate over a commonly held problem armed only with a shared sense of critical rationality. The notion of an inquiry as a kind of public sphere is further reified in the Inquiries Act of 2005, which states that a Scottish Minister cannot appoint a person with direct and vested interest in the subject of the investigation ("Inquiries Act of 2005," section 9.1.a). This largely abstracted approach to inquiries, I wager, is deep troubled once an investigation begins. Consider, for instance, Lord MacLean's foreword to the *Vale of Leven Inquiry Report,* in which he narrates:

> The evidence adduced by the Inquiry was concluded on 28 June 2012. In July 2012 I entered hospital for what was then regarded as a fairly routine operation. The operation itself was concluded successfully but shortly thereafter my condition began to deteriorate as a result of an infection of unknown aetiology, which necessitated a prolonged period of intensive care and hospitalisation for a total of five months. I may say that the irony of this was not lost on me during the time I remained in hospital. The experience did, however, enable me better to understand the plight of those who suffered from C.difficile infection and in some cases died from it, in the Vale of Leven Hospital. (p. x)

In working to articulate complex causes and impact of what went wrong in the Vale of Leven, the chair, I suggest, came to understand the impact such an outbreak has not only on patients and local residents but to all users of the NHS system, himself included. The inquiry's purpose, in other words, is not to scientifically explain the outbreak as a matter of

fact but rather to cultivate a particular matter of concern for a much broader and diverse public.

My use of the phrase *matter of concern* is purposeful. First and foremost, it is the phrase used in Scottish law to describe the motivating cause of public inquiries. The Inquiries Act of 2005 states that a formal inquiry is held into matters related to "particular events [that] have caused, or are capable of causing, public concern" (1.1.a). The phrase is also at the heart of Latour's new materialist politics, which foregrounds the collective of human and non-human actors that assemble around particular matters of concern. In "From Realpolitik to Dingpolitik" (2005), Latour calls for an understanding of the deeply rhetorical dimensions of politics, one that does not readily reduce important matters of concern to matters of fact. Matters of fact, on the one hand, are those (often scientific) objects presented as objective, transparent encapsulations or explanations of the real. They are, for all intents and purposes, contested and regarded as existing without dispute. Matters of concern, on the other hand, are uncertain but pressing issues around which people gather to inquiry, debate, and deliberate. Illustrating this difference, Latour compares the fully functioning *Columbia* space shuttle as a matter of fact with its subsequent disintegration upon re-entry into the atmosphere as a matter of concern:

> What else would you call this sudden transformation of a completely mastered, perfectly understood, quite forgotten by the media, taken-for- granted, matter-of-factual projectile into a sudden shower of debris falling on the United States, which thousands of people tried to salvage in the mud and rain and collect in a huge hall to serve as so many clues in a judicial scientific investigation? Here, suddenly, in a

> stroke, an object had become a thing, a matter of fact was considered as a matter of great concern. If a thing is a gathering, as Heidegger says, how striking to see how it can suddenly disband. (pp. 234-235)

As a matter of concern, we cannot begin to understand what went wrong with the shuttle's re-entry, as Rickert (2013) notes, "without also considering the entire ambient complex of forces, decisions, materials, designs, discourses, people, and institutions involved" (p. 26). My turn to Latour likewise makes sense in unpacking the public inquiry's approach to understanding the outbreak. As we saw with the independent review, a matter of concern (the outbreak) was rendered into a matter of fact (explained by local problems of practice, infrastructure, and culture). The public inquiry, by way of contrast, offers a much more inclusive account of what went wrong at the Vale of Leven. Resembling a Latourian litany, the inquiry, in many ways, gathers together diverse human and nonhuman actors, such as charge nurses, budgets, ill-placed sinks, and invisible bacteria. Latour might call the inquiry a form of criticism, proceeding as a "multifarious inquiry launched…to detect how many participants are gathered in a *thing* [or matter of concern] to make it exist and to maintain its existence" (Latour, 2004, p. 246). And in pulling together these diverse actors in accounting for the outbreak's cause and impact, "matters of fact [can] give way to their complicated entanglements and become matters of concern" (Latour, 2005, p. 31).

What I am suggesting throughout this dissertation in general and this chapter in particular is that the inquiry not only worked to articulate the outbreak as a matter of concern, but as a wicked one. While matters of concern and wicked problems have clear differences (wicked problems are often used as a larger categorization for particular matters

