A design analysis of parliamentary debate

Thesis

A design analysis of parliamentary debate

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Abstract

Drawing on descriptions and interpretations of the design process from the design studies literature, this thesis explores and develops a method of interpreting and analysing data about large public projects whose contexts lie outside conventional design studies.

The thesis undertakes a design analysis of parliamentary debate and draws data from the documentary records of two infrastructure projects. The first is High Speed Two (HS2), the London to Birmingham rail link proposed by the UK Government in 2010. Parliamentary bills were passing through both houses of Parliament and the relevant select committees, as this research was under way. The second, providing an historical counterpoint, is the first London to Birmingham Railway, planned and built between 1830-38.

Through a series of studies of transcripts of debates, committee proceedings and records of meetings, the application of design analysis as a method is refined and reviewed. This analysis yields insight and understanding of the parliamentary processes, including debates and committee proceedings involved in planning and designing major public infrastructure, as well as making a contribution to the field of design studies and its methods.

The implications this work has for design research are:

- As a contribution to the ongoing debate about the scope and relevance of design studies as a discipline;
- As a recognition of the value of the parliamentary record as a dataset, providing detailed records of design processes for complex projects with large budgets that affect large numbers of users;
- By drawing on this dataset and recognising the context in which it is created, the importance of such context in the study of design is underlined;
- The notion of an assemblage is developed as a mechanism for accommodating, accounting for, and visually representing the actors drawn from the contexts identified.

Primary data sources

Thatched House

A printed record of the Meeting of Peers, Members of the House of Commons and other persons, held at the Thatched House Tavern on Friday, the 13th July, 1832 is: at Senate House Library in the Goldsmiths'-Kress Library of Economic Literature at classmark [G.L.] I1.833; as a google book, https://goo.gl/VgNdqO; as a line numbered version, https://goo.gl/bUhVWp

HS2 Preparation Bill Second Reading

The Hansard text version of the *Second Reading of the High Speed Rail (Preparation) Bill* is available online at: http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm130626/debtext/130626-0002.htm#13062665000001. The line numbered version is online at https://goo.gl/OkuMYN

HS2 Preparation Bill Committee

The proceedings of the *High Speed Rail (Preparation) Bill Committee* are available online at: http://www.publications.parliament.uk/pa/cm201314/cmpublic/highspeedrail/130711/am/130711s01.htm. The line numbered version is online at: https://goo.gl/4NvtKY

Sources of other materials referred to in the text will be found in the relevant footnotes.

Additional online material

Data files

The first two of the data files linked below support the methodology chapters of the thesis and provide full lists of the newspaper and Hansard records that have been reviewed in the course of this study. The third file shows the categorised lists of actors drawn from three HS2 debates. The actors from the first of these debates formed the starting point for the work undertaken in Chapters 7 and 8. All files are Microsoft Excel documents.

- LBR Newspaper sources: https://goo.gl/4WSbT7
- HSR Hansard sources: https://goo.gl/P6VWSr
- Implicated actors: https://goo.gl/kwG9pW

Visual materials

A number of additional visual materials have been created and used in the production of this thesis. This material does not form a part of the thesis but provides the reader with additional context and detail to that presented in Chapters 4 and 8 of this thesis. Both are links to Prezi presentations.

- Visualising the LBR newspaper discourse: http://goo.gl/fGO4ZY
- Implicated actor assemblages: http://goo.gl/TPBUjb

Outputs from this research

Debate as design, presented at the Open Space Praxis seminar series, Open University, November 2013

Political debate as design process: a frame analysis, Proceedings of the Design Research Society Conference, Umeå, June 2014

Stephenson's Thin Red Line, presented at PhD by Design conference, Goldsmiths College, London, November 2014

A visual analysis of documentary data in 2.5D, presented at the International Visual Methods Conference, Brighton, September 2015

Design as analysis: examining the use of precedents in parliamentary debate, Proceedings of the Design Research Society Conference, Brighton, June 2016

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Contents

List of figures

List of tables

1 Introduction: a journey from design to debate

Rail passengers travelling between London Euston and Birmingham follow a route surveyed by an engineer in the 1830s. At that time the proposed line, the London and Birmingham Railway (LBR) provoked debate in Parliament, in the press and in the public houses along its 112 miles. Passengers making the same journey in 2026 might follow a different route, one proposed by a twenty first century Government whose proposals for their High Speed Two (HS2) railway line was accompanied by similar debates in similar places. These kinds of debates are controversial: supporters and opponents hold intractable, irreconcilable and mutually exclusive views on how and whether the project should proceed. In Parliament these debates, as noted by Rogers and Walters in their guide to how Parliament works, are where “often profound disagreements on politics and principles are argued out and decided” (Rogers and Walters, 2006:187). This thesis explores how insights from studies of design can be used to interpret such debates. It starts with the premise: “What do we see if we look at a parliamentary debate as a design meeting and at politicians as designers?”

This thesis explores how insights from studies of design can be used to interpret such debates. It starts with the premise: “What do we see if we look at a parliamentary debate as a design meeting and at politicians as designers?”

The connection between debate and design is not perhaps an obvious one to make and some background information about how the two came together and how this research project came about will provide a more general context in which this thesis can be placed.

Growing up in North Buckinghamshire in the mid 1960s with the new city of Milton Keynes developing around me, the experience of radical and rapid changes to the landscape and the culture of my immediate surroundings was at the time taken for granted. I have since recognised that this design and build of a new city on my doorstep was not how everybody grew up and was certainly not how I might have otherwise grown up in the neighbourhood of the post-Beeching Victorian railway town of Wolverton, now a part of the wider Milton Keynes district.

The new city provided exposure to architecture, infrastructure and social structures that would have, for me, been impossible to imagine in the predominantly rural area in which it was to be built. The new city also provided a more liberal education than would have been possible in the existing

county school system, which led me to a fine art training and practice exploring how different perspectives provoke unexpected insights[1].

This exposure, education and employment was a lived experience of design, in the broad sense of the designed city, and the impact that design has on people's lives. In terms of personal development this impact would result in a number of creative and commercial roles, the most recent of these as a website designer and then internet manager in a large publishing house. In a managerial role in a corporate environment I would become increasingly involved in strategic development work and recognised that the tools available to colleagues to support their decision making might benefit from creative and potentially unconventional approaches. This recognition led to an awareness of the business application of design thinking and consequently of the wider application of design beyond the graphic design of the newspaper page or the structure of its website.

The design of Milton Keynes and the impact it would have on existing and incoming populations was managed by the new town's Development Corporation but this was part of a wider national strategy of inner-city slum clearance, house building and economic development. By tracing a line from the personal experience of a design back to the fundamental decisions that would lead to its implementation one is led to Westminster, the seat of the UK government where these fundamental design decisions are taken.

The study of design has accumulated a significant body of knowledge about how design is done and how designers do it. Design research has become increasingly engaged with how policy is designed and how wider populations are engaged in the process. There have, however, been no formal empirical studies of parliamentary debate as a design activity, or work that builds on the experience and knowledge of design research in order to make that study. Such work would provide a direct link between the studio studies of design research and the Parliamentary process through which the country itself is designed.

Having come to this view, that the connection between design research and parliamentary process was potentially valuable and largely unexplored, it was necessary to select an aspect of the parliamentary process for the study. The selection of a debate about a proposed railway line arose from a number of circumstances. At the time of planning the thesis the debate about the proposed HS2 railway line was moving towards its first full parliament debate. This was presented as a controversial subject which coincidentally had direct relevance to design: a Parliamentary debate about a major piece of infrastructure provides direct links with the subjects of more conventional

[1] One particular early influence at art school was the performance work of Jeff Nuttall who described his practice as "punching holes in reality". His street performances in the early 1970s were seen as a counter cultural social critique with which to question the status quo of his happenstance audience. This was achieved through the presentation of incongruous or surreal scenarios that would not normally be encountered on the streets of provincial England. Nuttall was also an early contributor to design research with, for example, his paper on Technology presented at the Design Participation DRS conference in 1971 (Nuttall, 1972).

design meetings where objects, buildings and services are discussed. The shift from design to debate is thereby easier to make by selecting a debate about a railway line.

From a personal perspective my family history is tied up with the railways, a main source of employment in the area since the 1830s when the London and Birmingham Railway Company built its locomotive works in Wolverton. The proposed route for the HS2 project links the same two cities as this earlier line and has to navigate between similar physical and social landscapes. This offered the potential for further comparison to be made across different historical debates and between the different ways in which those debates are recorded and might be approached for analysis.

The connection between debate and design was initially therefore the product of a number of personal circumstances and the result of a collection of experiences and perspectives which could be readily mapped onto current trends in design research. The selection of a parliamentary debate about railways appeared to be timely, interesting and convenient but not essential.

Design scholars have developed an array of methods of describing and interpreting design meetings,
of identifying design activities and design expertise, and of mapping the design process.

Design scholars have developed an array of methods of describing and interpreting design meetings, of identifying design activities and design expertise, and of mapping the design process. Insights from these studies are increasingly being employed beyond the design studio and the design school as a way of engaging with wider social and political environments. Recent work, for example by Dorst (2016), Kimbell (2015) and Design Council (2013), has utilised design perspectives as a way of developing interventions in the policy making process but this does not appear to have extended to the use of design as a way of analysing parliamentary debate. By adopting perspectives from fieldwork in design studies and using them as a way of approaching and interpreting the parliamentary process, this thesis explores the scope of design and design studies in relation to wider social contexts. It demonstrates how insights gained from this application of design can be developed into an interpretative method and argues that doing so can enhance our understanding of Parliament and the issues debated there. Critically, from the perspective of design studies, this thesis also considers how those insights can then inform the study of design.

The literature of design studies offers a broad perspective on what design activity looks like and how it is done. This thesis refines that perspective in three ways. Firstly, by reviewing the scope of design studies it traces an engagement with wider social contexts. As a part of this engagement the current study is located within a trajectory of the design studies discipline. Secondly, by reviewing the findings of specific studies of design it identifies traits of designers and characteristics of the design process that have been recognised as making a specific contribution to our understanding of design. Some of these traits provide an operational basis for this empirical study. Thirdly, by following developments in the design literature this thesis recognises and

explores connections between design studies and Actor Network Theory (ANT). These developments inform the conceptual and methodological development of the thesis. These three elements of this thesis are drawn together through a series of empirical studies of parliamentary activity that look for "designerly" traits in what takes place in and around a parliamentary debate.

The debates studied are from a controversial infrastructure project - a proposed high speed railway line between London and Birmingham. This debate has taken place twice: once in the early nineteenth century for the London and Birmingham Railway (LBR) and again in the early twenty-first century for the High Speed Two railway (HS2). Such projects are controversial in a number of ways:

- the claims made by their supporters are contested;
- it is not possible to test these claims without implementing the whole project;
- the cost of implementing the project requires a significant budget (HS2 is costed at £52bn at the time of writing) that could be spent elsewhere;
- the budget is predicted by opponents to increase as time passes and by supporters to include a larger than necessary contingency;
- they represent an embodiment of the national good over the rights of the individual.

These two debates provide an opportunity to make historical comparisons between each parliamentary process, the infrastructure projects they are debating and the way that each project is represented in, and beyond, the debate in question. Because they are accessible through public archives, they also present an opportunity to explore how such archival sources can be utilised as datasets for studies such as this.

1.1 Design

The study of design has observed and identified various activities that designers do and the contexts in which they do them. This thesis explores whether "designerly" activities can be observed and identified in the context of parliamentary debate. One aspect of this exploration looks to design as a way of studying debate. In response to the question "What is Design Studies Good For?" (Tonkinwise, 2013) another question is posed: "Is Design Studies good for studying other things?" and, if so, how might this be done. Insights gained from this design view of debate are drawn upon to review how design is studied and how these studies inform design practice.

The practice of design, partly informed by the results of design studies, has a wide sphere of influence. A notable example of this influence is seen in the notion of design thinking which has disseminated from design studies, where the ideas explored for example in Bryan Lawson's examination of the design process, *How Designers Think*, (Lawson, 1980) can be traced through numerous subsequent publications and disciplines including planning (e.g. Çalışkan, 2016), education (e.g. Koh et. al., 2016), business (e.g. Brown, 2009) and design itself (e.g. Rowe, 1987; Cross, 2011).

Other sub-disciplines of design, such as speculative and discursive design, reach beyond traditional design practice in order to engage with social and political contexts. In more official engagements with the parliamentary process, design has been co-opted into Government agencies as a potential source of adding value to the policy-making process and the delivery of services. In contrast with the positioning of design in the service of Government, this thesis considers that design might also be employed as a critical analytical tool. The notions of design adopted in this thesis are employed in an interpretative, critical approach to where and how Government policies are publicly debated. This includes both detailed interactions between the participants who take part in the process and a wider view of the context in which it takes place.

This thesis looks to previous studies of design for reference points that can be seen as characteristic of the design process, the participants who are engaged in the process and the activities in which they are engaged. These reference points are traced from early work on design methods in the 1960s, through the work of Donald Schön and to more recent engagements with design as a situated practice

The 1962 conference on design methods (Jones & Thornley, 1962) brought together academics and professionals from a number of disciplines to identify a notion of design practice that could be defined and studied in ways that would provide a better understanding of the process and how it might be improved. The formal methods adopted at that time have subsequently been challenged, but some of the key principles that were established, of design as an interdisciplinary practice that deals with the development and application of different and unexpected perspectives on a problem and its solution, have persisted.

Schön's work on reflective practice and framing represents a landmark in the field that still informs accounts of design practice and design thinking[2]. Framing in particular, and the values that are constructed in and by these frames, is recognised as an important aspect of designing. Schön's formulations and their legacy, which can be traced through the work of, for example, Nigel Cross, Bryan Lawson and Kees Dorst, provide a series of starting points that are explored in more detail in the literature reviewed in Chapter 2. This review is then extended to consider how different design methods have been observed in studies of design activity and how different research methods have been employed in design research in order to do this.

In addition to the interactions that take place between designers and other participants engaging in design activities Schön, among others (e.g. Louis Bucciarelli, Kathryn Henderson, Inger Mewburn, and scholars engaged in the Design Thinking Research Symposia), also recognises to varying degrees the role of the context in which the design process occurs. Objects participate in what Schön refers to as the designer's conversations with their materials which he extends into a broader view of a conversation with the situation. This view of the role of the object, and the situation in which the designer and various objects are engaged, aligns with work undertaken in

[2] As shown for example in the bibliometric analysis of *Design Studies* by Chai & Xiao (2012).

Science and Technology Studies (STS) and in particular with aspects of ANT. This thesis does not engage directly with Bruno Latour's sociological critiques but does employ some of the perspectives that have developed from them.

These perspectives from ANT offer a way of considering the role of objects in the design process and the wider situation in which the process takes place. This leads to a notion of "networks of design" as proposed by, for example, Albena Yaneva, Lucy Kimbell and Alex Wilkie whose recent accounts of design have also engaged with, questioned and revised, some of Schön's findings. This thesis continues that engagement by using some aspects of design found in these literatures as a mechanism for approaching and interpreting parliamentary debate.

1.2 Debate

The UK Parliament incorporates a wide range of activity in which debates, as noted by Rogers and Walters above, occupy a central role: Parliamentary debates are a forum for the discussion of the principles behind proposed legislative changes. These debates also include the assessment of evidence from expert witnesses and a detailed scrutiny of the clauses which make up the proposals. In a general sense, parliamentary debates can be considered as meetings where particular problems, often of national importance, are presented and where solutions to those problems are proposed and discussed with a view to reaching some kind of negotiated conclusion.

The parliamentary process has not significantly changed in the almost two hundred years that separate the two projects that will be referred to in this study although the democratic principles that underpin the 21st Century debate on HS2 have been the subject of a number of reforms since the original LBR line was debated in 1832[3].

When the planning for this thesis began, the proposed route for HS2 had been published in a consultation document. By 2012 the Government had confirmed its intention to proceed with the project. The ongoing debate around this controversial decision-making process has continued during the development of this thesis. Some 180 years earlier, the LBR also faced controversy; it was rejected by a House of Lords Committee in 1832 but was then enacted in the following session of 1833.

Both LBR and HS2 are examples of controversial projects, where supporters and opponents hold contradictory and intractable positions as to whether or not the project should proceed. As part of the democratic process which is set up to resolve these controversies in the UK, such projects must pass through a series of formal parliamentary stages of approval before they can be built. The debates that take place in these stages are where these intractable positions are explored as participants decide a project's future. These debates are about the construction of large

[3] The first of these, The Representation of the People Act (1832) which began to extend suffrage to a wider population was passing through Parliament at the same time as the London and Birmingham Railway Bill.

infrastructure projects and consider which parts of the country are to be connected together by the railway line and how these connections are to be made. In a very literal sense the debate is about how the country is designed and this wide scope reflects wider concerns relating to how the country is governed and how its democracy is designed.

This thesis focuses primarily on debates that take place within the Houses of Parliament, in the main debating chamber and the Committee rooms. These debates, as a matter of public record, are made available through the archives which are constructed as a part of the parliamentary process. This archive, in the various forms in which it is available, provide the primary sources used in this thesis. How these debates have been selected and how they have then been approached from the design perspective adopted is described in Chapter 3.

Issues raised in debates are also disseminated and represented through other channels such as Government publicity materials, public meetings and media reports where they are discussed by their prospective publics. This wider parliamentary discourse is drawn upon at various points in the thesis. However, this thesis is not a discourse analysis of Parliament but is rather a “design analysis” of parliamentary debate and the discourse to which these debates contribute. This notion of a design analysis is developed through the course of the thesis and compared with other forms of analysis where appropriate.

1.3 Summary

This thesis follows, through the literature of design, studies of individual designers which then extend from the designer in the studio to their interactions with colleagues, clients, users and researchers. This view of the design process also includes a recognition of the objects which are used to support the design process, the objects that are created by it and the spaces in which the process takes place. The context in which these individuals and objects interact presents a wider view of where and how the designed object will eventually be deployed.

As the thesis develops, this wider view of the design process is compared with the parliamentary process. In these debates participants interact with each other across the debating chamber but always within the constructs of the parliamentary process and in the context of where and how the proposed project, the design, will eventually exist. The distinction between designer and designed reflects two perspectives found in the study of design. On the one hand is a cognitive approach that is concerned with how designers think. On the other is a more situated concern with the contexts in which design activity takes place. These perspectives are succinctly summarised by Tim Marshall who compares “the sole heroic designer, fashioning outcomes according to a particular vision of the order of living” (Marshall 2014:245), with a more situated view of design that takes place within complex social, political and environmental contexts.

This thesis identifies a space where design, Parliament and infrastructure intersect and then explores the relationship between them. The aim is to consider how individual actions and

interactions within a debate can be interpreted as design activities and how these activities can be contextualised within the wider parliamentary context. In the context of design as a social and political engagement this leads to further considerations of how underlying values and principles are represented through the activities observed, and how these values persist through, and beyond, that wider context. In the context of design studies these considerations then inform a view of the design process in terms of how it is observed, studied and interpreted.

To summarise the points made above and the questions raised earlier, this exploratory study:

- Identifies aspects of design, as observed in the literature of design studies, which can be used as a way of analysing activities not conventionally considered to be designing.
- Analyses activities observed in parliamentary debate from the perspective of the design activities identified.
- Adopts two scales to approach debate: of the interactions between the individuals involved in the activities and of the context in which the activities take place.
- Considers what insights into these parliamentary activities can be drawn from this design analysis.
- Examines what insights this approach might bring to the study of design.

To distil these points into a single statement, and building on the original premise on page 10, this thesis asks:

If we examine parliamentary debate as a design process, what do we learn about the debate and about the design process?

In answering this question, through a series of iterative and exploratory stages, the thesis constructs a framework, using a number of concepts derived directly from design research, with which to analyse parliamentary debates. This framework acts as a “designerly” complex lens made up of a number of characteristic design activities.

Although this thesis will not attempt to specifically demonstrate that parliamentary debate is a design process there are, as a corollary of the investigation, a number of points of comparison that can be drawn between debate and design. These points of comparison are summarised as part of the conclusion to the thesis in Chapter 9.

The thesis makes a series of contributions. The most important are the implications that the results of the study have on design research. This helps to answer Tonkinwise’s questioning of “what design studies is good for”, cited above, as a means of approaching and analysing parliamentary debate. In showing that design studies can be used for this, the thesis also demonstrates, by treating the parliamentary process as a design process, that the form and structure of debate studied can inform our understanding of the design process and how that is studied.

A further contribution relates to the nature of the data and how this is used. Data are available through the parliamentary archive provide a depth and breadth of research material that is not normally available in design studies. When considered as the record of a design process, the parliamentary archive provides a data source for a range of design research experiments. These experiments are often limited by the need to set up artificial design tasks to be studied, to rely on expert interviews, to record and transcribe protocol analyses or to introduce researcher and their recording equipment as an intervention into live design scenarios. The parliamentary archive, as a part of its democratic function, automatically generates a source of naturally-occurring data which provides a shortcut through some of these methodological issues.

As subsidiary contributions, the thesis also provides a new account of the parliamentary process which has not previously been studied from this design perspective. A design analysis of Parliament emerges as a potential sibling to other established methods such as argument theory or critical discourse analysis. This also extends to the specific infrastructure projects that are the subject of the debates studied. The design analysis generates specific insights into the nature of those projects and how they are presented and represented in the debate.

Finally, the theoretical development that is explored through the empirical use of ANT and design in this parliamentary context draws a connection between the “reflective turn” in design studies attributed to Donald Schön and what might be termed an “agential” turn that has been recognised more recently, for example by Binder et al. (2015), Tonkinwise (2013), Yaneva (2009b) and Latour (2008), as an influence on design from ANT.

1.4 Overview of thesis

In general terms, this thesis takes an exploratory approach to the questions it asks and the way that they are answered. This exploration takes three forms. Firstly, through an exploration of the design literature, it seeks to circumscribe an aspect of a broad discipline that can be deployed as a means of approaching parliament. Secondly, it uses this aspect of design to explore the data generated by the parliamentary process. Thirdly, it explores how aspects of the parliamentary process, when seen from this design perspective, might inform the way that design is studied.

This first chapter introduces the overall premise and scope of the thesis. The relationship between design and parliamentary debate is explored more fully in Chapter 2 which traces, through a series of shifts in perspective, the work of the early design methods through to more recent work on design thinking and its application to policy development. That trajectory of design research moves towards broader social and political engagement but falls short of direct engagement with the formal processes of parliamentary debate. This thesis is thereby positioned at a point where the empirical findings of design studies can be employed to explore and interpret those debates and in doing so extend the scope of design research. The rest of Chapter 2 identifies perspectives from previous studies of design that might inform that exploration and interpretation.

Chapters 3 and 4 outline the methodological decisions that have been made through the planning and implementation of this study and examine the approach taken both to design studies as a means of analysis and to parliamentary debate as a data source. Chapter 3 considers how the parliamentary process can be seen a design process and reviews different ways in which design activities have been studied. Chapter 4 describes the context of the debates that will be referred to, the available data sources relating to them and how these sources were approached and selected. The chapter concludes by reviewing the specific methods that will be used in the thesis to analyse the data drawn from the sources described.

Chapter 5 takes the notion of framing as an aspect of designing from which a series of studies progressively explore how this notion can be observed and interpreted in data drawn from debates. This is first seen in a descriptive model of design developed by Rianne Valkenburg and Kees Dorst which is employed as a method of approaching an historical LBR debate. This initial study found the model to be prescriptive and a more direct focus on framing is adopted in a subsequent frame analysis of the same debate. The results of these studies provide a focus for the next, which recognises the impact individual participant's attempts at framing and reframing has on the debate. This chapter concludes with proposed categories of different kinds of framing activities which are shown to have different impacts on the debate as it proceeds.

Framing, while recognised as an important aspect of the design process in the literature, is not exclusively a design process. Chapter 6 focuses on a specific form of framing that shows participants drawing upon precedents as a way of engaging with the debate and moving it forward. Precedents are considered to be a more specifically design-related framing mechanism. A template based on Dorst's model of frame creation is used to present and explore the prior examples on which participants draw and the context in which they are used.

The detailed empirical work of the previous two chapters informs a more speculative approach to the data in Chapter 7. This develops a broader perspective of the design concepts previously identified to look at how these operate across the wider parliamentary discourse. Recognising that frames and precedents are contingent upon the individuals who construct them, this chapter makes specific reference to the constitution of the design team and proposes a wider notion of team based on the scope of contributions and contributors engaged in the debate. Chapter 8 follows this team as it passes through the parliamentary process from one stage to the next. The nature and function of these different stages of the parliamentary process are compared with aspects of the design process.

Chapter Nine reviews the work of the previous chapters, concluding that a design approach to debate yields insights into the nature of the debate, the participants who are engaged in it and that the archival sources available in the parliamentary record provide a rich source of primary data for this and similar studies. This final chapter goes on to assesses the contribution that the thesis makes, recognising the limitations of what has been done and looking forward to what further work might follow.

2 Design concepts: shifts, frames, precedents and perspectives

This chapter provides a conceptual framework for the thesis in two ways. The first section reviews the history of design studies and identifies the notion of design as a shift in perspective. This is considered to be a key concept in design that will be drawn upon in subsequent chapters. A number of examples of these shifts are used to trace the practice of design from its conventional studio to a parliamentary setting. This locates the work of the thesis within a broader context of design studies and specifically on a recognised trajectory towards social and political engagements. The rest of the chapter then isolates a number of detailed design activities, found in studies of design, which provide specific examples of what designers do and how design is done. The way that these specific aspects of design have been addressed in the design literature will be used to approach similar activities observed in the parliamentary debates in the empirical chapters that follow. The final section focuses on the designer and the design team since it is from this team, in whatever form it takes, that the shifts in perspectives arise.

2.1 Design as a shift in perspective

A simple history of design can be told in terms of the transition from the traditional to the modern where the craft of the designer is perceived as an inefficient and inappropriate response to the increasingly and complex requirements of the industrial and post-WWII period. This story of modernisation places on the one hand the bespoke skills and methods which might have evolved over centuries to support, for example, the development and production of cartwheels. On the other is the inability of this mode of designing to respond to the challenges presented by the complexities and pace of change that characterised the industrialisation, mechanisation and automation of the twentieth century. The example of the cartwheel is found in several design texts where a description by George Sturt of the wheelwright's shop he inherited in the early part of the 20th century (Sturt, 1923) is used to explore how traditional incremental design takes place and how this process is not readily applicable to modern transport systems (Jones, 1970; Cross, 1975; Fowles [nd]; Lawson, 2005). This is a straightforward and, as seen in the chain of citations, useful dichotomy which traces the movement of design from the traditional and vernacular to the modern and professional. That dichotomy sets the scene for this chapter as it traces subsequent developments where the scope of design has, since the design methods movement, become engaged with broader social and political contexts.

2.1.1 Design research and design methods

A "worldwide dissatisfaction with traditional [design] procedures" arose during the course of the twentieth century according to John Chris Jones in Design Methods - seeds of human futures (Jones, 1970:xi). Jones' recipe book of "new design methods" (ibid:xvii), developed in response to

this dissatisfaction, represented a general trend described by Nigel Cross as the “scientisation” of design (Cross, 2001). Jones’ book represents a culmination of the first decade of design research that began with the 1962 conference on Design Methods held at Imperial College (Jones & Thornley, 1963). This early focus on method led to the call for designers to become more rigorous in their practice and adopt more scientific and mathematical attitudes, requiring “proofs” rather than “beliefs” (Jones, 1970).

Taking a more pragmatic approach than Sydney Gregory’s (1965) earlier volume on the Design Method Jones (1970:xii) explicitly acknowledges and describes how contributions from “such disciplines as computer programming, psychotherapy, behavioural science, electrical circuit theory and communications theory” might be used by designers. Design research, and the practices that it set out to support, was recognising itself as a multi-disciplinary field, drawing upon the perspectives of various professional and academic areas in order to address the multi-faceted and fast changing problems arising in the post-war world.

The adoption of these various attitudes and their attendant methods, for example using “morphological charts” (Jones, 1970:292) to search for ideas, or an “interaction net” (ibid:304) that helps to explore the structure of the problem, impose a distance between the designer and the task in hand. In doing so they oblige the designer to become more aware of the process they are engaged in and less immersed in what might be an otherwise conventional and traditional approach to the task. Regardless of the provenance or rationality of the method deployed, the introduction of this distance between the designer and what is being designed represents a fundamental, although not necessarily permanent, shift in the stance of the designer. For Jones this process would help the designer to “observe their own thinking in an objective way” (Jones, 1970:xii) and to facilitate a “perceptual span” beyond their own potentially limited or limiting experience (ibid, 42).

Although Jones subsequently disowned the rational method in favour of more arbitrary ways of generating solutions to problems (Jones, 1984:22), the methods he collated and described anticipate some of the current concerns in the application and relevance of design methods. Specific methods have been considered to be over-simplistic (Daley, 1968:73) and impractical (Dorst, 1997:11) but the over-riding mechanism they represent, of shifting the stance of the designer, remains an integral part of what Tim Brown calls the “designer’s toolkit” (Brown, 2009:132) which encourage and support the designer to “look at the world in different ways” (Brown, 2015). The persistence of these concerns is presciently traced by C Thomas Mitchell (1994) who recognises that the early design methods movement was a necessary precursor to more recent acknowledgements of user-centred and contextual design processes.

Methods continue to be developed and used by designers as tools for changing their awareness of, or shifting their perspective on, their role as designer, the relationship between the people who they are designing with, what they are designing and who they are designing it for.

The notion of design as a shift in perspective underpins the theoretical and practical framework of the research in this thesis. It represents a recurrent theme in design literature and is a useful way of focusing on what is otherwise a broad and disparate field. Some of the ways that this shift is performed, and the domains in which it is employed, are reviewed in this section. These examples follow design shifts taking place across a number of scenarios that extend the application of design from an industrial design studio to a parliamentary constituency office.

2.1.2 Examples of design presented as a shift in perspective

Each of these examples take as a starting point a particular situation that is seen as potentially problematic or contested. Through the application of various methods each example shifts the perspective from its problematised source towards a target stance that is intended to provoke new insight into the original situation and support the designers' engagement towards its solution.

Product designer as designer

The *iD cards* project from Loughborough Design School (Pei et al., 2010) is intended to improve the effectiveness of New Product Development teams by providing representations of specialist knowledge that can be communicated more easily between colleagues with contrasting backgrounds. The project provides a platform for developing a shared perspective on the design process in hand. This is delivered through simple visual and text descriptions of design representations used by industrial designers, for example to explain and clarify what a study sketch looks like and where it might be employed in the process, shown in Figure 2.1 below. In using the iD cards, designers are encouraged to see the design from the perspective of another designer.

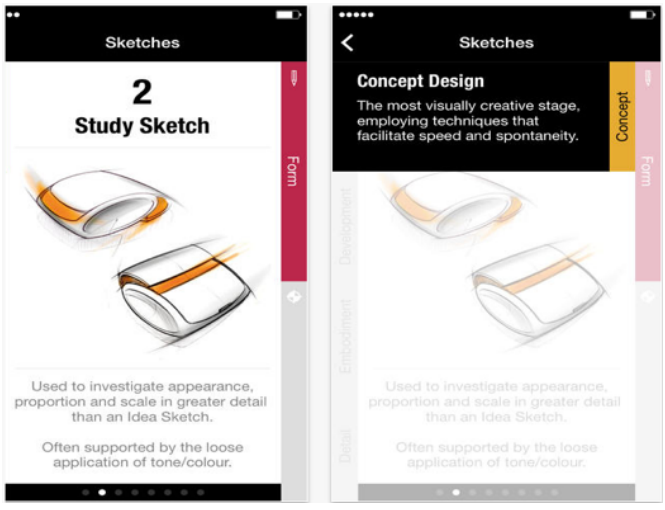

Figure 2.1: The Loughborough iD card project showing what a study sketch might look like and where it might be used (Pei et al. 2010).

Software designer as user

Dan Lockton's *Design with Intent* project (Lockton, 2015) provides a toolkit, through a collection of eight "lenses", that can be used by designers of signage, artefacts and interactions, to facilitate environmental and social behaviour change through design. Each lens encourages a "different

disciplinary worldview". In the example below (Figure 2.2) the card supports the designer to see the design from the perspective of a user.

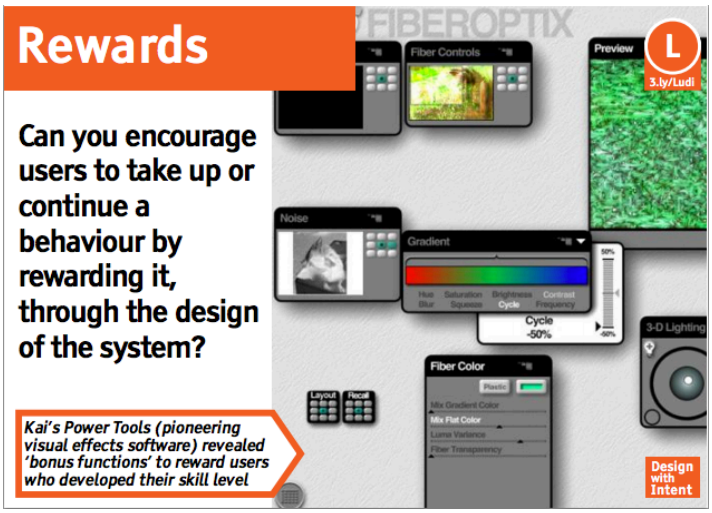

Figure 2.2: The Design with Intent Rewards card from the "Ludic" series showing how devices borrowed from game design can be used to engage with software users (Lockton, 2015).

The use of cards to facilitate shifts in perspectives

The use of cards, as seen in the two examples above, to deliver this kind of prompt for the designer to reimagine the product they are designing or the process of designing it, comes from a recognisable tradition in design practice. A set of cards were produced by the Open University in the early 1970s and were subsequently distributed in the conference pack for the joint Design Methods Group/Design Research Society *Design Activity International Conference* in 1973 (DMG/DRS, 1973). A similar tool was developed by Brian Eno and Peter Schmidt in their *Oblique Strategies* card deck (Eno & Schmidt, 1975). These are a collection of aphorisms that divert attention from the problem in hand towards other ways of seeing a situation. More recently the Open University produced an updated set of cards as part of the *U101 Design Thinking* course (Open University, 2016) and more commercially another version of the same format produced by IDEO offer "diverse ways that design teams can understand the people they are designing for" (IDEO, 2003). The card, as a format, requires the information it delivers to be concise and easily understood which lends itself to the simplified "this as that" messages described above. At the same time the format of the pack of cards encourages an explorative and arbitrary approach to the generation of solutions to the problem in hand. The sense of play that the use of cards invokes is itself a shift from the formal approach of earlier methods.

Policymaker as designer

To return to other shifts in perspective that can be found in design, it was noted above that the scope of design has expanded into wider social circles as the discipline has evolved and adapted to the dynamic environments in which designers operate. The *Social Design Methods Menu* (Kimbell and Julier, 2012) supports managers, entrepreneurs and service providers as they deal with the "complex issues" they face in their organisations. The menu consists of a collection of "designerly" methods that encourage the exploration of the impact of policies on their users.

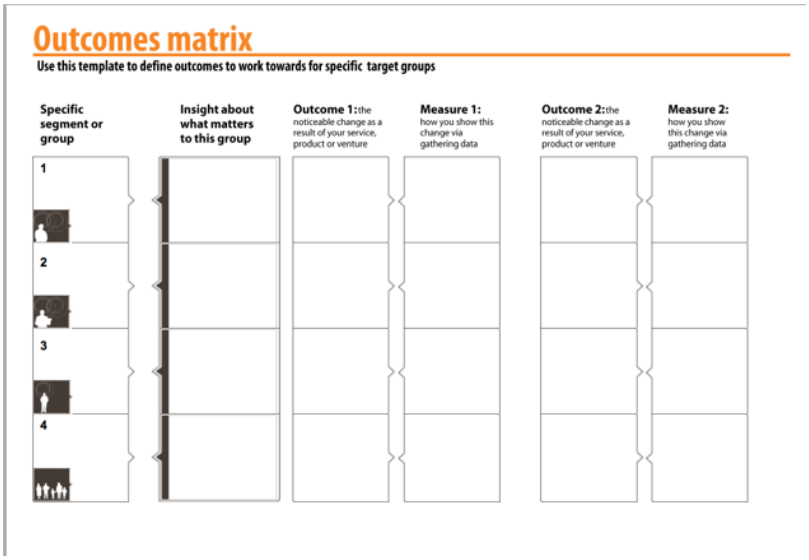

Figure 2.3: The *Social Methods Design Menu* "Outcomes matrix" maps target users alongside intended outcomes (Kimbell and Julier, 2012).

An example of one of these methods, shown in Figure 2.3 above, is an "Outcomes matrix" (ibid:42), which uses a method also employed by Jones (1971) to provide a template that suggests mapping a policy's target users alongside the policymakers' intended outcomes. When using this tool, the policymaker adopts a user-centred view of what they are creating, much like Lockton's software designers above. The policymaker is seen as a designer.

Designer as policymaker

While Kimbell and Julier bring designerly methods into the realm of policy making Kees Dorst brings the designers themselves into that arena. In *Frame Innovation* (Dorst, 2015) Dorst describes a nine-step model that applies design principles to what he calls "open complex dynamic and networked" problems. The method proposes the creation of a new frame that presents the problem from a new perspective where potentially innovative solutions may be seen. One of the cases used by Dorst describes a *Designing out Crime* project (ibid:30) which engages designers with policy problems by reframing city binge drinking as a music festival. This shifts the focus from crime prevention and the need for heavy handed security measures to a more benign application of crowd management techniques with improved signage and transport links. The drinkers, who have been seen as criminals, are thereby seen as festival goers. The city is seen as an event. The designers see themselves as policymakers.

Figure 2.4: Designing out crime visualisation of Kings Cross Sydney as a "music festival" (Dorst, 2015).

Politicians as people

Moving the scope of design further into the realm of policymaking, the Design Council's RED Unit project *Democracy* (Design Council, 2006) suggests ten ways for politicians to develop more meaningful contacts with their constituents who are, it is claimed, increasingly disengaging from the political process. The report advocates the development of a perspective that is less focussed on central Government and party politics and more connected to local and personal perspectives of the voter at large. Proposals include for example, encouraging Members of Parliament to engage with constituents "on their own turf" (ibid:17). The politician, through the intervention of the designer, sees voters as people.

Figure 2.5: The RED Unit Democracy project focuses politicians on local engagement with their constituents. (Design Council, 2006)

Design as a shift in perspective

In all of these projects, a source perspective is in some way formulated as the problem which may be: designers unable to communicate with each other or their users; policymakers faced with anti-social behaviour; or the politicians seen as out of touch with their constituents. Each project is

steered towards a preferred target perspective: another designer; the end user; a policymaker; the people. A design approach is developed as an intervention in a problematic situation intended to assist either with the development of a solution or to provide a new perspective on the problem. This design approach is employed as a tool for shifting a perspective and consequently of moving a problem along towards resolution. This notion of design as a shift in perspective is a characteristic of the design process that can be found in various design domains including product development, software and policy design.

Although these shifts operate in various domains they can be limited to the prescribed scope in which they operate. Consider one of the projects described above: the designing out crime initiative to reduce the anti-social behaviour of binge drinkers in late night Sydney. Dorst describes his designers “quickly reframing the issues that were presented to them by the local council as law-and-order problems and looking instead into how this area could be decriminalised” (Dorst, 2015:31-32). These designers-as-policymakers propose to reframe the city’s bars and nightclubs into a weekly music festival. Drawing on the experience of festivals that successfully manage thousands of revellers over the course of a weekend the solution proposes clearer way-marking, chill-out zones, better transport links in and out of the site and the replacement of black clad private security guards with “bright and cheery Info people” (Dorst, 2015:34). This type of reframing is presented as a designerly way of engaging with policy through the deployment of a shift in perspective that can be thought of as a creative and elegant solution to a messy problem. However, the designers are still working within a constrained view of the problem. The perceptual span, to build upon Jones’ term, is limited to the normative frame of how to better manage the consumption of alcohol. A wider span, a more critical stance, might move beyond the frame of managing drunken behaviour to question the broader circumstances of drinking as an activity that is encouraged or tolerated. When considered in terms of these constraints it seems that rather than presenting a designerly reframing of a messy problem, the music festival is more focussed on a designerly reframing of an existing solution. The scope of the reframing, whether constrained or expanded by either the client or the designer, plays a key part in the nature of the solution that is proposed and the loci of the problems addressed.

Critical design

Other projects take a more critical approach. While still demonstrating the fundamental shift in perspective shared by all of the work described above, the projects of designers like Anthony Dunne and Fiona Raby (Dunne and Raby, 2013) use these shifts to actively question the circumstances in which designers operate. This is attempted by designing objects, both real and imagined, that are intended as catalysts for a critique of the broader context in which the problem, and their often subversive solution to it, is presented. Their work exemplifies the development of this “critical design” and is intended to provoke questions about prevailing conditions rather than providing answers to them. For Dunne & Raby, the perceptual span of the designer reaches into a projected future where end-users will need solutions to problems that are yet to be formally recognised.

Their designs are intended to be “strange but believable speculative products” (Dunne & Raby, 2016). This is expanded further in their comparison with similarly framed fine art practices.

> Critical design needs to be closer to the everyday; that’s where its power to disturb lies. A critical design should be demanding, challenging, and if it is going to raise awareness, do so for issues that are not already well known. Sage ideas will not linger in people’s minds or challenge prevailing views but if it is too weird, it will be dismissed as art.
> (Dunne & Raby, 2013:43)

Dunne and Raby propose that design can be used to raise awareness through its engagement with, and subversion of, the everyday. This is also a nuanced position that recognises the danger of overstatement – if the proposed shift in perspective is too ambitious, “too weird”, and the space created between designer and viewer is too great then the design is in danger of being written off as “art”. Their comparison with art speaks to an ongoing debate about the difference between speculative design and fine art that is not relevant to the point here, which is that design is proposed as a mechanism for achieving that shift and that the scale of the shift is a relevant factor.

An example of how this work positions the designer in a specific and critical engagement with their society is found in one of their projects, Spymaker, *EM Sniffer Dog* shown in Figure 2.6 below.

Figure 2.6: Dunne & Raby’s *Spymaker EM Sniffer Dog* (2006/07) which proposes the shift of a sniffer dog’s sense of smell into a sensitivity to electromagnetic fields. This is intended to question the prevalence of CCTV and a possible future need for citizens to be able to identify safe areas that are not subject to electronic surveillance.
Image: http://www.dunneandraby.co.uk/content/projects/73/0

This project proposes a muzzle worn by sniffer dogs whose nose has been replaced with an electromagnetic sensor for seeking locations where electronic monitoring devices are not active. This provokes a critique of a number of accepted values in society: the dominion of science over nature; of man over dog; and, through the recognition and subversion of the prevalence of CCTV and surveillance techniques, the power relations between people. The viewers’ belief in the product, and therefore their engagement with the more important underlying ideas that the

designers are promoting, is based on the availability of an explanation of what is presented in the image. These ideas need to be assimilated and then recognised as representing a set of values that should be accepted or questioned. The designers assume that the values they are questioning are already accessible and understood by the viewer. This process thus requires that the perceptual span of designer is compatible with the viewer's but also that it does not reach beyond it. If the work is to succeed it is essential that the sniffer dog is seen as a question rather than an answer and as the indication of a problem rather than the offering of a solution.

DiSalvo (2012:7) distinguishes between projects that provoke questions rather than provide answers by using the terms "design for politics" and "political design". As an example of the former, he cites the AIGA Design for Democracy project which, like the RED example above, applies a designer's perspective to a political situation in order to provide "support and improve the mechanisms and procedures of governance" (ibid:9). In contrast to this kind of intervention, he goes on to describe projects that step outside of these processes and question them. He gives as an example a mapping project, *Million Dollar Blocks*, a crime map that focuses on the distribution and character of the home residences of convicted criminals rather than a more conventional narrative of criminal activity that considers the location of where their crimes were committed (ibid:10-11). *Million Dollar Blocks* is less nuanced than Dunne & Raby's Sniffer Dog as it hinges on a simple shift in focus from the symptoms of crime to its underlying causes. The project uses interactive mapping to clearly show "hotspots" in the city of Chicago. These hotspots are segregated low-income neighbourhoods which produce convicted criminals and could be improved with the funds that are currently used to pay for the prisons to which the convicted criminals are sent.

Early advocates of design methods proposed that designers should adopt an objective viewpoint of themselves and the world in which they operate. Dunne and Raby offer a subjective and sometimes surreal counterfactual view of the world and projects like *Million Dollar Blocks* manipulate representations of the world that make the established order appear unstable and subject to further debate.

Both Dunne & Raby and DiSalvo see their related views of design intervention in terms of a critical inquiry. Dunne and Raby's critique is invested in often fictional provocations of potentially dystopian futures which are intended to provoke critical inquiry into the present. DiSalvo describes projects that utilise design as a more direct mode of inquiry into the present, often using computer representations to examine relationships between assumptions revealed in existing situations. Such inquiries adopt what DiSalvo calls a more "adversarial" stance that recognises the contested environment in which design operates. In both cases these projects extend the range of what Jones refers to as the perceptual span of the designer to reach beyond the design team, the end-user and the given situation as they question the role of the designer and the world in which design takes place. The reach of this span, and how close it is to the reach of the viewer or end-user, as seen in Dunne & Raby's Sniffer Dog, is an important aspect to consider in these projects. If it reaches too far, or requires too much of the end-user, then it may be "too weird" or inaccessible. If,

on the other hand the span is too short, it might inadvertently become constrained by the terms in which it is being addressed or the way in which it is implemented.

In the worst case, exercising this kind of constraint to within the terms of the problem as it is presented might lead to the Sydney “music festival” response to drunken behaviour as being a reinforcement of alcohol consumption as normative behaviour, potentially leading to an escalation of the original problem rather than proposing an innovative and effective solution[4].

These examples demonstrate how design is practised in ways that are intended to provoke shifts in perspectives – either in the end users or designers themselves. The amount of shift required can affect the success of the project. As seen above both over- and under-ambitious shifts may lead to limited success or catastrophic failure. However, in every case the underlying principle of these shifts appears to be an important aspect of the design process seen both in the early examples of the Design Methods movement and in more recent developments in design thinking and design practice.

The perceptual span of this thesis reaches from design to parliamentary debate. It makes a primary perspective shift by looking at participants in parliamentary debate as designers. It adopts a critical position that questions the context of the debate rather than providing answers to the problematic of that debate - whether or not to build a railway is not the question that is addressed here. The thesis is related to the concepts of critical and adversarial design but uses a design approach, rather than a designed object, as a form of inquiring into the political. This extends the practice of *design* as a mode of inquiry, as seen above, to the practice of *design research* as a mode of inquiry, a design analysis that may sit alongside existing methods of analysis such as critical discourse analysis, frame analysis or argumentation theory.

2.1.4 Conclusion: using design to examine debate

This first section of this chapter has located this thesis within a trajectory of design research in two ways. Firstly, the scope of design has been followed through the multidisciplinary innovations of early design methods and then to a number of policy related applications and interventions. This trajectory positions the general direction of this thesis as a design engagement with parliamentary debate. A version of design research and design practice has been identified that steers conventional design activity towards wider social and political contexts. There has been limited work undertaken on how findings from design studies can be empirically applied to other contexts as a method of interpretation. Schön proposes the reflective practice of the individual designer as a

[4] The move away from criminalisation of drinking in Sydney, presented by the City Council strategic review in 2013, was abruptly reversed after further fatal injuries were sustained through violent, alcohol related disturbances. See Open Sydney online at http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0014/132224/2013-054826-OPEN-Sydney-Strategy-and-Action-Plan-FINAL-version-February-2013.pdf and Lockouts and last drinks online at http://www.bocsar.nsw.gov.au/Documents/CJB/CJB183.pdf. The failure of the reframing is subsequently recognised by Dorst in Framing in Design: a formal analysis and failure modes, online at https://opus.lib.uts.edu.au/bitstream/10453/36863/1/ICED15_38_PV.pdf

benchmark for the improvement of other individual professional practices (Schön, 1983) but this is observed within the constraints of an individual in their studio. Schön and Rein (1994) propose a "design rationality" with which to view groups of policy professionals in action, but this, as shown below, provides very little methodological detail and takes a broad, longitudinal approach to policy development as a discourse rather than a detailed engagement with specific episodes. These are reviewed below.

Secondly, and partly in consequence of the first, there is a need to identify how this engagement might be done. This section has identified a common theme in design research that shows how the development and deployment of shifts in perspective have been used to account for the way that designers engage with problems and generate solutions. This notion of a shift in perspective will be developed in the next section by reference to specific examples where such a shift, observable within design, might be adopted and operationalised as a way of undertaking a design analysis of parliamentary debate.

2.2 Framing: a shift in the designer's perspective

This section undertakes a review of design literature in order to identify the context and the characteristics of design observed in previous studies. This builds upon the previous section that identified shifts in perspective as an important aspect of design activity and seeks to establish examples of these shifts that might be operationalised as a way of identifying and interpreting design activity taking place within parliamentary debate.

2.2.1 Design is a constructed and situated practice

An important landmark in the development of design studies is seen in the "reflective turn" initiated by Donald Schön (1983). Schön proposes a constructivist alternative to what he viewed as the predominant technical and positivist approach to design, characterised by the "technical rationality" of Herbert Simon's *The Sciences of the Artificial* (Simon, 1976). To put this constructivist move into a wider context, Schön's work can be aligned with other appraisals of constructed positions that were gaining currency at that time such as Nelson Goodman's notion of world making (explored by Kinsella, 2006) and Dewey's pragmatism (Schön, 1992). Schön's philosophical training supports his theoretical engagement with this work which forms a part of his overall published output that recognises the way that individuals, organisations and societies adopt new concepts. These broader philosophical points are beyond the scope of this thesis. A specific approach to Schön's reflective practitioner as observed in the design studio is taken up in more detail below.

A parallel movement which has since become influential in the development of design studies began at the same time to explore the constructed nature of the laboratory practice. During the late 1970's a number of sociologists were turning their attention to the way that scientific knowledge was constructed in laboratories and in the academic papers that were produced by them. A landmark publication in this field reports Bruno Latour and Steve Woolgar's observations in a laboratory which they describe as an "account of fact production whereby laboratory scientists get

by with fictions which they push as hard as they can" (Latour & Woolgar, 1979:254). By the early 1980s the social study of science had, as the discipline of Science and Technological Studies (STS), developed a quantity of empirical research that drew on numerous analytical perspectives including ethnomethodology, discourse analysis and ethnography (Knorr-Cetina & Mulkay, 1983:1). This eclectic approach to the study of scientific practice parallels Schön's interest in studio practice and also reflects the widening multi-disciplinarity of design research documented by Jones (1970) and more recently extended by the Design Thinking Research Symposia (DTRS) that encourage the interpretation of design situations from a number of analytical perspectives[5]

Any relationship between this early work in STS and explorations of the design process was not explored by Schön, but by the mid 1990s the ethnographic work of Henderson (1991; 1999) and Bucciarelli (1994) makes clear connections between the two. Henderson and Bucciarelli both recognise that designers are responsible for the objects that they create and use in the design process and the worlds in which those objects are constructed. Both of these aspects of design are central to Schön's description which address the importance of the tacit knowledge and experience that the designer brings with them to the situation and the way that they interact with the situation when they are in it. Further connections between design and ANT will be picked up later in this and subsequent chapters.

Schön's approach to the design process as an individual constructed practice builds on his earlier work. In *Beyond the Stable State* (Schön, 1971) he argues for more flexible responses to changing circumstances based on the practitioner's ongoing actions rather than a reliance on more traditional institutional knowledge. This distinction between practice and convention resonates with the dichotomy between design and craft noted above but does so in relation to the practitioner's awareness of the situation they are in rather than their explicit adoption of one mode of working over another. One aspect of this reflective position is explored further in the notion of "single and double loop learning" (Argyris & Schön, 1978). This notion recognises the scope of an individual practitioner's responses to the frameworks within which they are working. Both of these cited works are concerned more directly with processes of organisational learning than with the practice of design but they both point towards Schön's account of design as a practice based on the experience of the designer and the importance of their responses to the situation in which they are working.

2.2.2 Designers reflect on and in their situation

Schön sees the designer drawing upon their previous experiences while they are designing and reflecting upon what they are doing while they are doing it. His example of Quist and Petra in the design studio (Schön, 1983) shows the studio master questioning his student's frame of reference and encouraging her, through the experimental redrawing of her solution, to explore alternative

[5] These symposia began with the Delft Protocols Workshop in 1994 (Cross, Christiaans & Dorst, 1996) with further examples in DTRS6 (Cross & Edmonds, 2003), DTRS7 (McDonnell & Lloyd, 2009) and DTRS10 (2014, unpublished).

approaches. These alternatives support the development of a more successful response to the problem situation and a reworking of her initial treatment of it. In this case, Quist is the expert designer who, through dialogue and drawing with his student, is seen to bring into the situation his expert knowledge based on his extensive prior design practice. Another facet of his expertise allows Quist to also recognise the value of the changes he has made to the present situation and respond to them in such a way that moves the process away from the initial problem and towards a new solution.

Schön's notion of design as a reflective practice takes into account a constructivist awareness of the individuals involved and the contribution that perspectives based upon their past experience can bring to the situation. This exploration of reflective practice, which Schön saw as an established element of the design studio tradition, has subsequently been developed into a general method of enhancing the development and education of professional practice across many disciplines. Schön's observation and description of that practice in a design context, and in particular his acknowledgement of how the designer's expertise is operationalised in a design situation, has become a canonical element of the design literature (Cross, 2007) and recognised as a definitive method of describing design activities (Dorst, 1997).

2.2.3 Reflection as an element of framing

Design activity is broadly described by Schön as a series of "see-move-see" activities (Schön & Wiggins, 1992). The designer identifies what they are looking at, makes some intervention or change to the situation in which they are working and then attends to what this intervention has produced in order to move them forward towards a, potentially unpredictable, solution and a more reflective professional practice. This is an exercise in framing and reframing by which the designer shifts their perspective in order to approach the task in hand from a different direction where it might then be seen as, or encouraged to be developed into, a move towards its resolution.

Schön's description of the design process has been broken down into a series of operations: naming, framing, moving and reflecting (NFMR). These operations have subsequently been formalised into a descriptive model of the design process by Valkenburg and Dorst in their study of design teams (Valkenburg & Dorst, 1998). Their own representation of this process, illustrated below in Figure 2.7, shows how they relate these four operations into a design narrative.

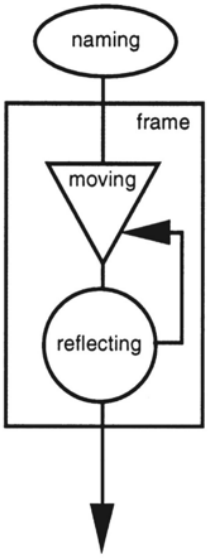

Figure 2.7: Valkenburg and Dorst's Naming Framing Moving Reflecting (NFMR) model as employed in their 1998 study of designers. The model shows the relationship between the four stages and the central role of framing within their process. (Valkenburg & Dorst, 1998)

This process begins with the naming operation that identifies what aspects of the design are currently being addressed. These aspects are then seen to be framed through a particular perspective which is used to move the design process forward, for example by making a new drawing as proposed by Quist above, and then reflecting on this move to inform the next one.

The Valkenburg and Dorst model has been employed in various subsequent, and recent, studies (e.g. Dong, 2013; Blyth et.al., 2012; Tang, Lee & Chen, 2012; Valkenburg, 2000). Each of these utilised the same model in order to identify elements of a design process taking place within controlled, experimental, simulated design exercises with the intention of advancing understanding of design cognition models, cross cultural frameworks and factors affecting design performance. The variety of these subsequent studies suggest that the model has utility across a number of different applications.

While these studies report varying degrees of success they also indicate some limitations. These limitations are reflected in problems that researchers have found with, for example, distinguishing between names and frames (Valkenburg, 2000:195) and the contexts in which the frames are identified (Blyth et. al., 2012). The identification of specific operations from transcripts of design meetings has also been questioned by other authors who, while not attempting to deploy the NFMR model, found that the isolation of moves within a transcript to be problematic and potentially unreliable (Goldschmidt, 2014; Perry & Krippendorf, 2013).

Despite these limitations, the NFMR model provides a starting point for this thesis: a description that can be used to observe design activity taking place and one that, being formed around a central activity of reframing, supports the view of design as a shift in the perspective of the designer. The NFMR model provides a simple view of what appears to be a collection of relevant characteristic activities which represent a recognisable and repeatable description of a design

process. It provides a useful generic starting point with a description of design activity that provides a discrete and operationalisable representation of the process which the authors applied to individual episodic interactions between designers. Other interaction models, such as Goldschmidt's Linkography, require a broader perspective which depends upon the drawing of connections across the whole of the design meeting (Goldschmidt, 2014). A Linkography of parliamentary debate might be used to identify and link design moves backward and forwards through a meeting. The NFMR provides a more discrete recognition of individual moves which can be seen within the context of individual shifts in perspective. In relation to this notion of a shift in perspective and its relation to framing the selection of the NFMR model as a starting point for this research is also based on its relation to Schön's work and builds upon his seminal position in the design literature noted above. It provides a detailed and specific set of discrete descriptive terms which have been previously observed within transcripts of design meetings and therefore appears to be a useful candidate for the purpose of approaching debate as a design meeting. This provision distinguishes the NFMR model from other more prescriptive overviews of the design process which, as we shall see in Chapter 3, are useful but less applicable to the scale of interaction that is proposed to be analysed at this point.

Furthermore, the NFMR model has also been used by a number of subsequent studies which suggested that it would provide a useful and operational starting point for this study. The rest of this section considers framing in more detail in preparation for its adoption as a starting point for the empirical work undertaken in Chapter 5 below. More methodological detail is provided in Chapters 3 and 4.

2.2.4 Framing is a shift in perspective

The notion of framing is not exclusively practised by designers or design researchers. As a sociological concept it is found in earlier work for example by Bateson, 1972 or Goffman, 1974 although Schön doesn't acknowledge this in his original formulation[6]. In The Reflective Practitioner, Schön (1983) instead refers back to Karl Mannheim's general overview of frames as "particular views of reality". Schön's specific focus on practice also then leads him to the psychiatric application of framing described by Leston Havens which again supports a more general view of framing as a method of shifting perspective. For Havens this is offered as a way for psychiatrists to help patients to see things differently. For Schön it is a way that practitioners can see things as others see them (Schön, 1983: 314).

This provides a simple term of reference: a frame is a shift in perspective. But in order to distinguish sociological theory or psychiatric practice from a more operational design perspective, it is necessary to consider specific types of framing which might support a view of the design process within the context of Parliament, as proposed in this thesis. In other words, what aspects of framing

[6] Schön and Rein undertook a more extensive review of the development of the term in their development of frame reflection as a policy practice (Rein & Schön, 1996).

can be considered specific to the design process and therefore be useful as a design perspective on the parliamentary process?

As outlined earlier in this section, design is considered in this thesis in terms of the shift in perspective which designers undertake as they approach or revisit the task in hand. Framing, where the designer is in Schön's terms, collecting together the objects to which they will attend, is considered to be the adoption of a specific perspective to the task in hand. This initial framing is not necessarily a shift from an existing perspective held by other actors since it may be an initial framing of a project. The initial frame is however a shift that selects and collects together the relevant objects – potentially a shift from the normative to the designed or in Herbert Simon's (1976) terms from the existing to the preferred.

Where these frames are subsequently referred in relation to other frames, particularly where those subsequent frames are introduced by other actors, this is considered to be reframing: a subsequent frame is introduced as a shift in perspective from the existing frame to a new one. Framing and reframing both represent the introduction of new perspectives into the task in hand and in doing so are considered, and used in the subsequent chapters in this thesis, to be intrinsic elements of design activity. This activity is observable where it affects, or attempts to affect, a shift in the perspective of the actors involved or their approach to the materials and concepts with which they are working.

2.2.5 Framing acts as a bridge between the design problem and its solution

The reframing and reconfiguring of the design problem and proposed solutions is described by Dorst and Cross (2001) as a process of co-evolution. They describe this process as a kind of bridge-building undertaken by the designer who, drawing on what the authors consider to be the designer's individual creativity, makes connections between how they are approaching the problem and how they envisage its solution. These bridges act as a frame that, perhaps only temporarily, brings together a pairing of whatever problem and solution is currently being explored. The ability to draw these pairs is, according to Dorst and Cross, directly related to the designer's creative ability and their level of expertise. The acquisition of expertise and how this occurs continues to be an important concern in design studies.

The 2003 Design Research Thinking Symposium was dedicated to the subject of Expertise in Design, bringing together a number of papers that, in the words of the editors represented a "significant step forward in the understanding of [design as] one of the highest cognitive abilities of human beings" (Cross & Edmonds, 2003:vii). The notion of the expert designer, and "what it takes to become one", was subsequently taken up by Lawson and Dorst in *Design Expertise* (Lawson & Dorst, 2009:10). These two publications signify a broad engagement with the concept of expertise that can be found across the design literature and that appears to be underpinned by researcher's concerns with identifying the cognitive functions that are necessary not only to design but to design like an expert. The focus on the cognitive is reflected in Cross' recurrent work on terms like "design

thinking" and "designerly knowledge", but he also recognises the limitations of this focus and the need to "capture a broader view" (Cross, 2004:441).

The role and function of creativity is also recognised as an important feature of the design process. Howard Hodgkin, the Turner Prize winning abstract artist, was interviewed on the creative process at the first Conference on design methods in 1962 (Jones & Thornley, 1963:195) and the theme is developed variously by Broadbent (1966), Roy, (1993), Jeffries, (2007), and Crilly (2015). Crilly recognises, like Cross on expertise, that the notion of creativity is not a simple cognitive function of the designer but is defined in terms of "a broad range of personal, organisational and contextual" influences (Crilly, ibid:79).

To return to Dorst and Cross, and their temporary pairing of problems and solutions, how might their notion of a bridge reflect this broad range of contexts in which the design process is operating? If we accept that the design process is contingent upon factors outside of the individual creativity and expertise of those involved in it, and may be observed in situations beyond what might be considered the conventional arena for design studies, then it is possible to consider these temporary bridges in a different light. In this wider context, the temporary bridge between the problem and the solution, and those participants who are seen to be constructing it, might be seen as a stage in the design process where particular circumstances are drawn together and where various actors are seen to be influential in the unfolding event. Such an event in more general terms, represents a key stage in the proceedings where change is affected and where design is being done. The frame, as a mechanism for shifting the perspective between the problem and the solution, provides a useful focal point in the study of design and one that is adopted in Chapter 5 below as a part of the development of a design analysis of parliamentary debate.

2.2.6 Framing provides a narrative of the design process

A method of how to build these bridges between problems and solutions is developed by Dorst in his guide to frame creation (Dorst, 2015). The example of this method cited above (see section 2.1.2 on reframing the nightlife of Sydney) is one of sixteen case studies that he draws upon to propose a formal model of approaching wider contexts from a design perspective. The proposed model is a nine step process that guides the practitioner through the necessary preparatory research into a given problem and the context in which is presented. These form the basis of decisions to be explored and made about how to proceed with the development, implementation and testing of a solution. Dorst's case studies show a series of examples where these stages are followed by different design practitioners in a variety of situations, including the reframing of Sydney's entertainment district already discussed.

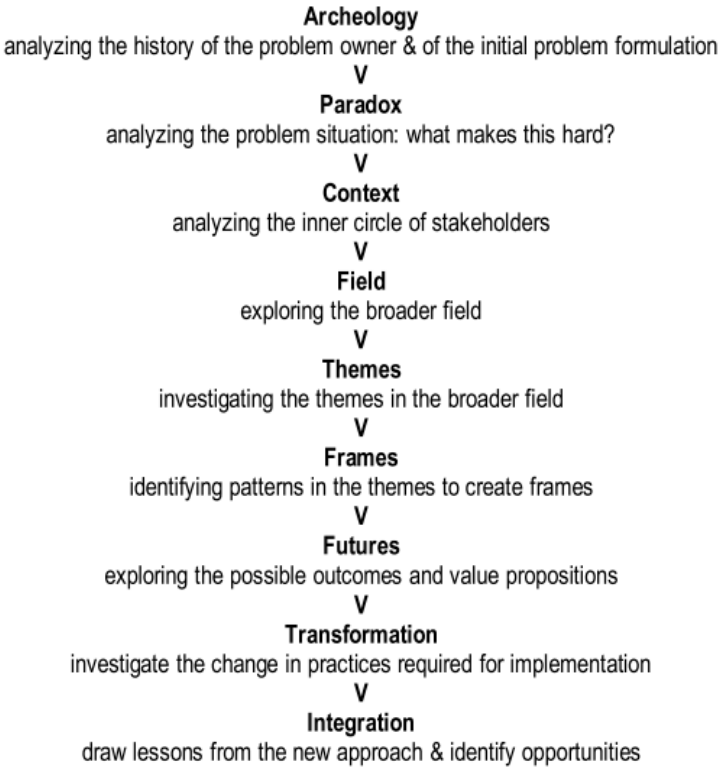

Figure 2.8: Dorst's nine stage model of frame creation showing frames at the centre of the process between the definition of the problem and the creation of a solution (Source: Lulham & Kaldor, 2013)

Dorst's nine steps, reproduced in Figure 2.8 above, progressively bring together the perspectives of the wider network of actors that are brought into the situation as the designer proceeds through various clarifications of the problem and as they move towards some kind of solution. Dorst suggests that the critical stage is the identification of the themes that underlie the problem situation but it is the next step, referred to as "Frames" which is of most interest in the context of this thesis. Here Dorst (2015:78) proposes a prototype formulation that he uses against each scenario explored. The frame stage, expressed by Dorst can be simplified to a simple if/then construct:

> "If the problem situation is approached *as if* it is …, *then* …"

and can be populated, for example with Sydney's revellers, with the following narrative:

> "If the law and order issues that arise from late night revellers is approached as if it is a music festival, then the urban environment, transport in and out of it and the security staff that manage it becomes one of crowd management rather than law enforcement"

This formulation is described by Dorst as convoluted and it would be easy to extend the narrative beyond a usefully concise summary. However, in its concise form it provides a method of producing and presenting a simple narrative into which perspectives can be made visible and then further explored. For the frame creation practitioner this becomes a starting point from which the proposed solution, based on a newly created or recalled perspective, can be constructed and evaluated. For the design analyst it provides a method of representation through which the new perspective can be viewed, interpreted and contextualised. This method is developed in Chapter 6 below as a way of representing and interrogating perspectives that are brought into parliamentary debate.

2.2.7 Conclusion: three models of framing

This section has explored how framing operates as a shift in perspective in the design process. This follows the notion of framing as initially observed by Schön in his reflective practice model of design, through the Naming, Framing Moving and Reflecting model developed as a method of describing design activity, to a narrative based method of adapting design thinking to a wider range of problem domains. These all represent different ways of describing how design is done but through a shared a lens of framing. They are all closely related conceptually and have a shared history through their development by Schön and Dorst. Despite these similarities they differ in the way that they represent the context in which design takes place.

Schön's designer is located in a trajectory of their own personal development whose terms of reference are based on the expression of their expertise and how this is applied in a present situation. This "repertoire of ideas, images, precedents, values, expectations and types" is for Bucciarelli and Schön (1987) what the designer draws upon when faced with a new design situation. The interface between that repertoire and the situation in which it is deployed, where aspects of the first are applied in potentially novel ways to aspects of the second, is the point at which framing occurs.

Valkenburg and Dorst's designers are situated within a series of inter-related and well defined operations that are more concerned with how successfully a design team can navigate through their design process. The frames they describe are more prosaic than Schön's and more concerned with the design situation than the designers.

Finally, the designer who undertakes Dorst's frame creation is expected to follow a prescribed set of operations which includes an element of creative or design thinking to generate a new and potentially unexpected shift in perspective. These different approaches to framing will be referred to later in this thesis in relation to how they will be used (Chapter 4) as a method of using design to interpret parliamentary debate (Chapters 5 & 6).

2.3 Precedents, principles and values

The concept of framing is not specifically a design process although it has been used, as seen above, as a way of describing aspects of what designers do. Progress through the design process is shown to be partly determined by the perspective that a designer brings to bear on the problem and its solution, and this perspective is informed by the designer's prior experience. It follows that the process of drawing upon this prior experience is a particular shift in perspective where some aspect of the past is drawn into the present situation. This particular kind of shift in perspective can be found in the design literature in the form of precedents. This section explores some examples of how the use of precedent has been observed and developed as a characteristic of the design process.

2.3.1 The use of precedents in the design process

The development of the cartwheel, referred to in section 2.1 above, demonstrates how a sequence of earlier wheels and ongoing modifications characterise the vernacular tradition. These modifications trace a process of incremental design changes which respond to the evolving requirements and circumstances that the design is intended to meet. This process resulted in a series of successful iterations of the wagon wheel over a long period of time but this traditional iterative design process was eschewed by the design methods movement in the 1960s. Jones considered that this form of craft evolution was no longer appropriate, suggesting that there was a weakness inherent in "changing only one-thing-at-a-time, and of relying on precedent, when what seems to be called for is a complete re-organisation of the form as a whole" (Jones, 1970:20). This represented a radical shift for Jones away from the individual designer towards a collective modern method of designing where many experts would each address a different part of the problem to achieve a more successful result. In this way the expertise of a collective designer is distributed across a number of contributors in the present rather than relying upon a single individual's recollection of their own past. Although this is used by Jones as an argument in support of new methods it fails to recognise the precedents that each of those collectivised individuals might bring to the task in hand.

Recognition of the use of precedent varies across different design schools and periods. Reyner Banham cites an anonymous note in Architectural Review dating from the early twentieth century which considered building to be "an entirely modern problem without precedent" (Banham, 1960:47). This stance reflects that of the Modern Movement where schools such as the Bauhaus and the International Style of architecture promoted a complete break with what had preceded them. These schools distanced themselves from what might have been seen as corrupt or degenerate designs of the past. Their functional and rationalist approaches to design problems were generated by a detailed and ostensibly objective analysis of the present rather than with reference to the past. This approach however has been criticised for becoming what Roger Trancik describes as "its own form of Academicism" (Trancik, 1986). Outputs of the functional analyses, for example the characteristic modular systems of housing and furniture associated with these schools, can be seen as an ongoing collection of precedents that subsequent designers could refer to or build upon. The Modernist present can always be located, albeit perhaps in some tension, within the context of what precedes it and what itself precedes.

The tension between a functional analysis of the current problem and the potential benefits of referring to prior examples is a feature of the pattern language developed by Christopher Alexander and colleagues (Alexander et al., 1977). The proposed patterns offer archetypal solutions, distilled from the previous planning and building experience of the authors, that can be used by "all the people in society…a million times over, without ever doing it the same way twice" (ibid:x). The patterns provide a set of direct, practical shortcuts which link a large library of archetypal problems with a library of archetypal solutions based on examples drawn from the past. The pattern language presents a complex combination of precedents that are used both to inform the solution but also to frame the problem. Alexander's patterns are presented as a sourcebook, much like

Jones design methods, and were intended for use by a wide readership. However, they present a particular worldview that determines what ought to be done in a given situation. This is delivered in terms of the built environment: *where* buildings should be built; *how* they should be arranged together, and, in terms of the people who would live in and around them: where everybody aspires to be a homeowner; everybody appreciates the same diversities and freedoms; where the town is seen as a carnival; everything is in reach; and meals are communal[7]. Alexander's patterns are written in a particular language for a particular audience who can call upon the precedents provided to replicate a prescribed lifestyle. The role of precedents in facilitating such transference of values is discussed in more detail below.

A number of further precedent based design models have been proposed. In Eilouti's review of these (2009), careful distinctions are made between different attributes and contexts in which precedents are developed and employed. This typology of precedents draws on a wide range of authoritative sources, including Alexander and Schön, and underlines the ongoing relevance of the use of precedent within design. A specific example of prior examples called upon to inform the present, and which demonstrates a number of functions that the precedent can be called upon to perform, is given by Eckert & Stacey (2000) in their study of how knitwear designers refer to previous designs and modify aspects of them to create new ones. A blue sweater from last year's collection is used as an example that informs a vision of next year's version which will be longer and with a V-neck. This use of precedent traces how the designer's past experience informs their present project. For Eckert and Stacey this kind of precedent fits into a broader typology of pasts that are used as "sources of inspiration". These sources are used to recall potentially relevant functional, formal and aesthetic aspects of a previous design. The inspirational function of previous designs is shown to be particularly relevant to early stages in the design process where solutions are being generated. It is however also seen to be relevant to later stages where a solution is being evaluated and its potential success compared with the performance of what has gone before[8].

A precedent can draw on firmly established traditions but might also be based on more recent and emergent examples of solutions and problems. A precedent can be, as Eckert and Stacey argue, a source of inspiration that carries with it an aesthetic or cultural vocabulary. It can also be, as we have seen, from a Modernist view, an unwelcome reference to a past that brings with it unwanted references to a previous era. Precedents are, in any case, a clearly recognised aspect of the design process. To summarise Eliouti's broad definition, a design precedent is a prior or past solution that may contain any number of characteristics that may provide partial or total exemplars of new solutions (Eilouti, 2009:340). Precedents can be drawn from a broad set of circumstances and act as a springboard for potentially novel solutions to given problems.

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[7] This mixture of 1960s idealism and 1970s pragmatism predicts what is now a common message of 21st century consumerism where television programmes, often with design in their titles, prescribe how and where things will go and who will do what in them. See Lloyd & Oak (2015) for a review of one such programme.

[8] See Earl et al, 2005 for a view of various design stages in which precedents might be active.

2.3.2 The use of precedents as a springboard for subsequent designs

The precedent as a springboard is clearly seen in Jane Darke's interviews with architects (Darke, 1979). Darke's notion of the "primary generator" emerges as a kind of precedent that is used to reduce the number of possibilities open to the designer as they proceed. By imposing some structure onto the problem the primary generator narrows down the options to "a small class of solutions that is cognitively manageable" (Darke, 1979:43). Darke refers to Basil Spence and his design of Coventry Cathedral where the altar cross from the original ruins was adopted as a starting point around which the new cathedral would be built. The cross was also seen as a symbolic connection with the past and a conceptual focal point for the future around which the theme of rejuvenation would reflect the post-war aspirations of the country, the spiritual aspirations of the church and the religious faith of the architect (Spence, 1962:vii).

This engagement with an initial and potentially simple idea runs through Darke's interpretation of her architects' housing projects where previous solutions or approaches to problems are adopted, adapted and deployed. In one example an architect draws upon elements of their previous high-rise housing project, using modular elements from that project to populate a low-rise solution for a new commission (Darke, 1979: 40). Aspects of the architect's earlier work provide a shortcut to the detailing of the new project but also mark a transition in the architect's sensibility towards changing social values of public housing. This new approach then becomes a part of the same repertoire of past projects from which further precedents may be drawn to help solve new problems.

Bryan Lawson, also talking to architects, sees their primary generators as an "originating idea…that seems powerful enough to generate a scheme and to subsume a lot of decisions within it" (Lawson, 1994:62). For the designer to devolve decisions in this way demonstrates how much trust is invested in these originating ideas. However, this trust is not always considered to be well placed. Cross (2011) suggests that fixing too firmly on these initial ideas can be restrictive.

The notion of fixation, demonstrated in an engineering context by Jansson and Smith (1991), is not unlike the constraints that Jones saw with the cartwheel where the known and configurable solutions of the vernacular are unable to keep pace with the conceptual and abstract view of the modern. Fixation continues to represent a problem within design practice and Crilly (2015) maintains that it can lead to the designer's work being prematurely constrained and preventing them from arriving at a more creative, innovative or suitable solution.

A relationship between the use of precedent and the problem of fixation is reported by Doboli & Umbarkar (2014) who conclude that when designers are encouraged to use precedents, the solutions they generate can be more useful but less novel. This finding is unsurprising: where elements of a previous, presumably successful design, are incorporated into a new one it is to be expected that the new design would inherit the utility of the precedent but also some of its features that, by definition, could not be seen as novel. There may be some novelty in the selection of a particular precedent and the way that it might be used but this level of detail is not recorded in their study. Further, the participants in this study were students whose repertoire of precedents and

experience of applying them may be limited. In many studies of this kind, including Schön's (see Section 2.3.5 below), the context in which participants are selected is not taken into account and therefore, in relation to their use of precedents, the scope of their prior knowledge and experience is not known. Moreover, in the case of Doboli & Umbarkar the relevant experience of participants is specifically discounted as the researchers attend to the problems of making their design experiment more realistic and the statistical analysis of their results meaningful.[9]

Some primary generators are clearly precedents drawn from the designers' own repertoires or from others that are deemed to be relevant or useful. The usefulness of these precedents may be tempered either by a fixation on them that limits the development of the project or by the range of precedents available to the designer. They also carry with them cultural references and principles that can, in the choice of high-rise or low-rise housing, produce a lasting impact on the design and its users.

2.3.3 Precedents and guiding principles

The above sections review how designers draw upon their past experience. On the one hand there are Eckert's knitwear designers, operating in a design studio where last year's sweaters provide a design vocabulary from which this year's designs may be drawn. Eckert uses the term "source of inspiration" to describe the various pasts that can be drawn upon. Darke refers to how an architect draws upon previous dwelling types that operate in a similar way to Eckert's designs and Alexander's patterns are a vocabulary of the past that can be used to construct the present. These are all in some respects versions of the heroic designers described by Marshall (2014:245) and referred to in Chapter 1 above.

On the other hand, a wider view of the situated designer also noted by Marshall, comes into focus. For the architect, housing densities and social values contribute to what they design and what they want to be seen to be designing. Within these wider contexts, the notion of fixation can have striking consequences such as Lawson's response to architects Alison and Peter Smithson's idea of building "streets in the air" (Lawson, 2005:231). Lawson considers that schemes such as Jack Lynn's Park Hill development in Sheffield, where these ideas were implemented, had been caught in what Lawson calls an "image trap" that promoted an architectural idea above the practicalities of the residents who would be living in them. The image trap and fixation both reflect the possible limitations of using precedents. They both also demonstrate the importance that is accorded by scholars to the role of the precedent in the design process.

The use of precedent as a design activity, whether seen as a reference to prior examples as a source of inspiration, as a trap, or as a useful or counter-productive technique, is presented through design studies as a way that designers approach the problem posed and as a shortcut to

[9] This study represents what appears to be a genre, particularly found in *Design Studies*, which focus on extensive statistical analyses of data generated from artificial design tasks that are performed by relatively small ample sizes and with limited documentation of the selection criteria applied to sourcing participants. This observation is made to note the limitations of this kind of study (which are often acknowledged by their authors) with the sample size and contextual information that will be seen in this thesis to be available in the parliamentary archive.

potential solutions. As seen above in Alexander's idealised vision of a community, such shortcuts implicitly carry with them the context from which they are drawn. They thereby operate not just as a useful source and inspiration for approaching problems and generating solutions but also as a way that the designer aligns themselves with particular aspects of the past. In this way they build on the principles of their own practice while also inheriting, possibly inadvertently, the principles of others.

2.3.4 Precedents and individual values

Lawson defines the principles that are used to guide the designer as: a "collection of attitudes, beliefs and values" (Lawson, 2005:159) that "influence and set the mental context for each design process" (ibid:179). These principles guide the selection of materials used, the physical form that the solution will take, the contexts in which it might be used and the way in which the designer's development and application of these principles are subsequently judged. Lawson's critique of the Smithsons' and Lynn's housing projects, noted above, demonstrate all four of these points in relation to the guiding principles adopted by the architects and their subsequent judgment in the context of the "New Brutalist" movement which they helped to form[10].

Lawson found that architects would generally reject the notion of styles or movements, citing a comment by Robert Venturi that "Bernini didn't know he was Baroque" (Lawson, 1994:144). However, the prevalence of precedents within architectural and design practices suggests that even though Bernini may not have known that he was Baroque he would surely have known that he was drawing upon precedents that aligned him with what was to become known as Baroque. Equally, one might conjecture that Venturi may not have known he was a post-modernist. However, his eclectic use of precedents in one project, the Vanna Venturi House, includes elements of modernism from Le Corbusier, the Shingle Style from the Low House of Bristol, and the English Baroque of Blenheim Palace. A further post modern reference to Casa Girasole (Venturi, 2005) confirms Venturi's alignment against the "puritanically moral language of orthodox Modern architecture" (Venturi, 1966:16).

Venturi's explanation of his references underline the relevance of the precedents drawn upon, the impact they make on the design process and, especially in the case of architects whose projects are highly visible, on the reception and recognition of the final designed object. All of these references are, by way of example, a means of drawing upon and aligning with the prior experience, expertise, and expressed values of others.

2.3.5 Precedents and institutional values

The examples examined in this section so far have centred around the individual designer and their practice rather than any wider contexts in which this practice is undertaken. Schön's (1983) conception of the designer as a reflective practitioner was also focussed on the individual. His study of Quist and Petra was primarily concerned with the cognitive process of the designer,

[10] The Smithson's are widely accepted as progenitors of Brutalist architecture although the critical reception, and probably therefore the more recognisable inception of New Brutalism is attributable to Reyner Banham whose book "The New Brutalism, Ethic or Aesthetic" captures in its title the controversy and tension that Lawson plays into.

drawing on the classroom situation as a way of accessing Quist's expertise. Subsequent commentators have noted that the wider relations between the tutor and his student, between the student and the learning environment, and between the researcher and the source of his transcripts were neither explored or even acknowledged by Schön. Mewburn (2009:59) argues that Schön's reading of the transcript of the session between Quist and Petra is inadequate since it fails to recognise the impact of either the space in which the session takes place and the power relations that might exist between the two protagonists. Webster (2008:71) in her critique of Schön's view of the educational process is more explicit, suggesting that "according to Schön, all the student Petra has to do to become an architect is to learn to be like Quist: white, male and middle class!".

Schön's terms of reference do not extend to accommodate the Marxist, Feminist or Structuralist perspectives that Webster draws upon. However, in a later study of another tutor/student exchange Schön (1984) does recognise some of the wider context in which the design process is taking place. In this later study Franz is the master of the MIT architectural studio who is discussing a project with his student, Harold. Here Schön takes into account the student's perspective and also the institutional context within which the teaching is taking place. His analysis of the exchanges between the two participants hinges upon a conflict of values between them. The student is considered to be a "socialist" with a "sixty-six, anti-establishment" feeling that is contrasted with his tutor's more measured appreciation of the value of "hierarchical principles of organisation". This conflation of political values and design principles is encapsulated in their use of precedents that describe the spatial aspects of the design task in hand. Harold is proposing a "spaghetti bowl" mass of intertwining, evolving spaces while Franz a "Renaissance palazzo" precedent that will impose a "clear and comprehensible" order onto the project (ibid:134).

The conflict is resolved as the tutor's institutional framework prevails over the less confident but more fluid approach of the student. This is not a surprising conclusion since the brief of the project included the instruction that "students were to translate the Institution's perspectives on student housing into a form acceptable to them." (ibid:132). Harold's eventual acceptance of his tutor's advice to abandon his underlying principles is a recognition of the normative values of both the Institution, its staff and the brief as presented. Schön suggests that Harold would eventually "have to carry out another sort of inquiry that would reveal an alternative approach to overall organisation" (ibid:136) and thereby considers that this abandonment of the individual to the Institution was the correct resolution. In this case Schön is more receptive to the context in which the design process is taking place: the underlying perspectives and values of both parties are clearly stated. He also offers his own interpretation of those values and in doing so implicitly aligns himself with the viewpoint of MIT and the imposition of order. This last point indicates how precedents can be used as a way of accessing the underlying values of the researcher as well as their subjects.

More recent studies confirm the presence and relevance of values in the design process. Le Dantec and Do's observation (2009) of the mechanics of how values are transferred between team

members recognises the importance of where in the design process those values are observed. This transfer is extended to beyond the immediate design process by Lloyd (2009) who shows that when a designer works though the consequences of a given solution they are working through the consequences of the competing values that are at stake. In the context of parliamentary debate this is especially relevant in a process that is carefully structured both in terms of how the meetings proceed internally, the order within the wider process in which they take place and the national or international scope of its consequences.

2.3.6 Conclusion: precedents transmit values

Precedents are called upon in the design process as a way of testing what has been known to work in the past against what is unknown about the present. Precedents align the designer with their predecessors, enrolling those predecessors into the design team and in effect allowing them to do some of the work. By using these precedents the designer also transmits, and potentially extends, the values they represent. This process makes known to the present what the designer values about the past and intends to project into the future. The alignment of Schön with MIT's institutional values for example illustrates how these precedents and their values can also be mediated and disseminated by the researcher.

2.4 Team perspectives

Based on the work reviewed so far in this chapter, the progress of a design process is dependent upon the perspective of the designer, the perspective of the designer is based on their prior experience and this experience can be related to the principles and values with which they align themselves. The identity of the designer or the design team is therefore of fundamental importance to how the design progresses and what kind of solution is created by it. This section reviews how the identities of designers and design teams have been recognised in studies of the design process.

2.4.1 Perspectives shared between design team members

Studies of individual design meetings have recognised that interactions between members of a design team have an important impact on the way that the design process progresses. Gabriela Goldschmidt (1995) questions whether a design team would function any differently to an individual designer but Cross & Clayburn Cross (1995) conclude that the social aspects of design, and the social interactions that influence the activities of design teams, was a neglected area in the discipline of design studies compared to what had up to that point been a focus on more technical and cognitive aspects.

The social interactions observed between designers by Cross & Clayburn Cross took place in an experimental setting and were primarily concerned with discrete episodes affecting how the design task is completed. They recognise where one team member is repeatedly ignored or over-ruled in relation to the flow of the meeting. However, they are not concerned with exploring cultural implications of this, for example in terms of possible gender bias that might affect the interactions.

“Social” for Cross and Clayburn Cross is limited in this case to what takes place within the confines of the experimental setting and within the limits of gaining an understanding of the design task. This understanding is based on what contributions individuals make in the meeting but does not attempt to account for either the way that the meeting is convened or, as noted in section 2.3.2 above, the ways that those who participate in the meeting found themselves to be there.

A number of experimental studies bring together a design team to perform a specific task. These studies can make some assumptions that the team members are, or should be, working collectively towards a commonly understood goal. Cross and Clayburn Cross’ participants are specifically debriefed in terms of their sense of achievement as measured against this common goal. Valkenburg and Dorst (1998) observed teams working in a competitive situation against other design teams. The introduction of a competitive element further encourages the collective endeavour as the team is focussed on achieving that common goal ahead of others.

More recently, Dong, Kleinsman & Deken (2013) explore how design teams identify with a shared goal by using the NFMR model of framing as a method of identifying and evaluating a “team mental model”. Their study, based on an experimental simulation of a design process through the playing of a game, concludes that for a design team to be effective its members need to be “on board”. This finding is recognised by the authors as limited by the nature of the experimental setting but the study is useful on two counts. Firstly, it confirms the perceived credibility of the NFMR model as a means of interrogating the design process and therefore supports further exploration of this model in this thesis. More importantly to this section’s concern with design teams and perspectives, it confirms the assumed benefits of a team sharing a common goal.

A shared goal requires effective communication. The problem of communicating between team members, of getting “on board”, is addressed by the iD cards referred to in section 2.1.2 where the visual cues presented on the cards attempt to create a shared frame that can be commonly referred to. The iD cards present practical object references that allow team members to agree the terms and functions of the elements of their design process. They offer tools with which to navigate between the different interpretations that can be applied to simple objects shared between team members. Bucciarelli’s description of the multiple possible interpretations of drawings is another example of how different individuals from different backgrounds and disciplines can refer to and interpret the function of what might otherwise be taken for granted (Bucciarelli, 1984:90). The value of physical objects or other forms of representations, which team members can use to help understand each others intentions, is seen by Eckert et. al (2010:34) as a key factor in the success of the design process.

Multi-disciplinary perspectives within design teams are explicitly described by Hey (2008) in his study of framing in New Product Development teams. In this environment the goal, according to Hey, is to ensure that the team reach a consensus on how they, and their potential users, view the product under development. Hey proposes that this process is best addressed through the adoption of a common metaphor that unites the team in a shared goal. This drive for consensus

aims to bring diverse perspectives together to support the development of both the product and the team. In Hey's example, even if team members do not begin "on the same page" (ibid:33) it is assumed that the team members are willing participants in this drive towards a shared goal and will respond to initiatives, directions or interventions intended to facilitate this move towards a consensus.

Donald Schön and Martin Rein (Schön & Rein, 1994:180) describe more antagonistic situations in their study of intractable policy controversies. They see an imperative for progress in a project not being strictly dependent upon the creation of a consensus but on a contingent notion of mutual trust. This requires that the main actors subscribe to shared notions of "truth, freedom and justice" which will enable them to recognise and respect perspectives adopted by others and reflect upon the impact of their own frames on the situation at hand.

Schön and Rein present an idealised vision of the expert practitioner who is able to achieve this broad level of understanding. In much the same way as Quist emerges from Schön's design studio as a "virtuoso performer" (Schön, 1984:104) there is in Schön and Rein's policy arena a similar actor who, as the head of an agency seeking to reform housing policy in Massachusetts, is described as being "dynamic, compassionate and politically savvy" (Schön & Rein, 1994:135). These actors, like Marshall's heroic expert designers and Lawson's architects, are presented as performing a key role in the process of achieving the goals set out for the team to achieve. Valkenburg describes this role as a "frame coach" or "reflection guard" who progresses the teams towards a successful conclusion (Valkenburg, 2000: 232). The importance of recognising where the designer is coming from is acknowledged by Hey (2008:241) who cautions against an overdependence on such a role within the design team without first considering their level of expertise.

The identity of the design team and its members can affect the way that the design progresses. The way that different members of the team communicate and share this identity, in terms of their disciplinary focus or their cultural backgrounds, is also relevant. In situations where the team subscribes to a normative or consensual approach they are expected to perform better. If this approach is missing it may be facilitated through the presence of an inspirational leader or other interventions that are designed to bring them together, or at least their shared understanding of what they are expected to do as a team. In all cases it is assumed by the researchers that there is an underlying motivation for the team to succeed in completing the task. This assumption is especially marked in artificially constructed experimental design settings (e.g. Cross & Clayburn Cross) but also seen in empirical studies of policy designers (e.g. Schön & Rein). At both ends of this methodological scale between constructed experiment and observed practice there is a recognition of the role of key actors and objects which appear to contribute to a shared understanding of how a design is seen to progress, how the design team is seen to be constituted and how well they succeed in the process.

When looking at parliamentary debates, which can be starkly partisan and antagonistic rather than motivated towards achieving a shared vision and a consensual approach, it will be useful to reflect on how design teams bring together potentially disparate interpretations of what they are doing based on the different perspectives of members involved.

2.4.2 The self identification of the design team

In a process related to Hey's (2008) development of a common metaphor noted earlier, Bryan Lawson found that design teams call upon their own precedents and in doing so promote an increased sense of shared identity between team members. This operates in the same way as Eckert's knitwear designers when they refer to previous season designs. Both precedents refer to complex sets of ideas in a kind of shorthand that is wrapped up in projects that they are familiar with. This helps the designers to develop a specific product but also to affirm their collective identity.

Lawson calls this affirmation a "schemata" that develops and contributes towards the establishment of group norms: Richard MacCormac's team of architects "collectively delight" in their own shared ideas (Lawson, 2004b:111). The way that teams identify with each other, Lawson suggests, allows them to quickly generate solutions that can be easily understood through shared precedents. In the context of design teams, the progressive development of a back catalogue helps the team to function, providing it with a repertoire upon which they can draw. In the case of Richard MaCormac's team it carries forward into the style of individual buildings that progressively contribute towards a group perspective and characterises their architectural practice.

Where different groups are brought together their different perspectives can create conflict. Lawson's observed this conflict in open plan office designs where the regressive behaviour of one group is regarded as a nuisance by others who do not share the same past or the values that have developed in the process (Lawson, 2005:245). These conflicts can become defining narratives of how a project proceeds. In her description of multi-disciplinary team practices in the Ford Motor Company, Walton (1997) repeatedly refers to the different collective identities of the teams of designers, engineers and executives and their failure to appreciate the different worlds in which each is obliged to operate.

Designers who work in teams. according to Bucciarelli (1994), develop and operate within their own object worlds. These worlds are marked out by the boundaries of different disciplines where different perspectives and ways of working create tension between the team members. Bucciarelli gives an example of how some groups of US engineers were resistant to the switch from imperial to metric measurements (ibid:78). The distinction between metric and imperial standards, Bucciarelli concludes, is tied up with the norms of different teams involved and can create a potentially unbridgeable cultural gap.

These differences between groups can have wider implications when misunderstandings arise through potentially impermeable boundaries that develop between groups who subscribe or belong

to different cultural identities. The output of the design process carries this hybrid cultural identity with it. A NASA project to land a probe on Mars in 1999 failed due to different teams of engineers on the project using different units of measurement. This loss of a $125 million spacecraft demonstrates how the cultural identity of a team can be followed through the lifecycle of a project and eventually lead to a crash site on another planet[11]. The cultural identity and aspirations of the design team can also conflict with a wider set of actors. In terms of end users, the conceptual devices of architects are not necessarily appreciated by the residents who are expected to live in them[12]. In terms of the client, the aspirational qualities of Utzon's Sydney Opera House were not fully supported by the public authority who originally commissioned it[13].

In terms of this thesis and its engagement with the parliamentary process this view of the design team as a culturally determined, self identified but contested group provokes a number of questions around the nature of the parliamentary design team: How is the parliamentary team constituted? What cultural identities might be observed within it and how far do these identities follow through the debate and what impact do they have on it? These questions inform the approach to parliamentary debate undertaken in Chapters 7 and 8 below.

2.4.3 The extent of the design team

The previous section drew together some recognition of the different actors that are involved in the design process under the guise of a design team. The team may be an individual designer, who can sometimes be an inspirational or iconic leader, but is more likely to be, as Jones suggested with his early predictions of modern design practice, a multi-disciplinary group of designers and others. The more varied the makeup of a team, the greater number of different perspectives are likely to be found within it.

The focus so far has been on the design team as it is constituted for the purposes of the design task in hand as observed in the studies referred to. This includes teams of students brought together to compete in design competitions, teams of architects observed in their offices, design meetings between a designer and a client and design lecturers who are imparting their design knowledge to their students.

There are other actors who may also be taken into account. Users and clients were briefly mentioned above. This thesis will argue that these other actors, such as the users, clients and other stakeholders should also be considered to be a part of an extended design "team" with various roles, connections and degrees of influence.

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[11] The NASA report into the failure of this project can be found online at http://mars.nasa.gov/msp98/orbiter/

[12] This was noted above in relation to the projects of Lynn and Smithson but can be traced further back to the work of their inspiration, Le Corbusier. Residents' dissatisfaction with the design of his 1926 housing project in Pessac led to extensive modifications to suit their own lifestyle requirements. See Boudon (1972) for this study.

[13] Yaneva (2012) and Flyvberg (2005) describe the wider context of the Sydney Opera House in terms of the controversies around the building of it and the various parties engaged in its design.

The design researcher can also be seen to play an implicit role in the process, not only in Bucciarelli's role as participant/observer but also in the way that they engage with, and report on, its representation and interpretation. This can be consciously acknowledged, as when Lloyd actively and creatively reinterprets what he finds in the data (Lloyd & Snelders, 2003). It can also be more implicit, as seen in Schön's (1984) interpretation of the MIT practice. More explicit roles are acknowledged by Lawson's (2005) notion of the controller of experiments which recognises some of the problems of participant selection noted by Dong et. al (2013), and the unavoidable interventions made by Bucciarelli's (1994) participant observer and Yaneva's (2009a) ethnographer in relation to how data is gathered about design activities in various scenarios.

The role of the researcher and their approach to data is reviewed in more detail in Chapter 3 below where the method employed in this thesis is described.

2.4.4 The designer and their client

The extent to which a designer's client is involved in the design process can vary considerably. A design solution can be tightly specified as an object that needs to be created for a particular purpose whereas in other situations the brief can be very open. The relationship developed during briefings between the designer and the client is seen by Paton and Dorst (2011) to be a process of reframing through which the designer draws upon their expertise to negotiate in a "contextual engagement" with the client. This process might be construed as a way of manipulating the client to accept the "more desirable" frames that the designer wishes to impose on the project (ibid:581). The process also creates a shared perspective with the client which embraces the wider contexts in which their design problem is based and from which alternative design solutions can be drawn. This involvement of the client in the process of designing leads to a more inclusive engagement with the creative process of negotiating between the problem and its solution.

Reymen, Dorst & Smulders, (2009) look for a similar process in their interpretation of a meeting between a designer and client, based on the common dataset from the seventh Design Thinking Research Symposia (DTRS7) which included meetings between an architect designing a crematorium for their client. In this context, where the solution has reached a certain stage of development, the possibility of negotiation of the problem and solution is less plausible. The authors refer instead, building on the earlier work of Dorst & Cross (2001) and referred to in section 2.2.5 above, to a bridging process across the boundaries between the distinct object worlds of participants. Their results also suggest that the definition of problem and solution in the "real-world" empirical data of design meetings is not as clearly drawn as in experimental settings. This last point questions the validity of the artificially produced design situations that many design studies are based upon and underlines the need for studies of design to access a wider range of real world, naturally occurring data.

In addition to this question of artificially created data, Reymen et al. explore several related ideas. They position the experimental notion of the design problem and the design solution within the real-world setting of the DTRS7 data, identifying the more nuanced events that they find there. This

also locates these notions within a later design stage than other studies, such as Schön's studio critique and Lawson's architects, who focus on earlier design stages where concepts are still being developed. In a more general sense, Reymen et al., with their regard for the client's input, also confirm the validity of considering a wider range of actors within the notional design team. Whether engaged in coevolution, reframing or boundary bridging, all parties are shown to be actively engaged in an activity that is considered to be a part of the design process.

Another DTRS7 analysis by Arlene Oak (2009) sees the role of the design client as a performance, that is jointly maintained by both the designer and their client. The client in the meeting studied is the manager of a planned crematorium in discussion with the architect. Oak suggests that the client calls upon a number of perspectives about how the crematorium is used in order to demonstrate their expertise in the field. In this way the client asserts their role but does so in a way that Oak describes as "a certain level of indirectness". When asked specific questions about critical aspects of the building, such as the widths of doorways or the dimensions of interior spaces, the client responds with stories about how people use the crematorium space rather than how much space she thinks that the crematorium should occupy. Oak sees this as a rhetorical activity on the part of the client who uses anecdotes rather than answers in order to provoke the designer into the role of "client-interpreter and decision maker" (Oak, 2009:58). In doing this Oak suggests that the client is empowering the architect to take ownership of the proposed design and to take decisions without being provided with a guide from the client. In empowering the designer in this way it is implied that the client is removing themselves from the design process, deferring to the expertise of the architect. However, at the same time that the client is managing the architect by handing over the ownership of the project they are also managing the design process in the way that they, anecdotally, bring other users of the building into the meeting.

In a final example, taken from the same DTRS7 meeting between the crematorium architect and his client, Goldschmidt & Eschel (2009) draw on a metaphor of theatrical production in their interpretation, echoing the notion of the performance proposed by Oak. Goldschmidt & Eschel consider that the client is assumed to be a part of the design team, contributing not only to the development of the project but also to building a positive team spirit through their use of humour. This is a more inclusive role than Oak allowed, who saw the designer and client in more separately defined roles, and supports the view of the design team as a group of self identifying individuals proposed by Lawson (referred to in section 2.3 above).

2.4.5 The use of rhetoric

The use of rhetoric in a design meeting was noted by Oak above as a way that the client interacted with their designer. Oak does not provide detail of what forms of rhetoric are used, apart from a participant's general indirectness in their answers to questions through the use of anecdote rather than the supply of information. The client is seen to be using a specific strategy in the way they answer questions in order to define the role that they are prepared to perform, the role that they expect the architect to perform and the roles performed by the eventual users of the building. This process directly complements the role of the designer who, as proposed by Paton and Dorst

(section 2.4.4 above) uses their own strategy to persuade the client that a proposed design was a suitable candidate for progressing. In Oak's performance of design both the client and the designer are rhetorically engaged in the meeting to achieve their desired outcome.

Buchanan (2001) considers the rhetorical function of the product that is created in *Design and the New Rhetoric* to be a "vivid argument about how we should lead our lives" (ibid:194). He presents the designer as a rhetorician whose technical skills support the development of the product's functionality, whose pathos for specific groups of individuals matches the product to its intended users and whose command of branding and aesthetics creates an appealing product that human beings will desire. These attributes of usability, usefulness and desirability are most easily recognised in the design of physical products but Buchanan is clear that they might also apply to his "four orders of design" (ibid:203) that encompass graphical design, product design, the design of activities and the design of environments. Just as designers engage in the creation of these things and in doing so can be seen to be rhetoricians, Buchanan also argues that rhetoricians who might engage in these same processes will contribute to the development and dissemination of design thinking.

Taken together these two rhetorical scenarios present a complementary view of how rhetoric and design interact. In the process of designing, participants of design meetings are seen to adopt rhetorical strategies for describing their own position and for moving the process forward. These interactions can be seen as a way of exploring and explaining what a design should be, what it should do, how it should do it and what it should look like as it does so. The result of this process, the design product in whatever form it takes, is then imbued with the results of that exploration, carrying through its own visual, formal and functional rhetoric a message from the designer, what Gibson (1986) calls affordances, to the user about how and why it should be used.

These affordances are not always explicit and the interpretation of what they are and how a design carries them is an area of extensive exploration, found for example in work on visual rhetoric reviewed by Buchanan (1985; 2001), Forty (1986), Lloyd & Snelders (2003) and Joost & Scheuermann (2006).

A methodological approach to the problem of how to extract this information relating to the circumstances of a design's creation and the intentions of the designers involved is proposed by Michael Baxandall (1985) in *Patterns of Intention.* Baxandall uses the Forth Bridge as an example of a design artefact that carries implicit information which he attempts to extract by referring to the circumstances of the problem which the Bridge was intended to solve and the nature of the potential solutions available to the designer at the time. This exercise proposes the Forth Bridge, and by extension any product of a design process, as a discrete object from which contextual information can be extracted. Although Baxandall creates a reasonably comprehensive view of the design process of the Forth Bridge it is difficult to validate, for example how he ascertained the details of steel girder technologies from looking at the bridge. The difficulties that Baxandall addresses and the questions raised in doing so suggest that while the final object is a useful

starting point for design analysis it is not sufficient to provide a reliable point of access to the contexts in which that object was created or the processes that were undertaken by the designers in order to do so. Design studies draws upon records of these processes and the UK parliament generates extensive records of its processes.

2.4.6 The use of objects

Bucciarelli's adoption of the notion of a boundary object that facilitates inter-group communication and Schön's sketches and drawings that facilitate communication between the designer and the situation are both examples of how objects can be associated with moving the design process forwards. For Henderson (1991), objects can perform multiple functions: as boundary objects that interface generally between different actors; as "inscription devices" that convey specific meanings between actors; and as "conscription devices" with which actors must engage in order to participate. Henderson was primarily concerned with the role of the object within engineering design teams but these concepts apply in wider contexts. The inscription device function reflects Adrian Forty's view of the design product as an object that conveys ideological concepts between the designer and their public (Forty, 1986:245). The conscription of participants is comparable to Michel Callon's obligatory passage points (1986) set up by researchers to engage their subjects. Prototypes, as a more generally recognised design object, communicate specific implications of various performance characteristics or aesthetic qualities. When tested these can also be seen to imply meanings and prescribe behaviour in the target user (Danholt, 2005).

The object in the design studio operates as a way of helping the designer to progress the design. When the object moves beyond the studio it takes on additional functions in relation to users, either intentionally as a part of reiterative prototyping or more implicitly in the way Kimbell (2012) sees the end user modifying the product in order to render it more compatible with the user experience. Certain engagements are potentially obligatory, for example where an engineering drawing is the sole source of essential information that participants will need to be able to understand the product. This can also be seen in terms of different stages in the design process where, for example, prototype testing can only take place between the object and the user and the user is expected to adopt certain roles, tasks and attitudes through their engagement.

All of these examples demonstrate the object performing a role for which it has been assigned, in ANT terms, a kind of agency. The object is inscribed by the designer but is not necessarily subject to their subsequent control. The user may adopt or reject the designers' intentions, the object may perform differently or be performed differently by different users.

An example of this performative aspect of the object is described by Albena Yaneva (2009b) where a security lock on a door in her university department is seen as a nexus for a complex series of design implications. It creates self-confidence in the user when they use the correct code. It generates a sense of community amongst the numerous users who have access to the code, even when they sometimes forget it. It provokes a sense of security that prevents users without the code from passing through the door. When the lock fails, a separate series of events are configured by

the engagement with technicians who fix it, administrators who review the security implications and staff members who are denied access to the resources that the door provides access to. The activity of unlocking a door becomes the point where a user engages with the designer's intentions, having been conscripted through their knowledge of the code and is affected by the institutional inscriptions with which the lock is imbued. Dependent upon both the lock's and the user's performance this event leads to another series of events that engage additional users and additional objects. Together the designer, the user, the object and the environment in which they are all brought together becomes a single point of interest at which a number of design activities converge.

Yaneva borrows heavily from Latour who uses examples of a self closing door (Latour, 1988) and a hotel door key (Latour, 1991) to represent similar concepts. When placed in Yaneva's design context this cascading collection of users, activities, objects and values represents a specific stage of the design process where different users arrive and depart in a given space to interact with each other and the objects in that space. This supports Kimbell's contention that when design is studied in this way it becomes difficult to circumscribe how and where the design process begins and ends. It is equally unclear who or what is to be regarded as an active participant in that process.

2.4.7 The client and the absent user

Another form of contribution to the design meeting for the crematorium described above is observed by Goldschmidt & Eschel (2009) as coming from the eventual end users of the crematorium. These off-stage actors comprise a potentially large cast of characters with interests in the outcome of the design meeting: this cast includes mourners at a funeral, administrative staff and municipal actors with wider responsibilities for the site. Although these end users were not present at the meeting, Goldschmidt & Eschel found that they performed, through the client, a role of "absent client" (ibid:329). This notion of the absent actor indicates how the membership of a design team can be extended to include participants not physically present in the room and also, in comparison to the more conventional view of stakeholders in the design process, not necessarily aware of the contribution they are making to the process or the fact that they are represented at all. In contrast, Oak finds the role of the end user more elusive, noting that the client at one point invokes their presence in the conversation but "is constrained not to report" their feedback.

The different interpretations of the role performed by these absent actors between the two papers compared here also indicate the difficulties that are inherent in studies of the design process. Even where the data is drawn from real world design situations, and thereby circumventing many of the problems associated with data collected from think-aloud protocols, experimental or ethnographic settings, the design process can be interpreted in different ways by different researchers.

Absent actors are referred to in ANT related research as implicated actors (Clarke & Montini, 1993). Alex Wilkie's (2010) ethnographic study of user-centred design considers these implicated actors as users in much the same way as Goldschmidt & Eshel's absent actors are potential users of the eventual building. The term "implicated" is more useful than "absent" since it not only

acknowledges the actor's lack of presence at the meeting but also their potential contribution to it. Both Wilkie and Goldschmidt & Eshel see hypothetical future users drawn into design meetings in order to inform the design process.

Kimbell's review of design thinking in terms of its wider practice (Kimbell, 2012) positions users and stakeholders at the centre of the design process. She observes the design process taking place outside of the traditional design studio where end users, in this case a pharmacy assistant using a test kit with patients, are seen to be modifying and reconfiguring products based on their own expertise and developing practice. This approach, recalling the post-production work of residents in Le Corbusier's houses in Pessac, situates the design task away from the experimental settings of earlier design studies and within the broader context of how and where the design object will be used.

2.4.8 Conclusion: a network of design

This section has identified a number of different individual's perspectives that can be seen to have an impact on how a design process moves forward. These perspectives, starting with the designer and the design team and then adopting a wider view on what might be construed as the design team, have led to the notion of what might be considered to be a network of design in which various actors and objects are assembled through different levels of participation, implication and rhetorical engagement. These various views of what can be considered a team, how that team is constituted, and how its perspectives are shared and disseminated, appear to be an important aspect of design and will be called upon to inform a design analysis of debate.

2.5 Conclusions

This chapter has served several purposes in the thesis. The broad and disparate field of design research has been narrowed to a particular view in terms of the shifts in perspective that take place during the design process. Successive applications of these shifts have been seen to take design progressively beyond the conventional context of the designer in the design studio towards the policy maker and the politician. The chapter then identified a number of shifts in perspective that have been employed in design studies or observed in design studios (or simulated versions of design studios). Specific focus has been placed on the use of framing and then the use of precedent as a design specific form of framing. This exploration of framing and precedent have led to a recognition of the importance of the values that are carried into the design process through the use of these frames and to a recognition that the identity and makeup of the designer and the design team is likely to be a relevant factor in the work described in the following chapters. Finally, by drawing together some connections between design and ANT that can be traced through design studies, a means of bringing these various elements together has been identified that can accommodate a range of different actors and contexts.

It has not been possible to identify previous studies that have developed specific engagements with parliamentary debate in terms of a design analysis. This supports the potential for the

proposed study of parliamentary debate from a design perspective to make a novel contribution to the discipline of design studies. This lack of directly relevant literature also accounts for the broad scope of this chapter's review of design concepts compared with a more conventional literature review.

2.5.1 Framing and shifts in perspective

Reviewing the literature through perspectives, frames and precedents has presented a number of issues that are worth highlighting at this stage, partly to recognise the limitations of the review but also to present a wider perspective in which the review was undertaken. Firstly, as noted, the field of design studies is broad and disparate and draws upon many other disciplines in order to develop its methodologies and validate its findings. The use of framing, to give an example from this review, is presented as a fundamental aspect of the design process in the work of Schön, in the work of other scholars who have built upon his work and also as a more general tenet of design thinking. And yet, the concept of framing is well established in the social sciences as a process that can be observed in various scenarios that are not specifically connected with either the design process or research undertaken into the design process. Moreover, references made to framing in design research, and Schön's is a case in point, do not always recognise this wider use of framing or earlier work from which it has been developed. In the light of this use of framing in design as a broad and loosely defined concept, it seems necessary therefore to clarify what is meant by framing in this thesis. Building on the general view of design as a shift in perspective outlined at the start of this chapter, the use of framing is seen to be a specific example of when such a shift is employed. In this sense, framing acts as an attempt to impose a different perspective on the way that a given task, object or debate is proceeding. The use of precedents, as described in section 2.3 above, represents a specific form of framing where this shift in perspective can be traced to a specific source that is often drawn from previous experiences which are shared by those who are involved in the process.

2.5.2 The generation and utility of experimental design data

Another aspect of the design literature that has been regularly encountered during the course of this review is the nature of the data that is generated and used during studies of design. The setting up of design tasks in experimental settings is a common methodology employed in design studies. These studies, while attempting to simulate a design process are constrained by the availability and identity of the participants they can enrol – a limitation acknowledged in some of the studies referred to above. While there is some recognition that student and expert designers work in very different ways, and a number of studies have undertaken to quantify those differences, there are numerous other characteristic of the participants in design studies that are not recognised. Gender, as a very obvious example, is noted in passing but the level and quality of a given participant's education, cultural understandings, previous experience and, in the case of teams, previous experience of working together, represent a large amount of information that is perhaps difficult to capture.

The design activities that are studied in these experimental settings are seen as a kind of context free cognitive process that can be dissected, analysed and identified for future reference. These studies are also based on the experimental solving of artificially created design problems. The artificial nature of the tasks that are set for participants to complete present an additional variable that cannot be readily addressed within the study since the study is itself focussed around the solving of those artificial tasks. Many of these design studies appear to be intrinsically problematic: participants are selected from a limited pool of possible subjects and the identity and history of the participants does not appear to be known. This highly individualised and often small sample size of subjects makes general conclusions about the nature of designing difficult to extrapolate. Where participants are asked to undertake artificially created tasks in artificial environments that are created and controlled by the design researchers this leads to further limitations on any claims that might be made from the results of such studies.

Bearing in mind these limitations, the construction of knowledge that has evolved through the empirical work of design studies is therefore problematic where successive papers build on the findings of their predecessors who have drawn conclusions from these clearly limited experimental circumstances. Arguments are based on well defined and clearly presented sets of evidence but the sources of this evidence and the nature of the experiments in which it is created are limiting and limited.

The DTRS studies, of which several examples are cited above, circumvent these problems by using data drawn from real world design situations. This provides a more reliable representation of the design process from which researchers can draw more solid conclusions. A single design meeting may be analysed by any number of academics, using any number of different analytical methods, and could generate any number of different interpretations of what is taking place within the design activity presented. The wider contexts of participants are not necessarily known or examined but it is possible that such contextual information could be sought and circulated to the researchers and that these contexts, particularly where they relate to real world designers, would present valuable additional material on which the research could be undertaken.

Such rich and varied interpretations of the same meeting produce findings that demonstrate the flexibility and scope of what can be achieved within the discipline of design studies. But this approach to data is also problematic: each academic's interpretation presents a potentially valid reading of a single meeting but when a collection of them are read together the multiple readings of the same meeting appear to validate each other. A single utterance or exchange, that might signify a single individual's way of working, can become reified in this process as successive readings of the same event begin to represent a more archetypal design event.

2.5.3 Wider contexts in design studies

For the reasons discussed in the previous section, the study of design would benefit from access to more varied datasets. These would be based on more varied design activities, undertaken by a broader range of participants and whose contributions to the activity can be, if required,

contextualised within their own historical practice and situated within the specific environment in which the activity is taking place. Recent work has begun to address some of these issues. In their study of design projects as “socio-material assemblies of humans and artefacts”, Binder et al. (2011), attempt to account for the wider contexts in which design takes place. They do this by taking a considered approach to the environment in which design activity occurs and by acknowledging the agency of non-human participants within the design process. This approach develops an extended view of both the designer and the design studio as they account for a wider participatory version of a design team and a more fluid boundary between where the design activity takes place and when it ends in relation to the development and dissemination of the product of the design process.

Binder’s approach presents a more flexible approach to the design process and potentially a sharper focus on the context in which the design activity to be studied takes place. What is noticeably limiting in their study is its focus on the work of design students and any additional participants that the students might be able to conscript into the process. This makes their studies useful in terms of how design is taught, and complements the work of Albena Yaneva in *Mapping Controversies* (Yaneva, 2012) whose description of work with her own students on the controversial contexts in which architecture is produced presents a similarly extended view of how design education might operate. Yaneva is a little polemical about her contribution to the more traditional teaching paradigms described by Schön as she “leaves Petra and Quist for a while, arguing over the sketch and reframing problems” to follow her own students as they use the internet to follow wider controversial histories of the built environment. However, in both Yaneva and Binder, this limitation to the pedagogical development of design does not help to address some of the existential issues raised above in relation to more general design research and how those wider contexts might be better acknowledged within the broader study of design.

2.5.4 Sensitising terms and assemblages in real world data

A broader view is developed by Wilkie and Farias (2016) in their proposed research programme for design studies which builds on the ANT tradition of laboratory studies as a model for a more situated exploration of design activity. In this view the design studio is identified as a “centre of synthesis” (Wilkie & Michael, 2016:38) where any number of actors, objects, contexts and processes are brought together and understood to be important factors in the work of the design studio as a place where innovation and invention contribute to the construction of realities yet to come.

The design studio as a laboratory, and the activities that take place within it, is closer to the view of design represented in DTRS data with its real world settings than that studied by either Schön or Yaneva in their respective educational establishments or with the design tasks found in experimental settings of design studies. The scope of the design studio is, in the same collection (Hennion and Farias, 2016) extended further by proposing that design studies focus beyond the production of theories based on successive case studies, an approach that can be readily followed in the pages of, for example *Design Studies*. Instead research should focus on the gathering

together of studies of the design studio into a “studio of studios” (ibid:81) which provides a broad data context from which a concrete understanding of studio practice might be drawn.

This shift in focus extends the utility of the DTRS model, which uses a single dataset to bring together of multiple interpretations of the same studio scenario, by proposing that multiple studio scenarios be brought together to create a wider range of sources from which design activities can be accessed, viewed and compared. The view of the study of design presented by Wilkie and others offers two challenges: how to identify appropriate and manageable sources from the extensive amount of real world data generated by this “studio of studios”; and then how to approach that studio as a data source in order to acknowledge the various contexts in which the activities take place.

The first of these challenges is addressed in this thesis as it sets about analysing parliamentary debate as a design process. The rich source of data available in the parliamentary archive will be presented in the chapters that follow. As the activities recorded in these archives are construed as, or compared with, the kind of activities seen in design studios, this explores the possibility that the collection of data proposed by Hennion above may already be in hand. In this way Parliament may be seen as that studio of studios, certainly in terms of the gathering of together data sources that might be used to examine the actors, objects, contexts and processes that take place there.

The second challenge, examined in the next two chapters, concerns the question of how to approach parliamentary process and the data that it generates. To clarify an earlier thread connecting ANT with design, and the view of the design studio proposed above as a centre of synthesis, the notion of the assemblage becomes increasingly important. It is not employed here as a post-structuralist philosophical construct used to argue for a specific ontological reframing of Parliament or design. It is also not used as a means of formally privileging non-human objects within a given context nor as a means of tracing the temporal framing of those contexts within a formal sequence of ephemeral events. All of those uses are informative and contribute to the selection of the use of the term. Moreover, the notion of the assemblage is used here, and drawn upon extensively in Chapter 8, as a way of bringing together notions of an extended design team that can be traced through successive stages of the parliamentary process. It inherits from ANT an agnosticism about the potential inclusion of non-human objects should they appear to be relevant and it does potentially apply to different events at different times but these are not its defining characteristics. It is used as a term and a device to represent the collection of what is found, by this researcher, to be having an effect on the proceedings at the time at which those proceedings have been observed.

A final observation, based on the experience of reviewing a broad collection of perspectives found in the design literature referred to above, is the need to maintain a flexible view of what characterises design. This is useful in part because the study of design is, despite its many knowledge claims and evolved methodological perspectives, a disparate field that requires a flexible approach for the researcher to be able to work with the concepts it generates. This

approach also reflects the attitude adopted here that treats the concepts from design identified in this chapter as a set of sensitising terms, a notion also borrowed from ANT. These terms are progressively considered as the thesis develops to be interpretative tools rather than elements of a prescriptive model to be sought out from data and then used to support a unifying theory of design or an absolute pronouncement on the nature of parliamentary debate as a design process.

3 Parliamentary debate and the design process

The previous chapter identified a number of characteristics of design research and design practice that will be used in this thesis as a conceptual framework for the empirical work that follows. Before proceeding to describe that work (in chapters 5 through to 8) this and the next chapter consider the methodological underpinning of the study as a whole. This chapter describes the parliamentary process, making a number of structural comparisons with the design process. It then reviews a number of design research methodologies that inform the methodology used in this thesis.

3.1 A comparison between parliamentary process and the design process

In the UK, Parliament is a place where the problems of a nation are brought to the attention of the people and their elected representatives. These representatives participate in a parliamentary process where they exercise their democratic authority to propose, debate and decide upon the solution to those problems.

3.1.1 The parliamentary process

The parliamentary democracy of the United Kingdom has been assessed as one of the most open and transparent in the world[14]. This is measured in terms of access to data, which can be made available in many forms, and includes the open access to debates that take place in both houses in this bicameral (two chamber) system. The UK Parliament generates and publishes a large amount of information that records what it does and how its decisions are made which includes text reports of the day's business and live video broadcasting of debates as they take place.

The problems that are presented to Parliament can be contested and controversial. The proposed solutions to them represent a specific version of the nation's future which is informed by the vision and values of the participants and, perhaps, the people they represent. From this perspective Parliament can be seen as a place where the country is being designed, both physically for example in terms of the proposed connections between cities along the route of a railway line, but also ideologically in terms of why and where these connections are to be made. The exploration of this perspective is the empirical work of this thesis. The rest of this section will describe the parliamentary process and how the debates that take place can be viewed as a design process.

There are a series of formal stages through which a Bill must pass to become UK law. The overall process is shown in Figure 3.1 below.

[14] http://barometer.opendataresearch.org/report/summary/

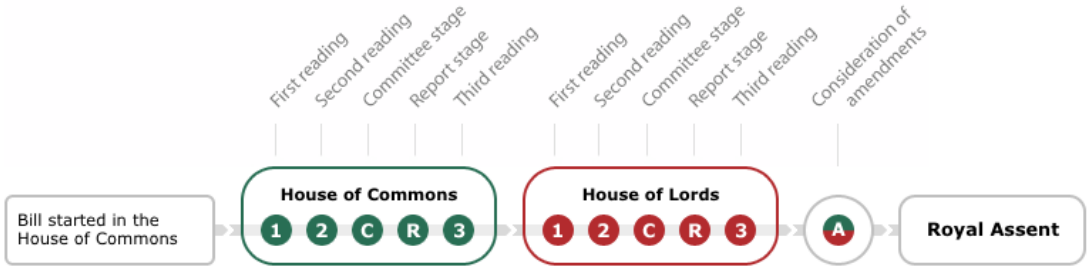

Figure 3.1: The passage of a bill through the UK Parliament. ***I****mage: Parliamentary copyright*

A Bill is usually first presented in the House of Commons at a "First Reading". This is a formality that announces the existence of the Bill. The First Reading does not require or allow either a debate or a vote but gives advanced notice of the "Second Reading" where the principles behind the Government's intentions for the Bill are debated. The Second Reading represents a key stage in the process where the Government presents the reasons why the Bill is necessary along with the details of how its proposals will be implemented. The Second Reading ends with a vote to decide whether or not the Bill should proceed further.

If the Bill is approved at the Second Reading it is then referred to a Committee stage where a small number of MPs review the proposals. A parliamentary Committee is empowered to "send for persons, papers and records"[15] to collect together and examine any evidence deemed necessary to inform the Committee's review of the Bill and to formulate any amendments to it. The Bill, with any proposed amendments, is then returned to the debating chamber for its "Report Stage" where any amendments are debated and voted on by the full assembly. As part of the same session, the amended Bill is then subjected to a "Third Reading", which is a further opportunity for debate and a final vote that determines whether the Bill should be passed onto the House of Lords for further scrutiny through a similar process to that undertaken in the Commons.

The House of Lords is a separate chamber, referred to as "the upper house", populated by a different set of participants who, as Peers, are brought together under different circumstances. Most members of the House of Lords are political appointments rather than being elected by, and accountable to, the general public. The House of Commons is the main executive assembly in the UK Government and although the House of Lords can propose additional amendments its power of veto has been limited since the early twentieth century.

When both houses have approved the Bill it is formally approved by the monarch and becomes an Act of Parliament. An Act of Parliament confirms the status of the proposals contained in the Bill as a part of the UK law and represents the necessary, formal permission, for those proposals to be progressed. This could be the passing of laws that criminalise certain activities, that restructure how parts of the country is governed, how parts of the Government are financed or, in the case of a

[15] The role of parliamentary Committees is described and reviewed in *Select Committees: evidence and witnesses*, SN/PC/06208 online at: http://researchbriefings.files.parliament.uk/documents/SN06208/SN06208.pdf

railway, it represents the granting of planning permission and rights to compulsorily purchase land and the approval of funds to proceed.