of concern, for instance), I want to conclude by focusing on their point of overlap. In conducting an investigation into the outbreak at the Vale of Leven, the inquiry facilitated and sustained engagement with a clearly pressing matter of concern. Like Latour's depiction of an archaic assembly, the investigation became a forum for inquiry, debate, and deliberation with: "its own architecture, its own technology of speech, its complex set of procedures…its ways of bringing together those who are concerned—and even more important, those who are not concerned—and what concerns them" (2005, p. 21). The deeply rhetorical work of these assemblies is both the gathering of people around a particular matter over which there is no consensus, and the movement toward a consensus, or as Latour puts it, "to obtain closure and come to a decision" (p. 21). The inquiry, then, accounted for the Vale of Leven outbreak as a matter of concern, but in a way that resists closure, consensus, and, ultimately, resolution. That is to say, the inquiry acknowledges that there is and will be no break from assembly once a decision is reached and closure is achieved. Such a view, however, does not necessarily result in stagnation. As Jasanoff (2007) argues in her comparative study of public inquiries and commissions across the UK, US, and India, "the very lack of resolution can be seen as a form of learning…the kind that, through its very incompleteness, reveals the impossibility of taming a cataclysmic event through necessarily imperfect managerial solutions" (p. 232). Rather, I suggest that the Vale of Leven inquiry's narrative account works to articulate and sustain the outbreak as a wicked matter of concern that hopes to open further inquiry, debate, and deliberation throughout Scotland and beyond.

# CHAPTER 5. ARTICULATING WICKED PROBLEMS

"All this is an attempt to see what lessons can be learned from past failures…inquiries were not ignored. Policy-makers and administrators put immense effort into trying to do something about the situations thus revealed. One consequence of this was that the character of the later inquiries was rather different from some of the earlier ones, so that in a sense the efforts have succeeded in changing the nature of the problems, or at least of the ways in which the problems are perceived"

—J.P. Martin (1984)

"Facts have become *issues*. And the more important the issue, the less certain we are now publicly as to how to handle it…The increase of disputability—and the amazing extension of scientific and technical controversies—while somewhat terrifying at first, is also the best path to finally taking seriously the political task of establishing the continuity of all entities that make up a common world"

—Bruno Latour (2010)

Throughout this dissertation, I have aimed to demonstrate how a bacterial outbreak at a rural hospital in Scotland gradually, over time, became a wicked problem.

To do so, I traced the way various retrospective accounts shifted their understanding of the outbreak, from the initial independent review, which depicted it as resulting from local problems of practice, infrastructure, and culture, to the successful petition made by members of C.diff Justice and the subsequent public inquiry's five-year investigation, both of which foregrounded the complexity and uncertainty surrounding the causes, impact, and significance of the outbreak. Members of C.diff Justice, for instance, worked to destabilize the local focus of the independent review's explanation by leveraging technical and scientific uncertainty over the risks posed by new and evolving strains of C.diff as well as by enrolling all users and participants of the NHS system as stakeholders in learning from what went wrong at the Vale of Leven Hospital:

> The scale of the outbreak at the Vale of Leven Hospital was unprecedented…I am equally clear about the fact that the issue is not restricted to the Vale of Leven…it affects people, hospitals, and care homes throughout Scotland. The incidence of C.diff is rising: year on year, the trend has been upwards. New strains are being diagnosed as we speak. At this point, no one is quite sure about the toxicity of the new 078 strain that has been discovered…a public inquiry would enable us to learn lessons not in a piecemeal way but in a comprehensive way. ("Petition No. PE01225/E")

In doing so, they reframe the outbreak as a matter of public concern, the significance of which must be investigated so that lessons can be learned by hospitals across Scotland and beyond. Likewise, the findings from the public inquiry's investigation, in various ways, situate the outbreak as entangled in a shifting network of problems at both the local (Vale

of Leven Hospital) and national (NHS) level. The report, moreover, resists creating a neat and clear demarcated account of the outbreak. In fact, if we imagine the inquiry's report as a map for understanding the outbreak (and thus understanding how to enact institutional change to prevent its reoccurrence in the future), then it is one that does not shy away from admitting, "here be dragons." In doing so, it resists constructing an account of the outbreak as a problem in need of closure or resolution, but rather as a wicked matter of concern in need of further inquiry, debate, and deliberation.

In this chapter, I conclude by exploring the rhetorical implications and significance of my argument for the research, practice, and teaching of technical communication. To do this, I turn to consider what it means for a public inquiry to articulate a wicked problem in the context of medicine, focusing in particular on the way wicked matters of concern blur traditionally held boundaries between experts and non-experts. From there, I consider how such inquiries can help us reimagine the boundaries of technical communication as not only a form of problem-solving and problem-setting but also deeply engaged in the articulation of wicked problems. Finally, I address the value of articulating and sustaining wicked problems for the future of rhetoric and technical communication.

## 5.1 Engaging Crisis with Caution and Care

The public inquiry's findings identify both local and systemic failure in the delivery of healthcare in NHS Scotland, a failure we might consider, in this larger national context, a crisis. Roitman's *Anti-Crisis* (2014) provides a productive sounding board for this idea. What drives her theoretical study of the 2007-2008 US financial collapse is an examination

of "the effects of the claim to crisis, to be attentive to the effects of our very accession to that judgment" (p. 12). Crisis, as I noted in chapter three, is etymologically rooted in the notion of krisis, or judgment in uncertain or shifting situations. Such judgment, Roitman argues, is steeped in politics, for a particular crisis "engenders certain forms of critique" while disallowing others (p. 12). Ultimately, Roitman calls us to "put less faith in crisis" because it "is bound up in the predicament of signifying human history, often serving as a transcendental placeholder in ostensible solutions to that problem" (p. 13). Her skepticism is drawn from an understanding of crisis as a kind of cultural and social "blindspot" that presents us with "a point of view, or an observation, which itself is not viewed or observed" (p. 13). That is to say, Roitman calls us to cautiously and carefully engage with the term because, all too often, we accept such crises without attending to the conditions, institutions, systems, or practices that call a crisis into existence.