The stages in the parliamentary process have remained largely unchanged over the two centuries that separate the two debates that will be referred to in this thesis. The only relevant difference is that in the nineteenth century the role of the House of Lords was more prominent and included the power of veto to prevent a Bill from proceeding.

3.1.2 The parliamentary process and the design process

Before moving onto the specific debates to be studied in this thesis it is useful at this stage to reflect on the parliamentary process as described in relation to the design process and how both processes can be represented. The models considered above in Chapter 2, and specifically those based on Schön and Dorst's work on framing, were selected to be used for the study of the detailed interactions found within parliamentary debate. This section looks at more general representations of the design process to provide a broader view of the process in which those design activities take place, and as a comparison between this broader view and the wider context in which individual debates take place within the parliamentary process described above.

In contrast with the descriptive models of design activity, such as the Valkenberg and Dorst's NFMR referred to above (Chapter 2.2.3), prescriptive models demonstrate how design should be done, rather than describe what it looks like while it is being done. The NFMR model, as a description of design activity taking place at an interpersonal level of interaction, provides a design perspective with which to approach the detailed analysis of a parliamentary debate. On the other hand, a prescriptive model provides a broader view of the process within which the debate takes place and the stages through which the design and the designer pass in order to proceed. This distinction is helpful as it marks a difference of scale between the interactions of the actors involved and the stages of the activity which they are involved in.

A large number of prescriptive models of the design process have been developed and disseminated through the design literature and in the commercial domains of business and management. Much work exists on documenting, analysing and creating such models. Nigel Cross dedicates a chapter to design models in *Engineering Design Methods* (Cross, 1989), which are used to describe how design activity is seen to be done and how it might be done better. There are many other sources which include complex models of factors that affect the success of a project (e.g. Hales cited in Wynn & Clarkson, 2005), more abstracted models of conceptual patterns such as Gero's (1990) Function-Behaviour-Structure ontology, procedures to be followed when producing a specific product, often for a specific company, such as the Ford Motor Company's World Class Timing stage-gate model (Whitney, 1994) or the more general and widely adopted model produced by Pahl and Beitz (1996).

Dubberly (2005) extends Cross' view of engineering design models to incorporate perspectives from the fields of operations research and cybernetics. The resulting descriptions of over 130

design models demonstrates similarities between those three fields and range from a simple archetypal overview of key stages in the design process, such as an input-process-output flow diagram to complex iterative cycles of design which capture multiple stages in over 200 steps (Dubberly, 2005).

As shown in Figure 3.1 the progress of a Bill through parliament is considered to be a series of stages, a linear progression which begins with the First Reading of the Bill and ends with the Royal Assent of the Act. This is a simple series of stages which can be considered as a series of input-process-outputs and as such represents an archetypal design process. For the purposes of this structural overview of the process it is not necessary to attempt to map one of the more complex models of design onto this process. However, there are some characteristics of the parliamentary process represented here that can be related to some more detailed, but still generic models of the design process.

Dubberly, for example, includes an expanded version of the simple I/O model to account for the kinds of activity that might take place within them. The 4D model, “Define, Design, Develop, Deploy” (Dubberly, 2005:61), adds a descriptive layer to what takes place in between each of the input and output stages although the recursive nature of the second stage suggests that this model might be problematic as a simple and generic tool for comparison.

The Design Council studied a number of company’s design processes to inform the development of their “double diamond” model of the design process which follows Jones (1970) general flow of design as a series of convergent and divergent stages (Figure 3.2).

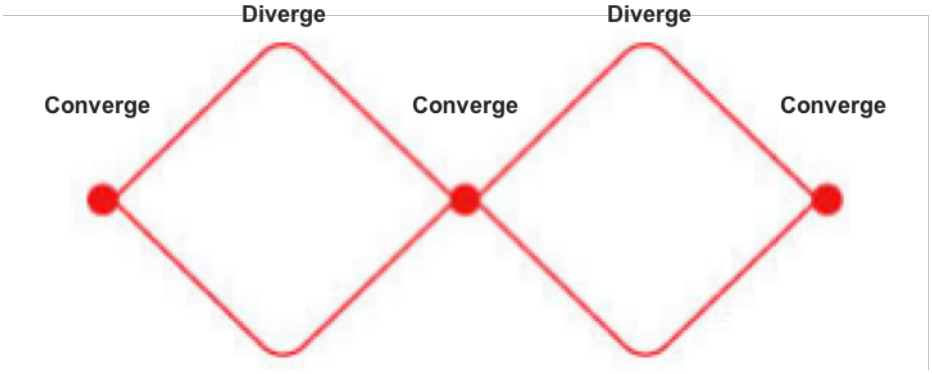

Figure 3.2: The Design Council double-diamond design model broadly reflects a pair of the more generic stages of converging and diverging activities noted by Chris Jones in his Design Methods (Design Council, 2005; Jones, 1970)

Taking the double diamond as a general description of these stages provides a simple visual tool with which to map the parliamentary process as a design process. Used in this way, without the limiting factor of labels, which as seen in the 4D model can be problematic, this model can be applied across any number of stages throughout the process. As a simple, iterative visual device the double diamond can also represent a generic design process without reference to the ultimate

point of convergence at which Dubberly notes “hopefully, the ‘miracle’ of transformation occurs” (Dubberly, 2005:22). The notion of transformation is useful and relates to many of the points described in later sections but the notion of the miracle is not developed in this thesis.

The parliamentary process can be mapped onto this structure where the Bill appears in an initial stage of convergence during its first reading and publication. At this stage the principles are brought together in a single document by the Government in which the project is described. This is followed by a divergent phase as these principles are subjected to the scrutiny of the members of the House of Commons who bring their wider perspectives to the debate. The Bill is then brought to a vote where these perspectives are in effect converged into a binary yes or no decision about whether it should proceed. The process diverges again when the Bill passes to the Committee stage where a wider collection of viewpoints are consulted. These converge once again, this time into a number of amendments that are voted upon by the Committee and presented with the Bill as another point of convergence. The Bill, as amended is then subjected to a Third Reading where again a wider group of MPs engage in another divergent stage, although as a Bill is rarely subjected to significant modification at a Third Reading this divergent stage has less potential impact on the proceedings than those that precede it.

This mapping of the double diamond model of design onto the parliamentary process is shown below in Figure 3.3. The full process is repeated again in the House of Lords before the Bill is then finally, when a vote is taken to approve it, converged into an Act of Parliament at which point it is locked into its final form and becomes part of the legislation of the country.

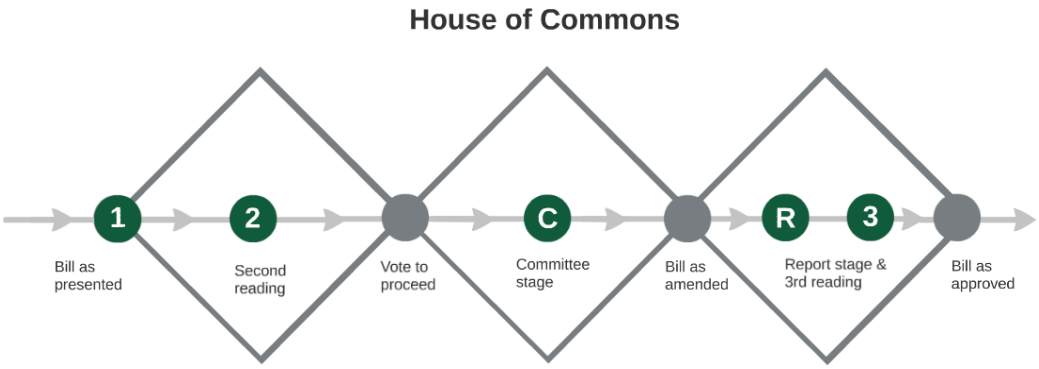

Figure 3.3: Stages of the parliamentary process shown here as elements of a repeating series of divergent and convergent activities. Based on the Design Council’s double diamond model of design.

The iterative parliamentary version of the double-diamond, shown in Figure 3.3, represents the progress of the Bill in the context of the range of participants involved and the range and contrast of different perspectives that might be brought into the process at different stages. However, it doesn’t account for the specific stages of the parliamentary process which determine how the Bill progresses from one stage to the next between these different groups of participants. This progression, marked by the dots in between each diamond, can be compared with a stage gate

model of the design process which has become an established prescriptive model of design used in various environments to ensure that a product meets specific criteria before progressing to the next stage of development.

The stage gate model provides a simple view of how approval is sought and documented, usually from senior management and is implicit within many of the design processes described by Dubberly, is an explicit feature of the Ford World Class Timing model and is further explored by Cooper (1994) in the context of new product development.

Where this development involves high levels of investment, such as when moving from a prototype car into production, then these stages are carefully controlled by senior members of the design team. In the parliamentary context the product is most clearly seen to be the Bill, which as a piece of legislation, must be seen to meet the approval of MPs responsible for its scrutiny.

This view of the process is represented in Figure 3.4 below, which expands the points between each of the diamonds in Figure 3.3 to reflect the mechanism taking place. The votes that are taken at the end of each debate, either in the full house or in Committee, are effectively the gates that control the progress from one stage to the next and these votes, like the decision in a design process, are cast by MPs who are the most senior, elected decision makers in the country.

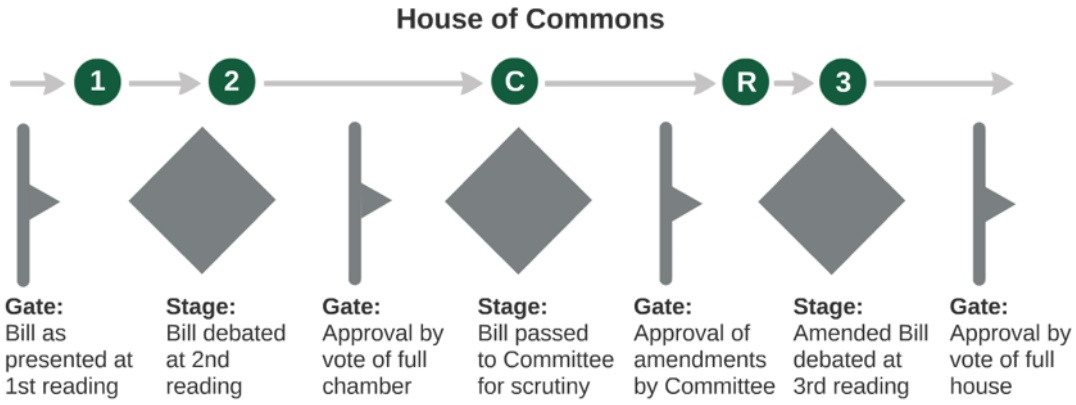

Figure 3.4: The parliamentary process shown as a stage gate process. Here Members of Parliament, the most senior elected decision makers in the country, engage in a formal sequence of approval for a Bill as it passes through its parliamentary stages.

3.1.3 Conclusion: The structure of Parliament and the structure of design

The broad comparison made here between the parliamentary process and the design process, as represented by two established models of that process, provide a structural background for the detailed analyses that follow. At this structural level each stage that a Bill passes through can be seen to have an equivalent in a design process.

The example shown, of a Bill passing through the House of Commons, could be extended forward to include the subsequent, similar stages that the Bill would pass through to gain approval from the

House of Lords. It could otherwise be extended backwards to account for earlier stages in the development of a given project that have taken place prior to the Bill being presented. Taken together, a different scale could be used to present the whole process of developing an initial idea, perhaps as a policy statement in a party manifesto to its eventual delivery in the field.

The analysis in this thesis however focusses on the Second Reading and Committee Stage of a Bill passing through the House of Commons. This is to allow enough space to be able to focus on the detailed interactions and contexts of a Bill moving through Parliament stages and at the same time to account for the context in which those stages take place. Before providing more detail of the context of the Bill in question, and the High Speed Rail project that it proposes, the next section focusses on the more detailed aspects of the design process that take place within the stages described above and how these more closely observed activities can be approached from a design studies perspective.

3.2 Approaches to the study of design activity

Studies that undertake detailed analysis of design activity draw upon various kinds of data and ways to analyse it. This section reviews a number of different studies that have used different types of data sources in a number of different ways. This review, drawing on some of the literature already introduced in Chapter 2 above, is used to identify an appropriate methodological approach to the data and method of analysis that will be adopted in this thesis.

3.2.1 Interpretation of the design object

When the design process has been completed, there often is no access to the designer or the process they undertook. In response to such a situation, Michael Baxandall (1985), as described above in section 2.4.5, approaches the finished artefact as an object of study. This is an approach of design history, where access to the design process my not be possible and the object can therefore only be observed in isolation from the process of its construction. The object is used as a focal point for a re-enactment of the designer's intentions. This re-enactment is drawn from a detailed description of the objects and the resources that were used, or not used, in the creation of the object studied. This kind of creative interpretation of the design process, again using the object itself as a primary data source, is also employed by Lloyd and Snelders who recreate several versions of Philippe Starck's design process in order to speculate on what conditions may be required to create a successful design object (Lloyd & Snelders, 2003).

A study of the debate that accompanies the development of an infrastructure project can assume that the railway when built would represent the conclusion of the design process. The nineteenth century railway is available as a designed object of study, but construction of the HS2 will not begin until at least 2017 with an estimated completion date of 2026, some considerable time after this thesis is to be completed. Although this makes a meaningful, speculative reinterpretation of the railway itself impossible, there are other aspects of the debate that might be considered in a similar way. As debates proceed, participants verbally construct images of what the railway will be, how it

will be run and how its users will engage with it. These descriptions of future objects are themselves speculative, as is any interpretation of them. Where they appear to contribute to the debate they will be called upon to contribute to the analysis of it.

3.2.2 Ethnographies of the design studio

Another approach to design data is to adopt an ethnographic stance. Albena Yaneva observes the creation of objects that are yet to be completed in her study of Rem Koolhaus' studio practice (Yaneva, 2009a). She studies the designing of a building and the various objects that are created to support the process, from an ethnographic stance, "scribbling hectically" in her notebook as events take place around her (ibid:9). In a different study, Yaneva (2009b) observes the function of a door in her university. Here she is, as did Latour (1992) in his car with his seatbelt, adopting an auto-ethnographic approach, observing her own responses to activities that extend beyond the original design process to include future encounters that may take place between the object created, the users of the object and commentators who study the object and how they are used. Objects that perform various functions within the design process are recognised by Bucciarelli (1994) in his study of designers. As a participant observer he also makes his own contribution to the design meetings and the construction of the object that is being produced by the designers and engineers that he studies.

Unlike in the case of Yaneva and Bucciarelli, there is no scope in this PhD project for participant observation within the parliamentary context since participation would require election to Parliament, but an ethnographic approach to Parliament has been employed in other studies. Although not attempting to bring design into her analysis of Parliament, Emma Crewe (2015) undertook a significant ethnographic study of the House of Commons, which provides a useful additional source of data, albeit mediated through the lens of the researcher, about how actors participate in the parliamentary process. Another ethnography of the European Parliament (Busby, 2013) provides additional comparative views on a similar environment. Both of these ethnographers focus on what Goffman (1959) describes as the "backstage" routines of the actors involved in the parliamentary process where actors perform and rehearse in private before entering the public stage.

In contrast to these studies, this thesis focuses on the "frontstage" activity where debates are openly performed under the public gaze. This focus permits a more direct comparison to be made with the kinds of design meetings analysed in design studies and that can be supported by documentary sources, such as transcripts of meetings. Such sources are more closely aligned to those used in design.

3.2.3 Protocols and transcripts of designers thinking

A common practice in the study of design meetings is the analysis of transcripts of meetings, which provide a record of the interactions taking place between team members, and of think aloud protocols which attempt to capture the design process from the perspective of the individual designer. Donald Schön's exploration of design as a reflective practice is based on his reading of

transcripts of videos made of studio critiques between architecture tutors and their students. Although these transcripts have been shown to be problematic in terms of how they were sourced and the context in which these sources were produced (Mewburn, 2009) they have provided the source material for one of the most cited design sequences in the literature (Chai & Xiao, 2012).

Schön's source material provided a detailed description of how an expert designer explains their understanding of design to their student. For Schön this material offered an insight into how the designer thinks. The process is explicated through the tutor's demonstration of how he thinks a design ought to proceed. This is achieved without the complication of having to ask them to explain themselves either while the activity was taking place in the form of a think-aloud protocol, or afterwards in interview. Indeed, for Schön, who borrowed the original material from another research project, it was also achieved without having to set up an experimental situation from which to obtain the protocols. The use of parliamentary records in this thesis provides a similar means of access to data which is being produced without any intervention from the researcher.

Think aloud protocols are recorded and transcribed to allow detailed explorations of how and what the designer might be thinking while they are designing. Gabriela Goldschmidt recognises that protocol analysis transcripts are both difficult to create and difficult to interpret (Goldschmidt, 2014:33). Protocol analysis is, Goldschmidt asserts, of limited use beyond the fine grained short sequences of design activity that contributes to the cognitive functions and flow of design that are represented in her Linkographs. There are also questions raised about the veracity of such protocols as a record of what the designer is thinking due to the context in which the designing is taking place and the processing that is required by the designer to verbalise their response to it (Goldschmidt, 2014:28). Much of what takes place in parliamentary debate can be interpreted as set piece speeches punctuated by interventions and ad hoc responses to them. These prepared performances are quite distinct from the kind of accounts that are provided in think-aloud protocols which would, in any case, be impossible to create in the parliamentary debate setting. However, it may be possible to consider the debate as a kind of thinking out loud of the democratic process and the principles and activities through which this process has been constituted.

3.2.4 Interviews with designers

Another research approach to gathering design data is the direct engagement with designers in the form of expert interviews. This approach has informed some seminal studies of design. When Bryan Lawson explores the identity of the design team in an architectural practice (Lawson, 2005:251) he is sitting with Richard MacCormac in his office chatting, architect to architect, and at the same time noting the interactions that take place around them as they talk. However, Lawson is aware that his interviewees may not be telling the truth (ibid:45) and Darke (1979:40) also reports that one of her architect subjects refused to engage with her questions or the area of interest that those questions were attempting to address. These two examples point to a problematised view of the interview which Nunkoosing recognises and describes as a constructed performance between two actors (Nunkoosing, 2005). The identity of both actors, the interviewer and the interviewee, affect how the reflective construction of experience is recreated both during the interview itself and

its subsequent reconstruction by the researcher. Additional questions around interviews relate to the distinction made between frontstage and backstage where, in the interview situation, it is difficult to determine the boundary between the stage, the performer and the audience.

3.2.5 Studying design team meetings

Design meetings can be studied in artificially constructed environments in which subjects, often students, are given a design task to fulfil. There are a growing number of this kind of study, many of which can be found in the pages of the *Journal of Design Studies*. These are studies of artificially created experimental design tasks whose authors sometimes recognise the limitations that are inherent in the selection of subjects and the recreation of a real-life design environment within an experimental setting.

This artificial construct is avoided where the researcher has access to design activities taking place in real-world situations. This form of data collection is particularly well demonstrated in the DTRS7 where video recordings and transcripts of real-world design meetings have been collected and provided to researchers as a common dataset. This form of data collection still represents an intervention in the design process, marked by the presence of the researcher and their recording equipment but provides a part solution to the methodological problems that characterise the artificially created design experiment. The recordings of design meetings created by DTRS, in text and video, parallel those produced as a record of the UK parliamentary process. The latter is different in that the record is created as an intrinsic part of the process, the recording equipment is part of the fabric of the building and the meetings always take place in the same debating chamber. These points of difference mean that the process of data collection in the parliamentary context requires less intervention in the meeting itself and presents less of a methodological problem than those recognised by other design studies.

3.2.6 A design approach to the study of debate

To undertake an empirical study such as that proposed in this thesis it is necessary to identify activities or perspectives from design studies which provide a suitable match for the kind of activities found in parliamentary debate.

These perspectives will be applied to parliamentary data and so need to be readily applicable to situations outside of their original setting. This means they are likely to comprise of discrete elements that can be isolated and deployed. These perspectives are initially used to identify activities taking place. They are therefore likely to be based on descriptions of how design is done rather than prescriptions of how it should be done.

In the context of a parliamentary debate taking place between any number of participants, the design perspective would be best drawn from descriptions of design that takes place in teams rather than individuals. Also, in the same context, relevant design perspectives are likely to be drawn from studies that describe design as an observed activity rather than studies that focus on purely cognitive aspects of design thinking.

The starting point for this thesis from which this design perspective will be developed is the seminal work of Donald Schön. Schön's notion of reflective practice, and the stages he described as comprising that practice work, informed a series of subsequent studies. An operationalised version of these stages, developed by Valkenburg and Dorst (1998) present each stage as a discrete element drawn into a narrative and accompanying visual model of the design process. This presents a simple model with which to test the proposed methodology for this thesis. The context of this model within design studies has been identified in Chapter 2 above. An empirical application of it to data is described in Chapter 5 below.

Subsequent perspectives, adopted in later chapters of this thesis, are also sourced from the literature of design studies, but each is refined as the engagement with the data continues and conclusions are drawn from this engagement. As this process continues the collection of design perspectives do not accrue into a single pattern of what that design perspective might be. They are instead maintained as a collection of "sensitising terms" which, in a similar fashion to Mol's description of ANT, add "layers and enrich the repertoire" (Mol, 2010:261) of ways to view and analyse debate and design.

3.2.8 Conclusion: a methodology

This thesis seeks to identify design activity taking place within parliamentary debate in order to answer research questions on how insights from design studies can inform an interpretation of activities that take place outside of conventional design environment. This chapter has made a number of comparisons between the design process and parliamentary debate as a way of setting out a broad framework of conceptual considerations about the nature of parliamentary debate and its relation to design.

This broad framework, based on evident connections between debate and design, provides a background against which the following research process is proposed:

1. Identify an activity or group of activities that have been used in studies of design as a way of describing, exploring and interpreting the design process and that might be used as a method of approaching parliamentary debate as a design activity. This stage of the research process has been described in Chapter 2 above. Specific methods will be described in more detail in the empirical chapters where they are applied.
2. Identify accessible and appropriate data sources from the parliamentary archive. This stage will be described in Chapter 4 below.
3. Make comparisons between design activities identified in stage 1 above within the data source identified in stage 2. The use of historical sources from debates of earlier, more constrained, infrastructure projects provides a preliminary study with which to test this stage which is investigated further in Chapters 5 through to 8.
4. Review how this analysis of debate from these perspectives of design generate insight into the debate and how these insights can contribute to our understanding, and ongoing study, of the design.

Clear comparisons between design and debate may at times be difficult to make where the sometimes abstract and academic notion of design is used as way of approaching material generated by activities occurring in a distinctly different environment and culture. To help to draw these two aspects together, an additional perspective drawn from outside of the academic context and related to a clearly identifiable and concrete design world, is used at the start of each empirical chapter. Each begins with a quote from Mary Walton's documentary journalist account of the redesign of a Ford car (Walton, 1997), based on her three years of observation and interview with the design team. Walton's approach to the design process might be compared to a combination of ethnography and unstructured interview but was not undertaken as an academic exercise and her text focuses on the presentation of a narrative described as 'a drama of the American workplace'. Her text can be read as a critique of business management, a chronicle of automobile history or an account of how a company and its employees design a car. In this latter sense, a number of quotes have been used to illustrate where the activities described and analysed in that chapter can be found in a conventional, and non-academic, design context.

The approach adopted to the available data sources, and the proposed methods of analysis of this data, is described in the next chapter which also describes the historical context of the debates in question.

4 The context of the debate and its documentary data

The previous chapter has established the use of archival documents as an appropriate data source. This chapter presents a more detailed view of the available data and how it will be used in this study. The chapter begins with a description of the London and Birmingham Railway and the High Speed Two railway projects from which the debates to be studied are drawn. This acquaints the reader with the overall context in which the debates took place. Having established these contexts, the subsequent sections describe how relevant data sources have been identified from their respective archives and, once identified, the approach taken to analyse them.

4.1 The context of the debate: HS2 and its 19th century predecessor

4.1.1 The London and Birmingham Railway, 1824 - 1838

A railway line between London and Birmingham was proposed by the London and Birmingham Railroad Company in 1824 who employed John Rennie Jnr to survey a line. Following a financial crash in the late 1820s the railroad company was dissolved and the route was subsequently revised by Robert Stephenson for a new company formed after the successful launch of the Liverpool and Manchester Railway line in 1830. The route of the line, as it was originally built, is shown overleaf in Figure 4.1.

The proposal for the line was controversial for a number of reasons. Some landowners along the route were not amenable to the intrusion that the railway might make on their estates. Many of these landowners were also politicians who would be called upon to approve the project in Parliament. Public meetings held along the line questioned the safety of the proposed speed of the railway and notices published in newspapers also contested claims made by the railway company about it. These claims included the potential economic benefits that the line would deliver to the country, the creation of jobs and the productive use of capital. Permission to build the line was required from the Government in the form of a Bill which, to gain approval, followed a very similar parliamentary procedure described above in section 3.1 above.

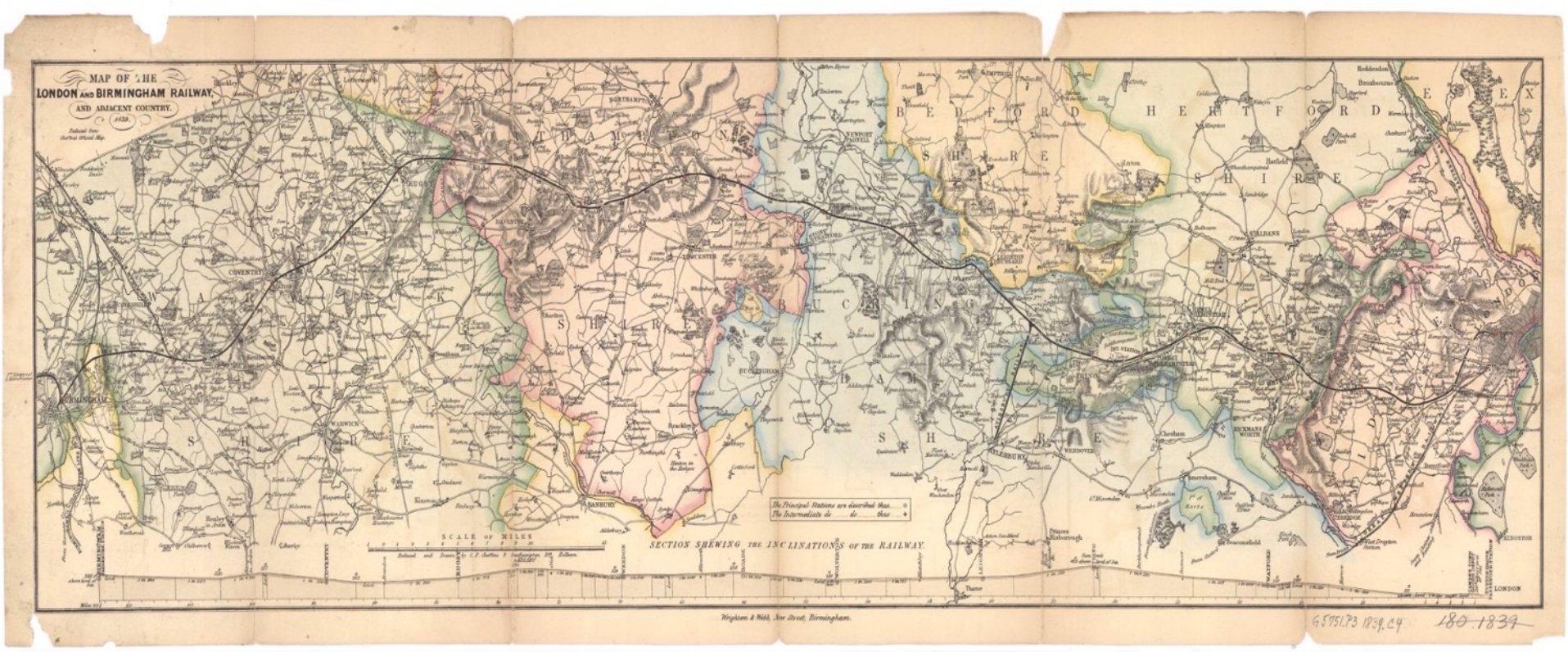

Figure 4.1: The route of Stephenson's London and Birmingham Railway proposed in 1832 and completed in 1838. This image can be viewed online at:http://ids.lib.harvard.edu/ids/view/45183785?width=2400&height=784&html=y (Harvard University Library)

The Bill was rejected by the House of Lords Committee in 1832 and was represented in the following session of Parliament in 1833 at which it was approved after its main and most influential opponents had been persuaded of the projects benefits. When built the line connected London to Birmingham with further onward connections to the north west of England via the Grand Junction Railway and continues to operate as part of the current West Coast Main Line between London and Scotland.

4.1.2 The London to Birmingham High Speed Railway, 2007 onwards

HS2 has been described as the first new north-south railway to be built "since Queen Victoria was on the throne"[16]. A proposal to build a new high speed railway line between London and Birmingham was initially considered by the UK Government in 2007 as one of a number of options to be reviewed in response to concerns about predicted capacity problems and congestion on the existing line[17]. An initially sceptical view of this, which was summarised at the time by then Under Secretary of State for Transport, Tom Harris: "Well, we've got high speed rail as a solution, now let's find the problem".[18]

This view shifted in 2009, under the direction of Lord Adonis, then Minister of State for Transport, as part of the Government's strategy for developing the country's transport infrastructure[19]. This initiative was supported by the establishment of a company, wholly owned by the Government, charged with the task of advising Ministers on how best to proceed with such a project. This advice led to the publication of a White Paper in March 2010[20] outlining the plans for a wider HSR network running from London to Scotland but focussing on a first phase to link the 119 miles between London and Birmingham with a possible phase two extension further north to Manchester and Leeds.

A number of different configurations for this core network were explored before a "Y" shaped network was confirmed as the Government's preferred route. This route, which remains as the proposed alignment of the network, is shown in Figure 4.2 below.

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[16] Claire Perry, Parliamentary Under-Secretary of State for Transport. Speech to National Rail Conference, Birmingham, November 2014 online at https://www.gov.uk/Government/speeches/the-hs2-journey

[17] DfT, Towards a sustainable transport system, Cm 7226, 30 October 2007

[18] House of Commons Transport Committee, Tenth Report of Session 2007-2008, *Delivering a sustainable railway: a 30-year strategy for the railways?*, HC 219, 21 July 2008: Q810

[19] DfT, Britain's transport infrastructure: High Speed Two, January 2009b

[20] DfT, High Speed Rail, Cm 7827, March 2010

Figure 4.2: The "Y" network route of HS2 showing Phase 1 from London to Birmingham and the Phase 2 extensions to Manchester and Leeds. Source: Guardian newspapers. An interactive version of this map can be found online at: http://darrenumney.com/HS2Party/vote.html

The line would, according to Philip Hammond the Secretary of State for Transport who confirmed the proposed route to Parliament in February 2011: bridge the north-south divide; address future transport capacity problems; generate billions of pounds worth of benefits; create thousands of jobs; provide a sustainable alternative to car and air travel; and ensure that Britain remained competitive.[21,22] These arguments for the railway line have remained in currency through subsequent debates but have also been contested by opponents who claim, for example, that the capacity forecasts were overstated or that a high speed railway line may not be the best way to achieve the predicted benefits.

The High Speed Rail (Preparation) Bill, the debates of which form the main focus of this study, was first presented to Parliament in May 2013 and gained approval in November of the same year. The Bill gave authority to the Government to continue the planning, consultation and preparation for the railway line that would eventually be presented for final approval in a separate Bill. This separate Bill was first introduced in November 2013 and is, at the time of writing, continuing to pass through

[21] HoC Debate, 28 February 2011, c16WS

[22] A full review of HS2 as it has been treated by successive Governments can be found in various reports prepared by the House of Commons library, notably RP11/75, online at http://researchbriefings.parliament.uk/ResearchBriefing/Summary/RP11-75

the various stages of approval[23]. The Preparation Bill has been used as the source for this study firstly because it was underway at the time the study was started and secondly because it was also expected to have concluded before the study ended.

4.1.3 Comparisons between LBR and HS2

A number of similarities between LBR and HS2 are apparent. They are both proposals for new railway lines between the same two cities. They both involve the use of technological solutions that have not been previously used in the country at the scale proposed. They also both claim to generate a number of wider economic benefits that are questioned by opponents. These questions contribute to a controversial, public debate that involves polarised, intractable views on whether the proposal is good (particularly for the country) or bad (for the individuals affected by it).

Alongside these similarities there are also a number differences. The two projects were undertaken in different social and political situations determined, in part, by their respective historical contexts. Financially, the LBR was as a commercial proposition that would primarily generate profit for its shareholders whereas HS2 is funded by public money and proposes to generate economic benefits for the country.

Politically, the environment of 1832 for example was less accountable. The parliamentary system at the time supported limited suffrage in comparison with the parliamentary process for HS2. Changes in land ownership and levels of occupancy meant that more people would be affected by HS2 than the small but influential number affected by the LBR. There are also clear differences in the way that the respective Governments and individuals communicate, specifically through the development of the internet. This also means that the larger number of people affected by HS2 project are, potentially, better informed and more engaged with the process. These differences contribute to the quality and quantity of data available for each project and the way that data sources can be approached. These approaches are discussed in Section 4.4 below.

4.1.4 Design problems and dilemmas in the LBR and HS2 debates

A new railway line is a major piece of new infrastructure. The detailed design work of this infrastructure project, such as the detailed route planning and the architectural and aesthetic form of the railway itself, was delegated to HS2 Ltd in the case of HS2 and to Robert Stephenson in the case of the LBR. The detailed work is not generally undertaken as part of the parliamentary debate and it is not the intention here to seek out episodes from the debate where reference to this kind of design work is explicitly made. Such episodes where relevant to the analysis will be referred to as appropriate but the identification and analysis of these specific references to “design” is not the main focus of this thesis nor the main purpose of the debates studied.

[23] This schedule for this separate Bill, the High Speed Rail (London to West Midlands) Bill was unknown at the time this thesis was begun and was also subject to a change of Government during its early parliamentary stages. Further details on the Bill can be found online at: http://services.parliament.uk/bills/2015-16/highspeedraillondonwestmidlands.html

The main purpose of these debates is to seek parliamentary approval for the project in question. This approval is needed to grant the power to compulsorily purchase the land required along the route. In the case of HS2 this also involves allocating a substantial amount of public funding to build the railway line along a route that includes not only properties, but areas protected by the Government for their outstanding natural beauty. The debates include discussions about what the costs are, what benefits it is intended to deliver and how it affects the population and the environment. These aspects of the debate are directly analogous to similar high-level functions of design processes that consider the competing needs and predicted impacts of a design along with more general and widespread evaluative processes such as Cost Benefit Analysis.

The debates explore the implications of the project to a large number of the population who will either use the railway, who will be affected by its development and ongoing presence, or will be asked, through taxation, to pay for it to be built. In exploring these implications, the debate also draws attention to the values and aspirations behind the project and those who support and oppose it. A major new railway line provokes a collection of disparate and contested claims about what it can achieve and how it will do so. Before the line is actually built these competing claims are difficult to substantiate and thereby reinforce the intractable positions of those who make them.

4.1.5 The wicked nature of the debates

There are a number of characteristics of both debates that relate to the notion of the ‘wicked problem’, as initially identified by Rittel and Webber (1973). It is not the intention here to make a line by line comparison between their ten-point description of a wicked problem and each of the railway projects. However, a general comparison provides a background of how these debates can be viewed in the context of what Rittel and Webber considered to be dilemmas of planning and which, by extension, can then be located within the more general notion of design as a wicked problem as proposed by subsequent authors.

The lack of stopping rule, for example, is reflected in the time limits that are imposed on debates. When a vote is taken at the end of the debate it does not mean that the debate has reached a natural conclusion with every possible solution explored and every contested claim resolved but rather that an external consideration, the parliamentary timetable, has taken precedence. The scale of the project reflects another aspect of the wicked problem where it is not possible to test the solution. In the case of HS2 it is not possible, for example, to test the claims made for its regenerative benefits until the line has been built. The full consequences of other intended advantages or undesirable repercussions cannot be appraised until the full budget has been spent, and by which time, alternative solutions are no longer available to be explored.

From a methodological perspective, the comparisons made in section 3.1.3 above provided a general overview of the parliamentary process in terms of two generic models of the design process. These accounted for the progress of a Bill through Parliament as a series of stages through which it must pass and which provide a form of punctuation both to the progress of the Bill and to the study of the debates around it. These models, drawing upon recognisable and

established views of the design process, provide a useful means of orientation towards a design perspective of the debate, but are not detailed enough to also account for the nature of the debate and the context in which it takes place within each of these stages.

A detailed analysis requires a closer reading of the texts involved that can also then account for the context in which the Bill is considered as it passes through the stage in question. Rittel and Webber were primarily concerned with a critique of the technical limitations imposed by the then favoured systems-approaches to problems. However their more general account of an argumentative process, through which different formulations of a problem and its solution are generated, provides further correlations between the debate and the design process which have been acknowledged by other authors (e.g. Buchanan, 1992; Harrison, 2012).

4.1.6 Conclusion: infrastructure debate as a data source

This comparison between the historical and modern debates described above, and the various differences and similarities between them, support the intention in this thesis to draw upon both debates as a part of the study. This also raises a more general point about the nature of these debates in relation to a design analysis. If these two debates, drawn from archival records almost two hundred years apart, are shown to be productive as data sources of what can be treated as design meetings then, it might be suggested, that any number of other debates from other periods might also be used in subsequent studies in similar ways.

In this study the subject of the debates, about proposed infrastructure projects, provides a starting point that already presents characteristics of a conventional design project. The controversial nature of these debates and the relationship between this and the nature of the wicked problem provides a further potential means of triangulating between the debate and the design process that may be useful as the analysis proceeds. In summary, this section has described a potentially rich source of data in which connections between the concerns explored within the debate, the concerns of design and of design studies can be addressed.

The following sections review the available data sources in more detail and describes the methods employed in approaching the archives where they are located, navigating through the sources they contain, identifying specific documents that will be used, and the form that an analysis of them might take.

4.2 Navigating a nineteenth century archive

4.2.1 Recording the nineteenth century parliamentary debate

The parliamentary record of the early nineteenth century was produced differently to that of the twenty-first century. This difference is partly determined by the technologies available (e.g. text/newspaper/video/internet) but also reflects differences in the way that parliamentary business is conducted (e.g. private/public bills), the way that the parliamentary democracy is constituted and

maintained (e.g. reform/transparency) and the historical circumstances that have affected how the parliamentary record has survived.

The recording of parliamentary business in the United Kingdom was initiated in the late eighteenth century in a move towards increasing accountability that has continued to the present time[24]. Reports were originally produced for publication in newspapers and then compiled by publishers into volumes of collected proceedings. These proceedings had by 1812 become associated with George Hansard, a printer whose name remains synonymous with the parliamentary record. The reports from 1802 onwards are available in a searchable online database.[25]

With particular reference to the development of railways, Hansard only recorded debates that accompanied the progress through Parliament of public bills, which are deemed to affect the general public. Private bills, such as those seeking approval to build individual railway lines, were promoted by private organisations and deemed to only affect specific and smaller parts of the population. These private bills were not recorded by Hansard and are therefore not available in the online archive. A contemporary, competing publication that also set out to record and disseminate the proceedings of Parliament, the *Mirror of Parliament*, did cover both Private and Public Bills.

These published reports are supplemented by the archives of national newspapers, considered at the time to be the paper of record, and local newspapers that would also circulate information about the impact of the railway on the local population. Published notices, both from supporters and opponents, would also provoke further debate in the form of letters to the editor and editorial comment.

4.2.2 Accessing the nineteenth century parliamentary record

There are several ways to access this nineteenth century archive. The online historical Hansard provides a keyword search facility but returns no references to the London and Birmingham Railway Bill. This result can be confirmed by cross reference to the printed volumes, referring to the reports from those days when the Bill was known to have been debated. The date of these debates can be identified from contemporary and subsequent secondary sources, and confirmed through references found in the newspaper archive.

Barrow's *Mirror of Parliament*, known to be more extensive in its coverage of private bills, is not available in digital format. The printed volumes, available at the British Library, were referred to using the same dates identified above. These dates were also confirmed in the *Mirror of Parliament* index volume that accompanies the printed editions. The relevant exchanges were identified and provided more detailed reports of the debates than available elsewhere[26].

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[24] The official version of this history is online at: http://www.parliament.uk/about/living-heritage/evolutionofparliament/parliamentwork/communicating/overview/officialreport/

[25] This archive, *Hansard 1803-2005,* is online at http://hansard.millbanksystems.com/

[26] Barrow, J. H. (1832) *Mirror of Parliament* Volume 4, London, pp. 2634 - 2636

In both sources, the amount of debate recorded from parliamentary proceedings was limited. The record shows only the logistical stages through which a Bill needed to pass to gain parliamentary approval such as when a Bill is proposed to be read or where petitioners request the right for their opposition to the Bill to be heard. There are two occasions where more detailed debate is recorded in the *Mirror of Parliament*. At its Second Reading, opponents of the Bill attempted to prevent its progress by questioning the accuracy of the drawings that were submitted in support of the application. This episode in the House of Commons was also repeated in the subsequent House of Lords Committee[27]. Only one other debate is recorded, again in *Mirror of Parliament*, where an MP attempts to use the presentation of a petition to voice his support for the railway. This attempt is deemed to be out of order because the Bill has already been referred to a Committee who are delegated with the task of detailed scrutiny and is therefore only a short exchange between two participants.

4.2.3 Accessing nineteenth century Committee proceedings

Scrutiny of the Bill, and the arguments put forward by its opponents, was passed onto a specifically appointed Committee who were delegated to explore the implications of the Bill and approve or reject it. Following the Bill from the chamber to the Committee room should provide access to this more detailed debate.

In the case of the LBR Bill of 1832, the fire that destroyed the Houses of Parliament in 1834 also destroyed the House of Commons library where the records of the LBR House of Commons Committee sessions were held. These sessions were the only occasion where the full case for and against the railway were presented. The subsequent House of Lords Committee rejected the Bill before the case against it was made, and the House of Lords library therefore only contains the case made for the railway by its supporters. The printed proceedings of the House of Lords Committee are still available in the House of Lords library. These records provide a detailed account of how the case was made, the range of witnesses called and the questions that were asked of them. The record also describes how the room was cleared before the Committee members debated the Bill. This key stage of the debate was therefore not recorded.

4.2.4 Widening the search to the nineteenth century newspaper archive

This scarcity of data relating to actual debates that took place during the progress of LBR through Parliament, presented a problem for a study intending to analyse those debates. The search was therefore extended to contemporary newspaper archives. Two archive sources were searched for reference to the LBR. *The Times* digital archive carries a full record of the UK's national newspaper of record. The British Library Newspaper archive (BLNA) carries a full record of many local newspapers. Keyword searches on both databases are not necessarily definitive or accurate, perhaps due to how the quality of the text in the original documents responds to the character recognition scanning employed during the digitisation process. Two separate searches of "London

[27] Main Papers, Session 1831-1832, *Minutes of Evidence: London & Birmingham Railway Bill*, Lords Journals, lxiv, HL/PO/JO/10/8/1002

AND Birmingham AND Rail" and "London AND Birmingham AND Railway" retrieved the most extensive set of results both in the national and local press.

Articles in the national press are dominated by statutory notices that describe the intended route and other brief references to parliamentary proceedings. The statutory notices were at the time a legal requirement to be published nationally and along the proposed route. Those retrieved from the BLNA archive include the same statutory notices but also notices and reports of meetings that reflect local interests - both in support and opposition to the railway. The local newspapers in particular also presented a wider discourse including references to the sale of shares in the railway company and the sale of houses along the proposed route. Many of these items are duplicated across several titles.

4.2.5 Identifying relevant articles in a nineteenth century discourse

The search of the newspaper archive, excluding duplicates, produced over 60 articles that related to the period leading up to and including the parliamentary debate in June 1832. This exercise was initially focussed on seeking reports of debates that might have taken place, particularly within the parliamentary context.

The calling of meetings provides more specific pointers to where debate might be taking place but these were public meetings, taking place at Inns along the route and primarily called to raise objections and funds to oppose the building of the railway. An analysis of this discourse could be used to trace important voices and events in terms of the historical development of transport infrastructure and the role that this development played within the social and political development of the early nineteenth century. More useful, and more in keeping with the view of the design process developed above in Chapter 2, would be the identification of the key stages where debate could be seen to be taking place and where specific outcomes from that debate, preferably found in transcripts or detailed reports, could be identified and followed.

4.2.6 Viewing a document discourse and accessing the text detail

The search strategy outlined above reflects an approach to historical documents that is partly informed by aspects of ANT. This sees the historical text as an object, in Henderson's terms a conscription object, that draws together other actors involved, allowing for the identification of key interactions which might affect the proceedings and which might then be observed and followed in subsequent texts. The unit of analysis at this point is not the individual text but the collection of texts, the 61 newspaper articles retrieved, from the archive. It is important to be able to access and interpret the full text that each article contains. It is also important to be able to maintain an overview of the historical narrative in which they are placed, retain the ability to identify and keep track of any key events or interactions that they refer to, and to trace the potential relationships that might be drawn between them. This requires some kind of proximal parity to be maintained between the close reading of the text and the overview of the inter-textual discourse to allow both to be readily accessible at the same time

4.2.7 Constructing a timeline using paper and ink

The first stage undertaken to achieve this parity was the collation of the relevant articles. Newspaper articles identified through the search interface can be viewed online through the display interface provided by their respective archives. Individual articles can be inspected at high resolution and collected together into folders and bookmarked for future reference. However, as shown in Figure 4.3 below, each article is retained in its own browser window which restricts the ability to cross-reference between documents or to develop a sense of their inter-textuality.

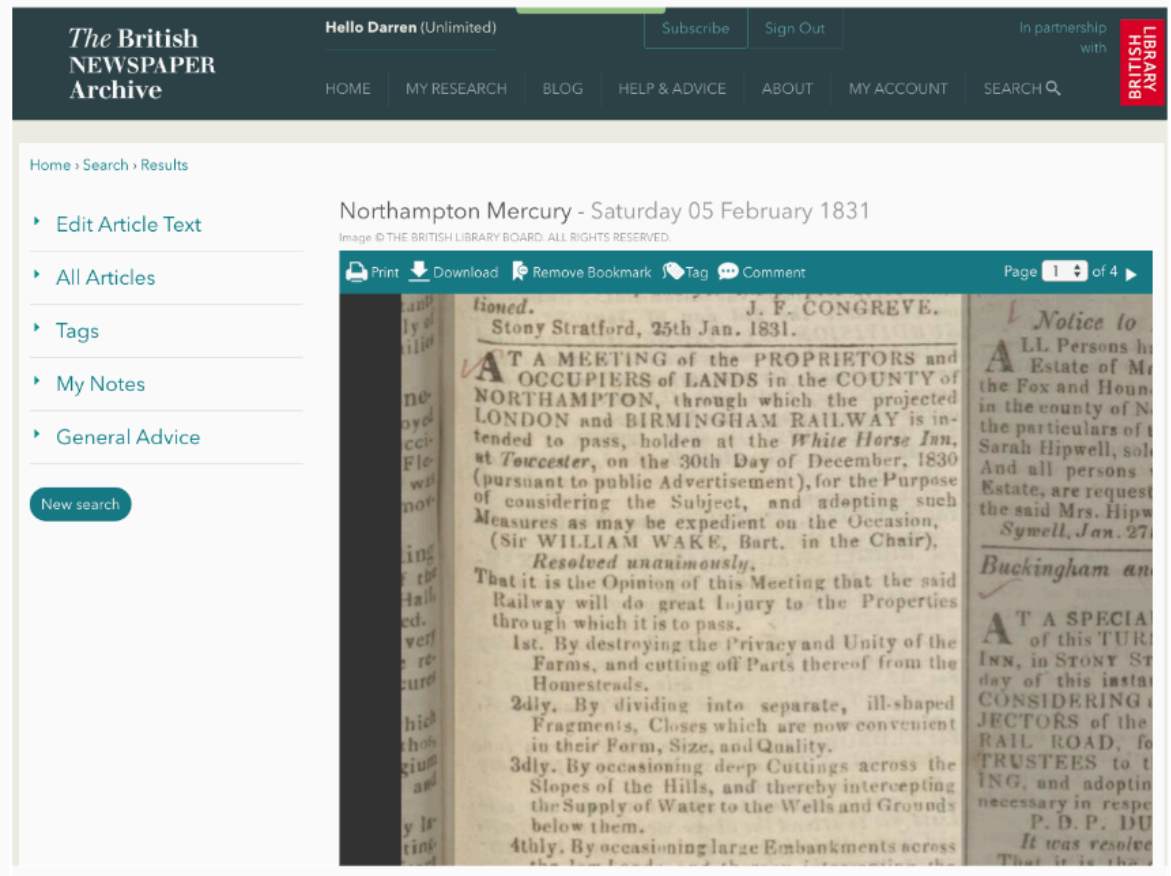


Figure 4.3: Screenshot of an article from the Northampton Mercury, a local newspaper serving a number of counties through which the LBR was proposed to pass through. This shows a single article in a single window, the only method available of viewing search results that also allows access to the text of the article.

Individual articles can be downloaded and printed from the archive and this was undertaken in order to produce a more tactile approach to the sources. Each could be handled, inspected and shifted around into categories or date order. Any key stages within the narrative trajectory of this series of historical documents would need to be identified and the construction of a timeline was therefore the initial objective of this stage of the research process. This would allow key events to be easily identified within the overall context of the evolving discourse.

This timeline began as a paper-based activity using the printouts referred to above. This process was not dissimilar to the creation of a design thinking wall in a session where post-it notes and highlighter pens are employed to organise ideas and draw together conclusions. However, the process presented two related limitations. Firstly, while the text of each article could be easily read

at a high level of magnification on a high contrast computer screen, this resolution did not easily translate to the printed output. Each article therefore needed to be printed at a resolution high enough to be legible. This task was complicated by the long and thin format of newspaper columns that doesn't easily translate to an A4 printer. Some of the longer newspaper reports would need to be printed out at bigger sizes which would lead to a large collection of unwieldy paperwork. This then creates a second limitation relating to the amount of space required to create an overview of the whole timeline. A collection of 61 articles, even if only two or three were longer than A4, would require a large wall or floor space that would also require even more space around it to be able to approach and annotate individual articles.

It could be argued that this whole process is not strictly necessary. Each article could be transcribed and printed out, if necessary, in a wider and therefore more compact format. While it is not difficult to achieve the processing of the text, its extraction from facsimile version of the newspaper article also removes a number of contextual elements that act as visual cues to help to identify the article. This includes the formatting of the text, the use of fonts, the texture of the printed form and the colour of the background newsprint. All of these also contribute to an overriding aesthetic in handling and viewing articles in their original format that makes the research process more positive and therefore more productive. Retaining the original visual format of the article is not necessary but the potential benefits that it provides are sufficient to justify the attempt to do so. However, this is not possible in the context of low budget printers and access to limited floor and wall space. It could also be argued that this whole process is not necessary because the texts could be read on screen. However, the screen presentation of this number of different documents requires specific handling and tools that would need to be identified.

4.2.8 Constructing a timeline using software

Having recognised that the high contrast screen presented a useful tool for the reading of the facsimile text, a software version of a design thinking wall was sought. Initial explorations of database software to facilitate this were reviewed. Qualitative Data Analysis (QDA) software such as HyperResearch and Atlas.ti provide a rich analytical toolset that supports the creation of codes and categories and theories. However, they do not provide an easy way to construct an overview of a collection of documents or direct access to close up views of individual documents in the collection. The interface that is required to manage the analytical tools is suited to a unit of analysis that operates at a single scale or in a single medium. To give an example of this, the overview of documents when imported into Atlas.ti (software known for its multimedia capabilities) provides a grid or a circle of icons that represent each document. A screenshot of the series of document called into Atlas.ti and displayed in the default grid format is shown in figure 4.4 below.

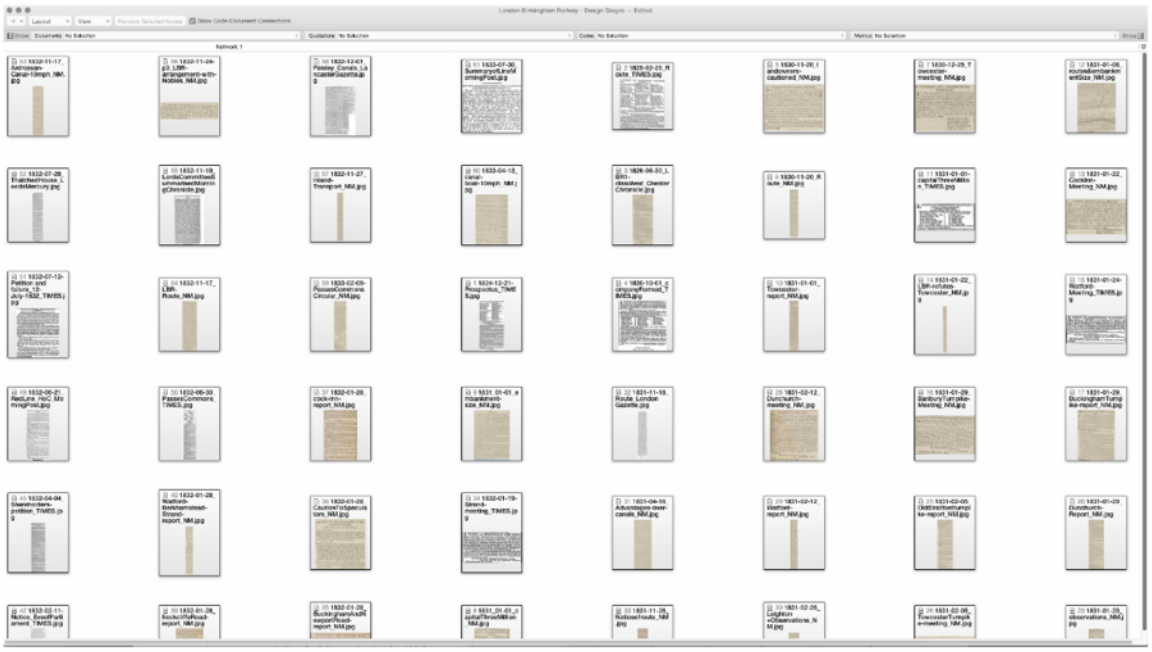


Figure 4.4: A screenshot of a collection of articles that have been imported into Atlas.ti. Although this software has a reputation as a visual analysis tool this is not reflected in the way that documents can be visually represented or manipulated within the interface provided.

Each of the document icons can be moved around and the whole collection can be made to fit into a single screen but to gain access to the detail of each document, and the text it contains, each must be opened in a new tab or new window. The software interface is visually dominant and the task of navigating between interface elements is complex. This software could be useful for detailed analysis of individual articles, and for constructing theoretical relations between them. It was less useful as a way of presenting a visual overview of the overall document set that would at the same time allow access to the details contained in each. These same problems attended, to varying degrees, other options explored in mind mapping and standard database tools.

4.2.9 A zoom and pan interface: Prezi as a data tool

An alternative was sought and a potential solution identified in software designed specifically for the presentation of visual material. Prezi is a proprietary software platform that offers an alternative to traditional slide based presentation formats such as Microsoft's Powerpoint or Apple's Keynote. Prezi provides a facility for text and image objects to be incorporated into presentations that can then be freely navigated by the presenter. The presentation can include panning around objects on the screen, zooming into the fine detail of a given object and out again to a wide overview of a collection of objects. This functionality, albeit intended for a different purpose, appeared to present a solution to the creation and navigation of a timeline that was made up of a collection of image files. The zoom and pan nature of the software could handle documents of arbitrary sizes, that needed to be accessible and legible at a high level of magnification but also readable from a distance to allow the intertextuality of the collection to be reviewed.

All 61 documents were imported into Prezi and arranged into a timeline from 1824 to 1833. At the highest resolution each document can be read in full, as shown in the detail of Figure 4.5a below. It

can be seen that the document retains its facsimile visual appearance and that the text can be read in full. Also shown in the illustration is a text label generated through the Prezi interface.

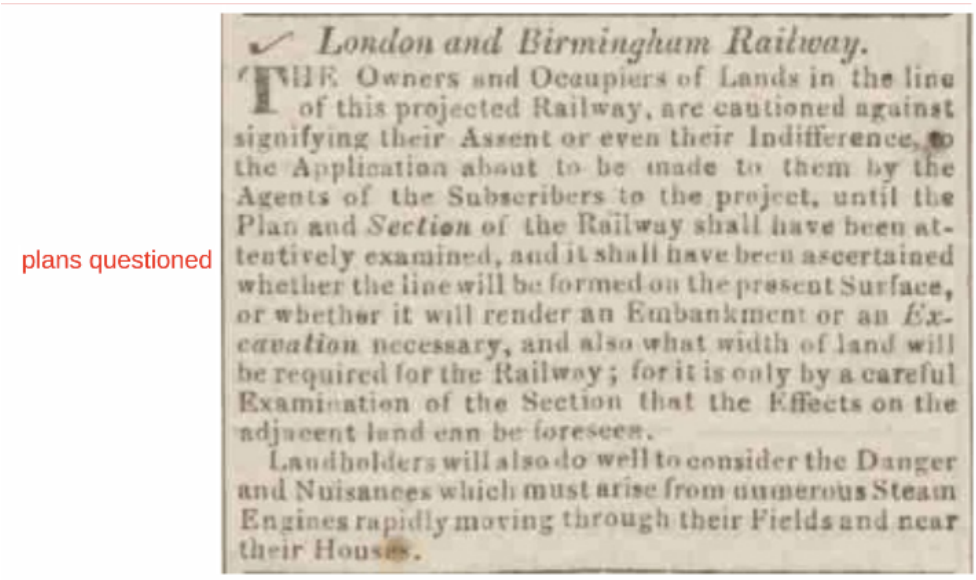


Figure 4.5a: A close-up of a single document from the Prezi timeline, showing legibility of the source text and the red markup text used here to indicate a function of the document.
Online version at: https://prezi.com/vumvl8dp0f5u/25d-with-4-newspaper-timeline/

Compared with the more structured interface of Atlas.ti these elements can be freely selected from a range of standard drawing objects such as lines, arrows, text boxes. Documents can be imported and arranged in different layouts, annotated with various relational, contextual or other analytical information. The arbitrary ways in which these elements can be used compares favourably with mind mapping software solutions that support similar methods of annotation and linking between objects. The latter though are constrained both by the scale at which elements can be viewed and the ways in which additional elements can be added and combined.

When the viewing scale in Prezi is reduced (as shown in Figure 4.5b below) more objects can be used to identify different aspects of the documents and relationships between them that relate to the wider context that the view represents.

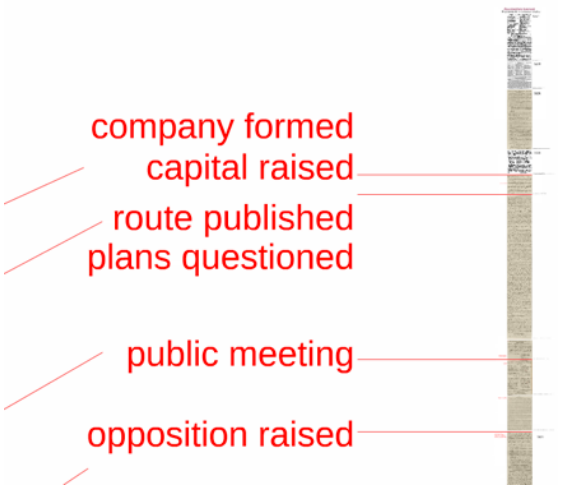


Figure 4.5b A mid-scale view of the same Prezi timeline showing a number of documents and the markup used to identify the stages they represent. Online version at: https://prezi.com/vumvl8dp0f5u/25d-with-4-newspaper-timeline/

As the scale of the viewpoint is further reduced, shown in Figure 4.5c below, the full timeline appears as a hairline on the screen, allowing any number of annotations and links to be drawn between them and any number of contexts to be referenced in situ alongside the relevant document. This addresses the problems identified earlier relating to the need to access both the context and the detail of archival documents. It provides a visual method of identifying the key stages of the process and developing an initial perspective of the relative importance of those stages along with the capability to zoom into a single document to assess the analytical potential of what it contains. The view shown in Figure 4.5c is approximately midway between the full close up of Figure 4.5a and the smallest scale view that can be achieved.

Figure 4.5c: The full Prezi timeline showing all 61 documents with the stages identified and brought together. This visual exploration in Prezi provides a flexible environment in which the contexts of individual documents can be explored.[28]

[28] . The full online version demonstrates the value of being able to bring them altogether in one place and zoom and pan between them. This can be accessed online at: https://prezi.com/vumvl8dp0f5u/25d-with-4-newspaper-timeline/

The use of Prezi as a method of compiling and analysing source documents does not provide the kinds of computational and analytical support found in more conventional data analysis solutions. However, it does provide a flexible and unconstrained environment in which material can be collated, arranged and viewed. This environment helps the researcher to establish conceptual connections across disparate objects while at the same time being able to create narrative structures out of them and maintain access to the full text that is contained in them. They can in this way be evaluated with regard to whether they contain a sufficient amount of detail about the events they describe to make them a useful source of data. From the 61 articles reviewed only one meeting appeared to be recorded in sufficient detail for analysis: a meeting of Peers and Members of the House of Commons held in July 1832 to discuss the progress of LBR.

4.2.9 Conclusion: visualising a discourse and identifying documents

In terms of a general methodological contribution, the visual method described above shows a novel approach to the problem of viewing a number of arbitrary sized documents at a sufficient range of scales. This range is necessary to be able to engage with the detailed content while at the same time support a wider perspective such as the timeline of the documents and the events they describe. This method of collating and representing a discourse provides a simple, qualitative visual tool that complements more quantitative and website specific approaches explored by, for example, the issue crawler or the diachronic approach of conventional discourse analyses developed by, for example the DiliPad project. Issuecrawler was developed to create visualisation of online networks, using software algorithms to follow inbound and outbound links between different online sources but doesn't provide any comprehensive engagement with what is contained within an individual site. Dilipad, in contrast, is an ongoing project specifically aimed at producing big data analysis of parliamentary debates[29].

The creation of the timeline described here progressed the development of this thesis in a number of ways. As an overview it provided a representation of the debate as it progressed through its parliamentary stages and of how these stages were reported in Parliament and documented in the news media. The small amount of data available in the official parliamentary record of the nineteenth century, compared with the detailed reports available in the newspapers, helps to illustrate how records of parliamentary business were disseminated at the time.

The task of looking for detailed transcripts of parliamentary debate within this overview, even before these transcripts have been considered within the context of the design analysis for which they were sought, presented an opportunity to identify a visual method of exploring data sources. This provides a way of exploring connections between the sources, the events they describe and the role that each performs within the historical record. As described in Chapter 5 below, this overview of available data sources and the key stages which they represent, helped to identify a relevant source of which a more detailed analysis could be undertaken.

[29] Issue crawler can be found online at https://www.issuecrawler.net and Dilipad at http://dilipad.history.ac.uk

This review of a nineteenth century discourse also provides a useful comparison to the way that a parallel debate is made available in the 21st Century, where the parliamentary stages are clearly drawn and maintained in the official archive and where the debates that take place in those stages are readily accessible and fully transcribed.

4.3 Navigating a twenty first century archive

The problems presented by the paucity of relevant data sources available in the nineteenth century parliamentary record contrast with the abundance of material generated by the Parliament of the twenty-first. The official record of these debates are available as transcripts in an online archive: a digitised version of Commons and Lords Hansard, the Official Report of debates in Parliament[30]. The business of modern UK Parliament is recorded in both text and video formats which can be treated as separate sources, to support different kinds of textual or visual analysis. The video can also be used as a corroborative source to eliminate possible errors in the text transcript. This combination of formats reflects the data sources used in recent, real-world design studies such as those undertaken by the Design Thinking Research Symposia.

The record of debates is more detailed and better documented than the equivalent record of the nineteenth century. The full debates are available online the day after they take place and the video is broadcast live, subject to the editorial guidelines that determine which elements of the proceedings are to be made public[31]. The debate can also be viewed live from the public galleries at the Houses of Parliament. As security measures in Parliament have increased, the debate takes place behind bulletproof glass and the debate is heard through speakers that are located in the backs of the benches provided. Overall, the debates are part of an extensively documented parliamentary process which provides clear and easy access to its various stages and the debates that take place around them. Media reports are also more extensive than in the nineteenth century although the concept of a paper of record, which would motivate many newspapers to publish extensive reporting of parliamentary proceedings has been superseded by the wider access afforded to parliamentary debate. Compared with the nineteenth century archive there are then more records available to the researcher of modern parliamentary proceedings and each of these records contains more extensive details of what takes place.

4.3.1 A comparison between the nineteenth century archive and its modern equivalent

The differences between the record of debates taking place in 1832 and in 2013 make direct comparisons between them difficult. The amount of material available is demonstrated by the number of references to be found to each in their respective archives. There are twenty-five references to the London and Birmingham Railway Bill found in J H Barrow's *Mirror of Parliament* between its First Reading on 20th February 1832 and being passed at a Third Reading on 19th June

[30] This archive can be found online at http://www.parliament.uk/business/publications/hansard/

[31] The voting procedure, for example, takes place outside of the chamber and beyond the view of the cameras

1832. Between the first reading of the High Speed Rail (Preparation) Bill on the 13th May 2013 and it being passed at its Third Reading on 31st October 2013 there are 160 references to HS2 in Hansard.

This six-fold increase in references is lower than might be expected but the quantity of text represented is an order of magnitude greater. The full word count of the LBR debates found in *Mirror of Parliament* is 3,186 compared with over 44,000 words recorded during a single debate at the Second Reading of the High Speed Rail (Preparation) Bill on 2nd June 2013. The difference in the number of references made to these debates in the media is also marked. The search for newspaper reports on LBR between 1824 and 1834 produced 61 articles. A sample taken from a Google news gave the same number of articles, 61, in one week during November 2014[32]. These differences between the volume of potential data available from each period is not surprising and the recognition of this distinction presents a necessary part of the methodological challenge of any historical comparison that might be drawn between the two debates.

The method adopted for approaching this extensive modern record was almost the opposite of that adopted for the historical archive. The search for usable data in the nineteenth century involved a widening of scope from Hansard, *to Mirror of Parliament* and to the newspaper archive that would identify key stages and the reports of the relevant debates. The key stages of the modern parliamentary process are clearly documented and visually represented by default on the Government's website along with direct links to the full video recordings and transcripts. In this respect the search for key events, and therefore the necessity of constructing a timeline to identify these events, was not essential.

The intended function of each aspect of the parliamentary process is also documented, for example in the Rogers and Walters text book "How Parliament Works" (2006), which indicates that the Second Reading of a Bill is the event where the underlying principles of a piece of legislation are first explored. The Second Reading is also where these principles are subjected to a vote by the Members of Parliament. If a Bill fails to gain sufficient support at this stage it is not able to progress any further and will not become enacted. The Second Reading therefore appears to be a predetermined key stage in the progress of a Bill. This was not the case in 1832 when the key stage for the LBR Bill was at the House of Lords Committee stage where it was rejected before the full case was heard. The power of the House of Lords, particularly after the Parliament Act of 1911, has been significantly reduced. Similarly, the power of veto at Committee has shifted towards a power of revision. Amendments are suggested and then debated in the chamber at the report stage.

While this makes the identification of a key stage easy it is nevertheless useful to confirm and contextualise this with a review the sources. The review that follows identifies where in the wider

[32] Google Alert using term "HS2 News"

discourse the Second Reading takes place and locates it within the context of the other records available from the parliamentary archive.

4.3.2 Hansard and the 21st century parliamentary archive

At the time that this data was being sourced, the searchable online database for the Hansard parliamentary record was operating with reduced functionality and advanced searches were not available[33]. The "phrase and boolean functionality" had been removed and the webmaster recommended the use of Google to perform the kind of advanced search that is necessary to attempt to generate the results required[34]. Google produced limited results using the search strategies that were recommended by the Hansard webmaster but the same strategies applied to the simple search facility on the Hansard site returned more useful and eventually more usable results.

This search strategy involved combining search results from both terms "HS2" and "High Speed Rail" and then also looking for results that appeared in both the House of Lords and the House of Commons. The 1,768 results from these searches were returned on separate webpages each that could display up to 100 records at a time. Individual records may be duplicated across multiple pages and may refer to multiple instances within the same debate. Each entry on every page also included arbitrary text elements drawn from the records they refer to. An example of a search results screen from the parliamentary website is shown in Figure 4.6 below.

[33] This functionality has since been revived, the webpage where the reduced service was described has now been removed and replaced with instructions for the new service: http://www.parliament.uk/site-information/using-this-website/searchhelp/

[34] Again this has since been removed but included the suggestion to limit the Google search to the parliamentary website, to restrict results to the Hansard URL and to use quotes around phrases.

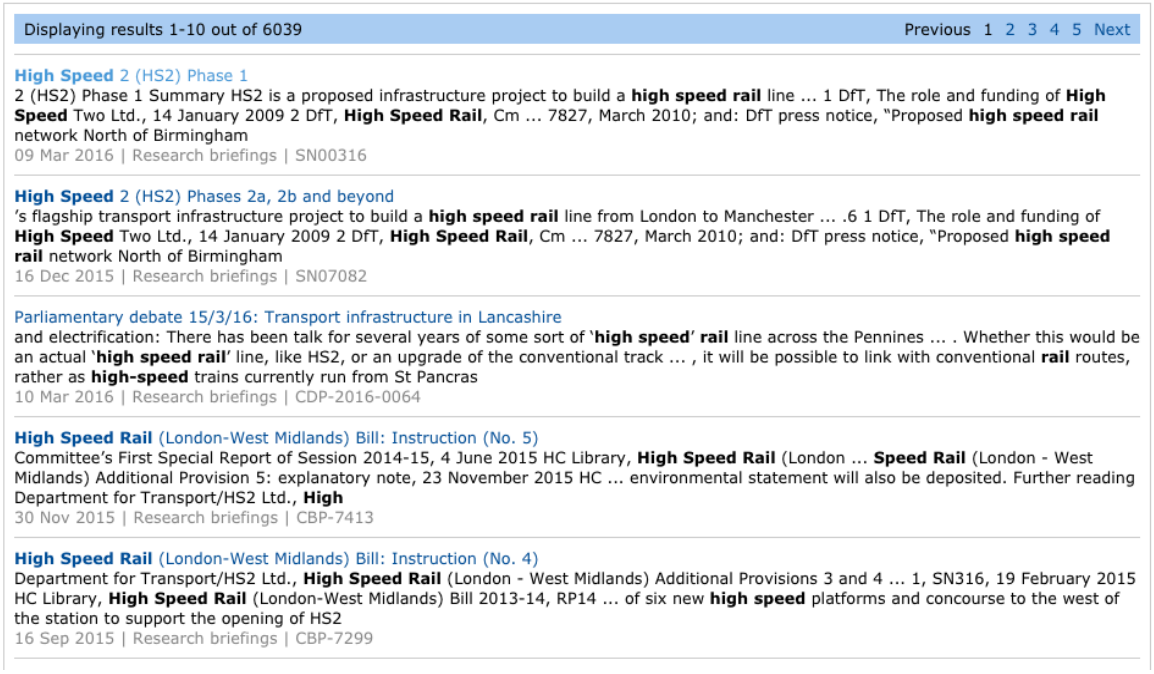


Figure 4.6: A screenshot of search results from the parliamentary archive showing different screen elements laid out to support the user experience through a web browser. These differently formatted elements are useful in the context of viewing the results on screen but do not help to collate together sources for a more detailed review of the material they contain. (Source: Google Chrome browser window of parliamentary archive search results)

There was no sort facility available on the Hansard website, which rendered these results difficult to navigate either in relation to the date of the Second Reading or to the type of debate to which they referred. To gain any insight into these results a more direct engagement with the data was necessary.

This more direct engagement took the form of a series text operations undertaken on the source HTML code rendered by the web browser. The code from each results page was collected and the whole set collated together into a single file. Regular expressions were used to strip out the HTML tags which had been used to support the visual formatting of the results on the web page. Individual data points within each record, such as the date of publication, the source URL and the location of the debate, were identified and separated out. A screenshot of the HTML code used to render the page shown in Figure 4.6, is shown in Figure 4.7.

```
            <ul id="results">
                    <li>
                        <h4>
                            <a href="http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN00316">
                                <em>High</em> <em>Speed</em> 2 (HS2) Phase 1
                            </a>
                        </h4>
                        <p>
                             2 (HS2) Phase 1
Summary
HS2 is a proposed infrastructure project to build a <em>high</em> <em>speed</em> <em>rail</em> line ...

1 DfT, The role and funding of <em>High</em> <em>Speed</em> Two Ltd., 14 January 2009
2 DfT, <em>High</em> <em>Speed</em> <em>Rail</em>, Cm ...  7827, March 2010; and: DfT press notice, &#8220;Proposed <em>high</em>
<em>speed</em> <em>rail</em> network North of Birmingham
                        </p>
                        <p class="resultdetails">
09 Mar 2016                                          <span> | </span>
Research briefings                                          <span> | </span>
SN00316
                        </p>
                    </li>
```

Figure 4.7: The HTML version of Figure 4.6 showing the code elements that are used to visually enhance the display of search results. Source: Google Chrome source view window of parliamentary archive search results shown in Figure 4.6

This structured text could then, as a CSV file, be imported into Microsoft Excel where a formula was used to detect and remove duplicates. At this point the remaining 1,432 records could be sorted into date order and reviewed as a single corpus of data. This stage of the research process is not described here as a technological or methodological innovation relating to data retrieval or text processing. It does however provide a comparison to the method used to navigate the nineteenth century archive, as described above, and demonstrates how the default interfaces provided by software developers, in Atlas.ti and a web search engine, can be manipulated or exchanged as necessary.

4.3.3 Creating a timeline from parliamentary data

The data created from the process described was initially used to create an equivalent to the nineteenth century timeline. This also confirmed the importance of the Second Reading. The results of this timeline, using Excel, is shown in Figure 4.8 below.

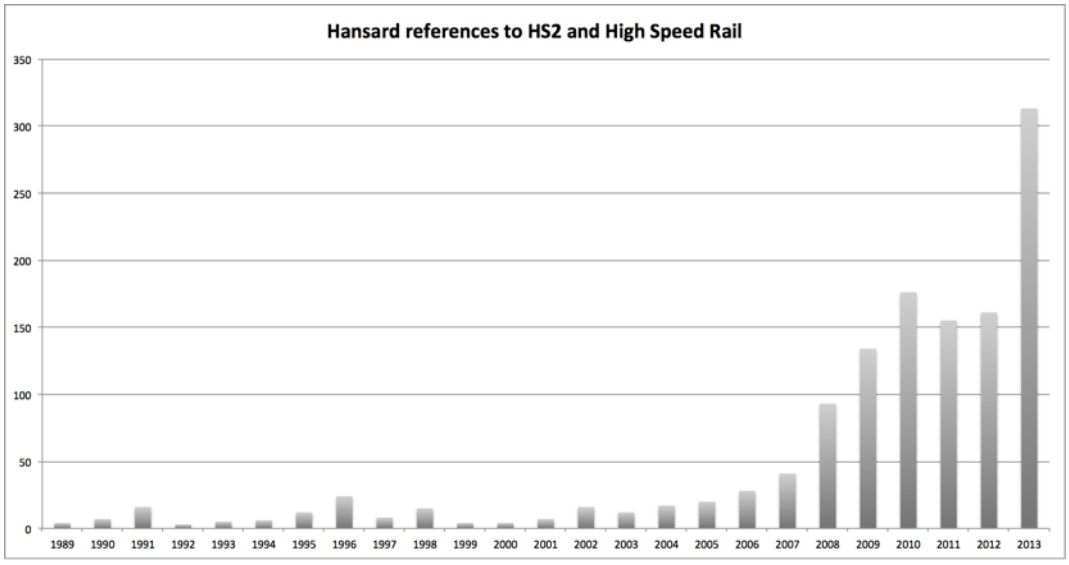


Figure 4.8: The frequency of terms HS2 and High Speed Rail found in Hansard including the Second Reading of the High Speed Rail (Preparation) Bill of 2013 displayed as a timeline. [35]

[35] The source data file for this can be found online at: https://goo.gl/P6VWSr

A background noise of references from 1989 onwards matches the narrative trajectory of the debate around high speed rail that has been documented elsewhere by the House of Commons Library and referred to in section 4.1.2 above. The level of debate is shown to increase in 2002 when the Channel Tunnel Rail Link starts to become known as High Speed 1, leading up to the HS1 Section 2 St Pancras link opening in 2007. The Labour Government set up HS2 Ltd in 2009 but they failed to regain power in the next general election. The subsequent review of HS2 by the newly formed coalition took place in 2010. The scheduling of the High Speed Rail (Preparation) Bill into the parliamentary business for 2013 appears to have contributed to make the number of references made to HS2 and High Speed Rail in that year the highest up to that point and to more than the previous two years added together. The Second Reading of a Bill was noted earlier as an important debate and the increase in references to the key terms in 2013 when this Reading took place reflects this importance.

A review of the other references in the 2013 archive shows that HS2 is also called upon to perform different roles in different contexts. In debates on transport and infrastructure, HS2 forms part of broader discussions about investment and strategic development. It is also referred to in debates that deal with the economic recession and, among other things developments in employment, defence and health policy. In addition to references made as an infrastructure development it is also used as a source of rhetorical humour where for example a Shadow Minister is absent from the chamber during Prime Minister's Question Time and presumed to be "sorting out Labour's HS2 policy"[36]. These examples show how HS2 operates across a broad range of discursive activities, all of which add to the volume of references returned in a search.

HS2 also appears as a subject in a number of adjournment debates that have been specifically called to highlight issues around the proposed railway. Adjournment debates are allocated by ballot to backbenchers and provide an opportunity for MPs to raise issues and receive responses from a Government Minister. There is no vote taken at them and they do not provide a way of seeking or proposing amendments to legislation and so do not have a formal impact on the progress of the project. For this reason a Second Reading, with its emphasis on the debate of principles and the taking of a vote, remains a more critical stage of a Bill upon which to focus.

The debate held on the 26th June 2013 for the Second Reading of the High Speed Rail (Preparation) Bill lasted for just over four and a half hours before a vote was taken. The transcript of this debate occupies 65 Hansard columns in just over 42,000 words. This translates to 3,380 lines in a 64 page Microsoft Word document[37]. This document provides the source material for the analysis undertaken and described in Chapter 5.

---

[36] HoC Debate, 28 October 2013, col 661.

[37] This document can be found online at: https://goo.gl/OkuMYN.
The Hansard report of the same is online at:
http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm130626/debtext/130626-0002.htm#13062665000001

Compared to the exploration of a visual method employed with the nineteenth century data, the online data from Hansard required a different approach. Modern websites, delivered through the interface elements of the web browser, are a visual media already. It was this visual quality, in particular the user interface designed to deliver results one page at a time and with different arbitrary elements displayed, that restricted the usefulness of the data as a means of identifying the scale of the data available and the relation between them. When this more extensive data had been extracted from the search results the use of software, in this case Excel, provided a more practical method of representing the data and confirming the key stages in the process.

4.3.4 Conclusion: navigating a digital archive and locating a relevant source

The method described here of extrapolating source material from the background noise of a web interface is not proposed as a viable method for future use. It is useful, aside from the perceived necessity at the time to gain better access to the data sources, to underline the shortcomings of default web browser interface conventions and the limitations that these bring to the stated aims of Governments to disseminate information and provide transparent access to parliamentary proceedings. In terms of the development of the thesis, the methods have been used to provide an overall context of the data sources relating to the progress of the HS2 project through Parliament and to indicate the relevance of the Second Reading as a key stage in that process. Having described the means by which documentary sources have been located and indicated which sources are most relevant to the study, the next section considers what to do with them.

4.4 The analysis of documentary sources

This final section, having provided the historical context of the debates and described the method used to identify relevant sources from their respective archives, is to show how these sources will be analysed. As this thesis develops through a number of iterative studies, the approach taken to the documentary sources and the methods and tools used to analyse the data will also develop. The details of these methods are best demonstrated in the context in which they are used and these details will be found in the relevant chapters. This section provides an overview of the methods adopted and locates them in the context of where and how they have been used in other studies.

As described earlier, this thesis develops its own analytical method. In the context of existing analytical approaches this can be seen, in one of the established typologies of qualitative research methods as an interpretative mixed methods approach (Miles and Huberman, 1994). There are some necessary quantitative reviews of the data undertaken but rather than such reviews providing results they are used as pointers to where relevant quantitative data might be found. This is demonstrated in the use of frequency reports in Chapter 5. The approach taken to the qualitative analysis of the data identified through this initial approach is informed by design research.

Schön's approach to his data sources has been, as noted in Chapter 2, questioned by a number of scholars and his method, further developed with Rein in relation to policy design (Schön & Rein,

1994), of identifying frames and defining what they meant by the term has also been queried (Hoppe, 1996). There are no formal methodology sections in Schön's writings and no guidance on his approach to data. This lack of definition offers flexibility to subsequent scholars who adopt Schön's conceptual framework to suit their own purpose. This flexibility perhaps contributes to the volume of references to Schön in the bibliographical review of *Design Studies* (Chai & Xiao, 2012).

Schön appears to take a grounded approach, using the meeting as a data source from which he derives a model of reflective practice (as described in section 2.2 above), although at the same time he appears to have already developed this model and is using the data to support it. A more technical approach is adopted by Valkenburg and Dorst with their formal model, also described in Chapter 2, of Naming, Framing, Moving and Reflecting, which they use to identify those specific discrete activities. This does not involve a detailed reading of a transcript such as that undertaken by, for example, Conversation Analysis or other fine grained methods that seek to identify and analyse the formal linguistic and non-verbal traits that contribute to understanding of, for example, turn-taking between participants[38].

As seen in Chapter 5 this formal model was not adopted, as had originally been planned, through the whole of the thesis. The identification of the different elements became a prescriptive coding exercise which restricted the potential interpretation of the activity to an abstracted model of designing. A more open interpretation of the text was then adopted which provides a less restrictive perspective on the proceedings and a less abstracted reading of them. This interpretation was guided by the aspects of design identified in Chapter 2. However, these aspects are not imposed on the data – it is not the intention to classify the activities taking place in parliamentary debate as different kinds of designing.

This lack of imposition reflects the more grounded approach taken by Schön: the interpretation of the debate is grounded in the data drawn from the debate. This follows one of the general principles of Grounded Theory (Glaser & Strauss, 1967) but does not follow the formal methods proposed by those authors since the thesis does not set out to develop a formal theory. Rather, and as is described in more detail in the following sections, this thesis sets out to explore the data from a design perspective. This design perspective evolves as the thesis develops and while some of the methods are inherited, through design, from the social sciences, the most significant and explicit methodological contribution from the social sciences comes from Actor Network Theory. The use of design perspectives as sensitising terms, used alongside other key concepts adopted from ANT, is also described below

[38] Within the context of parliamentary debate, turn-taking is, in any case, modulated by formal convention and etiquette.

4.4.1 Using a model to code a text

The first study in this thesis, described in Chapter 5 below, explicitly looks for a set of predetermined and named activities within the transcript of a meeting using the model of Naming, Framing, Moving and Reflecting as described by Valkenburg and Dorst. This method is a coding exercise that imposes a number of categories onto the activities observed to allow them to be analysed from the perspective of the design practice defined by those categories.

This activity was initially undertaken by annotating the transcript in a word processor where participants were identified and the discrete episodes of the meeting were isolated. As more detailed and numerous instances of each element were identified, the complexity of this task increased beyond the capabilities of the word processor. The addition of a spreadsheet was not adequate to keep track of this. The text was therefore imported into Qualitative Data Analysis (QDA) software, HyperResearch, which contains tools more suited to the identification of specific categories of design activity as themes within the source text. This process generated a large number of examples of design activities but these were numerous and, within the software interface, abstracted from the context and narrative in which they were produced. This resulted in three observations.

Firstly, the software was useful to keep track of numerous instances of different activities across the duration of the transcript. Secondly, the software was capable of more sophisticated, and unnecessary, interventions and representations of the data than were required. These two points informed the selection of tools for the next stage of the study. The third observation is that the NFMR model used was not entirely suitable to the task in hand. The original study by Valkenburg and Dorst employed strict categories and a close integration of them that was informed by the design model adopted by the researchers. Taken out of this original context, the model becomes a more prescriptive method requiring the data to be shaped into the predetermined categories. This created an abstraction of the activities observed rather than providing a method of identifying activities that might correlate to descriptions of designing. A more detailed review of this method is undertaken in Chapter 5 where it is empirically deployed.

4.4.2 A less formal approach to frame analysis

The use of Qualitative Data Analysis (QDA) software is well suited to the identification and retrieval of key elements of a transcript and the process of doing so offers a way of becoming familiar with the text and what it contains. The identification of names and frames proved to be of ongoing relevance to the analytical process with frames in particular providing a way of acknowledging the contexts that are being drawn into the debate by participants and perspectives that are adopted by them.

Identification of the use of framing, as a way of tracing how these contexts are introduced and what impact they have on the proceedings, may be achieved by a close reading of the text without the added complexity of either a formal model or the interface elements of the QDA software. This less formal approach to frame analysis treats the transcript as a narrative, looking for specific points

where framing, and reframing, takes place and follows the more open approach adopted by Schön. Without the constraints of a coding scheme or a formal model it is easier to establish, through a closer and persistent connection between the frame and the context in which is located, how these frames are drawn into the debate and how they are subsequently treated by participants.

The frames observed are identifiable with specific episodes of the debate. A detailed analysis of how these frames functioned within the debate provided a more detailed view of how each frame contributes to the narrative flow of the debate and relates to the stated position of the participants involved.

Framing is an activity identifiable with the design process and a frame analysis of that process has been seen to generate useful insights into the process. As a form of analysis of debate it leads to potentially useful results which are further explored in Chapter 5 as a development from the limitations of the NFMR model.

4.4.3 Locating framing as a design function

The use of precedents, and the attendant shift in perspective that this entails, has clear connections with the design process. Precedents are also indications of how designers bring wider contexts into that process. This represents an important development from the more generic treatment of frames described above towards a specific recognition of framing as a design activity. Precedents can also be seen as shifts in perspective that reach beyond the immediate environment of where the design activity is taking place. Both Schön's and Valkenburg and Dorst's approach to their transcripts of meetings focus on the activity taking place within the design studio without acknowledging the wider context in which the designers or the studio are placed.

Dorst's work on frame creation (Dorst, 2015) provides a more open model than NFMR, recognising the broader narrative of the design process. The framing stage of this model, with its simple identification of the key perspectives employed by a designer, is proposed by Dorst as a "how-to" design guide. Taking this as a starting point, but shifting the focus from creation to interpretation, Dorst's guide provides a template, a method of semi-structured text analysis, that can be used to identify and interpret activities taking place in a design meeting. This template is used, in Chapter 6 below, to provide a specific focus on the *source* from which a precedent is drawn and the *target* for which it is intended.

This presents the framing process within a controlled interpretative device but without the constraints of the NFMR model employed earlier. The focus provided by this template allows for the particular perspectives of participants to be examined in view of the specific design functions that the precedent served along with the identity of the participants and the values with which they identify.

This process of refinement, leading from a formal model through a less formal frame analysis to a more specific design focussed examination of precedents traces the path taken through the data

described in the earlier sections of this chapter. This series of methods progressively focuses on the participants of the debate and the influences that they are observed to bring to the proceedings.

4.4.4 Design and ANT

A methodological stage that requires some explanation is how the focus on the participants and the proceedings noted above is to be handled. The methods described above were developed for and applied to the analysis of conventional design meetings but will be applied to parliamentary debate which occurs in a different context. The methods engage with the detailed content of what participants have said as they interact through the meeting but do not provide a view of the context in which the meeting takes place. These contexts will be included in the analyses that follows by also focussing on the way that participants come to be involved in the debate and to the structure of the debate and the environment in which it takes place.

This focus is supported by the detailed reading of the transcript but also takes into account both the democratic process of representation that the UK parliamentary process exemplifies and the built environment in which it takes place. The way that the participants engage in this process and environment requires a more flexible manner than can be supported by the methods already described. This is resolved with reference to a more open approach to data adopted from ANT. In this approach the overall environment is considered to take an active part on the proceedings and the key stages in those proceedings are considered to be specific, transitional points where a particular grouping or assemblage of actors temporarily comes together.

These points of transition mark where some kind of impact is apparent and where the effects of that on the proceedings can be traced through subsequent stages. In ANT terms the researcher at this point begins to “follow the actors” through these stages. This notion of following actors originates in the ethnological approach to research on which ANT was originally based but is recognised here as a perspective on how the actors involved in the parliamentary process can be followed through the debate: initially based on the record of what they say but also stepping back to consider the context in which they say it.

This approach is adopted in Chapters 7 and 8 where the focus of the research shifts from the detailed interactions taking place between participants towards a more situated account of who those participants are and the environment in which their interactions take place. This shift also recognises that the frames and perspectives that have been identified in Chapters 5 and 6 are dependant upon the individuals who adopt them and the context in which they do so.

As this thesis develops it moves away from the coding of a transcript towards a more fluid approach and a more general recognition of the context in which the transcript is created. This fluidity, to reinforce the point made in Chapter 3, is reflected in the general approach to analysis. This approach treats the concepts identified from the design literature and from ANT as a collection

of sensitising terms which are kept in mind and referred to as appropriate rather than as a set of concepts that are consciously imposed on the data and its interpretation.

4.5 Summary

This chapter has provided a general introduction to the two projects that will be used to provide data for the work that follows. This provides the reader with the context in which the debates occurred and from where the data sources have been taken. The identification of relevant data sources has been described in some detail which provides further context, not only in relation to the sources themselves and where they are found, but also in relation to some of the specific methods that have been employed to assist in identifying sources and navigating around two distinctly different archival environments. Two primary data sources have been identified with which to begin this study: the transcript of a meeting which is one of few extant documents that record a debate from the LBR; and the Second Reading of the High Speed Rail (Preparation) Bill which is a key decision point in the parliamentary progress of the HS2 project.

The methods of identifying and engaging with data sources has been described here in preparation for the more detailed demonstration of these methods in the chapters that follow. This has also provided an opportunity to explore methodological questions about how data is treated in relation to a researcher's conceptual framework and the stance adopted in the current study that brings together methods and perspectives from design with a flexibility adopted from ANT. The next chapter is the first of four empirical chapters that bring together the data sources introduced in this chapter with the conceptual notions of design identified in Chapter 2.

5 Shifts in perspective in parliamentary debate

> "But forget the Accord, Dick Landgraff was thinking to himself as he drove the Camry. Now there was a Japanese car that was even better, Holy-moly! Was Ford in trouble, or what? Just two weeks after Landgraff drove the Camry, the product planning committee, composed of twenty top executives of the company, approved the $1.6 billion Accord-beater budget for the new Taurus. All the while he was making his presentation, Landgraff kept thinking about the Camry. They had targeted the *wrong car*." (Walton, 1997:43)

Design activity can be characterised, as shown in Chapter 2, as the application and exploration of shifts in perspective. An awareness of these shifts underpins the work of Schön whose observations of practitioners in the design studio are presented as a series of different perspectives, of seeing and moving and then seeing again their design problem and its potential solutions. This series of perspectives, broken down into four distinct phases of naming, framing, moving and reflecting, have been operationalised in several studies as a method of modelling and analysing design behaviour in various design environments. In the first part of this chapter this model will be used as a method of identifying and observing the presence of design activities within a debate. The presence of these activities helps to establish the potential of the model as a method of analysis and the analysis helps to understand how these activities affect the debate as it proceeds.

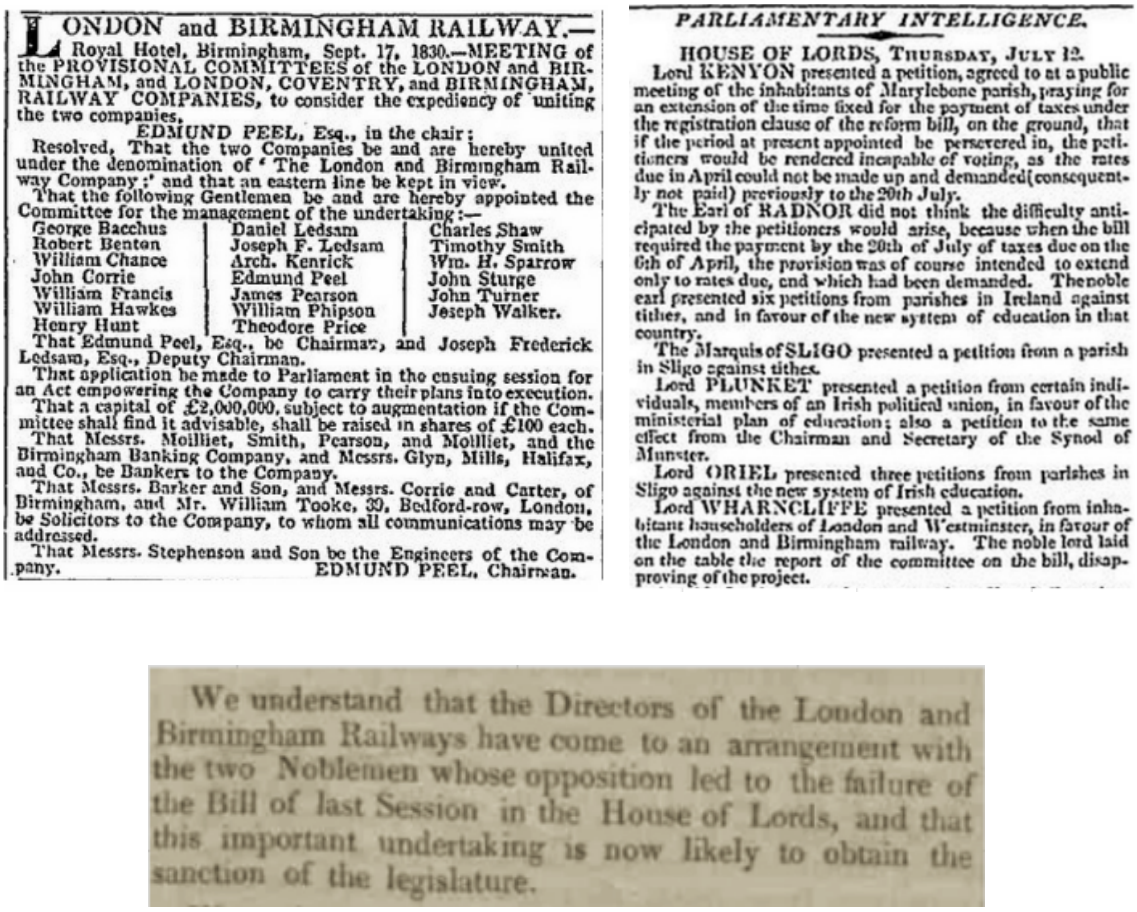
5.1 Naming and framing: a key meeting in the London and Birmingham Railway project

This study draws upon the historical example of the London Birmingham Railway which, as noted in Chapter 4, provides an historical context for the work on the High Speed Two project described later in this thesis. The use of an historical case has another methodological advantage: the parliamentary discourse of the nineteenth century is smaller and therefore provides a more manageable initial study. Further, because the outcome of the project is known this hindsight offers guidance to the researcher in this early stage since it is known what happened next and what impact the various activities observed had on the eventual progress of the debate and the development of the LBR. [39]

[39] The material contained in this section was presented as a paper at the Design Research Society Conference, Umeå, June 2014 (Umney, Lloyd & Potter, 2014).

5.1.1 Identifying a key meeting: the selection of data

The method for selecting data, through a process of compiling available sources and presenting a path through them as a visualisation of the discourse, was described in detail in Chapter 3. That exercise identified key stages in the discourse through the production of a timeline made up of the documentary sources available. The variable scales of view that Prezi supports provided a mechanism for viewing both the overall timeline of the project and the detailed content of each document. As each document was added to the timeline the main development stages of both the railway project and the debate around it were identified. Three documents relating to these stages, all from newspaper archives, are shown in Figure 5.1.



LONDON and BIRMINGHAM RAILWAY.—Royal Hotel, Birmingham, Sept. 17, 1830.—MEETING of the PROVISIONAL COMMITTEES of the LONDON and BIRMINGHAM, and LONDON, COVENTRY, and BIRMINGHAM, RAILWAY COMPANIES, to consider the expediency of uniting the two companies,

EDMUND PEEL, Esq., in the chair:

Resolved, That the two Companies be and are hereby united under the denomination of 'The London and Birmingham Railway Company;' and that an eastern line be kept in view.

That the following Gentlemen be and are hereby appointed the Committee for the management of the undertaking:—

George Bacchus	Daniel Ledsam	Charles Shaw
Robert Benton	Joseph F. Ledsam	Timothy Smith
William Chance	Arch. Kenrick	Wm. H. Sparrow
John Corrie	Edmund Peel	John Sturge
William Francis	James Pearson	John Turner
William Hawkes	William Phipson	Joseph Walker.
Henry Hunt	Theodore Price	

That Edmund Peel, Esq., be Chairman, and Joseph Frederick Ledsam, Esq., Deputy Chairman.

That application be made to Parliament in the ensuing session for an Act empowering the Company to carry their plans into execution.

That a capital of £2,000,000, subject to augmentation if the Committee shall find it advisable, shall be raised in shares of £100 each.

That Messrs. Moilliet, Smith, Pearson, and Moilliet, and the Birmingham Banking Company, and Messrs. Glyn, Mills, Halifax, and Co., be Bankers to the Company.

That Messrs. Barker and Son, and Messrs. Corrie and Carter, of Birmingham, and Mr. William Tooke, 39, Bedford-row, London, be Solicitors to the Company, to whom all communications may be addressed.

That Messrs. Stephenson and Son be the Engineers of the Company.

EDMUND PEEL, Chairman.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF LORDS, THURSDAY, JULY 12.

Lord KENYON presented a petition, agreed to at a public meeting of the inhabitants of Marylebone parish, praying for an extension of the time fixed for the payment of taxes under the registration clause of the reform bill, on the ground, that if the period at present appointed be persevered in, the petitioners would be rendered incapable of voting, as the rates due in April could not be made up and demanded (consequently not paid) previously to the 20th July.

The Earl of RADNOR did not think the difficulty anticipated by the petitioners would arise, because when the bill required the payment by the 20th of July of taxes due on the 6th of April, the provision was of course intended to extend only to rates due, and which had been demanded. The noble earl presented six petitions from parishes in Ireland against tithes, and in favour of the new system of education in that country.

The Marquis of SLIGO presented a petition from a parish in Sligo against tithes.

Lord PLUNKET presented a petition from certain individuals, members of an Irish political union, in favour of the ministerial plan of education; also a petition to the same effect from the Chairman and Secretary of the Synod of Munster.

Lord ORIEL presented three petitions from parishes in Sligo against the new system of Irish education.

Lord WHARNCLIFFE presented a petition from inhabitant householders of London and Westminster, in favour of the London and Birmingham railway. The noble lord laid on the table the report of the committee on the bill, disapproving of the project.

We understand that the Directors of the London and Birmingham Railways have come to an arrangement with the two Noblemen whose opposition led to the failure of the Bill of last Session in the House of Lords, and that this important undertaking is now likely to obtain the sanction of the legislature.

Figure 5.1: Three documents from the LBR discourse that identify key stages from the inception of the railway company to its approval in Parliament three years later. *Sources: London and Birmingham Railway*, The Times, London, England, Saturday October 02, 1830, p.1; *House of Lords*, Thursday, July 12. The Times, London, England, Friday July 13, 1832, p.1; *We understand*, Northampton Mercury, Northamptonshire, England, Saturday 24 November 1832, p.3

These documents describe critical events in the progress of the project. The first is at the beginning of the project where the management team are brought together: “the appointment of the Committee for the management of the undertaking”. The second is a major stumbling block in the House of Lords: “report of the Committee on the bill, disapproving of the project”. And finally “an arrangement with the two Noblemen whose opposition led to the failure of the Bill”. None of these events appear to have been documented in detail.

A fourth document from the timeline of the project reported a meeting at the Thatched House Tavern, which was called by the railway's political supporters immediately after the Bill was rejected by the Lord's Committee. They met to discuss their strategy for turning the Bill's initial failure into its eventual success. This meeting appears to have been a turning point in the progress of the project and was recognised by the promoters of the railway as such: a summary of the debate that took place was published as a notice in several newspapers and the full transcript was published and circulated separately by the railway company.

The Thatched House meeting as published, although not technically a parliamentary debate, of which no transcripts are extant, provides a detailed description of the debate. It represents the only document that could be identified from the discourse that contained a lengthy and complete debate between protagonists in the LBR project. In methodological terms, the document also represents a constrained event, with a fixed number of reported participants, and with a clearly marked purpose, structure and outcome which makes it a useful source for this initial study.

LONDON AND BIRMINGHAM RAILWAY.

A Meeting of Peers, Members of the House of Commons, and other persons favourably disposed to the undertaking, was held at the Thatched-house Tavern on Friday the 13th of July, the Right Hon. Lord WHARNCLIFFE in the chair.

The CHAIRMAN stated, that the meeting was held to take into consideration the circumstances which occasioned the failure of the London and Birmingham Railway Bill in the House of Lords, and the propriety of some expression of opinion as to what further proceedings may be expedient with respect to it.

The Earl of DENBIGH moved the first resolution, in seconding which Sir G. SKIPWITH, Bart. M. P. stated that no person who duly considered the subject could doubt that the proposed railway would have been extremely beneficial to the great towns it was intended to unite, to the districts through which it would have passed, and to the nation at large.

The second resolution having been moved by the Earl of AYLESFORD, and seconded by Sir E. D. SCOTT, Bart.

Lord WHARNCLIFFE said,—There can be no doubt that to the apprehensions of the landowners the failure of the bill must be attributed. Before I consented to take the chair in the committee I pointed out the difficulty which so great a proportion of dissentient landowners would offer to the passing of the bill, and begged it might be understood that I went into the committee entirely unpledged. I must now say, that having heard and carefully sifted the evidence for the bill, I was quite satisfied that this undertaking had the character of a great national measure, and was not a scheme, like many formed in 1825, for the purpose of traffic in shares. I was prepared, therefore, to support the measure, unless something should be advanced on the part of the opponents to alter my opinion. I think it right likewise to add, that of the many bills of this

Figure 5.2: Facsimile of a newspaper summary of Thatched House meeting. published 28 July 1832. *Source*: London and Birmingham Railway, *Morning Post*, London, England, Wednesday 18 July 1832, p.3[40]

A full report of the meeting is available in a number of archives. A detailed summary is given below along with excerpts from a line numbered version created for the purpose of this study[41].

[40] A full version of the record of this meeting was published by the London and Birmingham Railway company as an appendix to their "*Extracts from the minutes of evidence, given before the Committee of the Lords, on the London and Birmingham Railway Bill, in June, 1832: shewing the great advantage to landowners and the public, of this mode of communication in general*." Printed by J. Chilcott, 1833. An original copy of this can be found at a number of research libraries and online at https://books.google.co.uk/books/reader?id=0WEHs7vof-0C&printsec=frontcover&output=reader&pg=GBS.PP1 [Accessed March, 2017]

[41] The line numbered transcript referred to in this section is available online at https://goo.gl/bUhVWp

5.1.2 A summary of the Thatched House Tavern meeting

The Thatched House meeting was organised and attended by supporters of the railway in response to the Bill's failure. All of the participants, apart from the Chairman of the Railway Company, were Members of Parliament. The Chairman, Lord Wharncliffe, who had chaired the House of Lords Committee where the Bill was rejected, formally opened the meeting, explaining its purpose as considering "the circumstances which occasioned the failure of the London and Birmingham Railway Bill" and to discuss "what further proceedings may be expedient" in getting the Bill approved[42]. The meeting then proceeds through four formal resolutions which provide a broad structure to facilitate the discussion.

The first resolution, shown below in Excerpt 5.1, proposed that the railway would be "productive of very great national benefit" (Exceprt 5.1:Line 14). Sir Gray Skipwith, who chaired the House of Commons LBR Committee, seconded the resolution citing "the great towns" that the railway would unite and the "districts through which it would have passed" (5.1:17-18).

12 The Earl of Denbigh then rose and moved - "That in the opinion of this
13 Meeting, a Railway from London to Birmingham will be productive of very
14 great national benefit."
15 Sir Gray Skipwith, MP seconded the motion, and stated that no person
16 who duly considered the subject, could doubt that the proposed Railway
17 would have been extremely beneficial to the great towns it was intended
18 to unite, to the districts through which it would have passed, and the
19 nation at large.

Excerpt 5.1: Lines 12 to 19 of the Thatched House transcript.

The second resolution (Excerpt 5.2) recognised the "rigorous" examination in the House of Commons Committee hearing (5.2: 23) and that its failure in the House of Lords was due to landowners' "ill-founded" apprehensions about the effect the railway would have on their estates (5.2: 24-27).

22 "That the Bill for effecting this important object having passed the
23 House of Commons after a long and rigorous examination of its merits, it
24 must be presumed that its failure in the House of Lords has arisen from
25 apprehension on the part of the landowners and proprietors respecting its
26 probable effect on their estates, which this Meeting firmly and
27 conscientiously believe to be ill founded."

Excerpt 5.2: Lines 22 to 27 of the Thatched House transcript.

[42] The full source of this introduction to the meeting can be found on lines 7 to 11 of the line numbered transcript.

On proposing the second resolution Wharncliffe observed that, before agreeing to chair the Lords Committee, he was conscious that the Bill was likely to meet fierce opposition but that he was himself “entirely unpledged” (Excerpt 5.3).

Committee, will remember that I pointed out to them the difficulty which
so great a proportion of dissentient land-owners would offer to the
passing of the Bill; and I begged it might be understood that I went
into the Committee entirely unpledged.

Excerpt 5.3: Lines 33 to 36 of the Thatched House transcript.

In Excerpt 5.4 Wharncliffe recognised the conclusive nature of the evidence presented in support of the Bill (5.4:45-46). He went on to note that increasing the speed of communication between port and consumer is of “vital importance” (5.4:49) and “of great national benefit” (5.4:53), but that it was also the business of Parliament to protect landowners’ property and “satisfy those persons whose property is to be invaded” (5.4:57). Those landowners must be “wooed and won” rather than “hurried and forced” (5.4:58) into something they are resistant to.

in the course of my Parliamentary life, I never saw one
passed by either House that was supported by evidence of a more
conclusive character.
Of the utility of such a measure no one in the least acquainted with the
nature of trade can entertain a doubt - a speedy communication with the
ports of shipment or places of consumption, is of vital importance to
the manufacturer-there can be no doubt that such a mode of communication
as this was proposed to be, will be extended not only to Birmingham but
to Liverpool, to Lancashire, Yorkshire, and all the manufacturing
districts of the North, and will be productive of great national
benefit. Still I must contend that it is the business of the legislature
to protect the property of the parties through whose lands the line
would pass, to assure itself that all practicable measures have been
taken to satisfy those persons whose property is to be invaded, and who,
I must think, ought never to be hurried and forced, but rather wooed and won.

Excerpt 5.4: Lines 44 to 58 of the Thatched House transcript

Francis Lawley, a member of the House of Commons Committee that had previously approved the Bill is “fully convinced that the landowners’ fears of injury to their property or interference with their comfort and convenience are entirely unfounded” (Excerpt 5.5: line 80-82).

your Lordship for forming a judgment on the subject, having heard not only the evidence in favour of the measure, but all that could be alleged against it; and I can safely say, and say it with more confidence as my opinion perfectly coincides with that of your Lordship, that I went into the committee pained and grieved that so many landed proprietors dissented from the measure, and feeling like your Lordship, that it my duty to afford them every protection; but I came out of the Committee fully convinced that the fears they entertained of injury to their property, or interference with their comfort and convenience, were entirely unfounded. I declare I would not otherwise have supported the measure as I have done.

There was one word which fell from your Lordship to which I cannot forbear adverting; I mean the word intimidation: and I avow that if I saw any endeavour to use intimidation in support of this or any other measure, it should have my determined opposition; but knowing as I do

can assure your Lordship they are the last men in the world who would attempt to carry any measure by such means.

Excerpt 5.5: Lines 73 to 90 of the Thatched House transcript.

A third resolution considered how the Bill might be more successfully presented, and overcome previous difficulties, by employing “timely explanations” and “judicious management”[43]. Wharncliffe went on to describe how the Bill was defeated fairly, despite rumours to the contrary and of the unwillingness of the Lords to “force this measure on so many dissentient landed proprietors”[44]. The resolution was put and carried without further debate and the meeting then continued as participants made additional contributions. Thomas Paget (Excerpt 5.6) is reported, in an incongruous switch to a third person narrative in the document[45], to explain he changed his mind about the railway, after recognising how he would benefit from it.

a railway passed through an estate of his own; that at first he was opposed to it, but the benefits, the pecuniary benefits, arising from the enhanced value of the property, had been such as to convince him that in opposing it he opposed his own interest, and he was satisfied that in the event other landowners would come to the same conclusion.

Excerpt 5.6: Lines 140 to 145 of the Thatched House transcript.

The next speaker, Colonel Torrens, considered that it would not be necessary to intimidate landowners because they should in any case be able to appreciate the benefits of the railway (Excerpt 5.7). He identified a specific financial benefit of the railway by comparing the reduced cost of carrying goods by rail to increasing fertility in the landowners’ soil.

[43] Line 96 in transcript.

[44] Line 105.

[45] This document is described here as a transcript. It is recognised that it is probably not a verbatim report of the meeting that took place but rather the best example of a meeting of this kind that could be located for the purpose of this study.

158 intimidation, and I beg leave to say one word, just to express my own
159 opinion, that every species of intimidation would not only be improper,
160 but entirely unnecessary because the utility of a measure of this kind
161 rests upon grounds so plain and so easily made out, that it only
162 requires a little time and a little plain statement of the question to
163 convince the landed proprietors on the line, who are now averse to it.
164 It is my opinion, and an opinion formed upon some reflection, that every
165 thing which has a tendency to diminish the cost of carriage of goods or
166 agricultural produce, must have a similar effect to that which would be
167 produced by increasing the fertility of the soil itself, and therefore
168 the landowners in this kingdom in particular are the person most
169 interested in every thing that tends to cheapen and quicken carriage

Excerpt 5.7: Lines 158 to 169 of the Thatched House transcript.

Wharncliffe's final contribution (Excerpt 5.8) reasserted the mistaken apprehension of the landowners and that the railway promoters must take care of even "the fancied comfort" (5.8:177) of landowners. His final point indicated that support for the project was growing, but there were "certain individuals" (5.8:182) whose influence had prevailed over potential supporters.

172 In my judgement, there cannot be a greater mistake,
173 on the part of the landholders, than to think a Railway through their
174 lands would prove injurious to them. On the contrary, it will tend to
175 increase their convenience and their rentals. I am convinced the
176 promoters of this measure, in its future progress, will take care it
177 shall interfere as little as possible even with the fancied comfort of
178 proprietors. I add that, during the course of the proceedings on the
179 Bill, and since its failure, I have observed a disposition, on the part
180 of some who opposed it, to view it more favourably; and one who took a
181 leading part in the opposition, has stated to me his own wish to have
182 formed some amicable arrangement, but he found there were certain
183 individuals who though the injury they should sustain would be such as
184 would not admit of remuneration; he could not desert them, and was
185 therefore compelled, whatever might be his own inclination, to continue
186 his opposition.

Excerpt 5.8: Lines 172 to 186 of the Thatched House transcript.

The meeting concluded with a final vote of thanks given to the Chairman that also summarised the main points of the debate (Excerpt 5.9):

208 interested party; but having for upwards of twenty-two years been
209 engaged in commercial affairs, I must be permitted to say, that I do not
210 think a measure was ever projected, calculated to produce such great and
211 beneficial effects as that which has occasioned our present meeting. I
212 can safely say, that the results of the Liverpool and Manchester Railway
213 have far exceeded the expectation of the parties who embarked in it.
214 Commercial men can safely appreciate the advantages of cheap, certain,
215 and rapid means of communications. With regard to the apprehensions
216 entertained-I am sure conscientiously-by certain noble Lords, of injury
217 to their estates by the Railway-time and reflection, I am convinced,
218 will remove them; and the obstacles, which have for the present impeded
219 our great undertaking, will at no distant period entirely disappear.

Excerpt 5.9: Lines 208 to 219 of the Thatched House transcript.

In his summary the Chairman draws upon his commercial experience to describe the advantages of the railway, the nature of the opposition to it and the likelihood of removing that opposition by allowing landowners "time and reflection"[46] to change their minds.

5.1.3 Using the NFMR model to identify design activity in the Thatched House meeting

A method of looking for instances of Naming, Framing, Moving and Reflecting (henceforth NFMR), was used as a first approach to this meeting. This method was informed by Valkenburg and Dorst (1998) who describe their application of it as "an interesting instrument for describing team designing and identifying occurring strategies and problems" and which "provides a good survey of the course of the project" from which to analyse the different activities in more detail (ibid:267; 270).

The purpose of adopting this approach is two-fold. Firstly, to gain an insight into the applicability of a design model to a debate. This preliminary study, with the constraints already noted regarding the scope of the data and the simplified model of design applied to it, is an exploration of the principle question behind this thesis and a proof of concept. Applying this simple model of design to this simple sample data source helps to move the thesis forward to the more complex scenario of HS2 and drawing on more nuanced characteristics of design. The second intention builds on this methodological stage to gain an understanding of the possible insights into the debate that this method can generate.

The model used by Valkenburg and Dorst and described in Chapter 2 is shown in Figure 5.3 below. In their implementation the four elements are used as a series of iterative stages that they identify from a protocol analysis of a design meeting.

[46] Line 217 in transcript

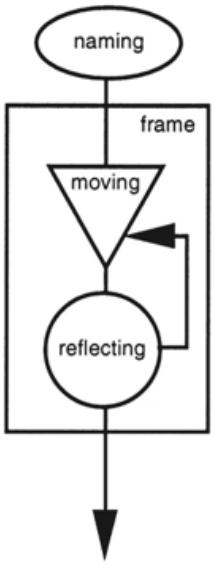


Figure 5.3 The Valkenburg and Dorst model of design as a process of Naming, Framing, Moving and Reflecting.

This approach is based on Schön's account of design as the series of "see-move-see" shifts in perspective he observed during the course of a meeting in a design studio. The design activities defined in the NFMR model as applied to the conventional design team in a design studio setting were, necessarily, applied somewhat differently to a documentary record of a nineteenth century debate because there are clear differences between the two. These differences are outlined below:

- the *participants* in Parliament are not designers - they are not specifically, or at least not consciously undertaking a "design activity". This distinction is an intrinsic aspect of this thesis.
- any interactions between the participants at the Thatched House meeting are represented in a linear sequence of speeches rather than the more dynamic and co-operative protocol of a design meeting - this is not a live data source generated in a conventional design environment;
- unlike the protocol analysis of the design meetings drawn from recording of a design meeting the Thatched House document is not a source of data collected at the time of the activity for the purpose of this type of analysis;
- the creators of the original NFMR data source were interested in how their analysis informs the education of design practitioners whereas the creators of the Thatched House document were interesting in persuading readers that the railway should be built.

Setting out these differences in this way provides a summary of the issues that this thesis navigates between concepts developed within the design discourse and their use as a way of analysing a discourse generated from outside of a conventional design environment. These issues provoke questions about who is participating, who is the designer, how the various participants interact as a design team and who can be considered to be a part of that team, how their participation is observed and measured, how the design activity is recorded and where this record

can be found, and what affect the researcher has on the overall process and the findings they generate through it. All of these questions will recur in later chapters.

Although the NFMR method appears to be better suited to the analysis of the kind of design meetings it was originally developed from and applied to, its use in this initial study addresses some of the questions raised above. The intention for this preliminary study then is to look for the incidence of NFMR elements in the debate, to evaluate the purpose they serve within the meeting and to consider whether the NFMR model is a useful tool for this kind of design analysis.

5.1.4 Naming, framing, moving and reflecting in the Thatched House transcript

The analysis of the Thatched House meeting was developed in four stages that correspond to the four NFMR activities, each building on its predecessor, and each producing a list of elements that might be considered to represent the relevant design activity taken from the NFMR model. This was initially undertaken as a coding exercise, using Qualitative Data Analysis software, HyperResearch. The transcript was divided into the structural elements of the meeting and by the named participants. Each contribution was then read and coded for the four elements of the NFMR model.

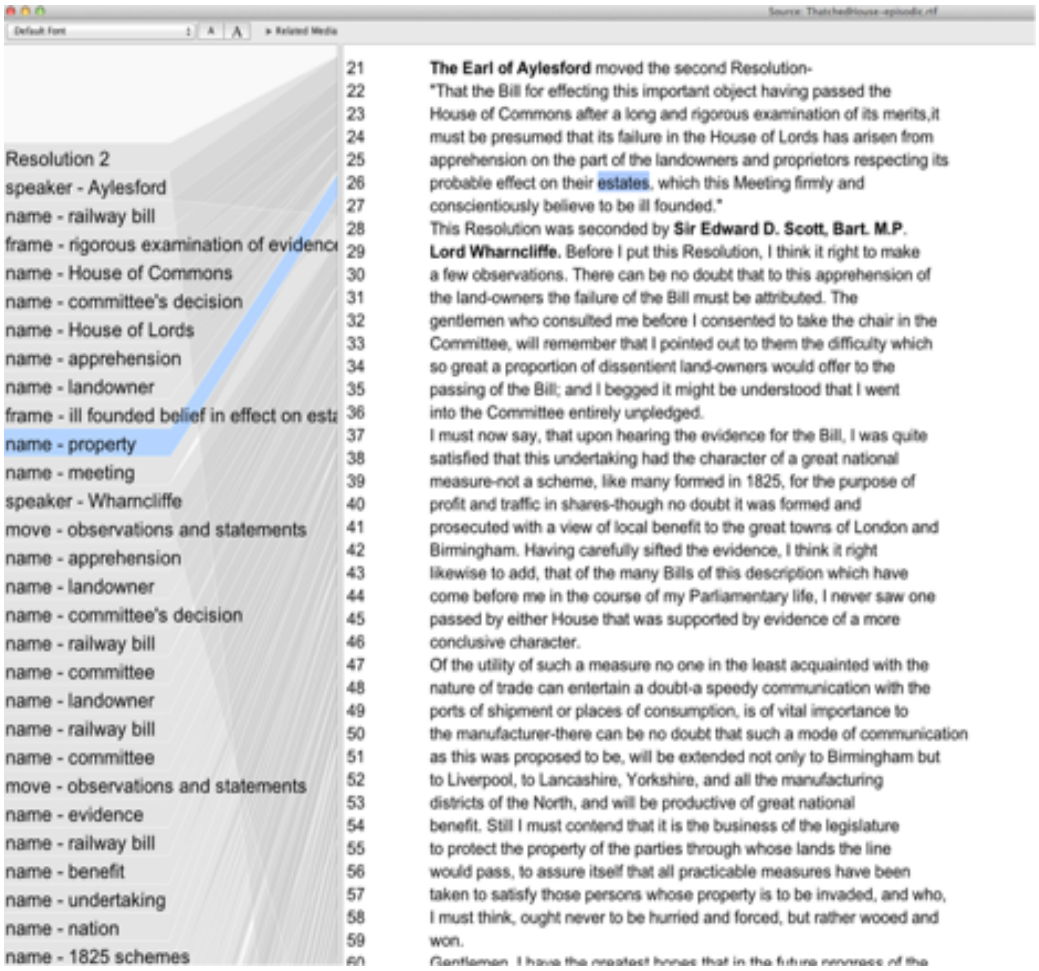


Figure 5.4: Software screenshot showing identification of design elements within the source document. This example highlights the “name-property” code in the left hand pane list of coded elements in relation to the “estates” instance as it appeared in the text on the right.

5.1.5 Names and frames

For Valkenburg and Dorst, *naming* is an explicit pointer to relevant objects in the design task (Valkenburg and Dorst, 1998, p.255) and the first stage of this study sought to identify relevant objects that were identified by participants in the debate. An object identified as a *name* is shown highlighted in Figure 5.4 in the context of the transcript of the debate and all names are listed in Figure 5.5 below as a screenshot of the codebook from the software.

Frequency Report

Code	Total	Bar Graph
name – the measure	20	
name – benefit	13	
name – landowner	12	
name – property	12	
name – railway bill	12	
name – meeting	10	
name – opposition	9	
name – locations	7	
name – railway	7	
name – evidence	6	
name – landowner privileges	6	
name – committee's decision	5	
name – undertaking	5	
name – apprehension	4	
name – committee	4	
name – communication	4	
name – House of Commons	4	
name – nation	4	
name – promoters	4	
name – House of Lords	3	
name – Peer	2	
name – 1825 schemes	1	
name – case against	1	
name – case of the promoters	1	
name – commercial men	1	
name – economic depression	1	
name – importance to manufacturer of speedy	1	
name – Liverpool and Manchester Railway	1	
name – manufacturer	1	
name – pain and expense spared	1	
name – prejudices	1	
name – session of Parliament	1	
name – unfairness	1	
name – utility	1	
Total: 34	166	

Figure 5.5: List of names identified in the Thatched House transcript and collated as a codebook in HyperResearch.

Identifying and listing named objects in this way produced an outline of the main elements of the debate which are, in Schön's terms, those aspects of the task in hand to which attention will be focussed. These elements, reflecting the purpose of the meeting identified above in lines 7 to 11 of the transcript, relate to: recent parliamentary activity; the railway bill; the railway itself, its geography and the benefits it will bring; the key protagonists and their properties and attributes. These were the named objects that the meeting, which as can be seen in the frequency report above, set out to address. All of the elements identified are deemed to be relevant objects due to their presence in the transcript but the most frequent: the railway bill, the railway line it proposes (the measure), the landowners and their opposition to the Bill, provide the focus of attention to which the meeting returns.

In relation to the stated objectives of the meeting, to ascertain the cause of the Bill's failure, the landowners who objected to the railway appear as one of the most important objects of attention. The nature of these objections is progressively refined as the meeting progresses. The landowners' opposition is based on their apprehensions about the impact the railway line will have on their property and these apprehensions begin to emerge as the object of attention. The failure of the Bill is explicitly attributed to these landowners' apprehensions (E5.2:25) which therefore need to be modified in some way. Modifying these apprehensions would result in a critical shift away from the current state of opposition to a more desirable position of support. The removal of these apprehensions is identified at the end of the meeting as the removal of "the obstacles which have for the present impeded our great undertaking" (E5.9:219).