I see Roitman's critique of crisis (which, she notes, are themselves cognates) as a reflection of what I have hoped and what I have attempted to argue throughout this dissertation. Her point also sheds light on some of the issues with understanding seeing inquiries as the articulation of wicked problems. Stanley and Manthorpe (2004) likewise advocate for exercising caution when dealing with inquiries into crises of health and social care: "they emphasize events that are unusual and may promote anxiety and conservatism. They may fuel stereotyping and concerns about violence, and they may instill a fear that other professionals will be unreceptive or incompetent. Most importantly, they relate to what went wrong, and although good practice is mentioned, this often becomes buried…the extent to which the accounts provided by inquiry reports are representative of

broad standards of professional practice remains open to question" (p. 10). That is, while inquiries are often undertaken to re-establish a public trust in a particular social service, such as the NHS, the opposite can just as easily result: namely, a wider loss of confidence in the existing system.

A decrease in public trust and confidence in the systems, institutions, and organizations that deliver healthcare is a significant dilemma. Stanley and Manthorpe, in this way, note, "these inquiries…have had a significance impact on public perceptions of professional expertise and authority" (p. 2). This is a particularly difficult point that I have personally been grappling with throughout the course of this study. For instance, debates have sparked between my brother (an anesthesiologist) and I about the impact such accounts of failure have on the disciplinary or professional autonomy of medicine as a field. There exists, in different ways, a culture of blame across the medical field in both the US and the UK (see, for instance, the Institute of Medicine's 1999 report, *To Err is Human: Building a Safer Health System* or the NHS's 2000 report, *An Organization with a Memory: Report of an Expert Group on Learning from Adverse Events in the NHS*). Stanley and Manthorpe see this as a result of an inquiry's construction of a "moral judgment," whereby the reader of the inquiry report "is invited to identify with the lofty perceptive of the inquiry panel and to pass judgment upon the actions of the protagonists with the benefit of hindsight" (p. 2). But the public-nature of these accounts is not, of course, a death knell to a sense of medical expertise in nurses or physicians. Rather, it works to challenge what Bosk (2005) sees as the manifold of practices and mechanisms used by social organizations that "allow the medical profession to bury mistakes from public view," the result of which

damages a particular hospital's institutional memory (p. 5). Referencing Light's (1972) sociological study of suicide reviews (which are internal meetings intended to retrospectively examine the events precipitating the suicide of a mental health patient), Bosk notes: "unfortunately, the perforce *ad hoc* and episodic nature of suicide review prevents us from making broad generalizations from the lessons of any particular suicide. By the time of the next suicide review, the composition of the group will be so changed that its historical memory, which would have enabled connection with lessons drawn from the prior review, will be compromised" (p. 5). In a way that resonates with the initial independent review of the Vale of Leven outbreak, the lessons from an internal suicide review, for various reasons, cannot be mobilized across a larger context of practice. Problems are resolved but lessons are not learned.

What motivates these forms of internal review systems as well as what drives many critiques of an inquiry's highly public dimensions is, I suggest, a fear of damaging the disciplinary and professional autonomy of medicine. The maintenance of this autonomy can be seen in the very infrastructure of hospitals and their placement in the cities where they reside. Take, for example, the hospital district (Figure 2) in Providence, Rhode Island (Google Maps, 2016).

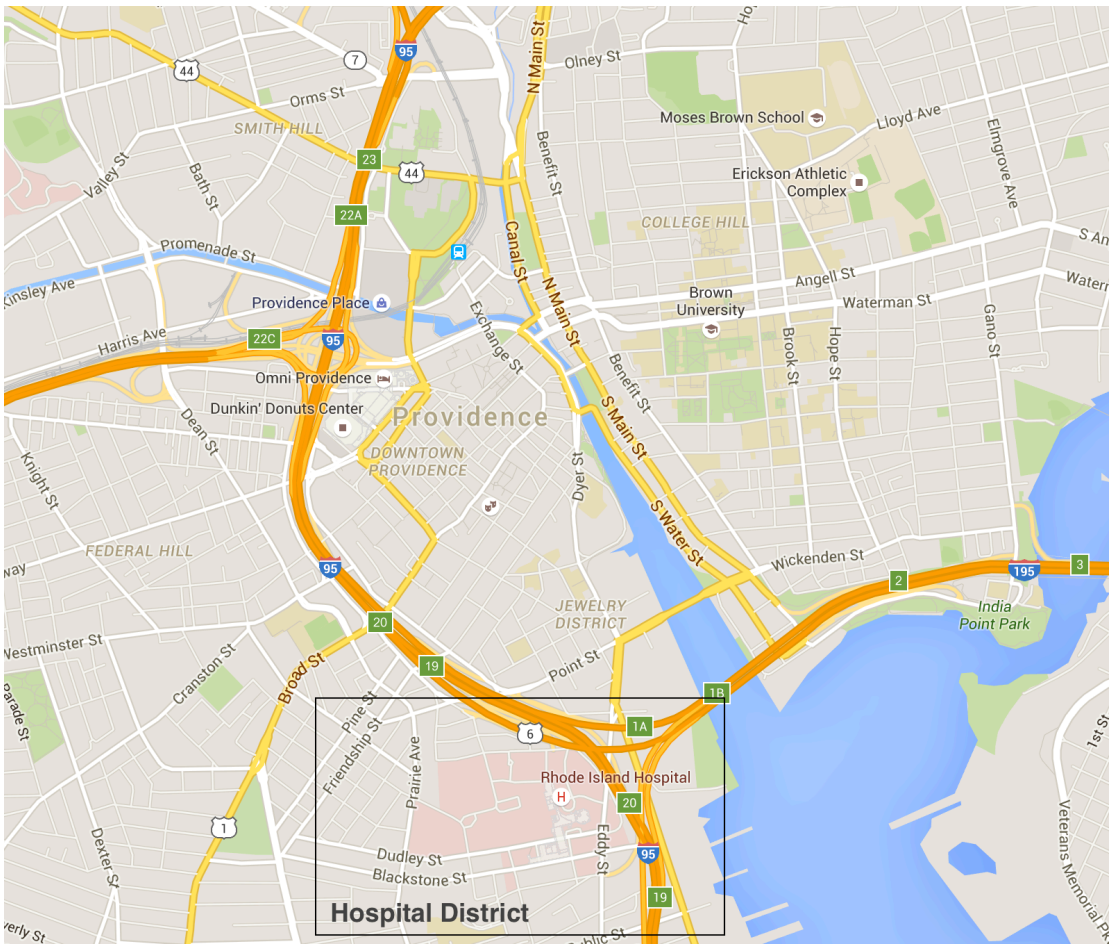


Figure 2: Map of the hospital district in Providence, Rhode Island

Separated from the downtown, the hospital district is nestled in an area of the city not easily accessed. The seclusion of a hospital to a hospital district is, of course, for good reason: that is, to ensure patients in need of emergency medical care can get to the hospital without hitting traffic or similar forms of congestion in the city. Moreover, their distance and seclusion is not necessarily a new phenomenon. Foucault (1984) sees such spaces, which he calls heterotopias, as a part of every culture, with hospitals, in particular, being a part of "crisis heterotopias…[or] privileged or sacred or forbidden places, reserved for individuals who are, in relation to society and to the human environment in which they

live, in a state of crisis" (p. 4). Moreover, the physical placement of a hospital or medical center in a city is reflective of a broader push for seclusion across various fields of science. Michel Callon, Pierre Lascoumes, and Yannick Barthe (2001), for instance, offer a concrete example: "the history of astronomy, like that of many other sciences, is one of the pursuit of an extreme seclusion. One of the ideals of Western science seems to be to establish its laboratories and install its instruments not only as far as possible from the world in which we live, but also out of reach of amateurs and laypersons" (p. 40). Making the limits or failures of medical institutions public, then, troubles the boundary between the long held division between expert and non-expert.

The boundary between medical expert and non-expert is never clearly drawn in the day-to-day work of healthcare. Strauss, Fagerhaugh, Suczek, and Wiener's *Social Organization of Medical Work* (1985), for one, argues for a view of medicine as a bundle of distinct but interrelated forms of trajectory work. Their reliance on the organizing concept of "work" is an attempt to understand medical care as more than a service provided or expertise possessed by professionals (and thus further defined by those professional roles, such as "nursing work," or "physician work"). A hospital, they argue, "consists of variegated workshops—places where different kinds of work are going on, where very different resources (space, skills, ratios of labor force, equipment, drugs, supplies, and the like) are required to carry out that work, where the divisions of labor are amazingly different" (p. 6). The social organization of medicine, then, involves a range of activities, such as machine work, safety work, comfort work, sentimental work, articulation work, dirty work, information work, body work, negotiate work, and temporal work. The work of comforting

patients, for instance, is shared not only by nurses, certified nursing assistants, and physicians, but also by relatives and volunteers. Such a division of labor also extends to divergences in the delivery of care, such as the outbreak at the Vale of Leven. One of the problems the inquiry team found was the poor communication between medical staff and patient families led to visitors not realizing that HAIs, such as C.diff, can spread via their clothing, or in the patient's laundry they brought home to clean and return on their next visit.

I follow this trajectory to acknowledge the critiques of inquiries as a professional risk to medical expertise, but, in so doing, suggest that such expertise is, in many ways, in need of understanding how problems, such as the Vale of Leven outbreak, cannot necessarily be solved by one profession or discipline alone. Simply put, inquiries are a risk to the boundaries maintained between medicine and other disciplines, professions, and communities, and that is, in part, the value of inquiries as an institution. An inquiry takes a long view of things in contrast to many hospitals' focus on the day-to-day delivery of care. Moreover, Stanley and Manthorpe "consider that the strength of the inquiry format lies in its capacity to position itself on the boundary between past events and future development. Like Janus, the god of the new year, it can look both backwards and forwards and some of the inquiry reports have had the most impact are those that acknowledge this dual vision and use the evidence of past events to inform planning for the future" (pp. 3-4). To mix metaphors, inquiries trouble the boundary between experts and non-experts in medicine by bringing more perspectives to the table, particularly in the aftermath of a significance

failure in care. Moreover, through their lengthy and drawn out process, they prevent such failure from evaporating.