These explicit pointers to "apprehensions" as an object to be addressed by the meeting raises an important methodological question: should this drawing of attention to a virtual object, a thought in the mind of an individual who is not in the room, be considered to be a name in the NFMR model? For Valkenburg and Dorst the named objects were clearly physical attributes of a product being designed and these could be observed, handled, modified and reviewed in the studio. This same process in Schön's example of Quist and Petra deals with the named virtual object of the building that is being designed but this object is physically represented and manipulated in the studio through the use of pencil and paper and the act of drawing. In the Thatched House debate, the apprehensions of the landowners are intangible and remote and, even if the landowners were physically in the room their apprehensions are not easily represented or manipulated. Should these less material aspects be left out of the analysis because they don't fit into the model or should the model be changed to accommodate them?

Looking for named objects and identifying the landowners' apprehensions in this way has helped to build up some insight into important aspects of the meeting and also raised significant issues about the nature of what constitutes a name and how that name relates to the object it refers to. In respect of the example of the landowners' apprehensions, as additional names are identified it becomes clear that each name is not necessarily a discrete object. The landowners' apprehensions are better seen as a collection of elements, an assemblage of interconnected names which include the landowners, their land, the possible impact that the railway with have on their land and their apprehensions about that impact.

These apprehensions are an attribute of the landowners who are separately identified throughout the debate (e.g. E5.2:25), a reflection of the landowners' relationship with the land which they are own and how they use it which is variously described as "comfort" "convenience" and "privilege" (E5.5:81; E5.8:177), and an anticipation of the effects that they anticipate the railway to have on their land (5.8:183). All of these different but related aspects of the landowners' apprehensions are separately named and identified in the transcript. Drawing these apprehensions of the landowners together provides a context in which these apprehensions are observed and how they might be addressed by the participants. This emerging context resonates with the notion of the frame which, for Valkenburg and Dorst, points towards a structure into which the relevant names are drawn by

participants in order to contextualise them and explore them further (Valkenburg and Dorst, *ibid*:255).

This single example of the landowners, their property and their aspirations posed a question about the nature of what can be named and how the virtual, physical presence or material attributes can be accounted for. Once these names are identified and assembled together it is then unclear how collections of names are to be distinguished from frames. The naming and framing elements of this model of design are potentially interchangeable and difficult to isolate from each other. This could be due to the differences between the context of design and the context of debate outlined above and if so this would support a case for the inapplicability of this line of enquiry and towards a conclusion that activities observed in conventional design contexts are incompatible with activities observed in the different contexts of design and debate.

However, the original study by Valkenburg and Dorst also demonstrates this difficulty. The named objects that are identified by participants are subsequently also identified as frames within which this attention is directed (Valkenburg & Dorst, 1998:261). To return to Schön's description (Schön, 1983:165), frames represent the way that participants "determine the features to which they will attend, the order they will attempt to impose on the situation, the directions in which they will try to change it." Schön's description of the frame also combines the process of naming relevant objects ("determining") with the process of framing the ways (the "order" and "direction") in which the objects are to be addressed. There is for Schön, and for Valkenburg and Dorst, some fluidity between these names and frames within the design context that invites further exploration in the debate context.

Moving onto the next stage of the NFMR model, the identification of frames within the Thatched House transcript looks for instances of where the participants have drawn together objects they have named and locates them within a context that supports further exploration. In the Thatched House debate frames appear, like the assemblage of landowner apprehensions seen above, to be collections of objects that operate within, build upon, or refer to wider contexts in which they are found or in which they are intended to operate. The frames found in the transcript are shown as a list in Figure 5.6 below.

Figure 5.6: List of frames identified in the Thatched House transcript and collated as a codebook in HyperResearch.

As the meeting progressed the more dominant frames were restated and reinforced as the participants continued to explore the problem of the landowners' opposition and their proposed strategies for dealing with it. To follow the earlier example, the landowners' apprehensions which were identified as a name, becomes more fully contextualised within the frame of their ill-founded belief in the effect that the railway would have on their estates. This locates the problem of landowners' opposition and apprehensions about the railway into a more direct relationship between them, their property and the proposed railway line.

The list of frames identified are collections of various named objects that have been combined into a more concerted approach to the problem in hand. These frames can be further consolidated into three broad contexts:

1. the participants' interpretation of the failure of the bill;
2. the nature of the landowners' opposition to the Bill;
3. the participants' proposed strategy to address and resolve this opposition.

These contexts qualify the named objects and provide a broader collective understanding between the participants of how the project should proceed. How these frames are developed, and how they proceed through the meeting is the focus of the next stage of the NFMR model, the *move*.

5.1.5 Moves and reflections

In contrast with the amount of detail found in the transcript relating to the naming and framing process there is much less apparent activity that can be described as moving or reflecting. In the design context a move is most clearly seen as a direct physical intervention such as drawing or

sketching or modifying the designed objects in order to test out configurations of materials and behaviours. Moves are, for Valkenburg and Dorst, “always characterised by a verb” (Valkenburg and Dorst, 1998:255) and alongside the more physical interventions they observe, for example, discussions around the pros and cons of a certain named object (ibid:261). Within the Thatched House transcript there is no evidence of physical interactions and the meeting is itself a discussion around the pros and cons of the railway and the opposition to it. In this sense the meeting can be treated as a single move within the wider process of promoting and developing a new railway line.

However, there is also finer granularity of moves within the transcript that can be seen in the structure of the meeting itself. The four resolutions that are raised and carried through the meeting, represent a series of formal moves. This is reflected in the formal language of the meeting where each resolution is “moved” prior to being debated, “put” and then, if supported by the participants, “carried”. Within this formal structure there are more detailed moves where individual participants are seen to bring into focus a certain aspect of the discussion. This is seen, for example where the evidence for the railway is sifted through in line 42 or where the notion of “intimidation” (E5.5:85) is brought back into focus by a participant who seeks to use the term as a means of measuring, by comparison, the honesty and integrity of the promoters of the railway (E5.5:90). But, in the absence of the more distinctive verbs that clearly identify an active move, it is difficult to identify and separate out these spoken moves from either the production of a frame or the process of reflection.

For Valkenburg and Dorst a reflection is an explicit reference to earlier activities made by designers which help them to know what to do next (ibid:255). The process of reflection is the central element of the practice upon which Schön’s legacy in the design literature is based. His isolation of the reflective process in the design process drew on his interpretation of the exchanges between Quist and Petra. In these exchanges Quist’s evaluations of what he was doing, at the time he was doing it, provided both Petra and Schön with an insight into how the designer evaluates their moves and uses this evaluation to move forward.

In the Thatched House meeting the participants reflected on the recent parliamentary meeting where the Bill was rejected and also on less recent activities such as their 22 years of commercial experience (E5.9:208). Reflections on the meeting itself are also apparent. The move around the notion of intimidation is an example of what has been said being reflected upon to shift what is said next. There are few examples of this which suggest another distinction that could be made between design and debate. The less physical nature of the debate, or at least the surviving record that is available in this instance, doesn’t include references to the kind of reflections that Schön would recognise.

5.1.6 Reviewing the use of the NFMR model as a method

This section reports on a preliminary investigation of how a description of design, based on the work of Schön and subsequently operationalised by Valkenburg and Dorst, can be used as a

method of looking for the presence of what might be considered to be design activity taking place in a debate context.

As a basic engagement with a text the method provided a way of familiarising the researcher with the material and identifying the key elements of the debate and the main stages through which it develops. This could however be achieved by any number of approaches to the reading of a documentary data source. As the reading focussed on the more specific task of identifying the elements of the NFMR model some of the differences and similarities between the design and the debate context became more apparent. Two key issues arose when attempting to identify the discrete elements of the NFMR model that might have provided a way of accessing a view of design in the debate. The first of these issues related to where elements are difficult to distinguish from each other or where one set of elements, such as a collection of names, can be collected together into a single instance of a frame. This problem of conflation was also found where the NFMR model was used in a design context. It's recurrence in the debate context supports subsequent criticisms of Schön's definition of what he means by a frame (Moon, 1999 among others) and also subsequent studies using the NFMR approach to studying designers that have noted difficulties in identifying discrete elements both as individual researcher and where inter-coder reliability has been measured (Blyth et al, 2013; Perry & Krippendorf, 2013).

A second issue was the difficulty of finding clear instances of moves and more especially of reflections within the transcript. Moves were found to define the structure of the meeting as it is reported rather than interventions made by participants engaging with the situation and moving it forwards. The lack of observable reflections, aside from general reviews of what has been said or references made to past events, suggests that the documentary record is not a suitable data source to be used for this kind of activity or that the process of reflection does not take place within debate. Given the known problems with identifying elements it is difficult without further detailed work to resolve this. However, rather than focussing on the analytical deconstruction of the transcript into these discrete elements and attempting to improve the method for doing so an alternative conclusion can be drawn. By taking a step back from the detail of the analysis undertaken it is possible to conclude that even if the method was not suitable to the task it generated a number of insights from which the thesis can develop. These insights are listed below.

1. that the process of attempting to identify the NFMR elements provides a useful way of becoming familiar with a given documentary data source;

2. the identification of names provoked useful questions about the nature of these names and the objects that they refer to, both in relation to their presence or absence within the room where the debate takes place and their physical status outside of the room where, with the example shown, an apprehension is considered to be an object, or collection of a number of objects, that requires attention and modification;

3. however, the individual elements are not easy to distinguish and some do not appear to be present at all;

4. this difficulty with identification, in particular between “names” and “frames” reflects similar difficulties where the NFMR model is used within the design context and underlines Schön’s own ambiguity between collections of names and individual frames;

5. the process of looking for these elements creates a deconstructed view of the debate and a layer of abstraction through the imposition of codes and the contested definitions of them.

The original study by Valkenburg and Dorst employed strict coding categories with which to analyse the design activities observed. While these observations were made using an ostensibly descriptive model of design, when taken out of this original context, the model became prescriptive, requiring the data to be shaped into those predetermined categories. Applying this model to the debate transcript created an abstracted representation of the activities observed rather than providing a method of identifying activities that might correlate with, and be informed by, established notions of design.

To address the limitations of this prescriptive model, a less restrictive approach is necessary which supports a more open approach to the research process. This approach moves away from the restrictions of using a single, and evidently problematic, view of design and which instead draws upon a less constrained collection of descriptive terms and concepts from design. This approach also represents a methodological engagement with a broader notion of design which reflects the connections made between design and Actor Network Theory as noted in Chapter 3. Design is thereby employed as a collection of sensitising terms which are used to approach the data rather than a prescriptive framework in which the data must be placed.

This methodological shift leads to a less formal approach to the transcript which will explore how a looser notion of framing as a shift in perspective can be observed and how those shifts contribute to the debate.5.1.7 A less formal frame analysis of Thatched House
The most clearly identifiable name/frame constructs within the above analysis related to three broad contexts that recurred through the meeting: why the Bill failed; the nature of the landowners’ opposition; and a strategy for dealing with this opposition. These contexts are revisited in this section with another, more open, reading of the narrative compared to the restrictive model used in the previous.

The Thatched House meeting had two explicitly stated objectives: firstly, to consider why the Bill failed and secondly, to explore what should be done to ensure its future success. The question of why the Bill failed is answered in the second resolution: it was due to landowners’ ill-founded

apprehensions about the effect the railway would have on their estates (E5.2:25-26). Another theme, which counters those apprehensions on larger scale, is introduced early in the debate: the "very great national benefit" (E5.1:13-14) that the London and Birmingham railway will produce.

The apprehensions are considered to be ill-founded in a number of ways. The Bill underwent a "long and rigorous examination of its merits" in the House of Commons (E5.2: 23) and was supported by conclusive evidence (E5.4: 46) that easily withstood "all that could be alleged against it" (E5.5: 74). However, this evidence is clearly contentious, as it was so firmly rejected by the landowners on the House of Lords Committee. If these apprehensions are seen as a frame of opposition, then the supporters of the Bill must understand how this frame has been constructed in order to counter it with their own and thereby secure the support of those who were compelled to oppose the Bill (E5.8: 185-186).

Wharncliffe's statement that he went into the Committee unpledged (E5.3: 36) underlines his rigorous approach to the evidence but also indicates some empathy with the landowners. He wants it understood that, had the evidence not convinced him, he too may have been an opponent. Wharncliffe, along with all members of Parliament, is a landowner and the viewpoint of landowners is more fully explored when the Bill's failure is seen to result from their fear of the effect of the railway on their estates. At this point an overall theme is introduced that dominates much of the following debate. Wharncliffe describes the railway as an "invader" (E5.4: 57) that if built would "prove injurious" to landholders (E5.8: 173-174). The theme is developed by Lawley who refers to the "injury to property" (E5.5: 80).

This theme creates an understanding of the opponents' viewpoint, a frame that can bring their concerns, or rather an understanding of their concerns, into relief. The landowners are "seeing" their property as being invaded by the railway, which becomes an aggressor in challenging or taking away their "comfort and convenience" (E5.5: 81), even if such comforts are "fancied" (E5.8: 177) rather than real. The invasion frame works in grouping together the various concerns of the landowners; they are being forced into something they don't want, are having to defend themselves as a result but are, in response to this reaction, not to be deserted (E5.8: 184). The frame also expands their identity from individuals to a collective nation, something susceptible to invasion but that was also introduced earlier as a beneficiary of the railway.

Setting the frame of the railway development as an (aggressive) invasion allows a move to be discussed that might counter the aggression and for Parliament to be seen as a protector against the unwanted invasion. There is a distinction drawn in the meeting between "intimidations" (E5.7: 158-159) on the one hand – further aggression, but fitting the frame of the invasion metaphor – and "wooing and winning" (E5.4: 58) – a more diplomatic and conciliatory strategy for turning opinion. The frame of "invasion" has allowed two alternatives to be discussed that allow a logic of resolution to be brought into play.

For the Bill to succeed the landowners' stance must be shifted towards seeing the railway as serving, rather than threatening, their interests. This shift is described by Thomas Paget (E5.6: 143), who came to see his opposition as counter to his own interests when he became aware of the financial benefits that the railway brought to his estate. Further benefits resulting from the railway are itemised at various geographical scales: the "great towns" the railway would unite (E5.1: 17), the "districts through which it would pass" (E5.1: 18) and eventually as a way of connecting the whole country from the "ports of shipment to the places of consumption", to Liverpool, Lancashire, Yorkshire, all "the manufacturing districts of the North" (E5.4: 51-53) and "the nation at large" (E5.1: 19). The benefits will be felt everywhere and by everyone; a fact that anybody acquainted with the nature of trade (E5.4: 47-48) can appreciate.

However, the benefits that are clear to the promoters of the bill are not clear to the landowners. What is needed is a way for the landowners to see and understand those benefits. Colonel Torrens (E5.7: 164-167) states that a reduction in the cost of transport is the same as "increasing the fertility of the soil itself". In drawing on an agricultural metaphor he frames the railway as something that can make the very soil (metaphorically) more fertile. This is achieved not through physical means, as a farmer might do and which takes considerable effort, but by something far easier. The economic benefits that arise from having fertile soil (i.e. an increased crop) can be achieved without effort. The agricultural frame has shifted anonymous national benefits towards a more subjective way of understanding benefit: from national progress to local productivity.

5.1.8 Shifts in perspective: framing in the Thatched House transcript

This more open, narrative, approach to the debate provides a clearer view of the perspectives developed by participants than the more restricted NFMR approach. The shifts that they undergo within the meeting and also the shifts that they project beyond the meeting towards the dissentient landowners are clearly identifiable. Having established the cause of the Bill's failure the participants began by developing an empathy with the landowners' perception of the railway as an invader. This perspective promoted a different view of the railway line as one that brought with it injury to the landowner rather than profit to the railway promoter. The fundamental shift of viewpoint allowed the meeting to then focus on how to make the railway line appear to be profitable to the landowner in terms that made sense to them. The Victorian view of progress, commerce, transport, commodities and manufacturing were supplanted by a simpler and traditional pastoral view of agriculture, fertility and productivity. In doing so they acknowledged the difficulty of asking landowners to accept a new, potentially radical frame that they have already rejected and instead create a different frame that tones down the image of their railway into a less radical vision that might be more acceptable to the sensibilities of the landowners.

This shift, in methodological terms, reflects the development of this thesis. At the start of this chapter, a formal, descriptive model of design drawn from the design studies literature was adopted in order to attempt to observe design activities within a debate transcript. This helped to develop an understanding of what was taking place in the debate but the formal elements proved

to be difficult to separate out and what was originally developed as a description of design became, in this usage, a more prescriptive barrier to accessing design. When drawing back from this approach and adopting a less formal reading of the debate, one that focussed more on its underlying narrative and the nature of the frames that were employed, the same elements were identifiable but could be explored more fully and more fruitfully.

The participants were shown to perform a number of design like tasks. They revised their view of the problem a number of times as the failure of the Bill became the landowners' apprehensions which became the need to woo and win. At the same time the nature of their solution was also revised from a watertight argument based on conclusive evidence to an aggressive invader of landowners' property to an artificial fertiliser that quantified the value of the land and what it could produce. This process can also be seen in design terms as a coevolution of problem and solution.

In performing this process, the participants demonstrated a controlled shift in perspective that produced empathy with a particular group of stakeholders. This reflects the broader view of design as a shift in perspective that was explored in Chapter 2 above. It also traces an approach to design that accounts for the wider impacts, both in terms of the costs and the benefits, of what is being designed and the wider publics who are likely to be impacted by them.

5.1.9 Conclusion: NFMR and QDA software are useful but also prescriptive

The use of the NFMR model helped to identify the elements and themes within the debate. Looking for design in a debate in this way helps to identify relationships between what is being designed and the people who are designing them. The identification of names and frames, using the NFMR model, clearly demonstrated the presence of the relevant objects and actors. There was however, as reported by other authors (in section 2.2.3) a lack of clarity between the various elements. The names (for example of the objects of the debate) and the frames (for example of the contexts in which those objects are considered) are easily interchangeable while moves can be found in the participant's speeches but are also, in the case of Thatched House, imposed by the formal structure of the meeting.

Although offering a useful method of engaging with the text, the NFMR model also proved to be prescriptive as it required the imposition of the four concepts onto the activities observed in the transcript. This prescriptive function was further reinforced by the use of QDA software which was useful and productive in the way it allowed codes to be applied and retrieved, but introduced through its formal interface elements a layer of abstraction between the codes and the context in which they are originally expressed.

Moving away from this prescriptive approach and undertaking a less formal reading of the transcript provided an opportunity to identify a number of reframing events within the meeting, including one that appeared to be particularly significant to the way that the problem (of landowner dissent) and the solution (a beneficent railway line) were presented. This reframing, a clearly identifiable shift in perspective, presented the railway as a less radical and more acceptable

undertaking than had been previously presented to opponents and underpinned the strategy adopted to take the process forward towards the eventual success of the project.

This section has established a methodological starting point, showing how both formal and informal approaches to a debate can produce insight, in different ways, into how a meeting progresses. This can be seen in the terms of the meeting itself, where a series of resolutions are discussed and refined but also in terms of a problem that is framed and reframed alongside a number of concurrent solutions. This second view concurs with similar notions that can be found in descriptions of the design process, for example of coevolution proposed by Dorst and Cross (2001).

The exercise also presents some methodological difficulties. The document, while referred to as a transcript and being presented as a *de facto* record of the proceedings of the meeting, can only be seen in the context in which it is found: a version of a debate that was published by the proponents of the railway with a clear objective of persuading the readers of the benefits of their project. It is not possible to corroborate what it contains with the event itself and, even though the participants are Members of Parliament the debate is not taking place within a parliamentary environment. These difficulties are intrinsic to the historical context in which the document was created and to the restricted availability of suitable alternatives.

Building on this final point, and away from the historical context of the LBR and towards the more recent data available in the HS2 debate, the next section examines the transcript of a modern parliamentary debate. This next section, following the conclusions drawn above, also moves away from the prescriptive model of NFMR and the use of QDA software as an analytical tool. It instead directly considers the debate in terms of the framing taking place within it, how these frames are constructed and what impact they have on the debate and its participants.

5.2 The design function of framing: traction, friction and flow

Framing has been observed to be an important aspect of the design process (Schön, 1983; Hey, 2008; Dorst, 2015) and is considered to be of particular relevance where a new frame is introduced and provides a new perspective on the issue at hand. This process of reframing was identified above as a way of moving the debate at the Thatched House Tavern to a new position which then moved the London to Birmingham railway project forward. Building on the lessons learnt in the previous section, this section moves on to examine instances of reframing from a debate of the High Speed Rail (Preparation) Bill in 2013.

This more recent debate is drawn from the Hansard record of the House of Commons which, as discussed in Chapter 3, provides a more extensive record of proceedings than the privately published record of the Thatched House debate. The examination of this debate considers how frames are employed by the participants involved and the impact that attempts at reframing have

on how the debate proceeds. Distinctions are made between different kinds of frames and the different impacts that these different kinds of frames make.

5.2.1 Problems, solutions and interventions in Ministers speech

The *prima facie* case for a new high speed railway was presented to Parliament by the Secretary of State for Transport in his opening speech of the Second Reading of the High Speed Rail (Preparation) Bill on 26 June 2013. This debate was the first formal opportunity for scrutiny of the Government's case in support of the HS2 railway. It was also the point at which a vote was taken to determine whether the project had the support of Parliament to allow it to continue to the next stage of the parliamentary process.

The structure of the debate presents an opportunity for the Minister to deliver a speech that explains to Parliament why the railway is needed and how it is intended to be implemented: a simple narrative of a problem presented alongside a proposed solution to it. The Minister opened his speech with a broad reference to his Government's approach to infrastructure investment which he described as "an ambitious programme for all parts of the country" (HoC 2013:c335)[47]. This programme addresses the need for more capacity on the country's railway network and for better, faster connections between major cities that would foster economic growth across the country. The solution proposed to these problems is a new, high speed railway line.

Parliamentary conventions require that while the argument for these proposals is being made, the Minster is obliged to take questions, known as "interventions", from other participants. It is not clear from the text transcript how the Minster selects which of these interventions he will take, and until they are taken the intervening participant is not visible in the video record. Their selection can be assumed to be a combination of both pre-arranged and ad-hoc interactions.

This section begins with an examination of four of these interventions as they are found in the transcript. Each demonstrate a new perspective being introduced into the debate by other participants who appear to be attempting to shift the debate onto different subject areas by reframing either the problem or its solution.

5.2.2 Reframing: geography as money

The intervention in Excerpt 5.10 below suggests that the proposed railway was a specifically English, rather than UK-wide project. It would therefore generate "Barnett consequentials". The "Barnett Formula" is a public finance arrangement intended to distribute central tax revenues to the devolved administrations where they are not deemed to benefit from planned capital expenditure projects. In this context the Barnett consequentials would involve the Welsh Government receiving

[47] The full Hansard report is online at: http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm130626/debtext/130626-0002.htm#13062665000001. The line numbered version used here can be found at https://goo.gl/OkuMYN

funds from the central administration as compensation for a project that was partly funded by Welsh taxes but would not provide any benefits to the Welsh population. (Excerpt 5.10: Line 74).

72 **Jonathan Edwards (Carmarthen East and Dinefwr) (PC):** The last time I
73 looked, York, Manchester, Birmingham and London were in England. HS2 was
74 clearly an England-only project, yet there will be Barnett consequentials. Unless
75 the Secretary of State can state that there will be equivalent consequentials for
76 Wales amounting to about £2 billion, we will vote against the Bill at every stage.
77 **Mr McLoughlin:** I am sorry the hon. Gentleman feels that way, because I believe
78 there will be advantages to Wales as well. As HS2 serves an area up to the north
79 Wales coast, there will be ways in which that can be an advantage. I think he is
80 saying that he will vote against because he is not getting the opportunity to get
81 high-speed services. If we do not get the route as currently proposed, he has no
82 chance of getting any high-speed opportunity whatsoever. He will see, if he looks
83 at the way the plans are laid out, that this can be developed further - even further
84 up to Scotland, as the Bill makes clear.

Excerpt 5.10: A Welsh MP fails to reframe HS2 as an "England-only" project (HoC 2013:c336)[48]

This attempt, to draw in a wider perspective and a separate and sometimes controversial issue which reframes HS2 as an issue of devolutionary funding, was resisted by the Minister. The Welsh border is firmly redrawn by the Minister to be within range of the benefits that the railway will bring. The railway will "serve an area up to the North Wales coast" (E5.10:79) and would therefore, if approved, bring advantages with it. If the Bill is rejected Wales will have no chance of getting any benefit from the line. This refutation of the logic behind the intervention implies that the backbencher had not properly thought through his position. This critical response was followed by a specific reference to the plans and a further implication – "he will see if he looks at the way the plans are laid out" (E5.10:83) - that the backbencher has not properly consulted them. At the same time as rejecting a reframing of the debate to be a question of devolutionary funding the Minister is also exerting parliamentary authority over a dissenting backbencher.

5.2.3 Reframing: money as time

In Excerpt 5.11 below, the anticipated lack of Barnett consequentials was used as a stepping stone to consolidate another, different nationalist, perspective.

[48] The Hansard transcript shown in Excerpt 5.10 has been corrected by referring to the video archive. A transcription error in column 336 reversed the meaning of this participant's statement. The correct version can be found in the video archive of the debate, online at: http://www.parliamentlive.tv/Main/Player.aspx?meetingId=13329, 14:31:30

Mr Angus Brendan MacNeil (Na h-Eileanan an Iar) (SNP): The Minister talks of expansion further up to Scotland. When? Given the remarks about no Barnett consequentials, the "when" is not in a decade, but should be here and now.

26 Jun 2013 : Column 337

Mr McLoughlin: I announced last October the work that was already being commissioned by HS2 to take the link up to Scotland, and I am more than happy to have discussions with Scottish Ministers and the Scottish Government about that.

Mark Lazarowicz (Edinburgh North and Leith) (Lab/Co-op): I suspect that even the Scottish National party does not expect the line to reach the constituency of the hon. Member for Na h-Eileanan an Iar (Mr MacNeil) any time soon, but I hope it will reach my constituency.

Frank Dobson (Holborn and St Pancras) (Lab): This century?

Mark Lazarowicz: I would like to believe that it will not be next century and that my constituents will be able to benefit from the line as well. Clearly, they will benefit from faster services in so far as they can use the line further south, but we need to see work being done now and commitments made now to ensure that the further additions from HS2 do not start happening only in 2033.

Mr McLoughlin: The hon. Gentleman makes a fair point. As I announced last October, I have asked HS2 to start doing the work on that, and I hope to be in a position to say more about it in due course. I cannot give him a specific date at this stage because there are some very big issues to address.

Excerpt 5.11: The Minister accedes to Scottish MPs building on the broken Welsh frame (HoC 2013:c337).

Here the lack of direct financial gain from the Barnett formula is acknowledged and accepted but this acceptance is used to make a case for an immediate expansion of the proposed network to Scotland (E5.11:87). The benefits from the line are then described by a second Scottish MP who also calls for a commitment to an early expansion of the network into Scotland (E5.11:102). The unlikely prospect of receiving Barnett money is reframed into a demand for a faster deployment in order that the recognised benefits of the project might reach Scotland as soon as possible. The Minister accepted the point, promised further action and the debate moved on. The principle of a High Speed Railway that will bring benefits to the whole of the United Kingdom remained undamaged by the Welsh geographical positioning, and bolstered by the Scottish intervention: the Government's position was strengthened. Interventions can be used by backbenchers to present the views of their constituents and the Welsh and Scottish interventions above are good examples of this. However, and as will be shown below, interventions can also be used to introduce wider political perspectives.

5.2.4 Reframing: investment in infrastructure as a tax on the poor

The only elected member of the Green Party in the debate represented a specific stance outside of mainstream politics. The Green party intervention, in Excerpt 5.12 below, began as a reference to the environmental damage of the proposed railway but this was extended into a broader claim that the railway would be socially regressive. The reference to Robin Hood makes a clear comparison between the privileged position of the railway's passengers and the disadvantaged "bottom 50% of income bands" (E5.12:137) whose taxes would also be paying for it.

Caroline Lucas (Brighton, Pavilion) (Green): The Secretary of State is very kind to give way. My point is that not only is the route of HS2 environmentally damaging, but the whole scheme is socially regressive. It is unaffordable to the bottom 50% of income bands and, in effect, it redirects money from the poorest to the richest. How can he justify this reverse Robin Hood strategy when that £33 billion could be better invested in giving us a better rail system for everybody, not just for the privileged few?

Mr McLoughlin: I find the hon. Lady's position on the issue strange. I should have thought that the Green party would welcome such investment in public railway systems. [Interruption.] I think I had better answer the hon. Lady. HS2 brings a great increase in capacity and I want to say more about that a little later. That is one of the important issues that lies behind the need for HS2. Also, as I point out to colleagues, going from St Pancras station to Canterbury, the first part of the route from St Pancras to Ashford on a high-speed train is a fantastic fast journey, then one hits the Victorian railway network to Canterbury and the journey slows down completely. I want the rest of the country to get the benefit of high-speed rail, not just the area in the south which already has a high-speed service.

Excerpt 5.12: The attempt to present the railway as a socially regressive (HoC 2013:c338)

In responding to this intervention, the broader issues of fairness and taxation that the intervention introduced were ignored by the Minister. Instead, the Green credentials of the questioner were tested with an assessment of what he "should have thought that the Green party would welcome" (E5.12:142). The earning capacity or the demographic of that public is not attended to beyond an assertion that the benefits of high-speed rail should be available to the general population of the whole country. This extract shows an attempt to shift the debate to acknowledge issues of social justice being closed down in favour of a more generic reference to "the rest of the country" (E5.12:149) who will be able to share a "fantastic fast journey" (E5.12:148). This exchange anticipates further statements from the Minister that reveal more of his attitude to progressive policies. The use of the phrase "I should have thought" (E5.12:142), as described above, is used three times during the course of the debate (see the excerpts in 5.13, below).

Mr McLoughlin: I find the hon. Lady's position on the issue strange. I should have thought that the Green party would welcome such investment in public railway systems. [Interruption.] I think I had better answer the hon. Lady.

Mr McLoughlin: Indeed, and I am grateful to my hon. Friend. Basically, 15 years ago there were about 750 million passenger journeys, and the latest estimate is for 1.5 billion passenger journeys, which is a massive shift that I would have thought my right hon. Friend the Member for Chesham and Amersham (Mrs Gillan) would welcome.

...

314 Tamworth and Lichfield. It will provide real scope to get more freight on to the
315 railways, which I would have thought the hon. Member for Brighton, Pavilion
316 (Caroline Lucas) would welcome. It will also free up capacity on the M1, the M6
317 and the M40.

Excerpts 5.13: The Minister "would have thought" what the Green Party would think (HoC 2013:c338; c340; c342)[49]

Each instance refers to the same participant and each asserts that the Government's policy on High Speed Rail is more environmentally friendly than the Green Party would admit. The implication is that the Government knows best. This paternalism is supported democratically: there is only one elected Member of Parliament from the Green Party compared with the 360 seats held by the Government. The Minster's position also appears to be partisan as his response is used as a way of moving away from a minority and progressive perspective towards the view of the coalition Government and Conservative party that he represents. There is also a patriarchal interpretation: this explicit form of "I would have thought" in relation to another participant's position is only found in these three instances and only against the same, female, participant. This directs the paternalistic stance of knowing better at a specific target.

This example illustrates how an intervention framed around the notion of regressive taxation was constrained to a less detailed perception of the demographic of the country and deflected to make a more general appraisal of an opponent's environmental credentials. The responses given by the Minister also provide an opportunity to explore a more subtle appreciation of other perspectives that appear to be held by the participant.

5.2.5 Reframing: subsidy as overcrowding

The interventions above were all initiated from members of parties who were ostensibly in opposition to the Government. A final example, in Excerpt 5.14 below, came from a member of the Government. The "old aphorism" of subsidy creating demand was used by a Conservative backbencher (5.14:261) to explore why passenger numbers had increased. In doing so he raised a more general point about the validity of Government subsidy.

The principle of trying to "drive out" subsidy from the railways is not contested: it is a strategy presented as being in the interest of business (Excerpt 5.14:264-265). But the broader, more radical implication that all subsidy is wrong is resisted. Selective subsidy is supported as a necessary mechanism for getting people to work (5.14:269).

[49] The Minister is shown in the video recording of the second reference here to be referring to the Caroline Lucas, the Green party MP rather than Mrs Gillan who is reported in the transcript.

Steve Baker: In relation to passenger numbers, my right hon. Friend will know the old aphorism that if one subsidises anything, one gets more of it. Will he remind us how much subsidy the rail industry has received over the past few years?

Mr McLoughlin: One of the things we are trying to do is drive out some of the subsidy in the railways to make it cheaper and more affordable for companies, but it is certainly true that there is subsidy in the rail industry. However, we have to think about people being able to get to work and what that subsidy supports. Sometimes the commuter in London, and the commuter in my hon. Friend's constituency, deserves that support to enable him to get to the jobs that are available elsewhere. One has to be realistic and understanding about that.

Excerpt 5.14: A question about the general impact of public subsidies is answered with support for the deserving commuter (HoC 2013:c341)

The original question about how much subsidy the railways receive was left unanswered. The frame introduced by this question, which attempted to bring the wider costs of the railways and the implications of this cost to the public purse, was closed down in favour of support for established subsidies that support deserving commuters to get them to their jobs.

5.2.6 Frames are controlled by the rules of the debate

The examples above show participants reframing the railway debate in order to shift the perspective of the debate and draw upon wider contexts, a process characteristic of the design process. The participants attempt to reframe the debate to address wider concerns that relate to their interests or those of their constituents. Devolution, regressive policies and free-market economics are all frames beyond the scope of the debate that advocate a political position outside of the established scope of the infrastructure development frame introduced by the Government Minister. In this respect three of the four of these rival frames can be considered to be a shift towards a more radical position. These radical frames were firmly resisted by the Minister who kept the debate within his own parameters. In doing this he exposed contexts of his perspective on, for instance, the progressive stance of the Green party and the regressive stance of his more radical right-wing colleagues. The one example shown that was not subjected to this form of resistance, where the Scottish Nationalist Party used the failure of the Welsh Nationalist Party to demonstrate their support for the project, elicited a response from the Minister that demonstrated his support for extending the railway line to Scotland. Other more supportive interventions and responses are shown below in sections 5.2.8 and 5.2.9.

The Minister's resistant responses are themselves outside of the stated frame of how and why to build a new railway line which suggest that the more radical the intervention is, and the further away from the case being made by the Minister, the more radical response is given to them. In these examples the Minister presented a broad political perspective on how the country is perceived and how it should be run. This perspective included a view of the country as the whole of the United Kingdom rather than any of its separate constituent parts. The country was seen to be

populated with people who, like the Minister's colleagues, should all be allowed to benefit from "fantastic fast" train journeys. Those people were seen to be governed by politicians who understand what is good for them both in terms of the benefit of high-speed rail and in terms of what minority groups would welcome. These politicians will spend tax revenues on subsidising business activity. Some of them may also express more nuanced attitudes towards political opponents in general and women in particular.

The Minister's responses to interventions provide insight into the principles not just behind the proposed Bill but also behind the Government who is proposing it. Rather than facilitating a transformative leap from what "is" to "ought" (Schön & Rein, 1994:26) the process maintains a normative stance of what "is" to what "will still be" at the cost of "what could have been". Attempts to shift from the normative to the transformative were controlled and negated by the Minister's responses and all of those attempted shifts in perspective were not revisited during the course of the debate.

The frames discussed here do not create a lasting shift of perspective in what might be considered a transformational design move. As seen above, the structure of parliamentary debate allows whoever is speaking to control the interventions. The Minister was able to select which of his Government's principles he is prepared to defend, which of the attacks against his Government's policy he will choose to ignore and what level of detail he will provide to any of the questions that are raised. The impact of reframing in the debate is thereby constrained by the rules that determine how participants can engage with it. This in turn determines what impact, if any, attempts at reframing can have on the course of the debate and on the stance that the Government and its Ministers have adopted towards the HS2 project.

The Minister's stance was helped by the level of cross-party support for the railway from the majority of participants. The main political parties all included a commitment to High Speed Rail in their election manifestoes. This reduced the potential scope and number of opposing interventions to those who were either members of smaller opposition parties or prepared to rebel (to a limited degree) against their own party. These circumstances clearly helped to circumscribe attempts to draw the debate away from the view of the majority. The opponents' frames above demonstrate their opposition to the Bill, allowed them to record the grievances of their constituents and are also used to introduce alternative perspectives which draw on wider contexts. But their frames, while perhaps reflecting wider concerns that might be revisited at a later stage of the process had no lasting impact on the debate as it progressed. To provide a convenient term with which to refer to this lack of impact these frames had no *traction*.

Although this lack of traction provides for no substantive contribution to the outcome of the debate, it helps to emphasise the structural flow of the debate in terms of how widely divergent perspectives are controlled and how the Minister used other, also divergent perspectives, to deflect them and bring the debate back on track.

5.2.7 Divergent frames and convergent responses

The four examples of framing, discussed above in relation to the external contexts they invoked and their lack of overall impact on the debate, can also be seen in relation to how the debate proceeds through smaller interim stages. Each intervention that introduces a new perspective can be considered to be the introduction of a *divergent* viewpoint. When the new viewpoint is resisted and closed down this can be considered to be a *convergent* response. The debate, as seen in three of the four examples, proceeds through a narrative of divergent intervention and convergent response. These are shown in Table 5.1 below.

Line	Intervention text	Divergent frame	Convergent response
72	Barnett consequentials	Devolution	Nation defined as UK
134	Socially regressive	Social justice	High speed rail for all
260	Amount of subsidy	Reduce state intervention	Get commuters to work

Table 5.1: Three interventions as a divergent and convergent flow (HoC 2013 showing line numbers from transcript)

This interpretation does not apply to the Scottish intervention in Excerpt 5.11 which, as noted above, supported the Government position. The Scottish MPs instead comply with the convergent flow, using it to introduce their own perspective. This Scottish perspective, although divergent in terms of the proposed timetable for extending the northern reach of the high speed network, are nevertheless aligned to its principles.

The four interventions already discussed are a subset of a total of 29 interventions that were taken by the Minister during his speech. Of these 29, 11 can be considered to be divergent. Those not already discussed are shown in Table 5.2.

Line	Intervention text	Divergent frame	Convergent response
24	No mention of Scotland	The Bill is deficient	The Bill implicitly covers Scotland
37	Deficient connections at Crewe	Need to redesign proposed network	Deferred to Phase 2
55	Loss of services at Stoke on Trent	Future service provision deficient	Deferred to Phase 2
204	No lack of capacity in existing network	Questions principle	Service that all colleagues want to see
240	Critical Public Accounts Committee report	Business case questioned	Investment in infrastructure brings local benefits
295	European funding	Reduce costs	Expect private sector investment
385	European funding	Reduce costs	Debates are ongoing
395	Increased costs	Impact on benefit cost ratio (BCR)	BCR not everything. It is strategic to compete in global race

Table 5.2: Further interventions from the HS2 debate shown as a divergent frame with a convergent response (HoC 2013 with line numbers from transcript)

Each of these additional examples demonstrates the same process. A participant presents a divergent perspective from the stated position of the Government and draws in a wider context that questions the principles behind that position. Some of these operate at a local level as they question the impact of the Bill on their own constituency while others present a more fundamental questioning of the entire project. Each intervention, with its divergent frame, ends as the Minister takes control of the debate and exercises his prerogative to direct attention back, with his convergent responses, to his original position.

Where participants attempt to introduce frames that are too divergent from the Minister's framing their perspective is rejected. Where participants introduce frames that, while still divergent, can be contained within the Minister's framing then these new perspectives may generate enough traction to persist and contribute to the debate as it develops. The Minister steers less divergent frames back towards his own framing of the debate where he is open to make concessions, now or later, and discuss potential modifications.

5.2.8 Convergent frames seek assurance and create friction

There are other interventions in the debate which do not question the fundamental position of the Government or attempt to diverge from the main agenda of the debate. An example of this type of convergent intervention is shown below in Excerpt 5.15:

120 **Mr Jim Cunningham (Coventry South) (Lab):** I apologise to the Secretary of
121 State for coming in late and I appreciate the fact that he has given way to me.
122 Can he tell me what Coventry will get out of high-speed rail and, more
123 importantly, what about a decent compensation package?
124 **Mr McLoughlin:** I will come on to say something about compensation later in my
125 speech. I think Coventry will get many benefits. The whole west midlands area
126 will get a huge number of benefits from HS2. I want to see councils such as
127 Coventry start working to make sure that they can get the best out of High Speed
128 2,

Excerpt 5.15: This intervention accepts that the railway will come to Coventry and seeks reassurance about the implications for local residents (HoC 2013:c337)

In this extract the intervention accepts that the railway will be built and that it will have some impact on the participant's local area, a city in the West Midlands near the proposed terminus at Birmingham. From within this frame of acceptance a question is raised about the positive benefits that the railway will bring and the compensation that will be provided to people suffering negative impacts. Given the tacit support for the railway in the intervention the Minister defers the issue of compensation to later and reassures the participant that the project will bring benefits to specific locations, but also that the councils in those locations will need to engage with the project to maximise those benefits.

Thirteen of the interventions from this part of the debate, shown in Table 5.3 below, perform a similar function that queries specific details of the proposed railway but without questioning the underlying principle either of the railway or the Government. In each case the Minister's response

performs a similar function by agreeing with the point and sometimes deferring the detail of his agreement until later in the debate.

Line	Text	Frame	Response
120	Benefits - Coventry	Local benefits questioned	Many benefits for councils to start working it out
154	Jobs – Northern Ireland	Local benefits	Agreed
216	Investment in existing services	Assurance sought	Agreed
321	Publish costs of project	value for money to taxpayer	The current Bill is needed
340	Compensation	Frozen property market	Deferred to later in debate
410	Cost of rolling stock	Items queried	Deferred to later in debate
419	Compensation and mitigation	Save on costs to improve mitigation	Need to improve consultation
434	Compensation	Legislation needed	The current Bill is needed
453	Compensation	Individual case	Deferred to later in debate
469	Contingency costs	Percentage questioned	International standard confirmed
514	Compensation	For the good of the country	Deferred to Phase 2
536	Create jobs in Scunthorpe	Local benefits requested	Deferred
546	Request for meeting	As previously requested	Look forward to changing minds

Table 5.3: Interventions which slow down proceedings as they seek assurances (HoC 2013 showing line numbers from transcript)

These interventions introduce frames that seek assurance. They present specific cases of hardship or query specific details of the proposal. They ask about the impact of the railway on their constituents, how the compensation package will operate, what benefits will be brought to their constituencies. They provoke a less confrontational response from the Minister who agrees, assures and defers. The Government will be “open with the House” about costs (Line 414), it can’t commit to compensation until the current Bill is approved, it can’t commit to route changes until the consultation phase is concluded. The interventions provide a platform for the Government perspective to be reinforced.

These frames do not present a radical shift in perspective and since they support the principle of the railway, they are not divergent. These frames appear to sit within the Government’s frame but by asking detailed questions about the frame they slow down the proceedings, and in doing so provide an opportunity to consolidate the Government perspective. To provide a convenient term for this slowing down of proceedings these frames generate *friction*.

5.2.9 Convergent frames contribute to the flow of the debate

A remaining group of interventions in this episode, shown in Table 5.4, directly reflect the Government's position and provide evidence in support of the case for the railway. These interventions are used to restate the case for HS2 or, in the case of HS1 at line 167, to ameliorate the controversy it provokes. In comparison with the interventions listed in Table 5.3 as creating friction these frames, with their lubricating effect, can be said to support the *flow* of the debate and consolidate the process of affirming what "is" to what "will still be".

Line	Text	Frame	Response
85	Build faster to Scotland	Timeframe	Agreed, deferred
111	Lille as positive precedent	Regenerative	Agreed
167	HS1 as positive precedent	Regenerative	Controversy is to be expected
183	M1 as positive precedent	Regenerative	Agreed
225	Business case based on conservative estimates	Statistics provided	Agreed

Table 5.4: Interventions providing evidence in support of the railway (HoC 2013 showing line numbers from transcript)

Four of these interventions draw on precedents that are intended to demonstrate the benefits of High Speed Rail, such as the regeneration of Lille and Kent from HS1 and TGV, or infrastructure in general, such as the benefits to the city of Leeds since it was connected to London by the first trunk Motorway. These interventions present a convergent frame, which is then reinforced by the Minister's, own convergent response.

5.2.10 Conclusion: different interventions affect the flow of the debate in different ways

This section has shown the different kinds of interventions made to the Minister's speech and the way they are handled by the Minister. The identification of interventions as being convergent or divergent reflected the generic design model already compared with the overall parliamentary process in Chapter 3. All interventions are attempts to reframe the overall problem and solution pair that underpin the narrative of the Bill as it is presented. The more divergent these interventions are from the Minister's perspective the less impact they have on the debate as they are dismissed or refuted. The way that the debate is structured, primarily in terms of the control retained by the Minister over who can intervene and to what extent he engages with that intervention, appear to support the normative narrative that is presented by the Minister. The explicit form that this structure takes does however provide a clear view of the different perspectives that contribute to the debate and the way that the Minister exercises his control over them.

5.3 Conclusions

This chapter began by looking at a constrained historical debate from the perspective of a description of design derived from Schön's notion of framing. This description of design, developed by Valkenburg and Dorst and also used in subsequent studies, draws upon an experimental model comprised of discretely identifiable design activities. Looking at the debate in this way provided a thematic approach to the debate. This provided an overview of the proceedings but one which was abstracted through the use of the model and the software used to apply it. This raised some methodological questions around the prescriptive nature of the model that led towards a more specific focus on the use of framing that could be construed as a characteristic of design activity and identified through a direct reading of the narrative presented as excerpts rather than coded elements. A second analysis of the historical debate tested this methodological development and provided some insight into the debate and how design, in terms of the use of framing as a shift in perspective, can be used as a way of interpreting a debate transcript.

Moving onto a modern context this less formal analysis was used to identify how frames were used in the introductory speech of a Government Minister presenting a Bill to the UK Parliament. This examined how frames were introduced as interventions in the debate, how they contributed to the progress of the debate and how they were controlled by the Minister. A number of different kinds of frames were seen to be developed and deployed by participants.

5.3.1 Interventions and the use of divergent and convergent frames

Different kinds of frames engaged with the debate in different ways as various aspects of the project were reframed. The use of reframing, as an attempt to widen the scope of the debate beyond its given subject, was seen to be unsuccessful. This was in part due to the way that the parliamentary debate is structured where a participant is able to control interventions and limit the response they give to the interventions they take.

The various interventions made in the debate were interpreted here in terms of their persistence. Frames that widely diverged from the problem and solution to it that was being presented were countered with convergent responses which brought the debate back on track. Some of these rebuttals were also used to cast doubts on the principles that were underlying the divergent frame.

The divergent interventions in the debate, and their convergent responses, operate as a collection of frame pairs. The notion of *divergence* and *convergence* is recognisable from the design studies paradigm described by Jones (1970:63), and the Design Council double diamond design model. The interim stage of Jones' process, of *transformation*, correlates with the more dynamic reframing processes outlined by Schön which he considered to be provocations or surprises that generate unexpected results. The Minister takes care to avoid or contain such surprises.

5.3.2 Frames and the flow of the meeting

Although some of more imaginative interventions can be seen as creative interventions, the radical shifts in perspectives that are introduced with the more divergent frames appear to be short lived. There is little evidence of any transformational effect of these divergent frames and they do not persist through to later stages of the debate. The development of these perspectives was constrained by the procedures and etiquette of parliamentary debate. The structure of the debate and the control that is exercised over the debate by the Minister does not allow them to develop. Consequently, these frames lacked the *traction* of the kinds of frames observed by Schön (1983) as transformational generators of surprise or those proposed by Dorst (2015) which can be developed into solutions to intractable and controversial issues.

Less divergent frames which focussed on specific details appeared to slow the debate down and allow the normative frame to be reinforced. These can be seen as creating friction. Such frictional frames created a space in which the issues that they raise could be clarified before the debate moved on. These interventions did not attempt to halt it or radically reframe it.

A final set of frames presented perspectives that were already aligned with the normative narrative of the debate. These more convergent frames were reinforced by the Minister's responses to them and contributed to the narrative and normative flow of the debate towards its intended outcome. The introduction of less radical perspectives appears to provide a more effective way for participants to engage with the debate.

These notions of traction, friction and flow extend the concept of framing, particular those that support the transformational leap that permeates design thinking literature, to accommodate the recognition of a less radical, but potentially more functional form of reframing. These less ambitious frames engage with the debate in smaller incremental stages that are more closely aligned to the normative position of the Minister and which, because of this are less likely to be rejected.

5.3.3 The structure of the debate in relation to design meetings

This focus on framing, and the development of a frame analysis of debate, is not exclusively a form of design analysis. Although the basis for this analysis was drawn from the use of framing in design, a frame analysis of parliamentary debate could be undertaken without reference to design and could produce similar results without reference to design. A number of specific aspects of these frames have been likened to aspects of design. The relationship between the problem and the solution and the recognition of convergent and divergent stages are directly comparable with similar notions in design. These specific aspects are clearly recognisable in the transcript because of the formal structure of the debate and the conventions that participants are obliged to follow. In a design meeting where the participants interact more freely these explicit activities observed in parliamentary debate, the speech and the intervention, may still take place but they may be difficult to observe depending upon how the design experiment is set up and how the design interactions are captured.

5.3.4 The identification of frames with a more specific design function

The analysis in this chapter identified a number of frames that have specific resonance with those found in a design context. Three of the five convergent frames identified in section 5.2.9 above were based on references to perspectives drawn from the past. This use of precedent in the debate are considered in more detail in the next chapter which examines how precedents are a form of framing that can be more specifically related to design. This work builds on the methodological developments described above and takes a different approach to the data. This approach focusses less on the imposition of a prescriptive model to identify specific design activities and more on the narrative of the participants speech and the contexts they draw into the process.

6 Design precedents in parliamentary debate

> "After his drive in the Camry, Landgraff had quietly ordered the DN101 engineers to compare it to the Taurus, chunk by chunk. Who had what and what it cost. Where Taurus was good or better; where the Camry had the edge. What it would take to match Toyota." (Walton, 1997:46)

In parliamentary, and other legal contexts, the term precedent can refer to procedural questions, points of order that are called upon to decide upon how or whether a debate should proceed. Precedents are also recognised as performing a rhetorical function in debate where calls to authority or tradition are employed to support a particular position or to interrupt proceedings. It is not the intention here to attempt to identify where such devices are employed in the debates studied or to test the validity of arguments as presented. Rather, the focus in this chapter is to explore the use of precedent in terms of how they can be interpreted as a design function, in the context of those described in Chapter 2, within the debate.

The examination of framing within parliamentary debate in the previous chapter identified the introduction of a specific kind of frame that called upon precedents to inform the debate. This chapter begins with an illustration of how precedents appear within a debate transcript. That is followed by an overview of all of the precedents identified within the full debate of the Second Reading of the High Speed Rail (Preparation) Bill. A more detailed analysis of specific precedents follows, developing and using a more specific, design focussed, form of frame analysis than that employed in previous chapters. The chapter then considers how precedents can be seen as a way of establishing identities and asserting values, primarily by the participants who use the precedent but also by the researcher who observes that use[50].

6.1 Precedents in HS2

6.1.1 Identifying precedents in parliamentary debate

It is first necessary to identify precedents where they occur in the data. This begins with a close reading of the text, looking for references to past projects or experiences that are called into the debate. An example of how a precedent appears in the debate is shown in Excerpt 6.1 below where the positive impact of a previous project, in this case a number of iconic examples of Victorian engineering, is called upon to inform the current debate.

[50] The work described in this chapter waspresented to the Design Research Conference, Brighton, 2016 (Umney, Lloyd & Earl, 2016).

Iain Stewart: My hon. Friend is absolutely right.

To those who voice concern about visual intrusion on areas of outstanding natural beauty, I simply make the point that railway infrastructure need not be ugly—it need not be concrete blocks. Look at some of the fantastic pieces of railway engineering and architecture we have: the Forth bridge, the Glenfinnan viaduct, Brunel's bridges and tunnels—they have enhanced the landscape. I urge my right hon. Friend the Minister of State to make HS2 into an opportunity to showcase the

26 Jun 2013 : Column 364

best of British design and engineering, with bridges, viaducts and other infrastructure that show off and augment our landscape.

Excerpt 6.1: An example of the use of a precedent, in this case Victorian engineering, identified in a parliamentary debate
Image: screenshot from online source of HoC 2013:c364

A total of 85 instances of precedents were identified in the debate. These are listed, by frequency, in Table 6.1 below. Each was identified as a reference to the past that was deemed by the participant to be relevant to an aspect of the present. The table also provides the reader with some brief contextual information about each precedent.

Precedent source	Frequency
HIGH SPEED RAIL projects already developed or planned in other countries	22
HIGH SPEED ONE (HS1) - the existing high speed rail line linking London with the Europe via the Channel Tunnel	16
VICTORIANS - developed the original UK railway network	9
WEST COAST MAINLINE - the mainline route connecting London with the North West of England and Scotland	7
CROSSRAIL - a major infrastructure project connecting East and West London	6
MOTORWAYS - M1 and M25	5
JUBILEE LINE - an extension of the London Underground to the docklands, opened in 1999	3
OLYMPIC GAMES - held in London in 2012	3
THAMESLINK - the mainline cross-London railway from Bedford to Brighton	2
BEECHING - the 1963 rationalisation of the railway network	1
BRITISH RAIL's 1990 speed test on the east coast main line	1
LONDON BUSES - commissioned by Transport for London in 2012	1
MANCHESTER AIRPORT - second runway	1
Previous high spend CAPITAL PROJECTS - unspecified	1
PRIVATISATION of the railways - enacted by the Conservative Government in 1993	1
TOWER OF LONDON - an eleventh century castle in central London	1
Total number of instances	85

Table 6.1: Precedents from the Second Reading of the High Speed Rail (Preparation) Bill showing sources from which they are drawn and the frequency with which they occur.

This list of precedents presents an overview of the context in which the participants are working. HS2 is thereby located within an historical narrative that participants are seen to be aware of. This narrative provides a potentially useful reflection on the nature of infrastructural innovation but a more detailed analysis is needed to understand how the precedents are used, the relevance of the contexts they draw upon, and their impact on the debate and its interpretation.

6.1.1 Identifying the context in which precedents are used

The context of a precedent can be followed through the identification of its *source*, the *attributes* of that source that are shared between it and its target (which is in this case HS2), and the anticipated *affect* these attributes may have on the target. Figure 6.1, below, shows the text from Excerpt 6.1 expressed in these terms.

source	attribute	effect
Victorian railway architecture and engineering	enhance the landscape	showcase the best of British design

Figure 6.1: The precedent of Victorian railways shown as source, attribute and effect

Taking this a stage further, these three constituent parts of the precedent can be written out in a form that more clearly expresses the way in which the precedent is used and the shift in perspective that it introduces to the debate. This method is adopted from Dorst's frame creation process, a reframing aid that helps designers engage with problems in social contexts. Dorst used a construct: "If the problem situation is approached as if it is…then…". (Dorst, 2015:78).

Dorst uses this model to reframe problems and identify potentially novel and unexpected, "designerly", solutions to them (described in section 2.2.6 above). It is used here as an analytical tool to help to identify where designerly activity might be observed within the debate. To serve this purpose it is adapted as a way of observing framing in the specific form of precedents used in the debate. Dorst's formulation of frame creation follows a general narrative template:

> If a particular ATTRIBUTE of the current situation is approached from the perspective of SOURCE then we might see how this will AFFECT the present.

This narrative can be expressed in more general terms, below, which helps to identify the use of precedent as a bridge between the problem and solutions that are being debated.

> We've done this before and we know how it works. If we transfer the knowledge of this previous solution to our understanding of the current problem we can move the debate, and the project, forward.

This treatment of the example above is shown in Figure 6.2 below:

> If we look at *the impact of railways on the landscape* (which is a concern of the opposition) from the perspective of *existing Victorian examples* (which are fantastic) then we can see that HS2 will *showcase the best of British design and engineering*

Figure 6.2: The elements of the precedent identified in Figure 6.1 represented as a reframing narrative.

Restating the excerpt in this way allows the narrative being developed through the precedent to be clearly identified. In this case, the threat of intrusion that the railway might make on the landscape is reframed as an opportunity to show off the country's design skills and the country itself in a similar way to the reframing of the railway in the Thatched House debate. These stages are collected together in Figure 6.3 below and present the method of inquiry adopted in this chapter.

To those who voice concern about visual intrusion on areas of outstanding natural beauty, I simply make the point that railway infrastructure need not be ugly - it need not be concrete blocks. Look at some of the fantastic pieces of railway engineering and architecture we have: the Forth bridge, the Glenfinnan viaduct, Brunel's bridges and tunnels - they have enhanced the landscape. I urge my right hon. Friend the Minister of State to make HS2 into an opportunity to showcase the best of British design and engineering, with bridges, viaducts and other infrastructure that show off and augment our landscape.

Iain Stewart (Milton Keynes South, Con), HoC, 2013:c363

source	attribute	effect
Victorian railway architecture and engineering	enhance the landscape	showcase the best of British design

If we look at *the impact of railways on the landscape* (which is a concern of the opposition) from the perspective of *existing Victorian examples* (which are fantastic) then we can see that HS2 will *showcase the best of British design and engineering*

Figure 6.3: The Victorian railway precedent represented in terms of the relevant context and the reframing that is taking place

This reading of the text identifies how a precedent is drawn from the past and demonstrates how this past is used to make a contribution to the present debate: a solution from the past informs a problem of the present, helping to define a solution for the future. It assumes that participants will recognise the attributes of the source and be able to translate them into future beneficial effects. The example in Figure 6.3 is examined in more detail in Section 6.3.3 below.

6.1.3 Conclusion: looking for the design function of precedents in debate

Producing a list of precedents that have been identified, as seen in Table 6.1 above, provides an indication of the historical context in which the debate is taking place and of the range of influences that participants draw upon.

The specific example of Victorian precedents relates to the earlier discussion about the use of objects in the design process referred to by Bucciarelli and Henderson (see Chapter 2). Although these examples of Victorian engineering are not physically available to participants as an object which can be physically engaged with or manipulated, their presence in the debate serves a related purpose in the way they are used by participants as a way of manipulating the debate. This also directly relates to Buchanan's (2001) reference to the rhetorical function of design objects that are used to make an argument for how we should lead our lives.

As noted in the introduction to this chapter, rhetorical functions are an intrinsic part of parliamentary proceedings and participants use them quite explicitly during the course of the debate. Because participants make no attempt to conceal this rhetorical use of a precedent it is relatively easy to

identify and therefore possible connections between rhetoric, precedent and design can be proposed and explored. The identification of the use of precedents offers a way of also identifying the use of rhetoric.

The single example of a precedent in this section demonstrates a direct comparison between the debate and a design perspective where earlier designs are used to inform present proposals. But what other function, and particularly from the perspective of design, might the other precedents on the list be seen to perform within the debate?

The following two sections explore this question by reviewing the list of precedents shown in Table 6.1 and applying the template developed above to examine them in more detail. To summarise the method to be used, and to represent it in more general terms than the example used above, the template is reproduced in Figure 6.4.

Text quoted from transcript

Participant (Constituency, Party) location of quote in transcript

source	attribute	effect
example from which precedent is drawn	relevant attribute of precedent	effect of attribute in original

If we look at ATTRIBUTE from the perspective of PRECEDENT FROM PAST then POTENTIAL AFFECT ON PRESENT

Figure 6.4: Template of precedent expressed in terms of source, attribute and effect.

The development and application of the template in this section suggest that it may be a useful method of approaching and analysing debate. This is based on just one example of a precedent found in the debate and may not be representative of how other precedents are employed and which may not fit into the same template. The rest of this chapter identifies and reformulates the other precedents found in the same debate to test this approach and to further explore this use of precedent.

6.2 Precedents use existing projects to inform current debate

6.2.1 Precedents support the principles behind HS2

The two most frequent precedents listed above in Table 6.1 are High Speed Rail projects in other countries and HS1, the only existing High Speed Rail project in the UK. It is not surprising that a debate about a future HSR project should call upon existing HSR projects to inform the current debate and there are forty-four examples of High Speed Rail projects called upon by participants in the debate. In France the TGV regenerated Lille so HS2 will regenerate Birmingham. Japanese HSR brought regeneration to the wider community so HS2 will do the same. China has become more competitive through its investment in HSR so investment in HS2 will make the UK more

competitive. In general terms these international comparisons relate to the principle of HSR and why it is needed.

More detailed operational aspects are apparent where comparisons are made with HS1. Twenty-two of the forty-four examples relate to HS1. Of these, thirteen are examples of a direct comparison between HS1 and HS2 where the former is shown as an example of what the latter should do or should avoid doing. HS1 was quiet and so HS2 will be quiet. HS1 regenerated Kings Cross so HS2 will regenerate Leeds. HS1 followed the existing motorway corridor so HS2 should follow the M40. Each of these provides an example of the kind of precedent that is observed in design literature, where examples and details from previous designs are used to guide the development of a new one or where incremental changes are proposed to existing models. The use of a number of HS1 precedents are examined later in this chapter.

Examples from earlier studies in the use of precedents as design shortcuts, such as Darke's primary generator, mostly refer to early stages of the design process where a possible solution is identified and developed. At these early stages the designers are narrowing a wide range of possibilities in order to move towards a more clearly defined designed object. In the debate studied here, HS2 has already been defined and developed into a detailed solution. The precedents are called upon to reinforce or question the solution that has been presented for debate and the principles and assumptions which have been used in reaching that solution.

6.2.2 Precedents are both good and bad

Precedents can be drawn into the debate in order to exemplify good or bad aspects from previous projects. When used in this way the precedent proposes a way of doing something that should, according to the participant, either be emulated or avoided. The two excerpts in Figure 6.5 below, show how HS1 was called upon to do both.