The blurring boundaries between experts and non-experts has been at the background of this dissertation, which has largely worked to situate the Vale of Leven public inquiry as a form of technical documentation that, in many ways, confounds our expectations of post-accident reports. The two points, however, intersect given the rhetorical work of the inquiry. That is, rather than isolating one particular cause, the inquiry's report constructs a messy and complex narrative of the outbreak that resists being pinned down—that is, it articulates a wicked problem, one that cannot be solved by any one profession or discipline. In reframing the outbreak as wicked, the inquiry challenges the idea that this is a medical problem, and instead presents it as a matter of public concern. Unpacking this further, I turn to consider the rhetorical significance of the inquiry, specifically to the notion of technical communication as a form of problem solving work.

## 5.2 Reimagining the Work of Rhetoric and Technical Communication

Johnson-Eilola and Selber (2013) characterize the technical communicator as one who finds and solves problems. With rapidly changing technologies and the need for a wide range of cross-disciplinary expertise in the workplace, they suggest that "technical communicators do not merely learn skills; they must also *learn how to learn new skills*, upgrading and augmenting their abilities as they mature in careers, analyzing the matches and mismatches between what they currently know and what a communication situation demands…[they] must learn to become reflective problem solvers" (p. 3). Problem solving,

in this way, is a deeply rhetorical activity, one in which a technical communicator must survey all the available solutions to a particular problem grounded in local context: "because there are always multiple ways to understand and solve problems in this field, technical communicators are constantly interpreting use situations and weighing possible responses. The solution to a problem in technical communication is never the only available solution, but one among several competing alternatives" (p. 3). Foregrounding the crucial role of adaptability to the continually shifting technological and rhetorical terrain of today's work environments, Johnson-Eilola and Selber identify a number of vital characteristics that technical communicators must embody, "including the ability to sense a problem, diagnose what forces within a context are causing the problem, and develop and implement a change within the context that addresses the problem" (pp. 3-4). Technical communicators are well suited for this problem-solving work became they are sensitive to the rhetorical dimensions of problems; that is, they are attuned to how problems take shape in and across contexts, the impact of such problems on a variety of stakeholders, and the ways problems form exigencies for rhetorical action. Take, for instance, usability testing, which is one method for continually detecting and solving problems with a particular text, artifact, or interface throughout the design process. Technical communicators identify and address such problems by working with users to negotiate a consensual understanding of a problem and then work to implement that feedback into the design or redesign of an information product.

Johnson-Eilola and Selber's understanding of problem-solving work is premised on the notion that technical communicators can "step back and analyze how [a] situation is

being defined and what the (sometimes competing) goals are, in an attempt to balance the factors in the problem space before constructing a solution" (p. 4). Offering heuristics as a framework for assessing problematic situations, they acknowledge that problems are not only something we interpret but are often constructed and reshaped in our process of grappling with them. In stepping back, technical communicators can survey how to rhetorically frame situations that may lead to change. Cushman (2014) offers a slightly different take on the construction of problems, arguing that while technical communicators are rarely presented with clearly defined problems to solve, the construction of such problems does not happen by stepping back and objectively assessing a situation. Rather, technical communicators, Cushman contends, "step in to act rather than step back to abstract" (p. 342). Cushman argues for an understanding of problem setting as a rhetorical practice whereby practitioners "must name and frame the boundaries of attention to invent situations that are temporally stable and thus solvable. The practice of problem setting is about production more than analysis and reflection…The practice involves coping with complexity and sometimes overload by attuning to shifting contexts and allowing some elements of a situation to emerge as more salient than others—even while the practitioners and their rhetorical decisions intertwine with the situations they hope to affect" (p. 332). Foregrounding the rhetorical practices used to temporarily stabilize situations, Cushman suggests that problem solving is a deeply inventive practice. In other words, since we rarely encounter stable situations defined by with neat and clearly identifiable borders, we must work to invent solvable (or tame) problems by naming, framing, and constructing them in the mess of things.

What I have argued throughout this dissertation expands the inventive work of problem setting and problem solving by also considering the articulation of wicked problems. That is, rather than working to temporarily stabilize the shifting boundaries of complex problems in order to solve them, we might also consider positioning rhetoric and technical communication as equally involved the preservation, cultivation, or intensification of a problem's complexity. This is not to implicitly affirm a view of technical communication as anti-complexity and thus falling back on the idea that technical communicators transmit or translate complex technical information (Slack et al, 1993). Rather, my suggestion grows out of technical communication's continual engagement with complex and ill-defined situations in day-to-day life. Moreover, my hope is not to counter prevailing understandings of problem solving in rhetoric and technical communication; rather, it is to open up space for recognizing the value of making problems wicked rather than exclusively working to tame them.