Both participants in these excerpts agree that HS1 provides shorter journey times into London but disagree over the results this increase in speed produces. On the one hand it was a "massive source of regeneration" to the area it serves and on the other it made no difference to the same area, described as the "most deprived area in England".

We have also failed to learn lessons from High Speed 1. In Kent, Thanet remains one of the most deprived areas in England, despite being served by high-speed rail that runs direct to London.

Mr Andrew Turner (Isle of Wight) (Con), HoC, 2013:c90

The Secretary of State described the business situation in Kent, an issue that, as A Kent MP, I should like to touch on. It is impossible to imagine how east Kent can be regenerated without the benefits that High Speed 1 brings. I sit in meetings with the regeneration group that looks at the east Kent regional growth zone, and selling the benefits of High Speed 1 and the lower journey times into London is the single biggest advantage we have. As the Secretary of State pointed out, the HS1 line runs only as far as Ashford into London; the rolling stock running from Folkestone, Dover and Canterbury into Thanet is also a massive source of regeneration.

Damian Collins (Folkestone and Hythe) (Con), HoC, 2013:c403

source	attribute	effect
HS1	"high speed rail that runs direct to London"	"one of the most deprived areas in England"
HS1	"lower journey times into London"	"a massive source of regeneration"

If we look at speed (a key feature of HS2) from the perspective of HS1 (where journey times from Kent into London have been reduced) then we can expect that HS2 will also have an economic impact.

Figure 6.5: Two examples of the same precedent used to suggest contradictory interpretations of the benefits of high speed rail.

These contested versions of the impact of high speed rail characterise the controversial nature of the debate where the new railway line is presented as both good and bad, a value judgment that also, for Rittel and Webber, characterises a wicked problem (Rittel and Webber, 1973:162). Although there is disagreement over the end result, the application of the precedent follows the same pattern. In both cases the *source,* HS1, with its *attributes* of high speed and consequent lower journey times to London *affects* HS2 with either a positive or negative economic impact.

Both excerpts demonstrate a precedent being used to predict the impact of the proposed solution on the places it serves. The contradictory nature of these two interpretations also demonstrates how, within the parliamentary context, different points of view can co-exist without being directly challenged[51]. Participants in parliamentary debate present explicitly contradictory information that in other design contexts may not be so visible.

[51] This again reflects Rittel and Webber's view of solutions to wicked problems as not being about whether they are true or false.

6.2.3 Precedents support the HS2 development process

Precedents are not only used to demonstrate what previous projects have delivered but can also be used to illustrate how to deliver them. The examples above focus on how precedents are used to better understand or imagine how the railway would operate. The precedents below focus on what will be necessary to allow the railway to be built in the first place. These move the focus of the debate from product to process.

Before the railway can be built, the details of the compensation scheme need to be agreed and this agreement is a critical part of the process. The level of compensation offered to landowners during the development of the LBR was a critical factor in securing permission to build it. Although the nature of land ownership and the democratic process has changed in the intervening years compensation remains an important aspect of the project and of the debate around it.

My last point comes from the experience of being responsible for building the second runway at Manchester airport. Paying compensation on the basis of free market value at the time is an extremely costly way of building infrastructure. Giving free market value plus 10%, 20% or 30%—whatever is appropriate —will speed up the process and save money. I hope the Government will give consideration to that, and to serious mitigation. If people take legal action because they think they are being treated unfairly, and if there is blight for a long time, that will hinder the project.

Graham Stringer (Brackley and Broughton, Lab), HoC 2013:c373

source	attribute	effect
second runway at Manchester airport	market value plus 10%, 20% or 30%	speed up the process and save money

If we look at *compensation* (which is necessary to progress) from the perspective of *Manchester airport* (where levels of compensation affected the speed and cost of the project) then HS2 will *save time and money* by making generous offers to those affected.

Figure 6.6: The compensation scheme of a previous infrastructure project is called upon to speed up the process of the current project.

This is a very clear example drawn from the personal experience of the participant who invoked the way that a previous project was managed to inform the way that the current one proceeds[52].

The decision about the route that the HS2 line will follow determines who will need to be compensated. The way this kind of decision has been made in the past forms the subject of another precedent, in Figure 6.7 below, which refers to HS1 and the intervention made by the then Secretary of State to change the route of the proposed line.

[52] The same point is made elsewhere in the debate but drawing upon a French precedent (HoC 2013, Eagle:c356; Engel:c379; Lefroy:c397)

I would say to her, and to my right hon. Friend the Secretary of State, that they should look at the process that was involved with HS1. The then new Secretary of State, my right hon. and learned Friend the Member for Kensington (Sir Malcolm Rifkind), very late in the day, called in all the evidence and changed the route . That route, which had been designed by British Rail, went right through south London and was going to blight large numbers of houses, and he changed it at the very last minute. If he had not done so, Stratford International would never have come into being and the Olympics would never have taken place. I say this to my right hon. Friend: do please look at the route, because if we are spending this vast amount of money, let us, as a nation, get the maximum out of it .

Geoffrey Clifton-Brown (The Cotswolds, Con) HoC, 2013:c392

source	attribute	effect
HS1 route	last minute Ministerial intervention to change the route	reduced blight and maximised the benefits

If we look at *route selection* (which for HS2 has already been made) from the perspective of *HS1* (where the Minister made a late and radical change to the one originally proposed) then it's not too late to change the route of HS2 to make it better.

Figure 6.7: The intervention of a previous Secretary of State in the route selection of HS1 is used to encourage the current Secretary of State to do the same, even when the project has already reached an advanced stage of planning.

The way that the HS1 route was selected is called upon in other places in this debate. The same participant in Figure 6.7 goes onto suggest that HS2 should follow an existing transport corridor (HoC 2013, Clifton-Brown:c392). The Secretary of State makes a different point using the same precedent when he claims that the single route option published for HS2 is an improvement on HS1 where the publication of several possible routes created widespread blight for residents who lived along them. (HoC 2013, McLoughlin:c345).

In the examples above, the debate shifts from discussions about the railway and what it will do when it is eventually built towards a focus on the process of how to make it happen. These examples do not involve the presentation of different and contradictory accounts such as those that were used to show the benefits and impacts of HSR on the towns and regions that it serves. Instead the participants appear to unite around the need to protect the people affected by the line, to ensure that they are properly compensated and to make sure that the project proceeds as quickly as possible. This appears to be more consensual and less controversial and reflects the sentiments of the LBR meeting where the railway's supporters resolved to woo its opponents into agreement as opposed to maintaining a provocative and unproductive stance.

6.2.4 Precedents used to question the problems that HS2 solves

The precedents in section 6.2.3 supported the HS2 project, calling on previous examples that point to how the project can be moved towards its resolution. The precedents described below do the opposite as they call upon examples of other rail projects in order to examine the underlying principle of HS2. In doing so these precedents remain within the overall frame of the debate, unlike the radical shifts in perspective seen in Chapter 5.2, but they attempt to question and redefine the problem that HS2 sets out to solve.

The need for speed

The argument for a new line and the journey times that can be achieved by making it a high speed rather than conventional railway line are questioned in the following example. This is done with reference to the capabilities of the existing network, shown in Figure 6.8 below. The line between London and Edinburgh, as it was over 20 years ago, according to this participant, could deliver shorter journey times than those proposed by HS2. If this could already be achieved, then the problem of connectivity that is addressed by HS2's faster journey times has already been solved.

In 1990 British Rail, as it was in those days, freed up the line and ran a train from London to Edinburgh with a two-minute stop at Newcastle. For most of the journey it was a 140 mph operation. The journey took three and a half hours - two and a half hours to Newcastle, three and a half hours to Edinburgh - which was eight minutes faster than the time advertised for HS2 now, so it can be done.

Kelvin Hopkins (Keighley, Con), HoC, 2013:c388

source	attribute	effect
speeds achieved by British Rail	journey times	faster than HS2

If we look at the *journey times achievable on the existing network* from the perspective of *tests undertaken 20 years ago* then HS2 is *not necessary* since it achieves lower timings than are possible on the existing network

Figure 6.8: A precedent that ran high speed trains on the existing network is used to question the problem of existing low speeds that HS2 is alleged to address.

The need for speed is further queried in the excerpt in Figure 6.9 where reference to European HSR is used, not as an example of the benefits of the high speeds at which it runs, but to draw attention to the even higher speeds proposed for HS2.

The Government have rightly said that a new rail network needs to be designed to increase capacity, rather than speed, so I cannot understand the fixation with speeds of 225 mph to 250 mph, if that means that routes are so inflexible that they cannot follow existing corridors, such as motorways, as many have argued. No railway in Europe travels at that speed. The maximum is 200 mph.

Jeremy Lefroy (Stafford, Con), HoC, 2013:c396

source	attribute	effect
European HSR	maximum speed is 200 mph	higher speeds unnecessary and route could be modified

If we look at the *speed of HSR* from the perspective of *the European network* then HS2 is *over specified and could be rerouted* for slower speeds.

Figure 6.9: The European precedent of lower speeds on its rail network is called upon to question the need to run at high speed and at the same time proposes a solution to problems raised by the inflexible route which a high speed line has to follow.

These higher speeds require straighter tracks and this affects the choice of route. If the slower speed of the European network were to be adopted instead of the higher proposed speeds, then the route could be modified to follow existing transport corridors. This precedent explicitly questions the need for speed by suggesting that the Government's "fixation" (itself a design term, see Crilly 2015) with high speed is unnecessary and that the problem of capacity should take precedence over any problems that are associated with a network that runs at lower speeds.

The lack of connectivity

The primary function of the speed of HS2 is to enhance the connectivity between the UK's major cities. This, it is argued, acts a regenerative force to the cities and regions that are connected by HS2 to the capital[53]. In the excerpt in Figure 6.10 below, the net increase in traffic into Paris provided by the TGV service is used to question the notion that HS2 generates wider regional economic benefits. This example supports a previous interpretation of HS1 (HoC 2013 Turner:c390) as having no impact on the deprived areas to which it runs.

In France, on the line connecting Paris, Rhone and the Alps, passenger growth to Paris was three times greater than that from Paris. The only people who will benefit from the project will be those living within about a 10-mile radius of the station near Birmingham on the HS2 line . Those who live any further away, such as the black country or Coventry, will be asked to travel more than 10 miles.

Mr Andrew Turner (Isle of Wight) (Con), HoC, 2013:c389

source	attribute	effect
Paris - Alps TGV	passenger growth	into rather than out of Paris

If we look at enhanced connectivity from the perspective of French TGV (where faster journeys into Paris mainly encouraged people to travel into the capital) then HS2 will only benefit London and those who live near enough to the other termini to take advantage of the enhanced connection to the capital.

Figure 6.10: A precedent from France used to demonstrate that the connectivity produced by high speed rail solutions do not necessarily deliver the benefits to the places where they are needed.

The benefits of connectivity are further questioned in relation to the physical geography of the UK compared to that of Europe in the excerpt in Figure 6.11 below where the precedent of European HSR is used not to demonstrate the benefits of high speed connections but to question then need for them. The distance between cities is measured here in time rather than miles and this presents the existing UK network in a favourable light compared to those of its European neighbours.

[53] House of Commons Library Research Paper, RP11/75, p.1

It should also be noted that, compared to our European neighbours, journey times between first and second cities are considerably shorter in the UK. The journey time between Birmingham and London is already half that of high-speed rail travel in France and Spain.

Andrew Bridge (North West Leicestershire, Con), HoC, 2013:c377

source	attribute	effect
European neighbours	journey times between first and second cities	UK is already better connected

If we look at *connectivity* from the perspective of *European distances between cities* then HS2 is *unnecessary* because the UK is smaller

Figure 6.11: The European high speed rail network is called upon in this precedent to demonstrate that UK journey times do not need to be shortened and the enhanced connectivity of HS2, one of the project's main justifications, is therefore unnecessary.

The lack of capacity

The penultimate example in this section, shown in Figure 6.12 below, questions another of the main justifications used for HS2: that the railway network is full to capacity. This participant is referring to an apparent over-specification of demand in the planning of HS1.

Does my hon. Friend recall that the initial estimates of capacity usage for HS1 were overestimated by 30%? Jeremy Lefroy: Yes, and I fully understand the problems mentioned by some of my hon. Friends.

Andrew Bridge (North West Leicestershire, Con), HoC, 2013:c396

source	attribute	effect
HS1	capacity forecasts overstated	HS2 unnecessary

If we look at *capacity forecasts* (which is a key justification for HS2) from the perspective of *HS1* (where they were overestimated) then HS2 *may be unnecessary*

Figure 6.12: The accuracy of capacity forecasts in HS1 are used to question the need for HS2.

HS2 is the Government's proposed solution to what are considered to be the existing problems of the country's transport infrastructure. The general principle of High Speed Rail has been adopted to provide this solution but the precedent of HS1, and the planning process that was undertaken at the time it was built, is used by the participant in Figure 6.12 to suggest that the process was flawed due to an over-estimation of the network capacity that it would fulfil. In raising this question the participant also raises questions about the validity of the assumptions underlying the plan for HS2 and the need for additional capacity that is based on these assumptions.

All of the examples above are testing the underlying principles used to justify the need for HS2: that faster journeys and enhanced connectivity bring economic benefits and that a new line is needed to expand the existing network. Participants are seen to be actively engaged in questioning

aspects of the proposed solution as it has been presented and also refining the problems that it sets out to solve. They are using precedents in order to do so but, as will be seen in the final example below, the use of precedent is itself also questioned.

The use of precedents is questioned

A final example of how precedents are used to question aspects of the case presented demonstrates how the use of precedents in the debate is openly recognised and reflected upon. In this example (Figure 6.13 below) a participant draws several of the precedents that have been used in the debate together in a critique of the way they have been employed to support the argument for HS2.

> We have also heard comparisons with the motorway network, the Jubilee line and HS1. They were all very much resisted at the time, but every single one of them was unique in its own way. For motorways, there is a junction every few miles, so everybody benefits from them; they undoubtedly promote growth in our economy. Likewise, the Jubilee line has many stops, and therefore benefits a huge swathe of the population HS1 is unique in the sense that it was the link to mainland Europe. HS2 is none of those things; it is a decision that we have taken in isolation.
>
> *Andrea Leadsom (South Northamptonshire, Con), HoC, 2013:c380*

source	attribute	effect
HS1, Jubilee Line, Motorways	all were resisted and eventually built but also had unique attributes	HS2 debate should not depend on precedents

If we look at *how we are debating HS2* from the perspective of *numerous different precedents* then we can see that because of the differences between them *these precedents are irrelevant.*

Figure 6.13: The relevance of a number of precedents called upon during the course of the debate is questioned.

Each of these three precedents (HS1, Jubilee Line, motorways) are described as unique and with attributes that are claimed to be irrelevant to HS2. The participant suggests that the shortcuts provided by these precedents are not a productive way of moving forward.

6.2.5 Conclusion: precedents as part of the design process

The examples in this section demonstrate how precedents were brought into the debate as ways of moving the project, or the debate around the project, forwards. Some were used to suggest shortcuts that can be learnt form previous projects and others are used to support or question the underlying principles behind the project. These precedents were called upon to question the solution and the benefits that its supporters claim it will deliver and also to question the problems that HS2 sets out to solve. In one example the same precedent was used to support contradictory claims. The use of precedents identified in this section allows direct comparisons to be made between the use of precedent as a way of negotiating between a problem and its solution and as an indication of the wicked nature of that problem.

6.3 Identity and value as a design function of precedent

The precedents explored in the previous section show participants calling upon perspectives from the past in order to inform their reflections on perceived problems posed by the existing state of the country's transport infrastructure and the solution proposed by the Government to address these problems.

Different examples of precedents from the same debate are presented in this section which examines how precedents were used to establish an identity for the supporters of the Governments proposals. This identity also defines an identity for their opponents. This begins to establish a connection between the use of precedent as a shift in perspective and as a way of identifying the nature of the perspectives that are adopted, the values they carry with them, and how they are shared between the participants and the people they represent.

6.3.1 Establishing positions in a contested and controversial debate

As seen in the previous section, evidence that is used to support and oppose the HS2 project can be contested and this makes the project appear to be inherently controversial. The controversial nature of HS2 is explored in the excerpt in Figure 6.14 through reference to the reported controversial nature of its predecessor.

Damian Collins (Folkestone and Hythe) (Con): My right hon. Friend mentioned his rail journey to Canterbury. I encourage him to take a different branch on High Speed 1 and travel to Folkestone, as he will see that the investment in High Speed 1 is the biggest single advantage we have in promoting the east Kent regional growth area.

Mr McLoughlin: I am grateful to my hon. Friend, who makes that point from vast experience. It is worth remembering how controversial High Speed 1 was when it was built. I will talk about that a little later. The simple fact is that every infrastructure project—not nearly every project, but every project—is very controversial when it first starts, and in that regard High Speed 2 is no different.

HoC, 2013:c339

source	attribute	effect
HS1	was controversial	but only when it was built

If we look at *controversial projects* (of which HS2 is one) from the perspective *HS1* (which was, like all infrastructure projects, controversial when it started) then we can expect that the controversy around HS2 will be temporary.

Figure 6.14: The original, but temporary, controversy of the HS1 project is used in the precedent in this excerpt to suggest that the controversy attached to HS2 will also be temporary and therefore not to be treated as unusual or requiring special attention.

HS1 is employed here by the Secretary of State for Transport, the sponsor of the project, to suggest that controversy is nothing new, a "simple fact" upon which further consideration is not necessary. In other words, opposition to HS1 did not last long once it was built and we do not need

to let opposition to HS2 prevent us from moving forward. This precedent sidesteps the need to explore the controversy in detail. As a shortcut it demonstrates how the problem of controversy has been shown to be too difficult to solve in the past and is therefore something that shouldn't necessarily be expected to be solved in the present. It also sets out a characteristic of the supporters of HS2, who recognise "simple" facts about the benefits that HSR delivers and the transient nature of controversy. An identity is also then implied for the project's opponents who are unable or unwilling to recognise the same "facts".

6.3.2 Exploring the future with foresight, vision and patriotism

The establishment of group identities within the HS2 debate is only inferred from the excerpt above. The notion of the group, established via precedents, is developed more explicitly in the examples below. Reference to the original development of the railway network by Victorians was shown to be one of the most frequent precedents found in the debate. In the excerpt in Figure 6.15 the great vision of the Victorian predecessors suggests that the supporters of HS2 are also visionary.

I have seen some of that analysis, but I disagree with it. All the past experience is that by connecting cities, we bring jobs and growth to both ends of the network. Our Victorian predecessors had great vision. No doubt there were people in those days who said, "This will all be a waste of money. Rail will never take off", but experience shows that when we connect up people and cities, we create more jobs at both ends of the network.

Alan Reid (Argyll and Bute, LD), HoC, 2013:c367

source	attribute	effect
Victorian objections	ignored benefits	opponents are short sighted, supporters are visionaries

If we look at *objections to railway development* (which makes HS2 controversial) from the perspective of *Victorian* predecessors (which was developed by far-sighted visionaries but also controversial) then we can see that opposition to HS2 is *short-sighted*.

Figure 6.15: Historical objections to Victorian railway projects suggest that opposition to HS2 is short-sighted compared with the great vision of its proponents.

The vision of a new railway is compared with an imagined opposition to it. The opponents to the original railway were unable to see the potential of the solution and ultimately shown to be wrong. If the investment in the original railway had not been made it would not have been possible to deliver the growth and prosperity that it did. Opponents to HS2 are short sighted and perhaps therefore not to be taken seriously.

The perceived status of the opposition is made more explicit in Figure 6.16 where attitudes held by opponents to the Victorian railway are described in more detail. This example clearly draws a

picture of absurdity on the part of objectors, with particular reference to the speed at which the trains would travel, and projects it onto the opponents of HS2.

High Speed 2 is not a scheme being built for the future based on the travel behaviours of the past. We stand firm in our belief that High Speed 2 is the right choice for Britain in the 21st century, just as the railways were the right choice for Britain in the 19th century. Amazingly, back then, those opposed to the railway claimed that it would terrify country folk, turn cows' milk sour, stop hens from laying and lead to an invasion of town folk into the country; and that travelling at speeds of more than 25 mph would cause the engines to combust and the passengers to disintegrate. The doubts of today are the only true hindrance to realising our vision and the benefits it will deliver, and I am sure that future generations will look back at these doubts in the same way as we look at the doubts of those opposed to railways in the 19th century - and, ironically and using a shorter time scale, the doubts that the people of Kent had in the 1980s and '90s, which they now totally reject.

Simon Burns (The Minister of State, Department for Transport) HoC, 2013:c408

source	attribute	effect
19th century objections	absurd	opposition obstructs progress

If we look at *objections to railway development* (which makes HS2 controversial) from the perspective of *the 19th century* (which was clearly absurd) then we can see that opposition to HS2 is *a hindrance to our vision and obstructive to progress.*

Figure 6.16: The apparently absurd objections to high speed rail in the 19th century, and to HS1 more recently, are used to suggest that objectors to HS2 maintain a similarly absurd position

The conclusion drawn suggests that opposition to HS2 is short sighted, ill-informed, temporary and not to be taken seriously. Another precedent, in Figure 6.17 below, makes a similar distinction.

None of us can know for certain what the future will bring - no more than when, nearly 30 years ago, this House debated the Channel Tunnel Bill. At that point, many Members spoke against it. Some said that we were living in the age of Concorde, and that international rail travel was not the future. The channel tunnel has outlasted Concorde and will be there for many more years to come.

Damian Collins (Folkestone and Hythe, Con), HoC, 2013:c404

source	attribute	effect
HS1 objections	naïve	opposition is short-sighted

If we look at *objections to railway development* (which makes HS2 controversial) from the perspective of *the Channel Tunnel* (which will outlast other modes of transport) then we can see that opposition to HS2 is *naïve and misguided.*

Figure 6.17: In this excerpt two precedents are called in sequence to trace a history of short sighted opposition to future transport solutions.

This excerpt shows how two precedents were used to question the validity of perspectives that might be held by opponents to projects like HS2. The Concorde precedent that had been used as an argument against the development of the Channel Tunnel project is claimed to have been

inappropriate. The perceived longevity of international rail travel compared with a misguided faith in supersonic flight shows that opponents to HS1, when it was originally discussed as part of the Channel Tunnel project, naively thought that Concorde, rather than a railway line under the English Channel, was the answer to international travel.

This example contains a number of elements that are worth unpacking. Firstly, in terms of the use of precedent in the debate, it contains two precedents that are used sequentially. Concorde, a bad precedent that did not succeed, is superseded by HS1, a good precedent that continues to do so. Secondly, any comparison between a trans-European railway line and a transatlantic supersonic airplane, two modes of transport which would never be in competition, must be seen as symbolic and rhetorical. This rhetoric is used to support a more general position that, although events are unpredictable, the supporters of HS2 like those of HS1, have a clearer and more reliable vision of the country's transport future. This vision is set up in contrast with the naivety of its opponents

The identity of different protagonists is explored further in Figure 6.18 below which recalls a speech from another figure regarded as a visionary who spoke, as Prime Minister, at the opening of the M25 London orbital motorway.

In April, we came to the House during the recess to reflect on the death of Margaret Thatcher. Many Members on the Government Benches gave speeches about how she was a visionary, and how she led and did what she thought was right. I ask my hon. Friends to reflect on the great lady's comments in 1986, on the opening of the M25: "Now some people are saying that the road is too small, even that it's a disaster. I must say I can't stand those who carp and criticise when they ought to be congratulating Britain on a magnificent achievement and beating the drum for Britain all over the world." I am sure my right hon. Friend the Minister remembers the quote. She went on to say: "And to those who say, 'we always build our roads too small' we can only point out that at some of the planning enquires those who object to the new road say that our traffic forecasts are excessive, and that improvements to existing roads would be enough. Fortunately the planning inspectors and successive Secretaries of State have not accepted that viewpoint." We can see the comparison with the high-speed rail network, which I believe is vital for my home city of Leeds and for the growth of Britain.

Alec Shelbrooke (Elmet and Rothwell, Con), HoC, 2013:c394

source	attribute	effect
M25 motorway	future proofed design	opposition is short-sighted and unpatriotic

If we look at *objections to infrastructure development* (which suggest that projects, like HS2, should be less ambitious) from the perspective of *the M25* (which was built to a higher specification than opponents thought necessary) then we can see that opposition to HS2 is *short sighted.* Criticism of such project is also seen as *unpatriotic.*

Figure 6.18: Another example of two precedents that are used to link HS2 with another successful infrastructure project. It also links the supporters of HS2 with a previous Prime regarded as a visionary and known for her patriotism.

As with the previous example there are two precedents combined in this excerpt. The M25 provides a direct parallel to HS2 where traffic forecasts were questioned and the need for a new route was thought to be unnecessary. The opposition to the M25 in this example is portrayed as short-sighted in comparison with the foresight of its supporters: Government Ministers who propose solutions and planning inspectors who over-ride objections to them.

This whole scenario is framed by a separate precedent in the form of Margaret Thatcher, a previous Conservative Party leader who is presented as a political icon. Her reference to beating the drum for Britain extends the image of HS2 supporters as visionaries who are also clearly aligned to a national identity and prepared to sacrifice private interests for the sake of their country.

The precedents shown in this section develop specific identities for the supporters and opponents of HS2. These identities are established through the use of precedents that recall previous projects and the people involved in them. In each instance it is possible to recognise that the precedent does not simply support the functionality of HS2 as an infrastructure development but also carries specific values, implicitly or explicitly, which the participants who use them are invoking. This establishes a group with which supporters can identify as a team of visionaries who can recognise simple facts and represent the best interests of their country. The opponents to HS2 are portrayed as naïve, short-sighted and unpatriotic.

6.3.4 National investment

The national identity invoked above is reflected in many of the precedents identified in this debate. Reference is made to other countries which have already explored HSR development or who are seen as competitors in a global marketplace in which investment in the development of HSR is seen to be of benefit. The examples in this section examine how precedents are used to address how this investment in HS2 should be made in relation to the sourcing of the products and services that will need to be procured by the project as it progresses.

The following precedents are not comparisons with what other countries have done but relate to how previous UK projects have been managed. In the first, Figure 6.19, it is noted that mistakes made in the past allowed procurement to go outside of the UK and should not be repeated.

Because there is a construction interest, can he give an assurance that when it comes to procurement, there will be no repetition of the mistakes that were made in the past whereby UK-based companies did not benefit from some of the high-spend capital projects, and there will be opportunities for construction firms from Northern Ireland?

Sammy Wilson (East Antrim, DUP), HoC, 2013:c338

source	attribute	effect
past projects	procurement strategy	invest in UK

If we look at *procurement* (which is where the HS2 budget will be spent) from the perspective of *mistakes made in the past* (when capital was spent elsewhere) then we can see that HS2 should *support UK companies*

Figure 6.19: Previous high spend capital projects are shown to have made mistakes by investing development budgets in non-UK companies.

The Minister's reply to this is shown below in Figure 6.20 with an assurance that this lesson has been learnt by calling upon a recent and ongoing capital project, Crossrail, as a precedent of good practice that should be followed by HS2.

Crossrail has set a good example. About 97% of Crossrail goods are serviced by British companies, and the Mayor of London is in the process of purchasing a huge infrastructure project, the new London buses, from Northern Ireland. That is very much in my mind with regard to the way I will be dealing with HS2 and talking to the management of HS2.

Mr McLoughlin (The Secretary of State for Transport), HoC, 2013:c338

source	attribute	effect
Crossrail	97% British procurement	investment in UK economy

If we look at *procurement* (which is where the HS2 budget will be spent) from the perspective of *Crossrail* (where most of the budget was spent in the UK) then we can see

Figure 6.20: A recent UK infrastructure project is used as a precedent for HS2 to follow with regard to where it procures goods and services.

A further specific example below, of the cross-London Thameslink project which procured trains from Germany, provides additional details which extend the scope of this precedent.

Ministers must learn the lessons of the Thameslink procurement. Those trains are now to be built in Germany. It is perfectly possible, within EU rules, to ensure that public investment delivers jobs and apprenticeships where they are desperately needed, here in Britain. Every other EU country manages to do the equivalent through its own train procurement. The new line must deliver British jobs and growth, not only after its completion but during its construction, and that must include the manufacturing of the trains.

Maria Eagle (Garston and Halewood, Lab), HoC, 2013:c347

source	attribute	effect
Thameslink	procured in Germany	investment in UK is essential and possible within EU rules

If we look at *procurement* (which is where the HS2 budget will be spent) from the perspective of *Thameslink* (which has spent in Germany) then we can see that HS2 can invest in Britain

Figure 6.21: Another recent UK infrastructure project where procurement was ceded to Germany is used to further reinforce the point that HS2 should invest in UK companies and that it is allowed to do so according to European legislation.

By referring to specific projects in a specific country this precedent locates procurement within a legal framework of what can and cannot be done according to European Union rules. This example also develops an image of Britain as an entity that needs to assert its authority and identity within the European Union in order to secure its economic security through jobs, training and growth.

6.3.5 International competition

More direct references to Europe explore the development of HSR in specific countries in order to compare those networks with that of the UK.

I was saying that HS2 will bring about two thirds of the people in the north of England within two hours of London. Its purpose is not merely to keep pace with our competitors, although it is worth pointing out that Italy will soon have 926 miles of high-speed rail, whereas we have just 67 miles.

Mr McLoughlin (The Secretary of State for Transport), HoC, 2013:c337

source	attribute	effect
Italian	extent of network	keep pace with competitors

If we look at *the size of our HSR network* (which is currently 67 miles long) from the perspective of *Italy* (which has 926 miles) then we can see that HS2 will *keep pace with international competitors*

Figure 6.22: The size of the Italian HSR network is used to show how small the UK network is in comparison and that it should be extended to be competitive.

In the excerpt in Figure 6.22 the extent of the Italian HSR network, reported to be over ten times the size of the UK network, is used to indicate that one of the reasons to support the development of HS2 is to ensure that the UK can compete with its international competitors. The scale of the competition is outlined further in Figure 6.23 where Germany, Japan, China and the United States

are added to the list of competitors. HS2 is presented as the solution to keeping up with this global range of competing countries. Moreover, it is seen to be dangerous to not develop HS2.

It is important to point out that other countries, such as Germany, Japan and China, have already invested heavily in high-speed rail and have several rail connections that are much faster than ours. The United States also has plans to develop a high-speed rail network. If we do not go ahead with HS2, there is a great danger that the UK will fall behind our international competitors.

Mr Reid (Argyll and Bute, LD), HoC,2013:c367

source	attribute	effect
other countries	investment in HSR	keep pace with competitors

If we look at *investment in HSR network* (which HS2 extends) from the perspective of *other countries* (who have already invested heavily in faster connections) then we can see that HS2 will *keep pace with international competitors.*

Figure 6.23: The amount of investment made in HSR by other countries is used to introduce further pressure to go ahead with HS2 to avert the danger of falling behind the competition.

Both examples above show precedents from other countries demonstrating that the UK should increase its capabilities to engage in a global competition against other nations which it is in danger of losing. These other nations are presented as being more advanced and therefore at a greater competitive advantage. The sense of identity is reinforced by the use of the collective pronoun that sets “our” nation against “them”.

Another example, in Figure 6.24, displays surprise at one of the countries that has developed a more extensive HSR network than the UK.

After all, it is rather embarrassing that Turkey will soon have 1,500 miles of high-speed rail when we have just 67.

Stuart Andrew (Pudsey, Con), HoC, 2013:c398

source	attribute	effect
Turkey	extent of network	Embarrassing

If we look at *the size of our HSR network* (which is currently 67 miles long) from the perspective of *Turkey* (which has 1500 miles) then we can see that HS2 will *reduce embarrassment*

Figure 6.24: The extent of the Turkish HSR network is introduced as an embarrassment to the lack of HSR development in the UK.

In contrast to the competitive concerns represented by other countries, the extent of Turkey's network is considered to be an embarrassment. In all of these examples[54], other countries and their experience of HSR are called upon to position the UK's current level of investment in HSR as being behind its international competitors.

The way that these competitors are presented also locates the UK in a kind of league table of nations. The embarrassment about Turkey, and to a lesser extent Italy who are not identified as competitors, places both of these countries below the UK whereas other countries, for example Germany and China are presented as one time equals who have been allowed to run ahead. HS2 is presented as a solution to recover the UK position in this league. As a solution, HS2 reduces the danger of being defeated by countries that are recognised as stronger competitors. It also redresses the apparent ignominy of being considered equal, if not inferior, to other countries.

These precedents provide a practical comparison between the UK and other countries' railway networks but at the same time uses this comparison to recognise the sense of a national identity maintained by supporters of HS2. This national identity is further reinforced by more detailed references to the HSR in other countries.

The connectivity provided by HS1 and its links to European cities is considered in the excerpt below.

I am not prepared to put up with a situation in which someone can get to Brussels on a high-speed train line, but not to Birmingham; to Strasbourg, but not to Sheffield; or to Lille, but not to Leeds. We cannot afford to leave the economic future of our great cities such as Manchester, Birmingham, Leeds, Sheffield, Nottingham and Derby to an overcrowded 200-year-old railway.

Mr McLoughlin (The Secretary of State for Transport), HoC, 2013:c341

source	attribute	effect
HS1	city to city connectivity	ensures economic future of connected cities

If we look at *UK intercity connectivity* (which is currently badly served by a 200 year old railway) from the perspective of *HS1* (which connects London with European cities by HSR) then we can see that HS2 will *secure the economic future of UK cities*

Figure 6.25: The HS1 high speed links to Europe are used as a precedent in this excerpt to call into question the lack of high speed connections between UK cities.

An almost identical comparison is found at HoC 2013:c390 but using different pairs of cities. Both examples consider it to be unacceptable that European cities can be accessed by HSR but UK cities can't. The development of HS2 redresses this problem by providing comparable HSR connections between the main cities in the UK. These internal high speed connections between "our great cities" create an image of a country reunited and economically secured as it is updated

[54] More are found at HoC (2013), Harrington:c371; Stringer:c371; Kwarteng:c384; Elan Jones:c391

from a 200-year long hiatus. Elan Jones further reinforces this historical and national context by making the point that “we in Britain…invented railways” (HoC 2013:c390).

6.3.6 National histories

Britain’s railway history is a prominent feature in the debate as evidenced by the number of references to Victorians in the frequency report of precedents in Table 6.1 above. References to opponents of the railways in the nineteenth century have also been shown above (see section 6.3.2) to provide a mechanism for defining an attitude to opponents to HS2. In those examples the opposition was shown to be short-sighted compared to the visionary approach of supporters of HS2 who also, through this vision, support a patriotic future for the country. The legacy of the Victorian railway engineers was shown in Section 6.1 as an example of how to identify a precedent. This excerpt is reproduced below in Figure 6.26 as the context in which this precedent appears has further relevance to the theme of national identity in the way it draws upon the history of the nation.

To those who voice concern about visual intrusion on areas of outstanding natural beauty, I simply make the point that railway infrastructure need not be ugly - it need not be concrete blocks. Look at some of the fantastic pieces of railway engineering and architecture we have: the Forth bridge, the Glenfinnan viaduct, Brunel’s bridges and tunnels - they have enhanced the landscape. I urge my right hon. Friend the Minister of State to make HS2 into an opportunity to showcase the best of British design and engineering, with bridges, viaducts and other infrastructure that show off and augment our landscape.

Iain Stewart (Milton Keynes South, Con), HoC, 2013:c363

source	attribute	effect
Victorian railway architecture and engineering	enhance the landscape	showcase the best of British design

If we look at *the impact of railways on the landscape* (which is a concern of the opposition) from the perspective of *existing Victorian examples* (which are fantastic) then we can see that HS2 will *showcase the best of British design and engineering*

Figure 6.26: A collection of design precedents created by Victorian engineers are called upon in this excerpt as exemplars of good design. This sense of good design is transferred by this from the infrastructure into the landscape in which it is placed.

The quality of the Victorian vision and their ability to realise it is used here to demonstrate several aspects of HS2. The Victorian railway infrastructure is held up as an example of what is considered to be good design. In this respect the precedent operates as the kind of shortcut, in a very conventional design sense, that draws upon previous solutions to inform the present debate. This is developed further as the positive impact that this good design has on the landscape is used to address concerns about the visual intrusion that HS2 is accused of making on the landscape. In this sense the precedent operates alongside those shown above that position HS2 supporters as having better insight into what the railway can achieve. Thirdly this precedent is used to describe a sense of national identity in a similar way to other examples in this section. The fantastic design of the Victorians can inform the design of HS2 in order to showcase not only the abilities of the nation’s designers but also to “show off and augment our landscape”. This embodies the national identity through the way that it designs infrastructure into the physical geography, the land, and the country in which it is built.

6.3.7 National power

The precedents discussed so far in this chapter all fall within a reasonable expectation of what might be called upon when looking at the development of a railway system. Other railway projects in other countries provide obvious comparisons, as shown in many instances above. Reference to other infrastructure projects provide a way of establishing precedents for how projects should be managed and what they should be expected to achieve. HSR, HS1 and the Victorians who built the original railway network represent the most frequent precedents that are called upon. There is one anomaly in Table 6.1: the Tower of London.

The Tower of London is one of the few precedents in the debate that is not transport related. It also has the longest history of the precedents referred to by any participants. The relevance of the anachronistic presence of this eleventh century castle to a twenty-first century railway is not immediately apparent until the context in which is raised is noted. This excerpt shows the Tower of London introduced as an infrastructure project.

> What is clear to me, as a Member for a south-east constituency that is very built-up and highly residential, is that disputes about infrastructure spending are inevitable. I suggested that when the Tower of London was built, people objected to it on quite worthy grounds. There have been objections to every piece of infrastructure spending in this country for hundreds of years, but that does not mean that we have not gone ahead and built the railways or the ports.
>
> *Kwasi Karteng (Spelthorne, Con), HoC, 2013:c385*

source	attribute	effect
Tower of London	worthy objections	still went ahead

If we look at *objections to infrastructure* (such as those made against HS2) from the perspective of *the Tower of London* (which was built anyway) then we can see that objections to HS2 *should not be heeded*

Figure 6.27: The Tower of London, an eleventh century feudal castle is called upon in this excerpt as a precedent which provides a way of dealing with opposition to HS2.

This, like the previous example, operates as a precedent in several ways. It is claimed that people objected to the building of the Tower on “worthy grounds” but these objections were disregarded at the time and the project went ahead.
This attitude to opponents to projects, as maintained for hundreds of years, provides a precedent for HS2 as a project which should also go ahead in spite of opposition. Without this approach the country’s railways and ports, which are assumed to contribute to the economic growth and stability of the nation, would not have been built. This attitude also ensured that the nation’s castles were also built although the extrapolation from railway to castle suggests a rhetorical purpose requiring further exploration.

The Tower of London was built in the eleventh century by William the Conqueror. It would establish and secure the recently victorious Norman invaders’ control of the capital city. It represents the

power of an occupying force, imposed after the landmark defeat of the English army in 1066 and was “built to strike fear and submission into the unruly citizens of London”[55]. The symbolic power of the Tower extends to its subsequent use as a prison particularly known for the incarceration, torture and potential execution of inmates accused of treason. The Tower symbolises the protection and continuation of the nation state but also represents a threat of punishment or death to those who dissent against it. More recently the Tower of London is regarded as a national treasure known as the home of the crown jewels, the regalia worn by monarchs during their coronation. These jewels symbolise the power of the monarchy over its people but the Tower is more commonly regarded as one of the most visited tourist sites from London’s rich historical and cultural heritage.

As a design precedent the Tower of London operates on several levels. An association with an old castle provides the new railway with the solidity and sense of purpose that the Tower of London invokes. The precedent of a design consultation process is called upon in which opposition to a project of such perceived national importance would never be countenanced. This precedent invokes an endearing and enduring iconic tourist landmark but at the same time the participant invokes a form of autocratic and feudal Government that was introduced to a defeated England by an aggressive and victorious invading force. This use of precedent strongly affirms one of the key dialectics of infrastructure debate and policy design which attempts to balance private interests against public good.

6.3.8 Conclusion: precedents develop identities and carry values

This section has introduced and analysed a number of precedents which can all be seen to function as a means of introducing specific characteristics into the debate that reflect on the identities and motivations of those involved. These characteristics include a number of personal traits that valorise supporters and vilify its opponents, that describe a number of relationships between the UK and other countries and that reify a sense of national identity that is to be embodied through the building of the railway line. All of these are values that appear to be supported and disseminated by participants through their use of precedents in the debate.

6.4 Conclusions

This chapter examined how precedents were called upon in the debate to reframe and reinforce the underlying principles of the subject and the participants of the debate. The function of these precedents in the debate was seen in relation to the proposed solution and to the problems that the solution is intended to solve. When looking for these precedents and the functions they serve it is apparent that the process of looking for them offers insight into other aspects of the debate. The use of precedent as a means of identifying the team and the values to which that team adhere was shown to be clearly present as an aspect of the debate. Looking for the use of precedent in the

[55] More stories about the Tower of London can be found on its website which is primarily intended to attract tourists to visit. http://www.hrp.org.uk/TowerOfLondon/stories/WhiteTower

debate provides a method of generating insight into broader contexts in which the debate, and its participants, are operating. The use of precedent in the debate can also be interpreted in terms of their rhetorical function which is particularly noticeable where the source of the precedent is conceptually distant from its target.

6.4.1 Design functions of precedents in debate

The design interpretation of precedents developed in this chapter, in terms of a dialectical problem/solution pair and the construction of a team identity, proposes a way of looking at parliamentary debate that offers insights into the nature of the subject being debated and into the way that the debate is engaged in by participants and can be engaged with by researchers.

The notion of precedent was recognised as a form of framing in terms of a perspective shift where a source and a target were used to identify them. The use of source and target is used in various interpretative methods (see Lakoff & Johnson 1980 for a standard notation of source and target in relation to metaphor). This provided a useful starting point for locating a number of precedents that were observed in varying frequency through the course of the debate. The identification of these precedents and this means of identifying them provided a springboard for a more detailed analysis of the function that each was seen to serve in the debate.

6.4.2 Precedents support the solution

A method of extrapolating the structure and relevance of each precedent was developed using a narrative prototype. This extended the source-target model to include the attributes that were carried between the source and the target. The narrative prototype, modelled on Dorst's exploration of framing (Dorst, 2015), provided a simple method of presenting and interpreting each precedent. By extracting from each precedent the specific attributes that it is being called upon to illustrate and by presenting each as a narrative structure it is possible to clearly identify the key contribution that the precedent is intended to make and to isolate the key issues that the participants are using the precedent to focus on. Where participants used precedents to inform how the railway would operate, and how it could more quickly reach operational status, these precedents are comparable with the kind of precedents called upon in specific stages of product design.

6.4.3 Precedents question the problem

Where participants used precedents to question the underlying principles of the debate they were seen to be shifting the focus back onto the problem as it was being stated. Although these shifts were not radical they were visible and could be seen as a form of revisiting and potentially revising those principles that were already established as guiding the project. Specifically, in this debate the key concepts behind HSR, of speed, connectivity and capacity were shifted into focus in this way.

6.4.4 Precedents as visions of the future

The focus on HSR reflects a clear tendency in the debate to focus on the railway that will eventually be built. Participants look to other railways in order to compare how they operate and

the benefits they deliver. Since infrastructure projects at this scale are impossible to prototype both in terms of the scale of the project and its controversial nature (Rittel & Weber, 1973) the precedents of other railways provide a way of examining the solution and building up a picture of what HS2 will be before it is built - a vision of the future.

The different positions maintained through the debate, and in particular the way that the same precedent can be used to support opposing points of view, illustrates the more conceptual level at which the debate can be seen to operate. Participants draw upon precedents to help them to create various alternative and potentially conflicting visions of the future. These visions are supported by, and populated with, elements of the various precedents that are invoked through the course of the debate.

The contribution that precedents make to this vision is another kind of design shortcut where elements and attributes from previous designs are called upon and tested against the requirements of the new project. In one way, elements that are deemed to be relevant are held up as examples of good practice to be followed and incorporated into the current project. Alternatively, other elements are considered to be equally relevant as examples of bad practice and to be avoided. In the design literature the use of precedents is seen as a reference to practices or products that have been deployed or developed in earlier projects. Precedents may be called upon to save time in product development, for example as a shortcut in New Product Development, where features and functions from previous designs are employed in the present project to provide a kind of shortcut to a solution. The use of precedent as seen in the debate mirrors this notion of the precedent as a reusable design element (Eckert & Stacey, 2000) and also reflects more general views of prototyping and of design as a way of future-making that are explored in design literature[56]. The work described in this chapter extends the design studies application of these notions into a method of interpreting parliamentary debate.

6.4.5 Precedents and team identity

Another form of the precedent observed in this chapter functioned as a mechanism for identifying the position of opponents and supporters to the HS2 project. Opponents to previous projects were deemed to be short-sighted compared with supporters who were claimed to be advocating visionary versions of the future. As a reference to the past, these instances are also similar to the references to good and bad practice that were explored in the precedents that propose solutions. They also draw upon the national identity, calling upon past projects that symbolise the status of the country, the participants' acknowledgement of this status and recalling icons that are readily understood and provide a patriotic identity around which the supporters can rally and, by inference, an unpatriotic position maintained by the project's opponents.

[56] See Yelavich & Adams, 2014 and Fry, Dilnot & Stewart, 2015 for discussions on design as a temporal agent.

These examples, with their symbolic overtones, recall the precedent that Lawson (2005) and Yaneva (2009a) observed in architectural teams. Concepts that a design team have previously subscribed to, based on projects they have previously worked on together or are familiar with as part of the team identity, operate as a team building exercise that also allow them to move on more quickly without having to revisit details resolved by earlier work. In the conventional design context this kind of activity is clearly observed in the confines of a design studio where the membership of the design team is already reasonably well established. In the parliamentary context there is not a *de facto* design team that can be clearly identified so while, on the one hand this presents the use of precedents operating as a method of a defining or refining a notional set of team values there is still a need to consider who is on the team and what role they are performing. This question of how the team is constituted and who, if anybody, is the designer, is examined in Chapter 7.

6.4.6 Precedents and values

Building on this notion of a precedent that extends beyond the immediate task in hand and that identifies the positioning of groups engaged in the process, precedents are also seen to act as carriers of additional, perhaps implicit information. The selection of a particular precedent, either as a specific design form or from a specific period, represent an underlying value or set of values that express a designer's allegiance to, or distance from either a school or movement in design history (Venturi, 2005), an institutional stance (Schön, 1984) or an individual's design aesthetic (Lloyd & Snelders, 2003). In this form the precedent acts as a conduit for a wider set of contextual references. The precedent of the Tower of London was seen as a clear example of this although less rhetorical examples, such as the absurdity of opposition to railways in the nineteenth century, are less extreme but also readily identifiable as carrying values that participants seek to bring into the the debate.

6.4.7 Conclusion: the design function of precedents in parliamentary debate

Identifying detailed examples of the use of precedents in the debate has shown how participants draw perspectives from the past into their present debates about the future. Precedents have a direct correlation in the design literature and provide a mechanism through which we can observe, a number of design-like functions taking place in the debate.

The identification of the presence and function of precedents in the debate, as seen in this chapter, has been supported by two characteristics of the parliamentary context in which they occur. The official records of parliamentary debate provide a source from which the detailed discussions can be readily accessed as both written reports and video records. As such, the parliamentary record for this and any number of other debates on other subjects, represent a significant and extensive data source of naturally occurring data that require few experimental overheads in terms of resources required to create them. Secondly, although the records are constrained to the particular format and structure that parliamentary convention requires, these formal and structural aspects also serve to render the data more accessible. This is most clearly illustrated above where participants are, as expected in this politically charged forum, unrestrained in their use of rhetoric. This direct and explicit expression of what they are setting out to achieve and their persuasive

descriptions of how they intend to do so, give access to acknowledged elements of the design process and the motivations of the designer that may be less evident in transcripts of design meetings or other methods used in conventional studies of design. The structure of the debate also provides a formal mechanism that circumvents the need for the researcher to be concerned with the detailed mechanics of turn taking or with the identification of how the meetings might be broken into episodes or stages. These are all explicit elements of the transcript and the benefits of their presence, noted here in relation to the identification and analysis of precedents, is equally applicable to that on framing described in the previous chapter.

A number of precedents were seen to function in the parliamentary debate either as:

- an aspect or element from a previous project that might be useful in the present one. These operate as shortcuts that help move the project forward.
- a reference to previous projects that are recognised by the participants and which they may have been involved in. This recognition reinforces the identity of the team and of others who are not in the team.
- a mechanism that transfers values from designs and designers of the past to visions of the future.

These aspects of precedent are not definitive or exhaustive but they represent important aspects that connect the debate to the design process in terms of how previous designs are used, how design problems are approached, how design teams are constituted and how design futures are constructed.

Combined with the exploration of framing undertaken in Chapter 5, the results of this chapter show that it is plausible to approach the processes of Parliament from the perspective of design. The selective elements of design activities drawn upon in this work, the use of framing and precedents as methods employed in debate as ways of shifting the perspective and moving the process forward, have been demonstrable. They have in their observation also provided insight into both the process as it is underway and the principles that are behind it.

References in the analysis above to design concepts, such as the navigation and negotiation between the problem and solution, the process of prototyping, the designing of values and the projection of design futures, suggest a design analysis of Parliament can enhance not only the understanding of the debate but also, through their appearance in the debate itself, to the understanding of design.

A theme that has developed through the course of chapters 5 and 6 relates to how this detailed study of parliamentary debate can inform future studies of design. This study has focussed on a number of aspects of parliamentary process: the structure of the debate; the etiquette that is followed by participants during the course of the debate; and the rhetorical nature of the debate. All of these aspects are explicitly recorded in the parliamentary context and provide direct access to

elements of the process which may not always be easy to access in the study of similar meetings and interactions in design contexts.

A key element of this work so far is a recognition of the importance of the identity of the individuals who are involved in the process and the way that the process constrains the way that those individuals interact and engage with the debate. These individuals hold different values and have been seen, through attempts at reframing and through the use of precedents to introduce these values into the debate. The different individuals are nevertheless an identifiable group that can be viewed as a design team who are working together within the conventions and structure of the parliamentary process. The next chapter takes a step back from the detailed interactions of debate and design in order to consider a more contextual view of the proceedings and its participants. This recognises that the shifts in perspective that have been used to characterise the design process are dependant upon who is involved in the process and where it takes place.

7 Participants and contributions to parliamentary debate

> "On his own, Veraldi recruited people from all corners of the company to work on what was then a top secret project. 'If Lew Veraldi said you were on the team, you were on the team,' said Neil Ressler, a Ford vice-president who in those days was chief engineer of the climate control division. At the time, Ressler was lobbying for radiators made of aluminium rather than steel. Veraldi called him up and said he wanted one for Taurus, and by the way, he said, Ressler was on the team." (Walton, 1997:16)

In a conventional design context, the design team is usually clearly defined. Even where this involves disparate and multidisciplinary groups these can be broadly acknowledged to be a team that are working towards some kind of shared goal (as seen in Chapter 2.4). In many studies of the design process, the individual or team is recognised from the outset as a designer or group of designers who set out to design something. In contrast with these design settings, the participants in a parliamentary debate are not generally considered to be designers or a design team. Equally, the debating chamber is not a design studio and a parliamentary debate is not normally considered to be a design meeting. Exploring these differences, and identifying some of the attendant similarities is a key theme for this thesis as it develops.

This chapter builds on some of the insights of previous chapters. Chapter 5 recognised how the formal etiquette and conventions of parliamentary debate affect how different perspectives are introduced into the process: which of these persist and flow through it. Chapter 6 recognised the relevance of perspectives that were brought into the debate as a mechanism for addressing the current problem by identifying with the past and reinforcing the identity of those present.

In stepping back from these analyses of the detailed interactions made in the previous two chapters this chapter begins with a more contextual approach to those interactions, building on observations made earlier on the limitations of previous work, for example Schön's study of the design studio (Chapter 3.2.3), that failed to fully account for the context in which it was undertaken.

Whereas previous chapters have been concerned with the identification of design traits being employed within the debate, this chapter is more concerned with identifying who has been employing them and the context in which this takes place. It begins with an overview of the participants, how they come to be involved in the debate and considers the nature of the physical environment in which it takes place. A number of different kinds of participation are identified and extended to participants who are not present, but by being implicated in the proceedings their perspectives are introduced into the debate. Different roles of participants are seen as groups that

make up a wider network of actors which reflects connections observed between design theory and ANT in Chapter 2. The debate is seen as a stage in a process from which subsequent events can be traced and actors followed.

In the terms of design as a shift in perspective, this stage represents a point at which different perspectives might converge and where the direction of shifts may be determined.

7.1 Participants in the debating chamber

7.1.1 The team of participants

According to UK constitutional practice the Government, which has executive powers to run the country, is formed by the political party that wins the most seats for its members in a general election. Once elected, each member represents the whole population of the specific geographical location, known as their constituency, which voted for them. The country is divided into 650 constituencies each of which provides one member of Parliament to sit in the House of Commons, the elected chamber where executive power is held. Members of Parliament who are not part of the ruling Government question and scrutinise the Government and its policies[57]. This group of 650 elected Members of Parliament provide the participants in the debates studied in this thesis and who, through varying levels of contribution, make up the team responsible for a given project.

The established identity of subjects in studies of design, as designers or design students, was noted in Chapter 2.4. Their location in a studio and their practice as a designer is quite clearly why they are selected as subjects in those studies and this is treated as self evident by the researchers involved. Brian Lawson, for example, interviewed Richard MacCormac and others because they were “outstanding designers” and “much admired” (Lawson 1994:3). Many studies of design, particularly those taking place in a research environment, use design students as subjects and the study of the difference between student, novice and expert designers has supported a number of claims about how design is done. In all cases, and with good reason, these studies appear to take the design credentials of their subjects for granted and little is reported about the selection of subjects or their backgrounds, beyond perhaps, in Lawson’s case, a biography of an architect’s education and their professional successes.

In this study, where the subjects are Members of Parliament, it is possible if required, to clearly identify every participant, where they are from, who they represent, how long they have been an MP, what they have said at every meeting they have contributed to, and how they have voted at every decision they have taken. In general terms, and reflecting one of the general findings of this thesis, the availability of this amount of contextual information about every participant represents a

[57] Part of the extensive official documentation on how Parliament works can be found here: http://www.parliament.uk/about/how/role/parliament-Government/

significant development from the amount of data that is usually reported in studies of design meetings and other research where preservation of anonymity is a requirement. In this chapter the information about who MPs represent and how they vote will be called upon in the relevant sections.

Having identified the wider team from which participants at individual debates are drawn, this section identifies which of these members of a possible 650 are present at which points of the debate in question. This reviews how that smaller team physically interact with the environment of the debating chamber and how the chamber facilitates those interactions.

7.1.2 The debating chamber

Debates in the House of Commons take place in several separate locations. Those debates that require members to vote, where a piece of legislation needs to be approved before it can move onto the next stage of the process (as described in section 3.1 above), take place in the main debating chamber. This room has a layout that encourages adversarial debate: two sets of benches face each other with the Government seated on one side and its opponents on the other, mediated where necessary by the Speaker, an MP who is elected by the House to act as Chair. The chamber is shown schematically in Fig 7.1 and photographically in 7.2 below, the latter image looks down the chamber from the right hand doorway seen in Figure 7.1.

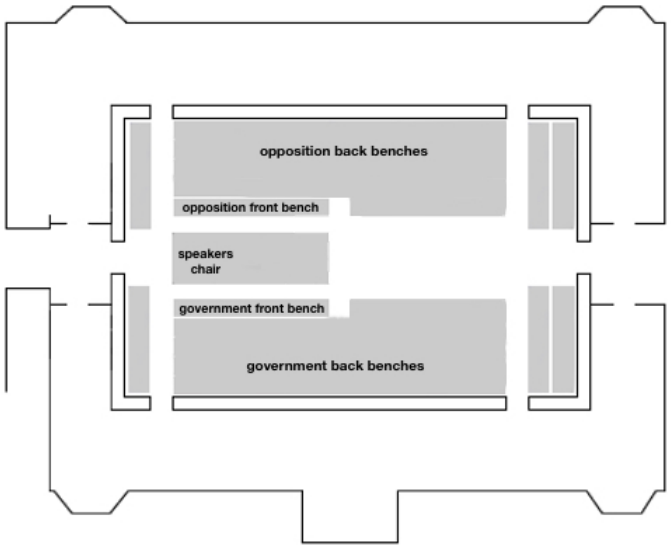


Figure 7.1: The House of Commons layout of benches, designed to encourage adversarial debates which are mediated by the Speaker.

This layout was, according to its proponents, intended to provide "an instrument of free and easy debate" and described by the same source as "vibrant", "entertaining" and "organic".[58] It is claimed

[58] This democratic vision of adversarial debate was reinforced in 1945 when the chamber was rebuilt after being destroyed in the bombing of London in 1941 by German air raids. A general and informal history of the House of Commons can be found here: http://www.parliament.uk/get-involved/outreach-and-training/resources-for-universities/teaching-resources/open-lecture-series/open-lectures/an-insiders-guide-to-the-house-of-commons/

that these attributes are encouraged through the limited number of seats that are provided: 437 seats for 650 members. This chamber is where Members of Parliament gather to debate the principles of proposed laws and to vote on whether these proposals should be enacted. This chamber is the place where key decisions are made about how the country is to be run and where the people responsible for making those decisions are publicly held to account. If we were to consider Parliament to be a design practice then the debating chamber is where the team come together to make proposals, to test their proposals out against other members and to decide whether or not they should proceed with them into the next stage of the parliamentary process.

7.1.3 Inside the chamber: the team assembles

No formal records are kept of which, or how many MPs attend which debates. The Second Reading of the High Speed Rail (Preparation) Bill took place on 26 June 2013, a Wednesday which is by convention also the day that the Prime Minister, leader of the ruling party, is questioned by the leader of the opposition party.

This session, referred to as Prime Minister Questions (PMQ), is known as a lively debate and is characteristic of the "vibrant" proceedings that the chamber's layout is intended to provoke. Estimates of attendance at a given debate can be made from the wide camera angles used at various times during the video recording from which the stills in Figure 7.2 are taken.[59] The large number of MPs who attended PMQ on 26 June 2013 can be seen in the relevant still from the video archive, the left hand image in Figure 7.2 below, which records that session about to begin at 11:56am. However, most of the MPs who were in the chamber for PMQ can be seen to have left by the time that the High Speed Rail (Preparation) Bill debate began at 14:27 on the same day, shown below right.

Figure 7.2: Attendance at debates in the House of Commons can vary widely, as is shown in the two images above where Prime Minster's Question Time attract significantly more interest than the subsequent debate on HS2. The attendance or absence of individual MPs is not accounted for but all sessions are recorded and available to view on Parliament's website.

[59] There is a set of rules and conventions that govern television coverage of the UK parliamentary proceedings. Wide angles are used at specific times that punctuate events taking place in the chamber: "for example, while the director is seeking a closer shot of a Member who has just been called, at times when no single Member has the floor, and to establish the geography of the House for the benefit of viewers." Administration Committee - Second Report Television: Annex One: Rules of Coverage, Annex One, rule 2 b iii

A The Secretary of State speaking 14:27:13 Transcript line 24	**B** Shadow Secretary of State speaking. 15:40:11 Line 929
C, D, E A series of backbenchers make their speeches to a fairly empty chamber. 16:47:33, 17:50:00, 18:38:21. Lines 1731, 2513, 3140	
F Participants collect in the chamber to vote as the debate draws to a close. 18:58:13	**G** The chamber is almost empty again when participants have left to vote. 19:00:59
H Participants return to the chamber to hear the result of the vote. 19:10:35	**I** The chamber is almost empty as the next debate proceeds 19:51:19

Figure 7.3: Changes in attendance of participants during the course of the High Speed Rail (Preparation) Bill Second Reading.

The participants who remain are a self-selected subset of Parliament's 650 elected members. A sample of images taken from the remaining duration of this debate (below in Figure 7.3) shows the number of MPs in the chamber at approximate hourly intervals, starting with at 14:27:13 and ending after the vote has been taken and the debate continues at 19:51:19.

An estimated headcount, based on the number of MPs visible in these images, shows that the first two hours of the debate have the highest number of participants in the chamber (between 50 and 60). This figure drops to around half of that number for the next three hours before the chamber begins to fill again as the debate draws to a close and a vote is taken. The final image shows an almost empty chamber for the subsequent debate.

Those present during the course of the debate are not necessarily always the same participants, and MPs can be seen entering and leaving as the debate proceeds (members can be seen doing this in images A and D of Figure 7.3).

This broad visual overview of the debate provides a context in which to consider the physical environment of the chamber and how it is used. The parliamentary chamber is a place where participants are free to choose whether or not to attend a debate and are also free to arrive and depart as it proceeds. If the participants in this particular debate are to be thought of as a team it is one with a flexible membership policy, attended by various people at various times. There is then, in contrast to the formal structure of the debate noted in Chapter 5.2, an informality in the way that the chamber is used: participants are able to enter, sit, stand and leave at any time during the proceedings.

Where an MP sits in the chamber is determined by the political party they belong to. In addition to the potential ideological conflicts that might arise across the chamber between opposing political parties there is also potential for individual conflicts of interest when a participant is called upon by their party to support measures that would be detrimental to their constituents. The physical environment of the debating chamber is where, through established conventions and formal proceedings, these potentially conflicting interests are exercised, firstly through the process of the debate and then through the act of voting.

7.1.4 Beyond the chamber: the voting lobbies and the video cameras

The beginning and the end of the debate, shown in the video stills above, are when this parliamentary team has the most members. The largest increase in attendance occurs when a vote is taken. The vote, referred to in parliamentary terms as a division, is the key decision point that determines whether a Bill proceeds and where participants show their support or opposition to it.