So what does it mean to *articulate* a wicked problem? Recall that wicked problems cannot be fully explained or definitively formulated; persist as exceedingly difficult or outright impossible to solve; impact a diverse and wide-ranging body of stakeholders; and often emerge as symptoms of even larger, more complex problems. To articulate a wicked problem, then, means making problems visible and meaningful for a diverse body of stakeholders by working to preserve, cultivate, or intensify a problem's complexity in a way that opens it up to further inquiry, debate, and deliberation. It means to draw out the impact of a particular problem outside a particular framework of understanding. In the case of the Vale of Leven outbreak, we can see members of C.diff Justice doing this in their

petition, which sought to foreground the far-reaching consequences of the outbreak beyond the Vale of Leven Hospital. They did this by leveraging uncertainty over the knowable risk presented by new strains of C.diff as well as by enrolling or assembling all users and participants of the NHS system as stakeholders directly or indirectly impacted by the outbreak. In many ways, this rhetorical work resembles what Porter, Sullivan, Blythe, Grabill, and Miles (2000) call institutional critique, whereby one aims to "change the practices of institutional representatives and to improve the conditions of those affected by and served by institutions" (p. 611). One of the methods for institutional change is to contest the established boundaries of a physical or figurative space. Drawing from the postmodern geography of David Sibley, Porter et al focus on the work of institutional critique in "zones of ambiguity," or those spaces "that house change, difference, or a clash of values or meaning. These zones of ambiguity…are locations where change can take place because of the boundary instability they highlight" (p. 642). Contesting the boundaries of the outbreak, for instance, called into question who is impacted by new and evolving strains of C.diff, thus destabilizing the independent review's relatively stable account of it as a result of various local problems. In doing so, the petition and the subsequent inquiry formed a much larger assembly of people who have a real stake in what went wrong at the Vale of Leven Hospital.

An assembly of this kind deepens rhetoric and technical communication's commitment to core concerns such as user advocacy (Johnson, 1998; Grabill & Simmons, 1998). Advocacy, in this sense, is not necessarily the work of making complex information accessible to an audience, but rather working to make a complex and ill-defined problem

visible and open for further inquiry, debate, and deliberation by people outside of a particular discipline or profession. In the context of the Vale of Leven outbreak, the public inquiry, as a form of technical communication, helped a larger public recognize the severity and pressing nature of a problem that cannot be confined to only one hospital. It accomplished this by making the outbreak meaningful for not only those directly or indirectly affected in the Vale of Leven region, but extended its significance across Scotland as a matter of public concern. Grabill (2010) accounts for a similar form of rhetorical work in the context of his participation in supporting a community's response to the dredging of an industrial canal, causing significant water pollution in the area. Grabill situates his involvement as supporting the work of the community as they sought to "open up a matter of concern and resist the closure of fact, of a decision, of silence" (p. 203). Rhetoric, then, is what helps support and further the work of others in the process of assembling people around a matter of concern; in other words, rhetoric is what takes place when "we teach or otherwise build capacity with others to act effectively" (p. 204). Such work is premised, in large part, on the matter of concern being a point of contestation and debate—that is, not as a problem fully formed, definable, or tamed. Wicked problems, by definition, then, call for more people to come to the table for further inquiry, debate, and deliberation on particular matters of concern.

## 5.3 Learning in an Age of Wicked Problems

Expanding the boundaries of rhetoric and technical communication to include not only problem-setting and problem-solving but also the work of articulating wicked

problems means shifting how we teach students to engage with problems in public and professional life. Indeed, the value of wicked problems as a descriptor is evident in its use to characteristic today's shifting rhetorical and technological work environments. Mehlenbacher (2013), for one, sees contemporary organizational contexts as wicked, in that they call technical communicators to engage in fragmented, unstructured work in physical and digital spaces while collaborating on multidisciplinary and multilingual teams. The boundaries of such professional environments are porous at best, and a technical communicator's day-to-day work most often contributes to a large-scale project that cannot be completed by any one individual. As Mehlenbacher describes, "the problems that [technical communicators] encounter in these contests will require expertise that no single person is likely to have (due to limited time, memory constraints, incomplete access to learning materials, or complex systems) and that necessitate ongoing sensitivity to sociotechnical mediation (to numerous technologies and to the many audiences that participate in contemporary technological developments)" (p. 189). The driving point of Mehlenbacher's description is the need to not only prepare technical communicators to solve these wicked problems but to foreground continual learning and reflection as vital to the work of technical communication today: "these problems…demand learning during an ever-increasing time famine punctuated by increasingly reduced product cycles, interruptions, and accelerated local and international deadlines" (p. 189). To deal with these wicked problems, we need to build active learning and reflection into our day-to-day practice of technical communication.