Voting in the House of Commons is a physical process facilitated by the location of the voting lobbies on either side of the chamber. When a vote is taken each MP leaves the chamber by one of two doors that will lead them through either the "Aye" or the "No" lobby, which indicates their support or opposition to what has been debated. Their decision is logged as they pass through and

the total number of MPs in each lobby is collected by “tellers” who then report their tally to the house. These lobbies, and the flow of MPs around them, is shown in Figure 7.4 below.

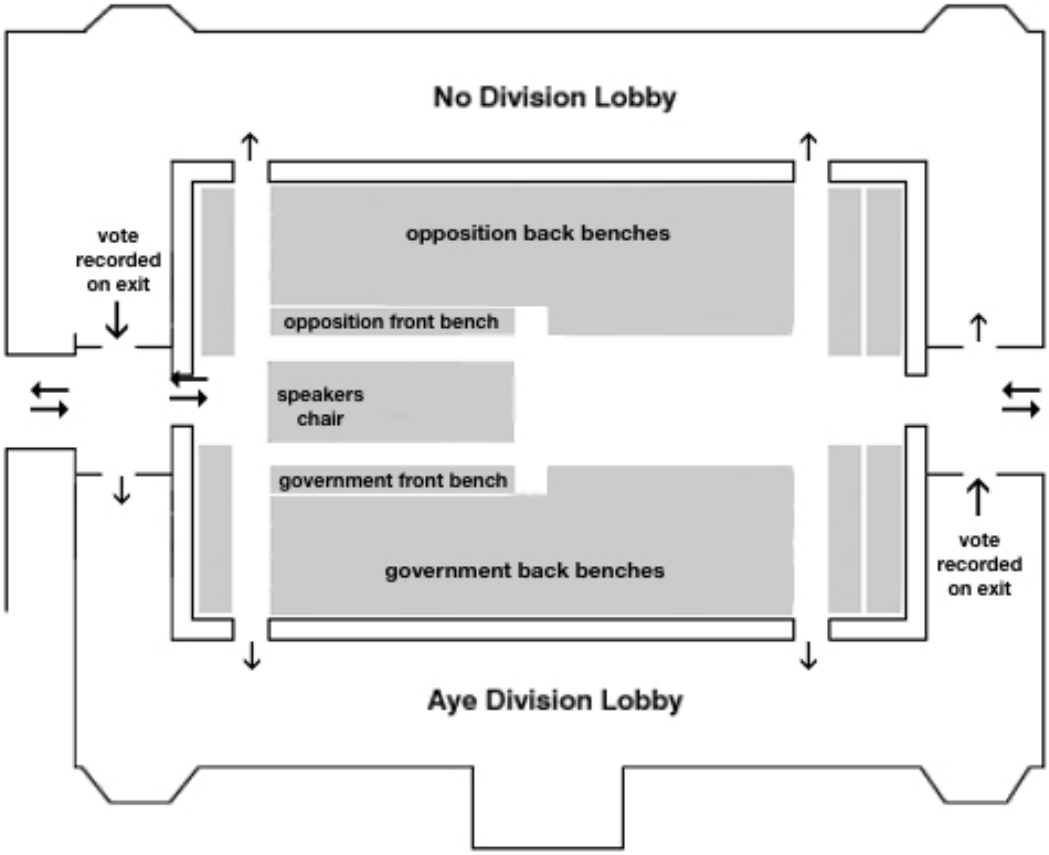


Figure 7.4: The House of Commons debating chamber showing the movement of MPs through the voting lobbies when the house divides for a vote to be taken.

The vote, known as a division because of this physical split between the two sides of the chamber, is accompanied by the division bell, a signal that is sounded throughout the parliamentary building to notify the MPs that a vote is taking place. The sounding of this bell represents a progressive dissemination of the democratic function that begins in the agonistic layout of the debating chamber which is surrounded by the voting lobbies where the democratic act of voting is physically enacted. The division bell signals this function through the corridors, meeting rooms and offices of the whole building. The number and names of the MPs who variously arrive and depart during the course of the debate are not, as noted above, formally recorded but their voting behaviour, for every decision to which they contribute, is recorded and reported in that day’s parliamentary record.

Beyond this physical engagement with the chamber is another layer of democratic engagement which is facilitated by the published transcripts and video recordings that are produced of the proceedings. These form a part of the UK Parliament’s approach to transparent government and provide a means for MPs to be held to account by their peers, their constituents and the wider

public. Arguably the presence of these recordings, and in particular the cameras that are broadcast live, will affect the behaviour of the MPs who appear in front of them. In this sense the cameras, and especially the director responsible for the online editing of which camera at which angle is used at any given time, can be seen as an extension of this putative parliamentary design team.

7.1.5 Conclusion: the different formalities of participation

The nature of the team, and the extensive records that are kept by Parliament of who this team is and what contributions they make to debates, presents a significant contrast to the small amount of data that might usually be available to the design researcher about their subjects. If Parliament is viewed as a design process and parliamentary debates regarded as design meetings then there is, across the full range of parliamentary activities, a large amount of data available with which to do this.

The informality of the way that participants attend the debate is usefully documented in the video archive. When not directly contributing to the debate or when there is no clear interest in how the debate is progressing, the majority of MPs are not present in the room and those that are present do not necessarily stay there for the whole debate. The make up of a design team can also fluctuate as different tasks are performed and specialisms engaged, but in this parliamentary debate context, fluctuation appears to be a more arbitrary process; participants select which of the different activities and different types of contribution they will make, both informally through their entrance and exit to the chamber and formally, through their response to the division bell and the voting activity it provokes. Each of these different actions and responses, different levels of participation and kinds of contributions, bring different perspectives into the debate. During the course of the debate these different perspectives are identifiable through its formal and informal structures.

The next section takes a more detailed view of how the debate is structured and the different kinds of participation and contributions that can be observed as the debate proceeds.

7.2 Different kinds of participation

The importance of the structural elements of the debate were considered in Chapter 5, with particular reference to the way that the structure of speeches and interventions provided a mechanism for the Minster to control the flow and scope of the debate. The different structural elements of the debate are further analysed in this section which moves from the detail of the speeches and interventions to focus on how the debate is structured by these elements. This leads to a review of the different kinds of contribution that this structure supports and the different kinds of participants that make them.

7.2.1 The structure of the debate

The Second Reading of the High Speed Rail (Preparation) Bill has a formal structure that follows established conventions of parliamentary debate[60]. The debate begins with the presentation of the case arguing for the Bill and what it proposes. This speech is given by the Minister responsible for the Bill and the Government Department where it originates which in this case is the Secretary of State for Transport (SST). The Government presentation is followed by the Shadow Secretary of State for Transport who presents the Opposition party's response to the Bill.

These two speeches represent the views of the two majority political parties and are delivered from the front benches of the chamber. These are followed by speeches from backbench MPs after which, summing up speeches by a Minister from each of the two majority parties are made which clarify positions and respond to any questions raised during the debate. Details of these stages as they are recorded in Hansard for the Second Reading of the High Speed Rail (Preparation) Bill are contained in Table 7.1 below.

stage	actor	interventions	interveners	length	duration	line ref
Govt. presents Bill	Minister	34	27	547 lines	47min	12-559
Opposition responds	Shadow Minister	16	14	467 lines	35min	561-1028
Backbench speeches	31 MPs	39	21	2106 lines	171min	1039-3145
Opposition sums up	Shadow minster	0	0	118 lines	9min	3146-3264
Govt. sums up	Minister	0	0	113 lines	11min	3265-3378
Votes recorded	372 MPs					3384-4137

Table 7.1: The full length of the Second Reading broken down into stages of the different types and length of speeches made from front and backbenchers and the number of interventions made.

There are 35 participants who made a speech contribution to the debate. The 89 interventions were made by 43 different individual participants and of these 43 interveners, 20 of them also delivered their own speech. Taking account of these duplications, there were a total of 58 individual participants who contributed to the debate by either speaking or intervening on others' speeches.

As shown above (section 7.1.2) the number of participants in the chamber increased as the debate draws to a close and leads to a separate phase of voting which was undertaken in two stages. A first vote was taken on an amendment which proposed to stop the bill from proceeding (line 1039: "That this House declines to give a Second Reading to a Bill") and a second vote was then taken "that the Bill now be read a second time".

[60] These structures and conventions are presented here as they are observed in the transcript of the debates in which they occur. A detailed account of them within the context of overall parliamentary procedure can found in *Erskine May: Parliamentary Practice*, a guide originally written in 1844 and now in its 24th edition of 1100 pages. Rogers and Walters (2006) provide a more approachable summary.

The debate follows four discrete stages: front bench presentations on the Bill, backbench responses to the bill, front bench summing up of the debate, votes on whether the Bill should proceed. These stages comprise three distinct activities: speeches, interventions and voting. The following sections considers each of these activities in more detail to review how participants engage and interact through them.

7.2.2 Participation: delivering speeches

The debate can be represented as a graph (Figure 7.5) which shows the speeches in the order they are made and their length measured in the number of lines taken up by each in the written transcript. Lengths of contributions are measured here in lines rather than the amount of time taken to deliver them as this better reflects the amount of contribution made rather than the speed at which it is delivered. Each of the lengths shown include any interventions that were taken within a given turn.

Because the HS2 project is supported by both the Government and the main Opposition party, the presentations made by all four of the Ministerial speakers show that support for the project dominates the beginning and end of the debate. The opening presentations are followed by the 31 speeches made by other participants. As the time allocated for the debate begins to run out, the time allocated for each speech is made increasingly shorter[61] until the two slightly longer summing up speeches conclude the debate. Each of the columns on the graph represents a formal turn that is taken during the course of the debate. Turns are allocated by the Speaker.

[61] This time limit is imposed as necessary by the Speaker in their role as Chair. Speakers are given more time if they take interventions.

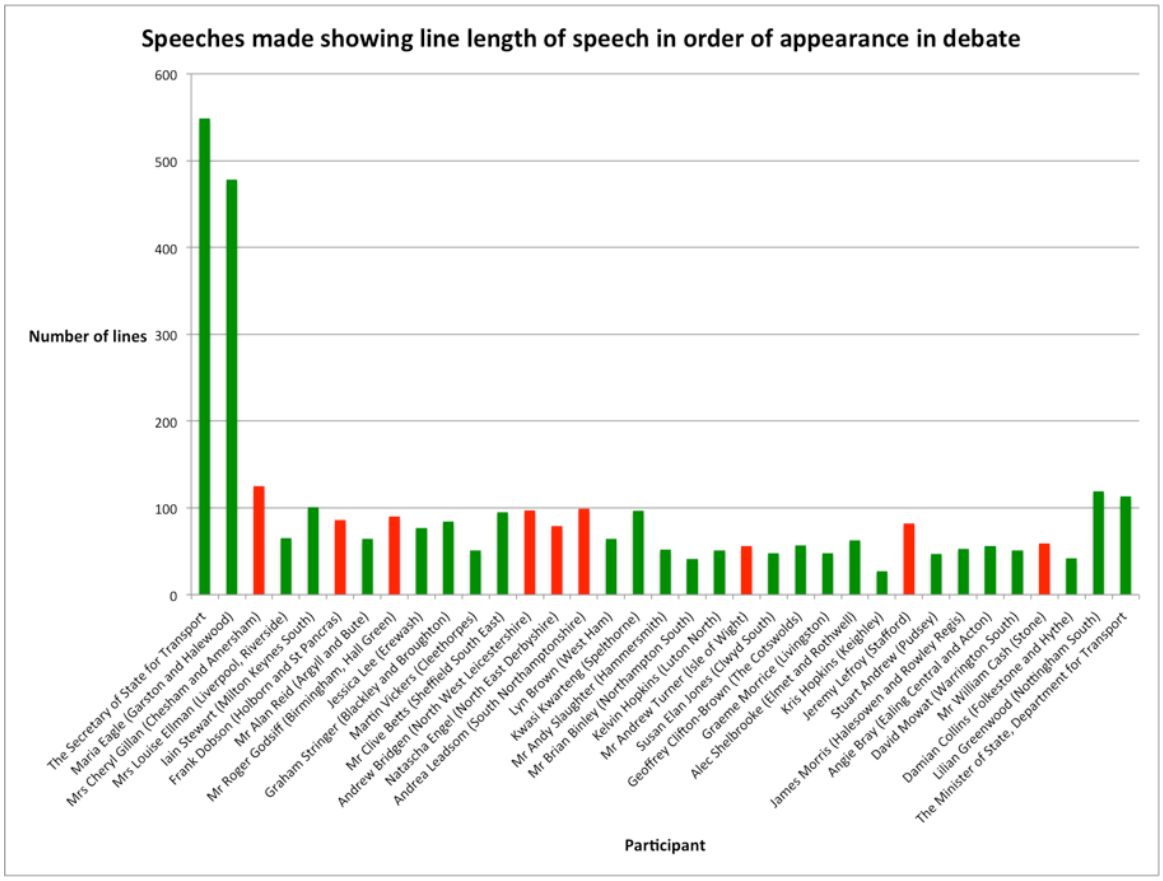


Figure 7.5: Line length of speeches made during the High Speed Rail (Preparation) Bill Second Reading, shown in order of presentation (from left to right) and colour coded to show supporters of the Bill in green and opponents in red.

The distinction shown between those participants who would go on to vote in favour of the Bill and those who would vote against it, shown as green (supporters) or red (opponents) in the graph, demonstrates the dominance of the Bill's supporters through the debate. The difference in the number of speeches made by supporters, 26 compared with the 9 against, and the line length taken in total by each position, 2593 in support and 773 opposing, reflects the majority view of the House that the project should go ahead. The regularity of the red opponents' speeches also shows the persistent presence of opponents through the course of the debate and how these are distributed through the course of the debate by the order in which their turn is allocated by The Speaker.

7.2.3 Participation: making interventions

The persistence of the opposition to the Bill is also visible when seen through the number and length of interventions made by participants, shown in Figure 7.6 below. In this representation, interventions are presented in decreasing order of length accumulated by each participant through the course of the debate. The graph shows opponents in red and supporters in green. There are also, shown in blue, those participants who abstained from voting in the final stage of the debate. Of the 43 interveners, 14 voted against the Bill, 21 supported and 8 abstained.

If, on account of the apparent neutrality of the abstaining participants those contributions are disregarded, the balance of the debate in terms of the amount of contribution made through interventions compared with speeches, shifts towards the opponents who take up 170 lines compared to the supporters' 191. Interventions still reflect an overall position of support for the bill, but with a much smaller majority.

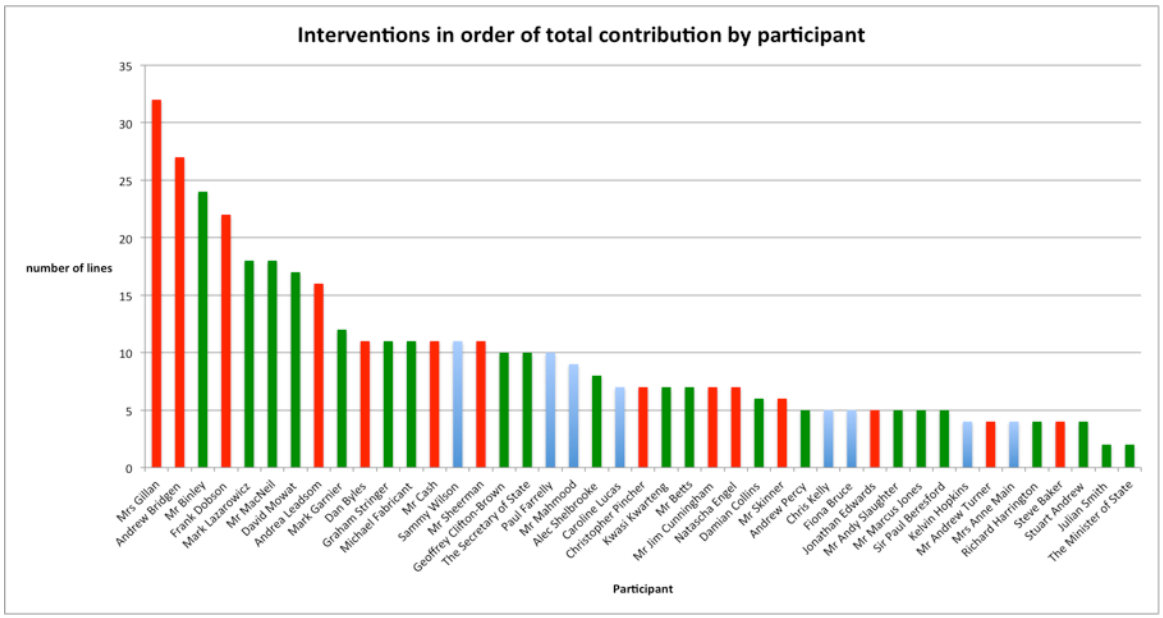


Figure 7.6: Line length of interventions made by participants shown in order of decreasing length and colour coded to show supporters, opponents and abstentions.

Three of the four longest interventions are made by opponents of the Bill. and the percentage of the total interventions that were made by opponents, at 32%, is three times higher than the proportion of votes cast against the Bill. Although the act of intervening is not exclusively nor predominately an act of opposition, it appears to be, through the more informal turn taking by which interventions are made, an effective means for opponents to the Bill to extend their contribution to the debate and maintain the visibility of their position throughout its course. This shows that the supporters of the Bill who, as shown in the Minister's speech in Chapter 5, are able to control the flow of interventions and the scope of the debate, do not do so by refusing to take interventions from opponents but, as also shown in Chapter 5, use those interventions in various ways to maintain that control.

7.2.4 Participation: voting

The flow of entries and exits into the chamber described in section 7.1 reflects the discretionary nature of attendance at debates but also, as the debate moved towards a vote and the chamber filled up, it demonstrates the nature of the voting procedure.

MPs are elected to represent the voters in their constituencies and how an MP votes on a particular issue is a matter of public concern: votes are both recorded and published. This is an important characteristic of a parliamentary democracy. However, when a political party wants a particular Bill

to succeed they will instruct enough of their MPs to attend and vote as are needed to ensure that a majority vote is achieved. This process is managed by "whips" who are MPs appointed to organise their party's vote. The directions that they give to their MPs, known as the "whip", are not generally made public and represent the views of the political party that the MP belongs to rather than the views of their constituents.

The HS2 Bill was one such occasion where the vote was subject to this whipping process. Although the party whips' instructions are not made public there is, particularly through MPs use of social and online media, the possibility of tracing these instructions as they are reported by individual MPs to their constituents[62]. The whips instructions are also reflected in the images shown above of the final stages of the debate where MPs who have not made a spoken contribution, or listened to the contributions of others, gather at the end of the debate to register their vote (shown in image F of Figure 7.3). The record of the votes, as published and shown in Figure 7.7 below, demonstrates the effectiveness of the whip as it was applied in this debate.

3379 Question put, That the amendment be made.
3380 The House divided:
3381 Ayes 37, Noes 325.
3382 Division No. 35]
...
3761 Question put forthwith (Standing Order No. 62(2)), That the Bill be now read a
3762 Second time.
3763 26 Jun 2013 : Column 412
3764 The House divided:
3765 Ayes 330, Noes 27.
3766 Division No. 36]

Figure 7.7: The Hansard voting record of the Second Reading showing the number of votes cast for and against the Second Reading of the Bill.

The number of votes cast in these two divisions are a clear demonstration of the accuracy with which voting behaviour can be orchestrated. The 325 votes cast against the initial amendment to reject the Bill (line 3381), i.e. votes in support of the project, were cast by exactly the number MPs needed to ensure that a majority vote would prevail over the maximum possible number of 649 votes that could be cast. The second vote, on the reading of the Bill itself, shows a marginal increase in that majority.

[62] An example of this can be found on a Conservative MPs website who explains on her blog why she defied the whip at Second Reading of the High Speed Rail (Preparation) Bill:

http://www.andrealeadsom.com/working-for-you/andrea's-blog/hs2-latest-news/635

7.2.5 Participation: representing constituents

Voting behaviour is important to participants for a number of reasons that relate to party politics, democratic responsibilities and their personal, and changeable, opinions on the issue in hand. The vote is the formal demonstration of allegiance to their party's commitment to the project, or defiance on behalf of constituents who may be adversely affected by it. It shows that an MP was present at the debate, even if the vote was their only contribution to it, and demonstrates their active participation in the representative role that they have been elected to perform by their constituents. However, individual MPs rarely vote against the mandate of their party, as instructed by the whip, and when they do it rarely impacts on the result of the vote[63].

The role of representation is directly connected to the geographical location of the MPs constituency. This connection is shown in Figure 7.8 below by mapping the votes cast for and against the Bill in terms of the geographical locations of the member's constituency. This map shows votes for the Bill in green and against in red. Constituents with MPs who abstained from voting are shown in grey. The yellow line represents the proposed HS2 route.

Although the 330 supporters for the Bill are drawn from around the country, the geography of the 27 votes cast against the Bill is more focussed. Fifteen of these were cast by MPs representing constituencies along or adjacent to the proposed route of the HS2 line. These are not drawn together through party political alignment, six are Labour and nine are Conservative, but through local interest, clearly shown by their proximity to the yellow line of the route.

[63] See The Public Whip and House of Commons Library Research Paper RP03-32 for more detailed discussion on this: http://www.publicwhip.org.uk/faq.php#clarify

http://researchbriefings.parliament.uk/ResearchBriefing/Summary/RP03-32

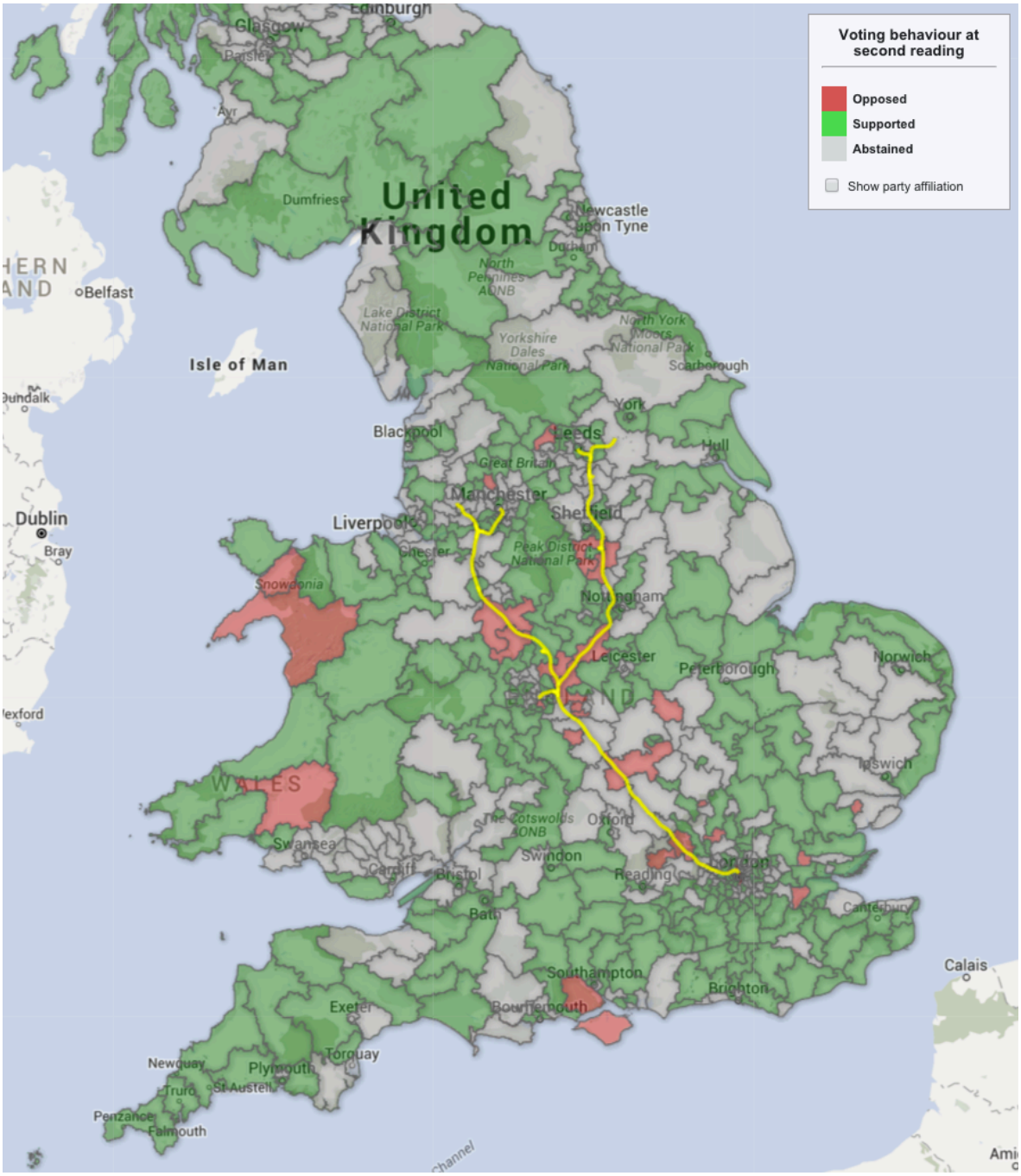


Figure 7.8: Showing supporters of the High Speed Rail (Preparation) Bill in green and opponents in red. The yellow line represents the proposed HS2 route. An interactive version of this map can be found online at: http://darrenumney.com/HS2Party/vote.html

There were 292 MPs who did not vote. It is plausible to assume that if they were strongly opposed to the Bill they would have wanted to publicly register their position and cast a vote in order to do so. But equally, where they represent constituencies directly affected by the proposed route an abstention offers a compromise that does not show support for the Bill (which would be against the views of their constituents) but also does not oppose it (which would be against the views of their party). The voting record confirms the broad backing for the Bill from the main parties and the map confirms the proximity of the proposed route to its main opponents. All three of the four most

persistent opposing interveners identified above represent parliamentary constituencies that are bisected by the line.

Mapping the votes in this way provides a clear visual representation of the geography of the vote and is, in the same way as earlier analyses, only possible because of the amount of freely accessible data that relates to the participants and the contributions they make to the parliamentary process. The explicit nature of the voting process, and the binary positions that it exposes and requires to be exposed in order to function, allows the project to be expressed in binary terms of support and opposition.

7.2.5 Support, opposition and the exploration of alternatives

If this were a design meeting, viewed from the binary perspective of support and opposition to the Bill that is clearly shown above, the participants appear to be designing two things. On the one hand the Government and its supporters are designing a new infrastructure project, "this railway". On the other hand, their opponents are designing a "not this railway" or a more local version of "not this railway here". Seen in this way the debate resembles a kind of design competition where two teams, or factions within a team, are debating which of their favoured solutions to the problem should be implemented. The proposed solution of a high speed railway is dominant through the debate and supported by the majority of participants but it is not the only option in the debate. The alternative of “not this railway” can be broken down to a number of different forms.

The detailed textual analyses presented earlier showed a number of these alternatives, including a mechanism for increasing devolutionary funding to Wales (section 5.2.2) or the investment of the money that would be spent on high speed rail in a wider series of improvements across the whole rail network (section 6.2.2). The most explicit "not this railway" counter proposal is found in the amendment that unsuccessfully attempted to reject the Bill outright through the amendment described in section 7.2.1. These alternatives are proposed by opponents and rejected by supporters. It is unlikely that the opponents have any expectation that their divergent frames would have any of the traction that was shown to be missing in Chapter 5, but their persistence is observable throughout the debate as they continue to demonstrate their alignment with the "not this railway" proposal.

The exploration of alternatives, even those being proposed by minority interests, is supported by the structure of the debate and the activities that it offers to participants. Participants, and in particular opponents who are in a minority, also use the structure of the debate, its speeches and interventions and combinations of the two, to present and record their objections to the project either on ideological grounds or on behalf of the interests of their constituents. They do this consistently. Those who vote against the project also speak against the project and those who speak against the project do so as often as they can. They take their turn to speak, as called by The Speaker, but are also persistent in their attempts to intervene. Their speeches and interventions seek to question the principles of the Bill and to explore alternative proposals that could replace it. The structure and convention of the debate supports the presentation and

exploration of these alternatives but the capability of those alternatives to persist is compromised by the over-riding control of that structure that is exercised by the Minister on behalf of the Government and its ruling majority.

7.2.6 Categories of activities observed in the debating chamber

Collectively, the activities described above comprises a scheme of participation that begins with the core Ministerial team who present and justify the project to other participants through their presentation and summing up speeches. A second category of speeches from a wider group of participants are presented by both supporters and opponents. A third category, of interventions, includes a significant number made by a group of persistent opponents. A fourth category of more dedicated participation includes those who both make speeches and interventions. A fifth category, of attendance at the debate, is thought to affect the "vibrancy" of the proceedings but this is difficult to trace through the limited record available and is primarily in any case a passive engagement with the proceedings. A sixth category, of voting, is undertaken by the largest number of participants and is arguably the decisive moment to which the debate builds.

All of these activities take place within a wider sphere that is circumscribed by the physical layout of the chamber, illustrated in Section 7.1.2, and also supported by the wider machinery of the parliamentary process identified above. This includes the political parties to which most MPs belong, the party whips who orchestrate the vote, and the general election that gives the MP the mandate to participate in the first place.

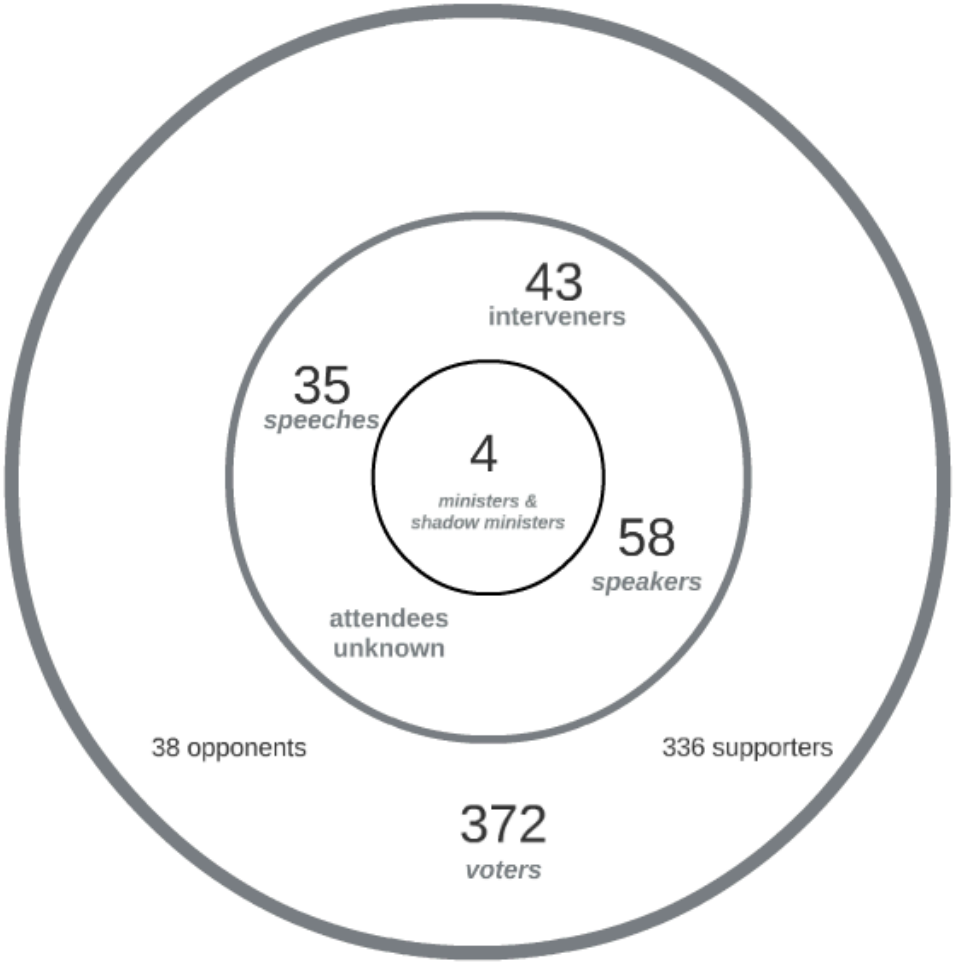


Figure 7.9: The participants at the centre of the High Speed Rail (Preparation) Bill, represented in terms of the category of participation they engage in. The core team of the Bill's proponents are at the centre, with the other participants and then those who responded to the division bell to vote, shown in concentric levels of engagement. A more detailed, scalable version of this representation and others in this thesis can be found at http://prezi.com/4k3puknunmf

These various categories of participation are shown schematically in Figure 7.9 above where the core Government team is shown at the centre of a series of wider and less engaged categories of participation. This diagram will be developed in subsequent sections as additional levels of participation are added

Beyond the perimeter of these direct levels of participation are the constituents whom the MPs represent. This wider public is not physically involved in the debate but is implicitly a part of the democratic process of representation. The representation of this wider voting public is most clearly seen in the voting behaviour of the opponents to the HS2 Bill who rebelled against their party's instructions to make the views of their constituents, and that participant's support for those views, more visible within the debate. Although the members of the public who are represented in this way are not present and do not engage directly in the activity, their proxy participation through their respective MPs make them an integral and implicit part of the process. Constituents in the debate are a form of "implicated actors" who are brought into the debate and perform a particular role assigned to them by the participant. When brought into the debate in this way these implicated

actors may also bring with them a point of view and a set of values. These roles are explored in more detail in section 7.3 below.

7.2.7 Conclusion: implicated actors in the debate

The recognition of this indirect form of participation marks a recognition of the different contributions to the debate, as described in this section, in terms of a wider network of actors that can be seen to operate in a wider sphere of activities. This wider perspective suggests a network, an extended team that is constituted in and through the debate. In the example worked through in this section the participants within the debate were observed as a temporary and fluid group of actors whose membership changed through the course of the debate as some arrived and others left the chamber, reaching its highest level of membership as the votes are cast at the end of the session.

This parliamentary debate team is notional, drawn up of members from both sides of the house who might in other debates form different alliances with different member in opposing positions. They are collected together temporarily, perhaps just for the length of this debate or just for the voting period at the end of the debate, as either supporters or opponents of HS2. They might otherwise be seen in a broader context as coming together for the length of the Parliament, until the next election where their performance might be held to account by those who are asked to re-elect them. In either case, and whether the team is formed around ideological or individual issues, the temporary and fluid nature of this parliamentary team reflects Lawson's characterisation of the design team where an architectural practice grows through the development of common practices and a shared repertoire but strengthened by frequent interventions that changed the team's membership. (Lawson, 2005)

The notion of the implicated actor helps to explore the nature of the parliamentary team and how it is constituted. Seen from a design perspective this extends the register of the implicated actors recognised by Goldschmidt (2009) in the conventional design context of the architect/client meeting. In that meeting, the off-stage actors were end-users and other direct stakeholders who would be expected to use the building that was being designed for them. The parliamentary design meeting, where a railway and its alternatives are debated, presents a more direct and diverse group of implicated actors that includes the wider population of the country who are all represented by the participants in one way or another.

These implicated actors are implicitly engaged through the parliamentary process where the participants physically present and involved in the debate are acting, speaking and voting on behalf of their constituents who voted them into office. This direct relationship between the participants and whom they represent is clearly accessible in the data generated through parliamentary debates but can in a design context be more difficult to identify and isolate. Paton & Dorst (2011), working on interviews with fifteen designers, concluded that more work was needed to trace this relationship between the designer and the client. The nature of the parliamentary record, with

specific reference to the direct relationship that it presents between the participant/designer and the constituent/client, would support this work by providing a significantly larger data source to draw upon.

This section has identified a category of implicated actor through the implicit democratic function of the constituent in the debate. Participants also explicitly refer to their constituents during the course of the debate and the next section returns to a more detailed analysis of the text to consider the context in which these references are made and the roles that these implicated actors perform in the debate.

7.3 Parliamentary constituents in the debate

The identification of different levels of engagement in the debate shown in the previous section began with a dominant group of actors who, operating as a core team of representatives of the Ministerial Government, were responsible for delivering the Bill through Parliament. Building out from this central group, other participants were seen to be engaged in various activities of speaking and intervening and voting. Beyond these activities occurring within the debate chamber, a further group of implicated actors, the constituents who MPs are responsible for representing and are directly accountable to, were identified as having some influence over the proceedings. The relevance of these constituents is implied through the democratic process that delegates responsibility from the voting public to the elected MP.

This section returns to the detailed transcript of the debate to identify specific examples of where this group of implicated actors are referred to and how these explicit references might clarify the relationship between the MP and their constituents and the role that these constituents perform within the debate. This provides a more coherent and concrete account of the implicated and their role within the notional design team proposed in section 7.1.

When an MP refers to "residents along the proposed line" (HoC 2013, c363), this can refer to a more general public who will be affected by the line rather than those resident in the MPs constituency. The use of the word "constituent" more specifically connotes this representational relationship and it is the use of this word that is used here to explore the different roles that constituents are called upon to perform when they are brought into the debate.

7.3.1 Constituents enrolled as supporters

Constituents are called upon by some participants to demonstrate the benefits that the new railway line will bring and the support that the line has from across the country. Scotland is not part of the initial plan for the high speed railway network (see route plan in Figure 4.2 above and discussion on Barnett consequentials in Chapter 5) but in the following detail, using the same excerpt examined in section 5.2.3, the participant can be seen to directly refer to constituents when projecting the plan beyond the proposed early stages.

98 **Mark Lazarowicz:** I would like to believe that it will not be next century and that
99 my constituents will be able to benefit from the line as well. Clearly, they will
100 benefit from faster services in so far as they can use the line further south, but
101 we need to see work being done now and commitments made now to ensure that
102 the further additions from HS2 do not start happening only in 2033.

Excerpt 7.1: A Scottish MP calls upon his constituents as beneficiaries of HS2 as he calls for the line to be extended northwards more quickly than planned (HoC 2013:c337).

In this excerpt, the use of the word “my” clearly states the relationship between the participant and his constituents. They are called upon to back up his call for the line to be brought to Scotland earlier. Faster connecting services are anticipated when the initial phase is completed but the participant calls for a direct high speed connection to be built sooner than currently planned for the Scottish constituents who will become its passengers. This specific group of constituents are introduced into the debate as concrete examples of people who will benefit from the project and who as fare paying passengers, will also benefit the project.

Another participant explains how his constituents will benefit from the increased capacity of the new line in Excerpt 7.2 below. This example identifies constituents around the phase one terminus in the West Midlands who will not only benefit from the new line but are also likely to suffer if it does not proceed.

2909 Most of the focus has been on reducing journey times. Although this will be an
2910 important consideration for many businesses, for most of my constituents the key
2911 benefit of HS2 will be the increased capacity that the new line will offer. The rail
2912 network around the west midlands is quickly approaching bursting point, which
2913 would be catastrophic for businesses and for people just needing to travel across
2914 the country. The number of people travelling by rail to and from cities in the west
2915 midlands is increasing even more quickly than the national trend.

Excerpt 7.2: A West Midlands MP calls upon his constituents as beleaguered passengers in a congested network who will be relieved by the additional capacity that HS2 is expected to bring to their regional transport network (HoC 2013:c399).

The potential catastrophe (E7.2: 2913) from which they would suffer if the line were not to be built is used to address wider questions about how the case for the new railway line is being made. The focus of the debate, shifted onto these constituents, should according to this participant, be based on the capacity problem that the railway solves rather than the principle of higher speeds and faster journey times. In making this point the beneficiaries of the line are portrayed as individual constituents, “people just needing to travel”, as well as business passengers.

A group of constituents with conflicting views are introduced in Excerpt 7.3 below. In this exchange the same constituents are introduced by two different participants and reported to have conflicting opinions.

1549 on trains nowadays. They use computers and mobile phones. Not one single,
1550 solitary business man in Birmingham has said to me, "Unless the project goes
1551 ahead and I can travel from Birmingham to London 30 minutes quicker, my
1552 business is going to suffer and be in danger."
1553 **Mark Garnier (Wyre Forest) (Con):** I will come straight back to the hon.
1554 Gentleman on that point. I have met a lot of business people in Birmingham who
1555 are arguing strongly for HS2. A lot of the hon. Gentleman's constituents are
1556 definitely asking for it.

Excerpt 7.3: Two west midlands MPs disagree over whether their constituents consider the new railway line to be necessary (HoC 2013:c369).

According to the first, there are no businessmen in Birmingham who have said that they need a high speed line. On the other hand, the business constituents of Birmingham are positive supporters of the railway and are "definitely asking for it" (E7.3:1556). This exchange calls upon constituents as a way of giving a voice to both the opposition and the support for the line. The second reference brings "the hon. Gentleman's constituents" directly into the debate to argue against their elected representative. The conflicting opinions of constituents referred to in this example further demonstrates the controversial and intractable views maintained by supporters and opponents of the railway line. [64]

In all of these examples, constituents are enrolled into the debate. These individual passengers and businesses are presented as the eventual users of the line and are brought into the debate to argue for the line to be built in the face of opposition, to reinforce the various benefits that the line will, or will not, deliver and to encourage the Government to extend its plans further and earlier than planned.

7.3.2 Different scales of constituents

Constituents are called upon to argue against the Bill in other ways and are represented at various scales. The largest collection of these is seen in Excerpt 7.4 below which extends beyond the boundaries of an individual constituency to encompass every constituency and thereby include the population of the whole country. This is a broad and inclusive group of taxpayers who will be called upon to pay for the railway line.

1737 **Andrew Bridgen:** My hon. Friend says that his constituency will be in no way
1738 affected. Unfortunately, it will be, because his constituents - this is true of every
1739 constituency - will initially receive a bill for £75 million, rising to a possible £100
1740 million.

Excerpt 7.4: The widest constituency, that of the whole country, is called upon to argue that the project is expensive, likely to become more expensive still, and having to be paid for by everyone (HoC 2013:c373).

[64] Further examples of constituents called upon as beneficiaries and supporters of the Bill are found at lines 99; 1555; 1577; 1581; 1634; 2197; 2369; 2375; 2605; 2881; 2910; 3037 in the transcript.

They are called upon here to show that the impact of the project is not limited to specific individuals in specific locations but will, financially, affect everybody in the country. This notion of the wider population of taxpaying constituents is a large and abstract group of actors. But, in terms of the financial cost of the project and where the money comes from to pay for it, the participant draws a direct connection between constituent, taxpayer and bill payer that defines the role of the constituent as a (tax)paying client of the Government as well as the democratically represented client of an individual MP.

A smaller, but still sizeable collection of constituents, are called upon in the excerpt below to demonstrate a consensus of opposition to the railway.

240 **Mr Cash:** Will my right hon. Friend accept that, in relation to my constituency,
241 this project goes from top to bottom and is deeply opposed by all and sundry? I
242 have had meetings with thousands of constituents already. Will he accept that,
243 according to the Public Accounts Committee, the pricing is unrealistic, the values
244 for journey time savings are untenable and there has been insufficient analysis of
245 non-rail alternatives? What answer does he give to the Public Accounts
246 Committee and my constituents, who are deeply angered by this?

Excerpt 7.5: The opposition of the angry population of a whole constituency are supported by their MP and the Public Account Committee (HoC 2013:c340).

Opposition to the project is, it is claimed, voiced by thousands of people in the constituency through which the route will pass and their anger is apparently shared by the members of an independent parliamentary Select Committee[65]. By referring to this Committee the participant traces a direct connection between the local opposition of constituents and an authoritative, third party who validates their opposition. This connection extends the consensus of opposition from within the boundaries of the parliamentary constituency of the participant into the more direct parliamentary perspective of a Committee that is made up of other MPs and which takes place in the same building as the debate. In this example the constituents are brought into the debate through their implicated status of democratic representation but join forces with the members of a Committee who are another group of implicated actors, some of whom might also, as MPs, be present in the chamber.

There are also specific individual constituents who are called into the debate, shown in the two examples in Excerpt 7.6 below, to demonstrate very personal and strikingly negative impacts of the project.

[65] The Public Accounts Committee undertakes independent scrutiny of Government spending proposals and their findings on HS2, according to this participant, agree with the view of his constituents.

1988 **Andrea Leadsom:** I pay tribute to the hon. Lady. There is rarely an occasion on
1989 which I do not agree with her. Constituents of mine have been literally suicidal
1990 because of the complete lack of sympathy for them, and because they are unable
1991 to obtain to compensation although their businesses are failing. Does she agree
1992 with me that we must get the compensation right?

...

2955 Secondly, the onus will be on Ealing council and Transport for London to manage
2956 the arrangements in a way that keeps disruption to a minimum. I understand that
2957 some constituents fear that they will be almost completely trapped, and will be
2958 unable even to gain access to local shops or their doctors while the works
2959 proceed. That would be simply unacceptable. Alternatives such as extra bus

Excerpt 7.6: The stories of specific constituents are brought into the debate to demonstrate the negative impact that the proposed railway line has on individuals affected. (HoC 2013:c379; c400).

The constituents in these excerpts are shown to be trapped by the railway both before and during its construction. The project is predicted to impact on the communities in which they live, the homes they live in, their ability to maintain their livelihoods due to its impact on their businesses and, in the most dramatic example, their general attitude to life and its continuation. These constituents are portrayed as a group of victims who are being wronged by an unsympathetic Government or through an unfair mechanism that has been set up by that Government to manage the project. Even if these disadvantaged constituents fail to stall the progress of the project, they are used to make a secondary case for its management to adopt a more sympathetic approach to the damage already caused.

The constituents referred to in the examples in this section are portrayed as angry, desperate and unwilling victims of the project who have been unfairly, and in the case of the taxpayers potentially unwittingly, disadvantaged by the Government's proposals[66]. They are called upon to detail the pain that the railway line causes and to demonstrate the need for appropriate mitigation against disruption and for adequate compensation against loss to be made available as a counterbalance to the detrimental impact of the project[67].

7.3.3 Representing the constituent

In both of the sets of examples shown above the constituents are introduced into the debate as people who are represented by the participants through the democratic process. This role of representation is implicit within the parliamentary system but, as seen here, those who are represented by it are regularly and explicitly referred to by participants as a group whose interests they are obliged to represent. This recalls the relationship between client and user that Oak describes (Oak, 2009) where the client, the crematorium manager, calls upon various groups of

[66] Further examples of the negative impacts on constituents are found at the following lines of the transcript: 242; 742; 1044; 1049; 1144; 1738; 1765; 1885; 2088; 2756; 3056.

[67] Further calls for adequate compensation to be made to constituents are found at lines 342, 420, 515, 1132, 1146, 1860, 2120, 2129 and 2147 in the HoC 2013 transcript.

actors who have been consulted and who appear to be used by the client to avoid answering some of the questions that have been put to her by the architect. The constituents in the debate here include those who have actively sought to be represented on this issue, those who should be consulted before the project proceeds and those who, as taxpayers, are being asked to pay for the Bill. They are called upon as supporters of the project and as opponents to it and when this is done at the same time, as seen in Excerpt 7.3, the rhetorical function of these references are, as those observed by Oak, clearly seen.

In all cases the participants referred to their constituents explicitly and describe them as democratically active members of society who attend meetings to discuss their views with their MP (E7.5:242). They are also shown to be economically active in a number of ways: as homeowners (E7.6:2957), businesses (E7.3:1554), taxpayers (E7.4: 1739) and passengers (E7.1:100)[68].

7.3.5 Conclusion: constituents are implicated actors

This function of the constituent as an implicated actor is similar to the function of precedent as prototype that was noted in Chapter 6 where participants draw external objects and actors into the debate in order to test potential solutions to the problem presented or to expose additional facets of the problem that require further attention. Whereas those precedents are drawn from the past, constituents are more closely related to the present: their relationship to the participant and the process is “live”.

Constituents provide a mechanism for participants to explore a wider set of circumstances than would otherwise be possible within the constraints of the debating chamber. In this way the constituents, as implicated actors, become engaged in a form of virtual consultation as client of the politician and end user of the railway. Participants construct a vision of a new railway line and present the benefits that it brings to their client and the end user. They also present unwanted effects that the proposed railway line may have on their constituents. These other constituents are not necessarily end-users of the railway but they are end-users of the process of consultation, of the mitigation measures that are to be introduced around the line and of the democratic function that allows it to happen at all.

Whether constituents are shown to be beneficiaries of, or disadvantaged by HS2, they are co-opted into the debate in the role of democratic client. This is presented through the direct relationship between the MP and their constituents that connects the latter with people they have met, spoken to and been called upon to act on their behalf. It is also achieved through an explicit acknowledgment of the abstract democratic relationship between the MP and the people that the MP represents.

[68] Further explicit reference to the relationship between participant as MP and the constituents that they represent appear in the transcript HoC 2013 at lines 242, 468, 715, 1139, 1145, 1734, 1880, 1949, 2087, 2091, 2182, 2223, 2669 and 2969.

Extending the scope of participation to incorporate this wider group of implicated actors provides a mechanism and an approach to the debate that helps to explore the role of the participant and the contribution they make to it. The notion of client and end-user that have been introduced here are comparable with similar aspects of design activity. The notion of the implicated actor here has been made with reference to the constituents who have a specific and directly accountable relationship with the participants. This relationship reflects comparable relationships between designers and their clients and proposed designs and the end users. The explicit ways in which participants refer to their constituents in the debate allows the relationship that MPs have with their constituents, and the role that these constituents perform in the debate to be clearly observed.

These observations serve two purposes to this study. Firstly, the exploration of this relationship, which began as an exploration of a putative design team in the parliamentary context and led to the wider perspective of a proposed design network, offers a productive way of approaching the transcript and understanding the relationships between the various parties that are engaged in it. Secondly it further underlines the potential of the parliamentary context, where these relationships are so clearly drawn, as a site where the designer or design team and the various implicated actors involved in the design process can be freely studied as what Wilkie described a centre of synthesis.

The next section seeks to identify other kinds of implicated actors and the roles, if any, they perform.

7.4 A typology of implicated actors in the debate

The identification of constituents in the debate was a relatively simple undertaking since they are a clearly named group of individuals with a clearly defined relationship to participants in the debate. Further, those participants have a vested interest in bringing their constituents into the debate in order to demonstrate and exercise their democratic role as representative of the people.

Identifying other kinds of actors that might be implicated in the debate requires a broader perspective, looking for references made by participants to any number of individuals, groups or other formulations of actors that might be construed as informing or affecting the debate in some way through their appearance in it. This extension of the implicated actor from the democratically represented to a more varied collection of actors who might be considered to be implicated in various ways leads to a number of different categories of actors. This is presented below as a typology of implicated actors of which the constituents are a clear but not singular example.

The identification of the various groups of implicated actors identified in the transcript is based on their shared characteristics. Each group is summarised below with an indication of these

characteristics, the context in which they appear in the debate, and the kinds of roles that they can be seen to perform[69].

7.4.1 Democratic representatives

This group includes the various types of actors that are, in a similar way to the constituents observed in the previous section, directly related to the proceedings through their democratic relationship with the participants.

Government departments and Ministers

The Department of Transport and its affiliated organisations responsible for UK rail infrastructure (Network Rail) and the development of the HS2 project (HS2 Ltd) are Government agencies who were called upon in two ways. The supporters of the project referred to these organisations as the source of the best practical information about the current railway network and the proposed high speed railway network that is being planned. Opponents took a different view, referring to the incompetent management of the planning and consultation stages of the project that are already underway. Other Departments and other Ministers were also referred to, to establish for example that the cost of the project has been approved by the Treasury Department or that the consultation process is compliant with processes controlled by other agencies such as the Department of Communities and Local Government. Direct references to the current Ministers and Shadow Ministers of Transport were also made which are primarily a reflective comment on those present rather than a reference to others who are absent and implicated.

Parliament and Scrutiny

The Members of Parliament referred to themselves as the debate progressed. Parliament was referred to in the third person, appearing as a separate scrutinising body that needs to be fully apprised of how the HS2 budget is being spent and as an impartial group that confers authority on the Government to proceed within its plans. Because the plans for HS2 are long term, the notion of Parliament becomes further objectified from those who mentioned it in terms of "successive" and "multiple" Parliaments that will take over the responsibility for the project which acknowledges the temporary nature of the current participants. References were also made to activities outside of the debating chamber by such bodies as cross-party Select Committees and the independent National Audit Office who perform roles of scrutiny in the wider parliamentary context.

Local authorities

Local authorities and councils for the towns and cities through which the line will pass were called upon to capitalise locally on the investment being made in the railway line. They were also referred to in their role of either supporting or opposing the proposals through their own democratic function of representing the people of the areas they serve.

[69] The data used for this analysis, drawn from the transcript of the debate, is compiled into a spreadsheet available online at https://goo.gl/kwG9pW

Political parties

Five of the main political parties, Labour, Green, SNP, Conservative and Liberal Democrats, were referred to through the course of the debate. These parties occupy most of the seats in both local and the national assemblies. They were called into the debate to emphasise political positions upheld or criticised by participants during the debate. They also demonstrate a particular party's long standing support of the project or to identify some dissent amongst them. In doing so the participants who called upon these parties demonstrate their awareness of allegiances through which they identify with a wider team.

Building out from the core team of participants, identified in section 7.2 above, these groups of democratic representatives comprise a second tier of participation that are generally not present during the proceedings but whose presence is directly implied through the democratic process that the debate embodies. The constituents responsible for voting the Members of Parliament into their role of representation and core team membership are the common thread through this group of actors. Each of the groups here were either elected to their role or are, in the case of government departments, directly appointed or instructed by those elected to implement the project in hand. These groups of actors are represented in Figure 7.10 below which adds an additional layer of actors around those participants shown in Figure 7.9.

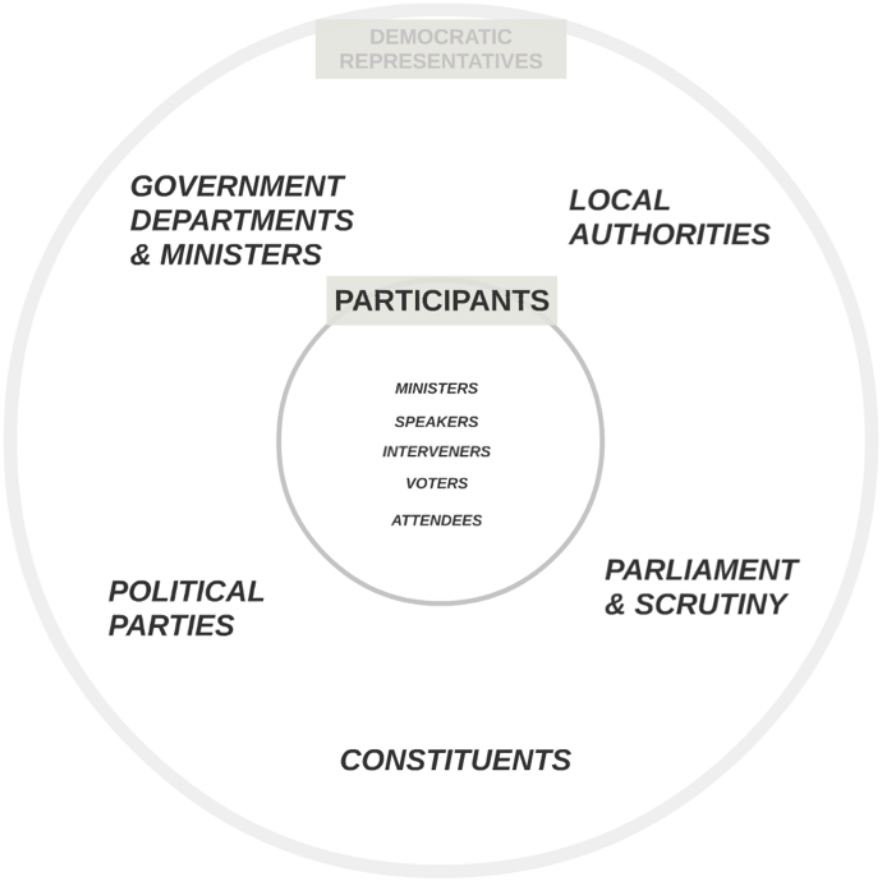


Figure 7.10: A schematic view of the categories of implicated actors identifiable from the debate transcript. This extends beyond the physical space of the debating chamber into the implicated space of the democratic functions that the chamber fulfils.

7.4.2 Interested parties

A further group can be identified as a collection of actors who were brought into the debate as having particular stated interests in the progress of the project.

Lobby groups

Individuals and groups who are collectively engaged with lobbying for or against HS2 include grass roots protest organisations such as the Stop HS2 campaign, business groups such as the Council of Mortgage Lenders and chambers of commerce, various partnerships between businesses and local authorities and an all-party parliamentary group.

Businesses

A small number of businesses were named who would be negatively affected by HS2 due to their proximity to the route. These were referred to as constituents requiring representation but also denote a group with particular interests in the progress of the project and the route that the line will take. Other businesses provide through their employees the passengers for the railway line while others are expected to benefit from the regenerative impact the line is expected to make on the areas around its stations and economic impacts upon the cities the line serves.

Infrastructure companies

A particular kind of business referred to are those involved in the development and delivery of UK infrastructure projects. Construction and engineering companies are a specific beneficiary of the project who are expected to win the contracts for building the line and therefore create the jobs that are needed to build it. Other infrastructure companies were called upon as precedents to demonstrate how the line should or shouldn't be built.

Members of this group may also be represented as constituents but are separately and explicitly identified as having interests in the project that are not served directly by the democratic relationship between them and the participant who implicates them.

7.4.3 Specific people

This grouping refers to a more abstract formulation of people who are brought into the debate and who, although they refer to specific people with specific interests and concerns, are referred to by participants in more general collective terms.

Those affected by HS2

This group of people includes those constituents who were specifically referred to by their MPs as being detrimentally affected by the project. The group also includes a more general reference of "people who have to move house" who might also be "owner-occupiers", "leaseholders", "tenants" and also "NIMBYs". This last term, generally used as a pejorative description for residents who object to new developments in their neighbourhoods, is explicitly defended by one MP in the debate as being a group of people with valid objections.

Passengers

The eventual end-users of HS2 are the passengers that will use the railway line. Surprise was expressed by one participant at the large number of leisure travellers predicted to use the service and their willingness to pay potential premium ticket prices is questioned. They are also expected to be travelling into London from the provinces rather than the other way round and the prospect of this movement of economic activity into the capital is used to question the case made for HS2 as a project that would regenerate the economies of the wider country. One member of this group is an archetypal business passenger, the "rich man" who can afford to buy tickets and so treats the line as his "toy". This archetype was introduced into the debate through reference to a previous Transport Minister's comments to the Transport Select Committee[70] and was called upon to further question the democratic equity of a project paid for by all taxpayers. Business travellers, including members of professions such as lawyers and accountants were recognised as the more likely end-users.

Experts

A small group of academic experts were called into the debate from different universities. Their expertise is drawn upon to both support and question the case being made for the HS2 project.

7.4.4 Abstracted constructs

A final group of actors are those referred to in more abstract terms than the previous groups.

The nation

A broad category of implicated actors comprises people who were in some way implicated in the proceedings. In their broadest sense these were referred to through abstract collective nouns such as "people", "everyone", and "this nation". Other groups are defined by the geographical area where they live such as "the people in Buckinghamshire", "communities along the route" and various other parts of the country. Some of these people were referred to as constituents or taxpayers but are also part of a more broadly drawn collection of people who are running the HS2 project, who are objecting to it, who seek reassurance about it, who will travel on it and who are, or will be affected by it.

Other countries

A more remote collection of people is those from other countries with experience in running high speed rail and seen as competitors to the UK business economy or, in the case of the EU, as a competing legislative body whose regulations need to be navigated to secure the best return on the HS2 investment.

Precedents and historical context

Precedents were discussed in detail in Chapter 6 above and include previous Prime Ministers and other political figures, Victorian railway developers and opponents to Victorian railway developments.

[70] http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/1185/11091301.htm

7.4.5 Implicated actors in the debate

The various groups identified above are not mutually exclusive. Ministers are also MPs, local authorities are made up of members of political parties, and people affected by the project are also part of the nation through which it is planned to be built. It has been necessary to make these artificial groupings to allow their specific characteristics to be identified. There are more general relationships that can be identified by bringing these groups back together with the physical participants who invoke them. All of the groups, including participants, are represented together in Figure 7.11 below, which extends the previous diagram with a further layer of participation that represents the wider groups of implicated described in this section.