Preparing students for such complex and unstructured work environments, however, has long been a part of technical communication pedagogy. Johnson (1998), for instance, describes the enduring use of case pedagogy in technical communication classrooms as an attempt to have students work through a fictional scenario that presents them with a complex dilemma: "the case method presents students with narrative scenarios of problems similar to ones they might encounter in their post-school workplace lives. A case might ask for the solution to an ethical dilemma, but more often than not the student is asked to create a written document that solves a problem, or at the very least defines a problem so it can be acted upon at a later date" (p. 159). In highlighting the value of integrating user-centered perspective into the technical communication classroom, Johnson points out that "case-inspired pedagogy is most guilty of setting up expectations that communication problem-solving is a matter of finding the right answer, or being able to solve the whole problem" while real world situations are often more complex and ill-defined than those represented in teaching cases (p. 163). Johnson's critique of case pedagogy is, in part, motivated by his call for more complexity in the way students learn how to engage and address problems in public and professional life.

More recently, Wickman (2014) has contended that "instructors of technical communication are uniquely positioned to engage students with concrete problems in local workplaces and community settings" and, employing Rittel and Webber's terminology, suggests, "problem-definition…can be a complicated rhetorical and methodological undertaking in its own right. Indeed, many of the issues that demand our collective attention (e.g., global climate change, educational reform, widespread unemployment) are

so 'wicked,' and *ill-defined,* that they require us to expand our thinking beyond a linear, definition/solution model for research and social planning" (p. 24). Wickman narrates that such a wicked problem presented itself at the beginning of his Fall 2010 semester when the Deepwater Horizon oil rig exploded, killing 11 workers and spilling roughly 210 million gallons of crude oil into the Gulf of Mexico. Wickman contends that "these types of incidents offer a powerful basis for teaching students how to address problems on a local scale—through their research, writing, and emerging professional expertise—and for addressing the array of global entanglements that continue to arise well after the semester has come to an end" (p. 24). The value of grappling with wicked problems stems from students' engagement with them as a problem for which there is no immediate or foreseeable solution, and requires students to collaborate and adopt a multidisciplinary understanding of events as they unfold in time (p. 25).

Wickman's employment of wicked problems as a framework for teaching technical communication presents a compelling approach for engaging complex and ill-defined problems that (particularly in the context and at the time he describes) are relevant and meaningful to students as stakeholders. As he narrates, "many students [were] eager to discuss a common experience: the time they spent visiting the coastal region during the largest and most devastating oil spill in U.S. history" (p. 23). The intense and sustained interest in what happened with the Deepwater Horizon rig reflects its a wider, more "extensive response from citizens, advocacy groups, and environmental organizations around the world" (p. 31). While the spill itself was taking place 5,000 feet below the water's surface, the disaster was most visible on the coast as emergency responders,

environmental scientists, government officials, and residents of the coastal areas gathered to understand what went wrong and how to address it. Wickman frames the Gulf spill as a wicked problem to students and provides them with opportunities to research and write about the events as they unfold. Students in Wickman's course used Richard Buchanan's notion of "placements" as a way of understanding the wicked problem through the construction of flexible and contingent boundaries to define the oil spill from their respective disciplinary orientations. The framework offered by Wickman works to bring wicked problems taking place right outside the window *into* the classroom as an object of rhetorical inquiry. That is, in Wickman's words, "beyond instructing students in principles of effective technical communication, the classes I taught during the 2010 Fall term also required them to research and write about the Gulf spill as a wicked problem" (p. 31). Here, the wicked dimension of the oil spill is already established, as the event unfolding sparked both local and national attention. And with its around the clock media attention, it presented environmental scientists, government officials, and local residents a time-pressing wicked problem that crippled all convention forms of solution.

Here, I wager that we might also situate wicked problems in the technical communication classroom as not only an object of rhetorical inquiry but as something articulated and made visible to our audiences. I attempted to do this throughout two sections of my technical writing courses in Fall 2015. For the final project of the semester, I provided students with a theoretical background on wicked problems and how they relate to the principles of effective technical communication; but rather than asking them to then identify a wicked problem, such as climate change or the use of renewable energy, we

worked to re-articulate complex situations or events that were predominantly regarded as tame or manageable problems to solve. Teams of students set out to re-articulate tame problems by engaging in what I called *technical storytelling.* Specifically, my goal was for student teams to tell a story about a socio-technical problem that, in part, would foreground its complexity as a matter of public concern. At the outset of the project, my only expectation was for students to tell a story that preserved, cultivated, or intensified the complexity of a particular socio-technical problem, such as the sustainability of producing solar panels using rare earth minerals. One team proposed to focus on the environmental impact of Keurig single-cup coffee makers. Their project, which eventually took the form of a whiteboard explanation video, focused in particular on the immense amount of plastic waste produced by K-cups (the single-use container filled with coffee grounds for brewing) as they piled up in landfills across the world. Part of their technical story sought to narrate how Keurig, as a company, was treating the environmental impact of K-cups as a tame, rather than a wicked, problem. Specifically, they constructed an argument that demonstrated how Keurig's solution to the environmental problem of K-cups (namely, their campaign to make recycling K-cups easier by providing customers with large, 2-foot high disposal bins for their homes, schools, or offices, which, when full, needed to be sent to Keurig's own recycling center) had, in and of itself, a harmful impact on the environment. Their technical story concluded with the idea that K-cups have fundamentally changed the culture of coffee drinking, and thus presented a wicked problem for present and future generations that cannot be solved by Keurig alone. What the technical storytelling project suggests is that wicked problems are not always clearly

visible disasters that have drawn considerable public attention. Rather, the most mundane of objects, such as a K-cup, is articulated as part of a complex and interconnected web of environmental problems that, by definition, cannot be solved but are nonetheless pressing matters of public concern.

## 5.4 Toward a Wicked Future

How might a study of rhetoric, technical communication, and the articulation of wicked problems conclude or in some way provide its argument with a form of closure? As I was considering this, a particular scene from the HBO series, *Newsroom,* kept coming to mind. In the third season, the main character, news anchor Will McAvoy (Jeff Daniels) interviews climate scientist Richard Westbrook (Paul Lieberstein), who is serving as the Deputy Assistant Administrator in the Environmental Protection Agency (EPA). Westbrook is brought in to talk about the EPA's most recent climate assessment report, which he does by describing their findings in very technical language. McAvoy, looking to clarify the findings in layman's terms, asks: "Just so we know what we're talking about, if you were a doctor and we were the patient, what's your prognosis? A thousand years? Two thousand years?," to which Westbrook replies: "A person has already been born who will die due to catastrophic failure of the planet" (Sorkin, 2014). The statement, delivered in a deadpan manner, comically shocks the news anchor and his production team ("Wait, what did he just say?," spouts McAvoy's producer, Mackenzie McHale). Attempting to get the interview back on track, McAvoy continues the conversation by asking:

McAvoy: So what can we do to reverse this?

Westbrook: There's a lot we could do…

McAvoy: Good!

Westbrook: …twenty years ago, or even ten years ago, but now? No.

…

McAvoy: You sound like you're saying its hopeless.

Westbrook: Yeah…

…

McAvoy: The administration, let me try to…your administration would support wind and solar, clean coal, nuclear power, raising fuel economy standards, and building a more efficient electrical grid.

Westbrook: Yes

McAvoy: And?

Westbrook: That *would have been* great.

McAvoy: Let's see if we can find a better spin, people are starting their weekends. (Sorkin, 2014)

I recount this scene because it is exemplifies the way wicked problems resist our attempts at resolution and closure. As revealed in the episode, part of why Westbrook agreed to the interview was to make it publicly clear how something as wicked as climate change is so often treated like a tame problem that can be clearly defined, managed and, ultimately, solved.

My goal throughout this dissertation has been, largely, to make a similar (albeit less grim) point—specifically, that prevailing understandings of rhetoric and technical

communication as problem-solving work only tell half of the story. That is, in focusing on the Vale of Leven inquiry, my hope has been to foreground the role rhetoric and technical communication played in making the outbreak a wicked problem and, in doing so, brought an exceedingly complex and ill-defined issue to the attention of the entire NHS. In particular, the rhetorical work of C.diff Justice and members of the inquiry team helped to open the outbreak up as a matter of public concern in need of further inquiry, debate, and deliberation. The method of a public inquiry is but one way to make a problem wicked. The possibilities for future articulations, ranging from a city's contaminated drinking water to the environmental impact of single-use coffee machines, are endless as long as such problems remain untamed and, ultimately, rhetorically constructed as wicked matters of public concern.

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VITA

# VITA

## EDUCATION

Ph.D. in English, Rhetoric and Composition (Expected May 2016)
Purdue University

Dissertation: *Storytelling Failure in the Vale of Leven: How a Bacterial Outbreak Became a Wicked Problem*

Committee: Patricia Sullivan (Chair), Michael Salvo, Samantha Blackmon, and Thomas Rickert

M.A. in English (May 2011)
Georgetown University

B.A. in English and Philosophy (May 2009)
Providence College

## RESEARCH AREAS

Professional and Technical Writing; Rhetoric of Science and Medicine; Public Rhetorics; Community Engagement; New Media Writing; Rhetorical Theory and History; Pedagogy

## PUBLICATIONS

Vealey, K. (2016). The shape of problems to come: Troubleshooting visibility in remote technical communication. *Journal of Technical Writing and Communication*. (Forthcoming).

Vealey, K. (2016). Building problem forums: On troubleshooting in the professional writing classroom. *Business and Professional Communication Quarterly*. (Forthcoming).

Vealey, K. & Hyde, C. (2015). Extending participatory program assessment to STEM disciplines, local communities, and industry contexts: Rhetorical work and ethical consideration. *Programmatic Perspectives, 7*(2): 4-24.

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Vealey, K. & Gerding, J. (2013). Designing accidents: Advocating aleatory research methods in new media pedagogy. *Journal of Interactive Technology and Pedagogy*.

## HONORS

Associate Fellow in Purdue's Teaching Academy (2014)

Purdue's Graduate School's Excellence in Graduate Teaching Award (2014)

Center for Instructional Excellence Outstanding Teaching Award (2013)

Crouse Emergent Scholar in Professional Writing Award (2015)