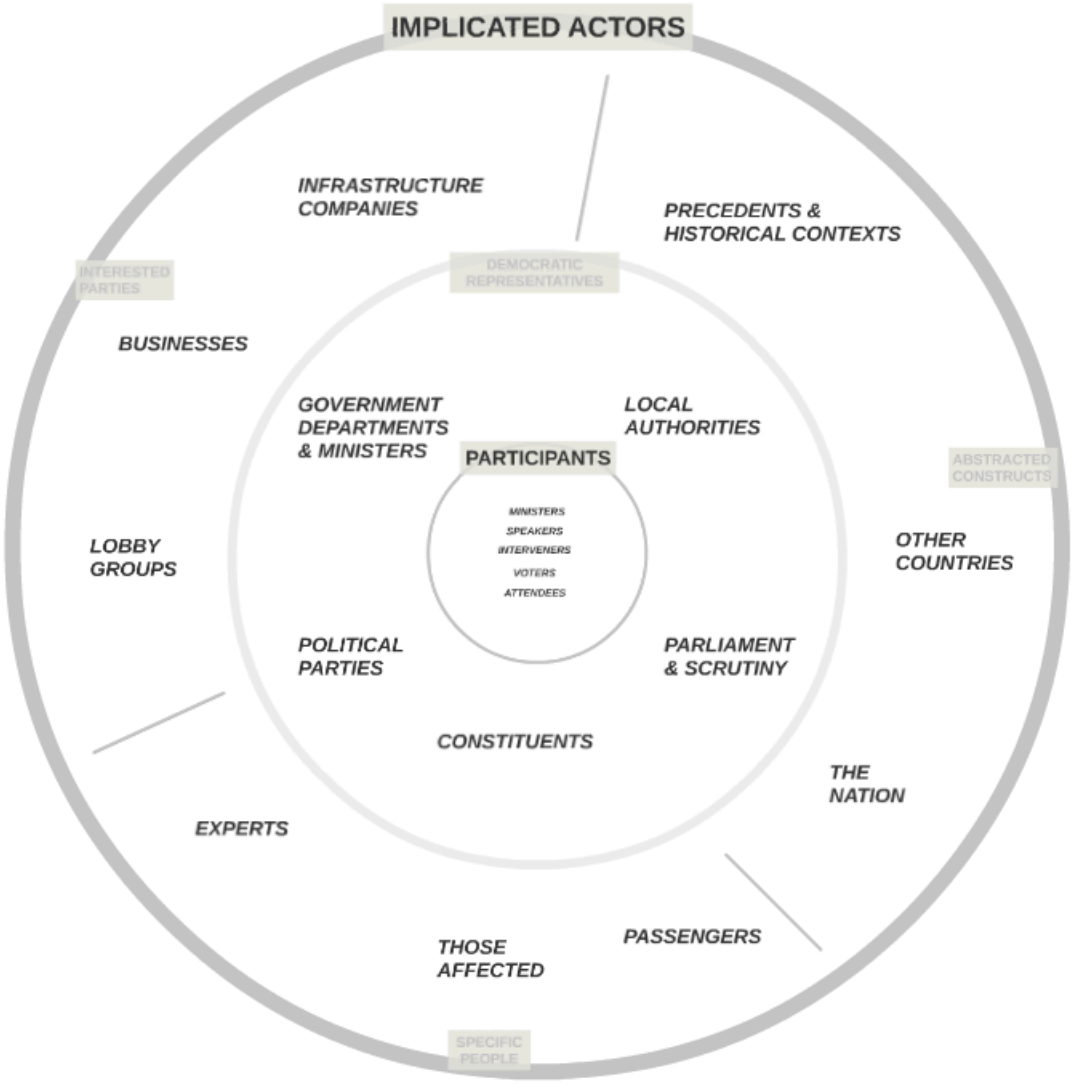


Figure 7.11: An extended view of implicated actors identifiable from the debate transcript including the more widely drawn categories with no explicit connection with the proceedings through direct democratic representation.

7.4.6 Conclusion: implicated actors are extensive and agnostic

These groups of actors were all identified through a reading of the debate that began by looking for the different kinds of contributions made by active participants. These groups of participants were then extended by the identification of implied contributions of the constituents whose elected MPs

represent them and refer to them in the debate. This group of constituents were considered, through both their implicit role and then explicit references made to them, as implicated actors. This notion of implicated actor refers to individuals or groups of individuals who were not physically in the debating chamber but were called into the debate by participants in order to make some kind of contribution to it. This inclusion of absent actors reflects the role assigned by Goldschmidt & Eschel to the end users of a planned building but also draws in contributions from a wider group of stakeholders such as those who are democratically represented by participants – in this respect the electorate are one of these absent clients.

Some of these groups are individuals and groups of individuals who were present in the chamber. This includes parliamentary entities such as the Opposition or backbenchers and specifically named Government Ministers and MPs who are, or might have been at some point, active participants and contributors to the debate. Other groups, such as the Department of Transport, HS2 Ltd and the main political parties, have a formal place within the debate as they are direct contributors to the policies and principles on which the project is based. This second group are not physically in the chamber but they are, like the constituents who are represented by the MPs, directly represented by the Government Ministers who are responsible for them.

These groups are made up of active members of the parliamentary process and their physical absence or presence in the chamber is immaterial in relation to the specific roles they perform within that process. Their appearance in and out of the debate is much like the appearance and reappearance of MPs from the video record who are seen to arrive and leave and make contributions in various ways. This broader collective of actors may not all be participants in the inner circle but most of them would have a place to sit in the chamber and would not seem out of place if they appeared in it.

Beyond this inner circle of present and potentially present participants are the more disparate groups whose absence from the chamber and lack of formal role would suggest that they have no place within the notional design team that is being constructed here. There is, however, one group in this outer circle that has been shown already to have some impact on the proceedings. Precedents were shown to have a demonstrable effect on the debate in the previous chapter. In that chapter precedents were identified as references to past projects. These were called upon as examples of prior projects and practices to be emulated or avoided. In this chapter they have been identified more broadly as a group of actors which has been shown to make some contribution to the debate. Their lack of physical presence or lack of pre-determined role within the parliamentary process, while important to note, does not preclude their inclusion in this representation of the meeting.

The different nature of the "precedent as project" and the "precedent as person" raises an important distinction about what is meant by an actor. The actors referred to here are individuals or groups of individuals but they can also be, as identified in the previous chapter, corporate bodies, railway lines, airports or eleventh century castles. This point is not made to support theories around

whether or not non-human objects can be seen to have agency but to recognise that references made to such objects in this context requires them to be included within the scope of relevant contributions made to the debate and as part of the wider team that is considered to be making that contribution. In this respect the human or non-human status of all of the actors identified here is considered to be irrelevant to what is, in ANT terms, an agnostic account.

7.5 Conclusions

The starting point for this chapter was to explore the notion of the parliamentary debate as a meeting of a design team. This was undertaken in recognition of the importance of the source of the perspectives adopted and employed by those involved in the process. This adoption of perspective underpins the notion of design adopted in this thesis. It has extended questions raised in earlier chapters concerning the relevance of the identity of the designer to the perspectives that they bring to the process and of the identification of the team to which the designers belong. As part of this exploration the relevance of the environment in which the team meets was also recognised.

The relation between the parliamentary chamber, the structure of the debate and the different kinds of actors who are involved in the debate have been brought together to be viewed as a network that is formed and reformed as the debate continues. This network view of the debate can be considered as a point of transition, convergent or divergent, which sits within a series of similar points that make up the parliamentary process.

In a design context different members of the team might be called upon to contribute their particular expertise to a project. Bucciarelli and Henderson, among others, propose the interactions between members of these different fields of expertise gives rise to an acknowledgment of the different worlds they inhabit or they construct around them. The necessity, and potential difficulties, of communication between these different worlds, and the ways that these difficulties might be overcome, for example through the use of boundary objects, is a matter of concern that affects the progress of a conventional design process.

In the parliamentary context, the different ideological and constitutional worlds that are inhabited by different MPs are mediated through the debating environment. This environment is ostensibly intended to encourage adversity in the debate but it also provides a flexible space in which individuals, through their various arrivals and departures and their particular responsibilities to constituents, collect together. They form and reform in the chamber and, through the debate that takes place in the chamber and through the structures of the debate that the chamber facilitates, they extend the scope of their team through the enrolment of a wide and inclusive range of implicated actors. The connections between actors are formed in the debating chamber which operates as a kind of boundary object, a point of enrolment through which a Bill must pass to

become law, and to which the participants must attend to contribute to the debate and to the democratic process.

At this point of enrolment, the various actors combine to form a temporarily fixed point within an otherwise fluid network of the debate. This fluidity is visible in the physical movement of MPs in and out of the chamber and traceable in the transcript as other actors are called upon to support the contribution being made. With each of these movements the membership of the team changes. A Minister may arrive to take his place on the front bench or a Victorian engineer may be invoked to inspire a new generation of infrastructure designers.

Specific contributions made by participants in the debate have been used to identify the wider group of actors involved. Each contribution, recalling Mol (2010), could be viewed as a turn of a kaleidoscope that brings about multiple minor changes to the evolving pattern of the meeting. These can be, as shown above, collected and brought together into a representation of the ongoing assemblage of the various actors participating in the debate and of the various perspectives that they bring. Rather than looking at each individual change to the team as a significant event to be recorded, in the same way that, for example, detailed analyses of design meetings have been made on the micro-interactions between team members, these shifts and additions are understood here in terms of the debate as a single collective event, a centre of synthesis that is represented in the successive extensions shown in Figures 7.9, 7.10 and 7.11.

As this assemblage is formed and reformed, the unit of analysis shifts between the individual interactions taking place within the debate and a broader view of the debate within the wider parliamentary process. The next chapter considers how the assemblage formed from this single debate is reformed in a subsequent stage of the parliamentary process.

8 Implication and participation: following the Bill to a Committee

> "By scheduling confirmation prototypes earlier in the process, World Class Timing had allotted more time than in the past to correct problems that surfaced in extensive tests and prove-out drives. Landgraff had imposed order and discipline on the process." (Walton, 1997:345)

Previous chapters have shown how shifts in perspective permeate the design literature (Chapter 2) and how examples of these can be found in parliamentary debate. An examination of the use of perspectives as a way of attempting to move the debate in a different direction was reported in Chapter 5. Chapter 6 considered how precedents, a specific kind of perspective from the past, were brought into the debate. Recognising the importance of who introduces these perspectives, Chapter 7 undertook a more detailed exploration of those involved in the process and who they called upon to join them in the debate. This produced a view of the debate as an assemblage of participants moving through the debating chamber along with their divergent collection of implicated actors. The divergence of the Second Reading, with its various participants and implicated actors, was shown to converge on the binary decision point at which participants voted to approve the Bill.

This chapter follows the Bill into the next divergent stage where the Committee members are presented as another formation of actors and perspectives. The development of this subsequent assemblage provides points of comparison between the two stages, showing which actors and perspectives have persisted from the earlier stage to the next. The following sections take up a number of themes developed in previous chapters in order to gain further understanding of:

- who is involved in the process as it proceeds;
- how they are enrolled in the process;
- what perspectives they bring to it;
- which perspectives persist from the previous stage.

Moving towards the conclusions drawn in Chapter 9, these questions are sensitive to the overall consideration of how this collection of actors and their shifting perspectives supports the notion of debate as a design activity and how that notion informs the study of design.

8.1 The Public Bill Committee

Immediately after the approval of the Second Reading of the High Speed Rail (Preparation) Bill in June 2013, it was referred to a Public Bill Committee (PBC), a delegation of MPs responsible for scrutiny of the Bill. A Committee is charged with examining evidence that relates to the arguments

for and against what is proposed in a Bill and suggesting amendments that might be made to it. When this process concludes, the Committee reports its findings back to the main chamber where all MPs debate the Bill's report stage and Third Reading. This process, previously illustrated in Figure 3.4, is reproduced in Figure 8.1 below.

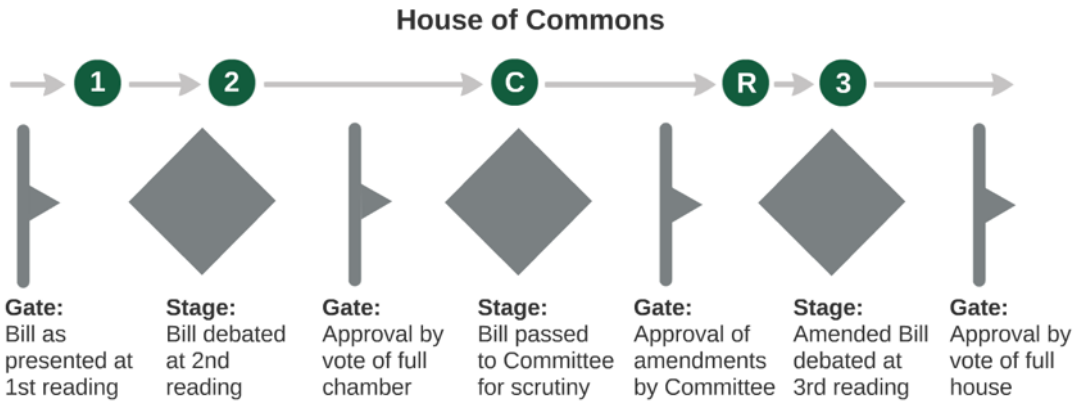


Figure 8.1: The parliamentary stages through which a Bill passes to gain approval showing the Committee stage which is the focus of this chapter.

8.1.1 The High Speed Rail (Preparation) Bill Committee

The High Speed Rail (Preparation) Bill Committee was made up of eighteen MPs, two of whom were appointed as impartial Chairs. The PBC met seven times over four days between 9 July and 18 July 2013. The first four of these sessions collected evidence: twenty-nine witnesses were invited to attend and answer questions. Additionally, thirty-three submissions of written evidence were received before and during the course of these sessions. The remaining three meetings involved a detailed review of the clauses of the Bill and of various proposed amendments to it[71]. This detailed review concluded with a series of votes or divisions within the committee where a majority of its members are required to approve potential changes to the Bill before those changes can be carried forward to the next stage.

Approved changes were then referred back to the main chamber, in the form of the Bill as amended, which becomes the central element of the subsequent report and third reading stage. The High Speed Rail (Preparation) Bill Committee examined 38 amendments with a vote being taken on seven of them, the others being withdrawn by their proposers before being taken to a vote. Only one amendment was made to the Bill before it was approved as the High Speed Rail (Preparation) Act 2013. This amendment placed an additional requirement on the Government that

[71] The full text of these sessions is available online at http://services.parliament.uk/bills/2013-14/highspeedrailpreparation/Committees/houseofcommonspublicbillCommitteeonthehighspeedrailpreparationbill201314.html. A line number version is online at https://goo.gl/4NvtKY

ongoing expenditure incurred on their preparation of the railway line was to be reported under separate headings for capital and resource expenditure.[72]

There are then two separate stages in the Committee process:
The first stage of consultation and collection of evidence is less formal than a full debate. Questions and answers are exchanged more freely between participants than is possible with the conventions and etiquette of the full debating chamber. The second more formal stage of deliberation, scrutiny and debate resembles the structure and conventions of debates in the main chamber, although taking place with fewer participants and in a smaller room.

In order to directly build on the work of the previous chapter and to follow the assemblage of the debate constructed there this chapter focusses on the first of these stages, which is the next immediate stage of the Bill and directly follows on from the Second Reading.

A characteristic of this first stage of the Committee process is that witnesses are called from outside of Parliament to be questioned about their views on the Bill. This represents a shift for some of the implicated actors introduced during the debate at the Second Reading into an active role more closely aligned with the core team identified in section 7.4.

8.1.2 Committee members from the previous debate

Two central members of the PBC were the Ministers responsible for taking the Bill through its Second Reading. In their role of summing up at the end of that debate, the Minister of State for Transport and the Shadow Secretary of State for Transport had made the final to contribution to that stage of the proceedings. This continuity between stages is also reflected in the broader membership of the Committee with nine of the members having made formal contributions to the Second Reading. The sixteen Members of Parliament who sat on the PBC for the High Speed Rail (Preparation) Bill, excluding the elected Chairs, are listed in Table 8.1 below.

The continuity of maintaining the Government majority in the membership of the Committee, and maintaining support for the Bill, is reflected in the allegiance of the Committee's members: only one of the sixteen voted against the Bill at its Second Reading (although one other, who abstained at the vote, was also an HS2 opponent).

Recent experience in transport debates is also represented in the membership of the Committee with four of its members having been active or previous members of the Transport Select Committee, which is a group of MPs responsible for a more general and longer term scrutiny of the Government's transport policy. There are also two Chairs, not shown in Table 8.1, whose role is to manage the proceedings and who are expected to maintain a neutral position.

[72] The original Bill is online at: http://www.publications.parliament.uk/pa/bills/cbill/2013-2014/0010/2014010.pdf. Its amended form is online at: http://www.publications.parliament.uk/pa/bills/cbill/2013-2014/0096/14096.pdf

Committee member	Parliamentary role	Contribution to 2nd Reading
Simon Burns (Chelmsford) (Con)	Minister of State, DfT	summing up speech, voted for
Lilian Greenwood (Nottingham South) (Lab)	Shadow Transport Secretary	summing up speech, voted for
Jim Shannon (Strangford) (DUP)	DUP Transport Spokesperson	voted for
Karen Lumley (Redditch) (Con)	Transport Select Committee	voted for
Iain Stewart (Milton Keynes South) (Con)	Transport Select Committee	speech, voted for
Julian Sturdy (York Outer) (Con)	Transport Select Committee	voted for
Martin Vickers (Cleethorpes) (Con)	Transport Select Committee	speech, voted for
Kris Hopkins (Keighley) (Con)	MP	speech, voted for
Graeme Morrice (Livingston) (Lab)	MP	speech, voted for
Mr Alan Reid (Argyll and Bute) (LD)	MP	speech, voted for
Mr Khalid Mahmood (Birmingham, Perry Barr) (Lab)	MP	intervention, voted for
Nic Dakin (Scunthorpe) (Lab)	MP	voted for
Pat Glass (North West Durham) (Lab)	MP	voted for
Nicky Morgan (Loughborough) (Con)	MP	voted for
Mrs Caroline Spelman (Meriden) (Con)	MP	absent (but subsequently voted against)
Frank Dobson (Holborn and St Pancras) (Lab)	MP	speech, intervention, voted against

Table 8.1: High Speed Rail (Preparation) Bill Committee Members shown in order of decreasing support for the project based on their parliamentary role and activity recorded during the Second Reading. The single opponent to the project reflects both the Government majority in the House of Commons and the recorded votes at the Second Reading.

In the context of this chapter, of examining perspectives that participants bring to the process and the contribution that these perspectives may make to the progress of the Bill, it is useful to consider how Committee members are selected, a process that is comparable with the process of election noted in Chapter 7.1.

8.1.3 The selection of Committee members

A Public Bill Committee is a delegation of MPs appointed by the House of Commons' "Committee of Selection". This is a group of nine MPs, all party whips, whose membership reflects the

Government majority and who are responsible for the appointment of all PBCs. As a group of party whips this Committee of Selection represents the will of the main political parties. Although their proceedings are not documented, and therefore the selection of a PBC is not a transparent process, its results are clearly visible in the make up of the Committees they select.

Nine members of the sixteen strong PBC (56% of its membership) were drawn from parties who made up the coalition Government which between them held 55% of seats in the House of Commons. There were six Opposition party members on the Committee which, being 37% of the total sixteen matched the 37% of Opposition MPs in the main house. The make up of the Committee also reflected the voting of the main debating chamber on the Bill at it's Second Reading where the 92% of participating MPs who voted in favour of the Bill were represented by fifteen of the sixteen (94%) Committee members. The selection of committees is a process that reinforces the majority of the Government through the wider parliamentary process and reflects the democratic principle of the UK Parliament both in terms of the political parties they come from and how they participate in it.

The role of scrutiny of the Bill is thereby delegated to a small working group of cross-party MPs who, in common with the vote at the Bill's Second Reading, are generally supportive of the aims of the Bill. Some of the members of the Committee appear to have long term experience in related issues and have mostly demonstrated their engagement with the Bill either through their parliamentary office or by contributions made during the Bill's previous parliamentary debate.

8.1.4 The core team

The core team of participants observed at the Second Reading in the previous chapter was based on the active participation of MPs. This group were centred around the Ministerial team who presented the Bill but also included backbenchers who contributed to the debate and the more varied group of participants who arrived at the end of the debate to vote. In contrast with that broad and inclusive range of engagement with the Second Reading, the more focussed and constrained boundaries of the PBC presents a smaller and more easily assimilated view of participation. This core team is shown in Figure 8.2 and shows the different members of the Committee and their contribution to the previous debate.

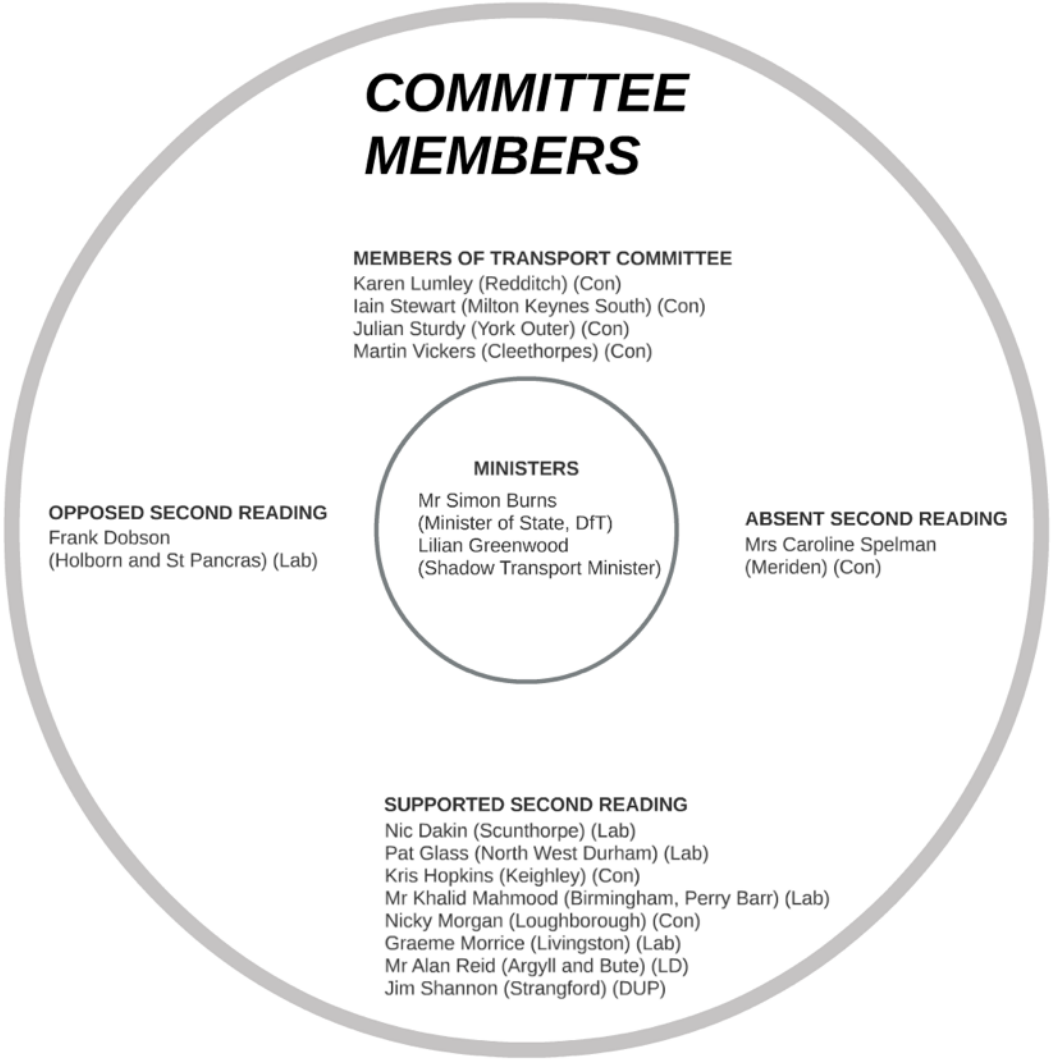


Figure 8.2: High Speed Rail (Preparation) Bill Committee members, showing their previous contribution and experience, and forming the core team around the Minister responsible for the Bill and his Opposition counterpart. This diagram can be viewed online at https://prezi.com/4k3pukntunmf/ministers-and-shadow-ministers/ and in table form at https://goo.gl/kwG9pW

At the centre are the Minister and Shadow Minister from each of the two main parties who are responsible for leading the progress of the Bill through Parliament. These two members of the Committee perform different but important roles which are reviewed below.

8.1.5 Team leader: The Shadow Minister

At the start of the first session (Excerpt 8.1 below) the Chair, after making initial comments about how the meeting would progress, directly handed control of the meeting to the Shadow Minister, Lillian Greenwood, who was also invited to open the questioning in every subsequent session.

The Chair: We will now hear oral evidence from the London borough of Camden and Nottingham city council. I remind all Members that questions should be limited to matters within the scope of the Bill, and that we must stick to the timings in the programme motion the Committee has just agreed. I will have to interrupt mid-sentence if a session is still continuing at its scheduled finish time—apologies to our witnesses if that happens. Members should declare any interests before the start of each panel in which that interest is relevant. I shall also ask our witnesses to declare any financial interests during the evidence sessions. Will the witnesses introduce themselves and tell us the positions they hold? I will then call Lilian Greenwood, who will commence the questioning for us this morning.

Excerpt 8.1: Control of the meeting was handed over by the Chair to the Shadow Minister. HoC Public Bill Committee, 9 July, 2013:col 5[73].

In taking this lead, Lilian Greenwood, asked more questions than any other member of the Committee (sixty-nine of the 295 questions put to the witnesses) across a range of subjects that drew out key themes about the project from the witnesses. Two examples of this are shown below. In Question 1 (E8.2:127), an opponent to the project is prompted for their views on the wider strategic objectives of the Government and invited to share their specific objections to the proposed railway. In the second example a question is directed to the Minster of State for Transport who appeared as the final witness to the Committee. In Question 295 the Government's management of the project is brought into question.

Q 1 Lilian Greenwood (Nottingham South) (Lab): Councillor Hayward, in your submission you said you do not believe that High Speed 2 will deliver the Government's strategic objectives. Do you believe that high-speed rail in general is a poor investment, or is your opposition based more on the details of this particular proposal?

...

Q 295 Lilian Greenwood: May I ask a quick follow-up question, before HS2 Limited answers the same question? You said, Minister—and were very honest in saying—that we should have done more on a number of issues. Who do you hold responsible for the failure to do those things adequately?

Excerpt 8.2: Two of the Opposition Minister's sixty-nine questions that engaged witnesses in detailed points about the Bill and also made more general points reflecting her role as critic of the Government. HoC Public Bill Committee, 9 July, 2013:col 85 and 11 July:col 156

[73] The original transcripts of these sessions is available online at the parliamentary website. The line numbered version used here forms a part of the thesis appendix.

Both examples show the Shadow Minister engaging with the issues that surround the project, the perspectives that witnesses may have on those issues, and the use of questions to question the performance of the Government from the position of the official Opposition which she represented.

8.1.6 Team leader: The Government Minister

In contrast to the lead role taken by the Shadow Minister, the Government's Minister for Transport, Simon Burns, asked only six questions of witnesses. However, all of these questions performed specific functions that provided information about the Government's intentions and abilities rather than eliciting evidence from witnesses.

In Question 39 (E8.3:1128) the Minister asked leaders of three regional councils (Birmingham, Staffordshire and Manchester) if "they are aware" of the Government's plans to extend the network beyond its initial phases from London to Birmingham and Manchester.

1127 **The Chair:** Any further comments?
1128 **Q 39 Mr Burns:** May I ask all three gentlemen if they are aware that
1129 the Secretary of State for Transport, last October, announced that work
1130 will be looked at in respect of the business case—the viability—of possibly
1131 extending High Speed 2 to a third phase, to Edinburgh and Glasgow? On
1132 the important point that has been made, particularly by Sir Richard and
1133 Mr Inskip, that other parts of the country might get a high-speed network,
1134 the Bill takes that into account, so it is valid for the future. Looking at
1135 clause 1(2)(a), one sees that it says:
1136 "The network referred to in subsection (1) is a network which…involves
1137 the construction of railway lines connecting"—
1138 and the crucial words are—
1139 "at least".
1140 Then it lists a number of areas. The words "at least" allow for Edinburgh,
1141 Glasgow, Bristol, Liverpool, Cardiff—wherever—if the business case stacks
1142 up and there is a need in the future, so one would not have to come back
1143 to Parliament for another piece of legislation.

Excerpt 8.3: The Government Minister isolated two "crucial words" from the Bill to raise awareness of potential future developments. HoC Public Bill Committee, 9 July, 2013:col 25, Q39

By asking if witnesses were aware of something (E8.3:1128) the Minster directed the meeting away from the examination of the witness towards the introduction of his own perspective on the Bill. This perspective extended the high speed network beyond its proposed routes and beyond any of the geographical jurisdictions of the witnesses. The Minister raised this broad context through a direct reference to the wording of the Bill and focussing on just two words from the Bill – "at least". These two words, described as crucial, establish a principle that the proposed railway line might eventually be extended to serve the whole of the UK.

This extension of the railway was pursued again by the Minister in an almost identical question to a different witness in Question 176, asked two days later, shown in Excerpt 8.4.

4495 **The Chair:** Thank you. We are now approaching the end of time,
4496 Minister.
4497 **Q 176 Mr Burns:** Presumably, Mr Lloyd and the Scottish Government
4498 are content with the Bill because clause 1(2)(a) simply lists all those areas
4499 where the train is actually going to, as a fact, in existing proposed
4500 legislation. The critical words, "at least", are there, enabling the addition
4501 at future dates, if necessary, Edinburgh, Glasgow, or anywhere else in
4502 mainland United Kingdom.
4503 ***Peter Lloyd:*** As I said before, we are content with the phrasing of "at
4504 least"; we are content with the note in the explanatory notes; and we are

Excerpt 8.4: The Minister for Transport uses a question to draw attention again to two words from the Bill, "at least", that signify the possible future expansion of the HSR network. HoC Public Bill Committee, 11 July 2013:col 98, Q176

The Minister's specific and repeated reference to these "critical words" from the Bill (there are several further instances during the course of the Committee proceedings) ensure that the Government's plans to include Scotland and Wales as part of their HSR network are known. This form of questioning, as a means of disseminating information to witnesses as opposed to gathering evidence from them, can also be seen to perform other functions in the debate.

The Minister uses the questions to exert control over the meeting by ensuring that the points he wishes to make are put on record. This mechanism reflects a process of reframing observed by Paton & Dorst where designers use leading questions to reframe a client's position to be more conducive to the proposed design (Paton & Dorst, 2011:583). The Minister does this by asking questions about the wording of the Bill, which outline his Government's plans, and suggesting through these questions how the plans should be interpreted.

The foresight of these plans is underlined through reference to announcements made in the previous October that work will be done to explore the viability of extending the line to Scotland. This Government, he implies, has foresight and is also rigorous as its plans take account of any situation where "the business case stacks up" (E8.3:1141), are wide ranging enough to serve "anywhere else in mainland UK" (E8.4:4502), and can be achieved "without the need for another piece of legislation" (E8.3:1143). By making these points through a specific form of question, the Minister elicits an affirmative response from several witnesses which records their agreement with the Government's plans. Moreover, this agreement is elicited in response to their own statement of the need for the new railway to extend to other parts of the country (E8.3:1132-1133).

The witnesses' agreement is thereby established and as evidence of their support. This reflects a general aspect of a design meeting where changes and decisions need to be drawn out and recorded for future reference. By drawing these witnesses into the debate in this way, and by connecting them with the current wording of the Bill, the Minister enrolled the Committee and the

witnesses together with the stated aims of the Bill. Witnesses are thereby enrolled into the design team.

The Minister explained that the Bill, with its specific reference to the non-specific “at least”, provides the Government with the authority to explore any number of extensions to the proposed railway network. This is presented as a flexible, forward thinking solution to the problem of connectivity that had been raised by the witness. It also inscribes into the Bill the possibility to undertake further developments without further scrutiny.
These various functions: of controlling the meeting, of outlining plans, of demonstrating the foresight and rigour of the Government and of publicly eliciting support from witnesses for the plans as presented, all demonstrate the use of the Bill as a way of moving the debate forward and shifting perspective, through a form of temporal reframing, from the current proposal to its extended future.

In the Second Reading, precedents were noted (in Chapter 6) as a form of virtual prototyping, used in an environment where physical objects are not available to be modified or manipulated and on a project where physical prototypes are not feasible. In the Committee room, where there are also no physical objects available, the Bill, and just two words from one of its clauses, is invoked by the Minister as a tool with which the current situation, the meeting, can be manipulated. In doing this, he manipulates the current situation but also asserts his Government’s authority, through the instructions contained in the Bill, to manipulate future situations.

Before going on to examine additional roles performed by the Minister in the Committee room, the next section follows the same two words of the Bill as they appear in a subsequent debate.

8.1.7 The persistence of critical words

The report stage of the Bill took place three months after the Committee stage concluded. In that subsequent debate Cheryl Gillan, an MP based in the rural Chilterns district where the proposed railway was widely opposed by residents, focused on the same two “critical” words referred to by the Minister in her main amendment, tabled for debate by the full house[74]. This amendment proposed that the words “at least” be removed from the Bill[75].

By focussing on these same two words, the MP recalled the symbolic importance afforded to them by the Minister as both crucial and critical to the Bill. Proposing their removal raised a question about the fundamental nature of the Bill. These words appear to have been specifically selected by Gillan who, just as the Minister used questions in the Committee room to make his own points, used an amendment to them in the full house to make her own.

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[74] The transcript of the report stage of the Bill is online at http://www.publications.parliament.uk/pa/cm201314/cmhansrd/cm131031/debtext/131031-0002.htm#1310316500000. A line number version is at https://goo.gl/VouVE4

[75] The amendment is online at http://www.publications.parliament.uk/pa/bills/cbill/2013-2014/0096/amend/pbc0962810a.1193-1194.html

When questioned in the debate about the purpose of her amendment she stated that it was "intended to probe the Government's intentions" (E8.5:101). A probing amendment is a recognised parliamentary device that is intended to provoke debate rather than to be accepted as an amendment to the legislation being debated. The removal of the words "at least" are a direct reference back to the Government's intention to develop an extended network and are used to examine the extent and function of this network by questioning the number of stops provided on the proposed railway line between the main termini.

101 **Mrs Gillan:** My amendments are intended to probe the Government's intention. I
102 believe that they should have made provision to include more stops on the line.
103 For example, I would have thought that between Manchester and elsewhere,
104 there could have been other stops giving greater benefit to some of the areas
105 that will be destroyed by the line.

Excerpt 8.5: An amendment to remove two crucial words from the Bill are acknowledged to be a more general critique of the principles underlying the Government's intentions. HoC 2013b: c1114

The use of these two words across these two debates demonstrates how a detailed element of the Bill is referred to and employed by participants to serve conflicting functions. Originally brought into focus by the Minister in Committee to represent how his Government's plans should be supported as they served the whole country they were subsequently called upon to suggest to the whole House of Commons that those plans are flawed.

Although a seemingly obvious assumption, it is important to recognise that the Bill itself and the words it is made up of, being the subject of the debate and the object of scrutiny, is a central element in the process. As it moves through the stages of the parliamentary process, a Bill embodies the Government's plans, is the focal point for the presentation and questioning of the principles that underline them and facilitates their transmission from stage to stage and further into unspecified futures.

This observation confirms the Bill as an object that is referred to and manipulated by participants as they make their contribution to the debate and attempt to maintain currency for the views that they express and the position they support. The Minister employed two words from this object as a way of implanting specific affordances into the project that might pre-empt or manipulate the scope of future debates. The backbencher reused them, drawing on the weight they had already been given, as a way of engaging the formal structure of Parliament and its devices to question the principles they were intended to convey.

8.1.8 Control of the Chair

Returning to the Public Bill Committee and the Minister's questions, it was seen in section 8.1.6 that the formal structure of the Committee format, the questions asked by the Committee of the witnesses, were used to impart rather than elicit information. This use of the formal structure of the Committee can be observed in other contributions made by the Minister who continued to employ

the tactic of using questions to make points. In Excerpt 8.6, below, he used a question to correct evidence that he believed to be incorrect:

1145 May I gently point out to Mr Winnington, who keeps saying in his evidence
1146 that the cost of High Speed 2 is £50 billion, that that is far from correct?
1147 It is £42.6 billion, of which £14.4 billion is contingency.
1148 ***Mark Winnington:*** Does that include the rolling stock?
1149 **Q 40 Mr Burns:** No. The rolling stock is separate. But the actual cost of
1150 High Speed 2—the building of it and the establishment—is £42.6 billion.

Excerpt 8.6: The Minister uses a question to make a correction. HoC Public Bill Committee, 9 July 2013:col 25, Q40

and in Question 42 (in Excerpt 8.7 below) he offered general encouragement to witnesses who were supportive of the Bill.

1163 **Mr Burns:** May I come back on that with a question?
1164 **The Chair:** I think I had better let you have a question.
1165 **Q 42 Mr Burns:** May I say to Sir Richard that he is absolutely right? One
1166 of the purposes of the Bill, among others, is that it cements the
1167 commitment to phase 1 and phase 2. He can rest assured that I am as
1168 anxious as he is that the legislative progress goes as swiftly as possible,
1169 so that we can get on with building this railway.
1170 **The Chair:** Minister, thank you for that question.

Excerpt 8.7: The Minister uses a question to confirm and encourage support of the Bill. HoC Public Bill Committee, 9 July 2013:col 25, Q42

In these contributions the Minister creates opportunities, through the rhetorical use of the question format he is expected to be using, in order to promote the Bill as it passes through the proceedings. He does this by asking witnesses questions that do not require answers but which allow him to assert the Government's position and to support the principles of the Bill.

Another member of the Committee is reprimanded by the Chair for using questions to witnesses in this way. In Excerpt 8.8 below, Frank Dobson followed up a response from a witness to make a point about perceived failings of the project's compensation scheme for his constituents in Camden (E8.8:4292-4296). The Chair intervened (E8.8:4297) to assert control of the proceedings, stating that Committee members should be asking questions rather than making comments: the purpose of the Committee is to collect evidence from witnesses that will inform their scrutiny of the Bill. The Minister immediately poses his own question to the witness (E8.8:4299), using the same format as his earlier question (Question 39 in Excerpt 8.3 above), asking whether the witness "is aware" of an aspect of the project. As in the previous example, this questioning of a witness' awareness is used to make a point about how the compensation scheme works and also how the problems in Camden might be resolved through further consultation.

Although the Chair asserted their authority over an MP who attempted to use a witness as a way of making his point, this same authority is not asserted over the Minister. By seeking encouragement of a response from the witness to the Minister's question (E8.8:4308) the Chair focuses on the function of the question as requiring an answer rather than on the comment that it contains.

4292 **Frank Dobson:** Can I also make the point that, as currently intended,
4293 these business people who will be put out of business will be entitled to no
4294 compensation whatever? Their premises are not going to be demolished;
4295 it is just that there will be a sort of Berlin wall between them and their
4296 principal source of customers.
4297 **The Chair:** I remind Members that we should be asking questions, rather
4298 than making comments.
4299 **Q 166 The Minister of State, Department for Transport (Mr Simon**
4300 **Burns):** May I ask Dr Marshall whether he is aware that, on the question
4301 of business compensation, particularly for small and medium-sized
4302 businesses within the safeguarded area, they will be eligible for
4303 compensation under the national compensation code? Is he aware that
4304 there will also be other areas where they may be able to seek
4305 compensation for reasonable costs and expenses with regard to relocating
4306 and so on? For Drummond street, HS2 Ltd very much wants to work with
4307 Camden council to seek a solution to the problems.
4308 **The Chair:** I am sure the Minister would like a response to that
4309 question.

Excerpt 8.8: The single MP on the Committee who explicitly opposed the Bill by voting against it at its Second Reading is reprimanded for attempting to use questions to impart information about its negative impact on his constituency. HoC Public Bill Committee, 11 July 2013:col 96, Q166

8.1.9 Conclusion: control of the meeting controls the future of the Bill

The etiquette and conventions of the main chamber, such as the taking of turns and giving way to interventions seen in the Second Reading, is not followed in the less formal stage of the questioning of witnesses in the Committee room. However, there is in the Committee room, as in the main debate, a series of structured parliamentary conventions that control the flow of the meeting. These conventions determine who is invited to participate, who can speak, what kinds of questions can be asked, and who they can be asked of. This flow, much like the flow of the debate seen in the Second Reading (Chapter 5.2), supports the Government's intentions. Where attempts are made to divert the flow, again as seen in Chapter 5, they are constrained by the structure of the proceedings and the conventions that are in place to support that structure. This support includes the in-built Government majority in the membership of the Committee, the selection of the Committee chair, the deference given by the Chair to the Government Minister and, as will be seen in the next section, the selection of which witnesses can appear before the Committee.

This view of the Committee hearing provides a number of comparisons with design. The use of questions as a reframing device identifies a relationship between the Government Minister and the Committee as a designer who ensures that focus is maintained on aspects of the design that are considered to be important. The Minister asserted his authority over the meeting, supported by the Chair, through his use of only a few questions. This is contrasted with the Shadow Minister who is primarily given the role of leading the enquiry with questions that elicit details from witnesses. In comparison with the design meeting for the new crematorium, where the architect is empowered by the client (as interpreted by Oak in section 2.4.4 above) it appears that the Committee performs the role of client, acting as a mediator between the witness/users and the Minister/architect.

When the Minister picks out two words as a tool for manipulating the situation, he draws attention to the Government's use of the Bill as a way of clarifying aspects of the present project but also of specifying, predicting and controlling its future iterations. These clarifications ensure witnesses are on record as having agreed to the Minister's intentions, much like a record of a client's agreement is needed during a progress meeting. The prediction of unspecified future versions of the railway, carried by the same two words, extend the Bill's functionality beyond the current debate. This functionality is transferrable, as seen by the subsequent adoption of the words by an opponent of the Bill. In this second usage the words function like a precedent: the weight originally ascribed to them as a device to point to positive aspects of the proposed design of the railway network is used as a counterweight to question a fundamental principle of the Bill.

This final comparison offers a further insight into the parliamentary context in relation to what that context produces. The railway, the Bill and two words taken from the Bill, are all seen to perform particular roles in the debate as objects to be manipulated, precedents to be referred to or products to be signed off and moved forward. This last point is the clearest to make: The Committee hearing is a meeting where supporters of the Bill ensure that their proposed design is carried forward to the next stage of the design process.

This section has focussed mainly on the Committee members and their role in the Committee team. The next section focusses on the witnesses, and other forms of evidence, that are called into a Committee room.

8.2 Persons, papers and records: evidence and witnesses in Committee

8.2.1 The introduction of witnesses - from implicated actors to active participants

In debates in the main chamber, MPs are the only active participants allowed to take part in the debates. External perspectives are only brought into the chamber as quotes or references. In the debate of the Second Reading of the High Speed Rail (Preparation) Bill a large number of implicated actors were drawn into the debate, contributing to the number of perspectives involved.

At the Committee stage of the Bill a small selection of those implicated actors were invited to participate directly in the proceedings. All of the questions referred to in the previous section, whether they are used to expound the Government's plans, to underline allegiances between supporters or to question the position of opponents, are facilitated by the presence of the invited witnesses. These witnesses are physically in the room and are used primarily to consolidate support for the Bill. This was done through reflections on progress already made by the Government, on an analysis of the detailed wording of the Bill, on the presumed awareness of the witnesses, and on a future vision of the railway as it extends across the country. This implies that witnesses are passive in their participation: it does not seem to matter who they are as long as they can be used to make the points required. However, while this may be the case for the Minister's questions, they account for only six of the 295 questions asked.

The expertise and experience of the witnesses becomes more relevant as more detailed questions were asked by other Committee members such as those from the Opposition Minister seen in section 8.1.5 above. The selection and identity of the witnesses, and the kinds of responses they give to questions is thereby relevant to how the sessions progress. The following section examines which witnesses were called to give evidence to the Committee. This gives a more precise description of who is included in this stage of the process and how they engage with it. The different levels of engagement are then added to the representation of the assemblage in Figure 8.2 as a means of mapping the participants and tracing them through the debate.

8.2.2 The selection of witnesses and the bias of the Committee

The selection of witnesses to appear before a Committee is made by the "programming sub-Committee", a group of seven MPs appointed by the Speaker to steer the PBC. Programming sub-Committees are usually made up of the Minister responsible for the Bill and their Opposition Shadow, the lead Minister's private secretary (a junior MP who supports Ministers in their role), the Government and opposition whips, a Government backbencher and a further member of the opposition[76]. The specific identity of the members of a programming sub-Committee is not recorded but the make up, as described, ensures an inbuilt Government majority. As with the selection of members of the Committee, the process of witness selection undertaken by the sub-Committee is not recorded or made publicly available. This lack of information is unusual compared to the amount of other parliamentary data that is readily accessible.

As seen in section 8.1 above, the Committee is predominantly made up of members who support the Government's proposals for HS2 but witnesses were also called from groups who oppose the railway. Support or opposition of each of the twenty-six witnesses can be clearly identified from the contribution they make to the Committee and this can be, where necessary, corroborated with reference to additional sources such as an organisation's website. The full list of witnesses is shown below in Table 8.2 divided into supporters and opponents.

[76] This is documented at Cabinet Office, 2015:183, Guide to making legislation, online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/450239/Guide_to_Making_Legislation.pdf

The dissenting voices were mainly drawn from rural local authorities and grass roots lobby groups but also from Camden Borough Council where HS2's London terminus is proposed to be built and from a Professor of Urban and Regional Planning at University College London. Support for the Bill is represented in the witness list by the leaders of regional metropolitan districts such as Birmingham, Manchester and Sheffield who anticipate benefits from the line when it connects their regions to the capital.

Technical details about how the project was progressing were sought from the executives of HS2 Ltd who are accompanied by the Minister who, for that session, switches from questioner to witness. Executives from two of the projects direct precedents, Crossrail and HS1, were questioned about the logistics of managing large infrastructure projects and how their projected benefits were realised. Evidence from another academic, Sir Peter Hall, also from University College London, was also shown to be supportive of High Speed Rail. Some of this evidence will be reviewed in more detail in Section 8.3 below.

Supporting	**Opposing or questioning**
local authorities	local authorities
Manchester	Camden Borough
Nottingham	Staffordshire
Birmingham	
Centro transport authority	lobby groups
Transport Scotland	51m
Sheffield LEP	HS2 Action Alliance
	Stop HS2
lobby groups	Country Land and Business Association
Chambers of Commerce	Campaign for the Protection of Rural England
Greengauge	Campaign for Better Transport
Rail Freight Group	Passenger Focus
Institute of Civil Engineers	
	experts
experts	Professor John Tomaney
Sir Peter Hall	
Government departments	
Network Rail	
Department for Transport	
HS2 Ltd	
precedents	
Crossrail	
HS1	

Table 8.2: Witnesses called to appear before the High Speed Rail (Preparation) public bill Committee showing their respective supporting and opposing positions to the Bill.

The number of witnesses supporting the Bill outnumber its opponents. This bias is, however, less marked when the context of the last two groups in the list of supporting witnesses in Table 8.2 are considered. The Government departments and the precedents, while clearly supportive of the Bill, are the only witnesses who could have the relevant expertise in the operational aspects of related infrastructure projects. If these two are not taken into account there is, despite the inbuilt bias for support within the Committee, a more equal division of supporters and opponents in the selected witnesses. This balance allows for evidence to be drawn out, examined and questioned from both sides of the debate even if the process is explicitly biased towards supporting the Bill.

The witnesses are represented below in Figure 8.3 using the same categories of implicated actors found in the transcript of the Second Reading. The core team of Ministers, and other Committee members, similarly positioned at the centre of the diagram.

Figure 8.3: The inclusion of witnesses. This figure extends the representation of Committee members, shown in section 8.1 above, to include the witnesses who were called to appear before that Committee.

8.2.3 Written evidence

This representation can be extended. Alongside the oral evidence of witnesses called into the Committee room, the PBC process also allows for written evidence to be submitted for consideration by the Committee. This written evidence is published by the Committee and available alongside the transcript of the Committee hearings on the parliamentary website[77].

There are three levels of engagements by which implicated actors become more active participants in the PBC: by being called to appear in person; by submitting written evidence; or both. Different levels of the witnesses are listed in Table 8.3 below according to their relative support for the Bill. Each column is also divided into categories of supporters, opponents and groups who question the project but do not oppose it.

The left hand column of Table 8.3 lists those witnesses called to give evidence to the PBC: these witnesses are predominately supportive of the Bill. The right hand column lists those who submitted written evidence but were not called to appear before the Committee: a group predominantly made up of opponents to the Bill. The middle column shows witnesses who were called to appear and had also submitted written evidence and is equally divided between supporters and opponents.

Moving progressively through these three groups of witnesses from left to right, the level of participation shifts from invited to uninvited and from spoken to written. This shift is accompanied by a parallel shift away from support of the Bill for the individuals and organisations involved. Opposition to the Bill accounts for nineteen out of the twenty-one written submissions that did not appear before the Committee and therefore did not participate directly with the process. Conversely out of the sixteen witnesses who were called to appear without submitting written evidence, only three were opponents of the Bill. This further supports the view that the PBC is biased towards supporting the Bill. However, it is not clear how witnesses are selected and whether the submission, or what is contained in a submission, of written evidence is a factor in the selection process.

[77] The written evidence is consolidated into a single file which is online at: http://www.publications.parliament.uk/pa/cm201314/cmpublic/highspeedrail/memo/pbchsrconsolidated.pdf

Witnesses called to Committee without a written submission	Witnesses called to Committee who also made a written submission	Written evidence submitted but witnesses not called to Committee
Government departments Department for Transport HS2 Ltd Supporting local authorities Nottingham Manchester Birmingham Centro transport authority Transport Scotland Supporting lobby groups Chambers of Commerce Precedents Crossrail HS1 Supporting expert Sir Peter Hall, UCL Questioning expert Professor John Tomaney, UCL Questioning lobby groups Campaign for Better Transport Passenger Focus Opposing lobby groups 51m	Government departments Network Rail Supporting local authorities Sheffield LEP Supporting lobby groups Greengauge Institute of Civil Engineers Rail Freight Group Opposing local authorities Camden Borough Council Staffordshire Opposing lobby groups Country Land Association CPRE HS2 Action Alliance Stop HS2	Supporting local authorities London Borough of Newham Supporting lobby groups The Airport Operators Association Opposing local authorities Leader of Hillingdon Council David Dundas Opposing lobby groups Wendover HS2 action group Heathrow Hub Ltd Woodland Trust Tonge & Breedon HS2 Action Opposing people affected Dr Chris Eaglen LLB Andrew Bodman Charlie Sarrell John Withington Dr Paul Harlow David Richards Andrew Cordiner Penny Gaines Digbeth Residents' Association Michael Edwards, UCL Chris Damant Opposing experts Dr Paul Hoad BiblioFox Research

Table 8.3: Individuals and organisations who submitted written evidence to the High Speed Rail (Preparation) public bill Committee collected into categories of actors and divided into supporters and opponents.

The process of selecting witnesses is controlled by the programming sub-Committee whereas the submission of written evidence is open to the general public. The timeframe for submission is however very tight. The Second Reading was approved on the 26 June 2013 and the Committee

held its first meeting on the 9 July 2013. In just under two weeks the Committee was selected, the programming subcommittee convened, a timetable agreed for the meetings, the witnesses selected and scheduled to appear. The submission of written evidence, especially by interested or aggrieved individuals, therefore must be done quickly and with little expectation of being called to the meeting. Written evidence continued to be submitted throughout the course of the hearings, several days after the witness schedule has been agreed and publicised. The high proportion of written submissions from individual opponents to the Bill suggests a high level of grass roots opposition to the Bill.

An example of how this grass roots opposition was mobilised can be seen in the call to action for individuals to do so on the Stop HS2 website, reproduced in Figure 8.4. Although there is no expectation to appear before the Committee, those that submitted evidence in this way were clearly keen to engage in the process and contribute to the proceedings. In doing so they make a contribution to the documentary record.

Figure 8.4: The Stop HS2 campaign call to submit evidence to the High Speed Rail (Preparation) Bill Committee. *Source: http://stophs2.org/news/8944-submit-views-paving-bill-Committee.*

Written evidence is taken into account by the Committee but the ability to defend, expand or counter arguments made against a position that is proposed and submitted as written evidence is clearly limited compared to the dialogue that can be pursued through the presentation of oral evidence and available to those called to appear as witnesses. This disadvantage is reflected in some of the submissions that detail the experience of the writer and their expertise in High Speed Rail, possibly to give more weight to their evidence.

In particular, the extracts from the written submissions of Dr Paul Hoad and BiblioFox Research, shown in Figure 8.5, explicitly declare themselves as having relevant experience respectively in transport and research.

Written evidence from Dr Paul Hoad (HSR 02)

1. BACKGROUND

1.1. *Introduction*

1.1.1. This paper has been written by Dr Paul Hoad who has 16 years' experience in Transport Modelling and Planning. Dr Hoad has worked on a wide range of transport projects, in the UK, East Asia and the Gulf, including the economic and financial assessment of transport schemes. This experience has included "hands on" computer modelling of schemes, the management of planning projects and the critical review of other consultants' work

1.1.2. Having undertaken and scrutinised studies of a similar nature (although admittedly smaller) to the HS2 scheme I consider that the study as currently being progressed has numerous errors and does not present value for money for the country. However given the remit of the Scrutiny Committee it is not my intention in this paper to present my detailed arguments over the errors made by the HS2 study.

Written evidence from BiblioFox Research (HSR 18)

1. BiblioFox Research is a research consultancy established in 2000. We specialise in document-based research and archival research and have recently been investigating the implications of the HS2 business case for existing intercity services on the West Coast, East Coast and Midland Main Lines.

Figure 8.5: Extracts from written evidence submitted to the Public Bill Committee showing claims to previous experience in transport and HSR. HoC PBC (Bill 010) 2013 – 2014 p.8 and p.43

In both cases these submissions did not lead to their authors being invited to appear as witnesses before the Committee.

8.2.4 Conclusion: implication, participation and consultation

The representation of the different actors involved in the Committee stage of the High Speed Rail (Preparation) Bill, as shown in Figure 8.3, is extended in Figure 8.6 below. This illustrates which types of actors continue to be positioned at the centre of the process, which are engaged in the proceedings, and which are left out. A number of the implicated actors originally identified in the Second Reading are shown in closer proximity to the proceedings where they have become engaged in a more direct participatory role from implicated to active. This engagement with various stakeholders brings together a range of different perspectives into the debate from those involved in its development, with expertise in the field, or who will be affected by the project or expected to use it.

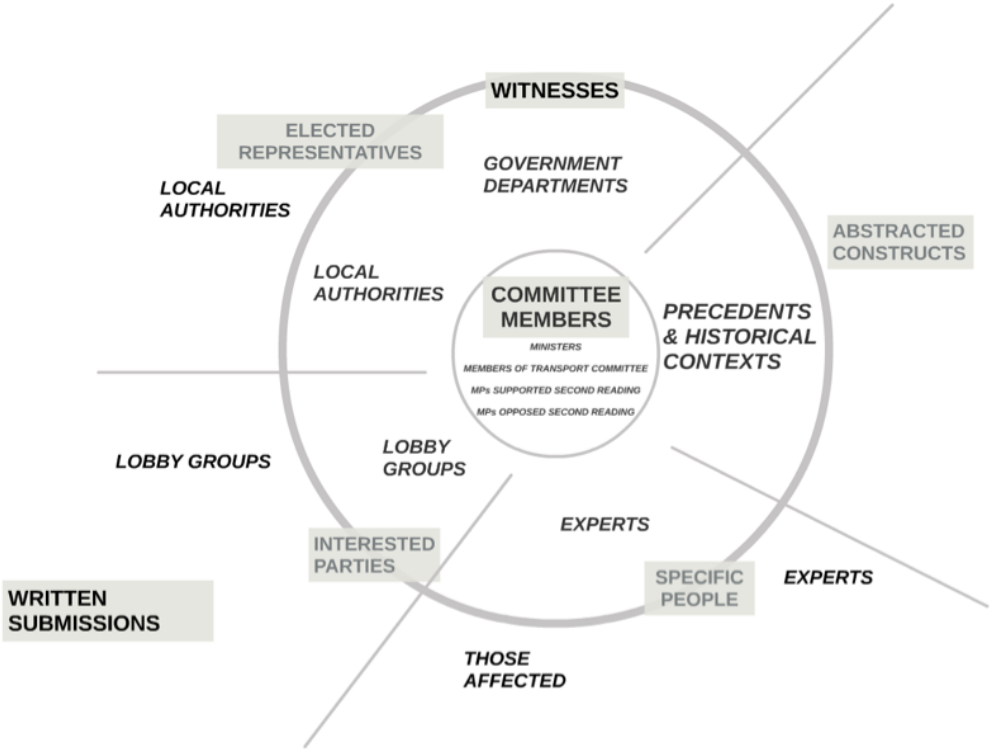

Figure 8.6: The High Speed Rail (Preparation) Public Bill Committee showing categories of participants with decreasing level of contribution represented by distance from centre. The full list of participants who make up the categories shown here can be viewed online at https://prezi.com/4k3puknunmf/ministers-and-shadow-ministers/

The Committee stage of the Bill is a divergent process which has fewer participants than a full debate but those participants are drawn from a more diverse range of groups and individuals. This diversity includes a balance of supporters and opponents to the Bill who are drawn from outside of Parliament. However, the progress of the Committee meetings, including the selection of who is able to attend and therefore have privileged access to the decision-making process, remains in the control of the majority Government.

In comparison with a design process, the Committee meetings operate as a form of consultation that allows the designers to test out their ideas on a wider range of participants than were present in the previous meeting. At the point where a design team recognise the need for additional input it is necessary for that team to identify what inputs are required and who is needed to provide it. The earlier meeting, the Second Reading, operates as a brainstorming session that generate candidates, in the form of implicated actors, who might be called in to actively contribute to the Committee stage.

The next section undertakes a comparison of the actors between the two stages of the debate. This follows the actors from one stage to the next and identifies those that remain engaged in the process and the function they perform within it.

8.3 Moving from one stage to the next

This section uses the two assemblages constructed in this and the previous chapter to compare the two stages in the debate they represent. The two assemblages are shown, in simplified versions below in Figure 8.7. The structural and temporal relationship between the formal parliamentary process, a general view of the design process and the methodological construct of the assemblage have been brought together in this figure.

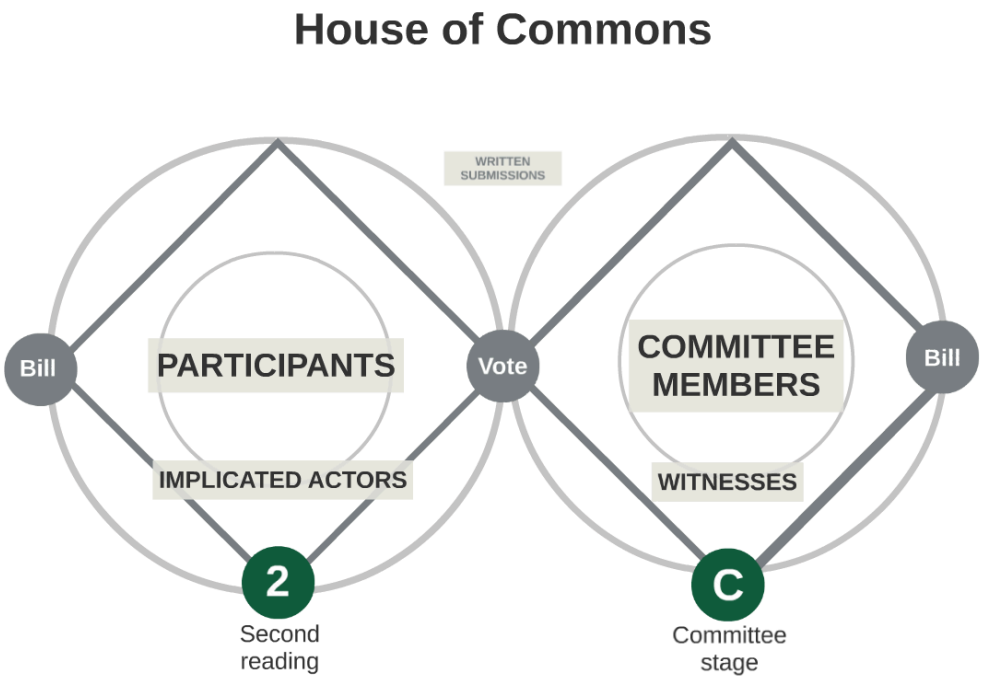

Figure 8.7: The parliamentary process as a model of convergence and divergence shown with a simplified version of the two assemblages constructed in this thesis.

8.3.1 Persistence of actors from stage to stage

Compared with the implicated actors identified in the Second Reading, the role of witnesses introduced into the Committee stage represents a more direct engagement for those actors with the parliamentary process. This is centred around the core team of Ministers who are responsible for promoting the Bill. That core team take responsibility for the ideas behind the project, present it to the wider audience of Parliament and then review the feedback from this audience for possible incorporation into its next iteration.

Looking progressively outwards from that core, the participants become an increasingly disparate, but still important, group of actors who have been brought into the process. These actors help the core team to navigate the Bill through the necessary stages of the democratic process of legislation and move the project forwards. This movement was achieved in the Second Reading through MPs

various levels of contribution and interactions with each other in the physical space of the Chamber and their invocation of a virtual group of implicated actors. In the Committee stage, parts of this virtual group are made concrete through the introduction of witnesses and evidence into the process. In doing this the relationship between the core team, the Bill, the witnesses and the parliamentary space is made evident.

The notion of the assemblage, and the diagrams to represent them, was developed above as a way of acknowledging the different actors involved. The next section compares the two diagrams and examines which actors can be traced from one to the next.

8.3.2 The two assemblages

The two assemblages of the Second Reading and the Committee stage are reproduced below in Figure 8.8. This offers a direct and visual comparison between the actors involved in each stage.

A number of persistent groups of actors are carried forward from the Second Reading. These are mostly drawn from the groups of elected representatives and the civil servants they employ, and of interested parties, primarily represented by lobby groups of one kind or another. Some are identifiable individuals, the reappearance of the director general of HS2 Ltd, David Prout is a notable example, but the majority of the persistent actors are more general representatives of groups. There is a tendency towards groups rather than individuals being selected to give evidence: this was particularly clear from the number of written submissions made by opponents to the Bill where the views of a number of individual submissions were assimilated into the appearance of two representative lobby groups (StopHS2 and HS2 Alliance).

The various groups seen here would expect, and be expected, to be involved throughout the process, as they represent relevant groups of interested parties. This includes local politicians who are democratically accountable to the regions affected by the project and represent the regional and city councils who support the Bill; the residents and landowners who oppose it; and those who have the most relevant experience in the development of a large rail infrastructure project, such as the Government departments involved.

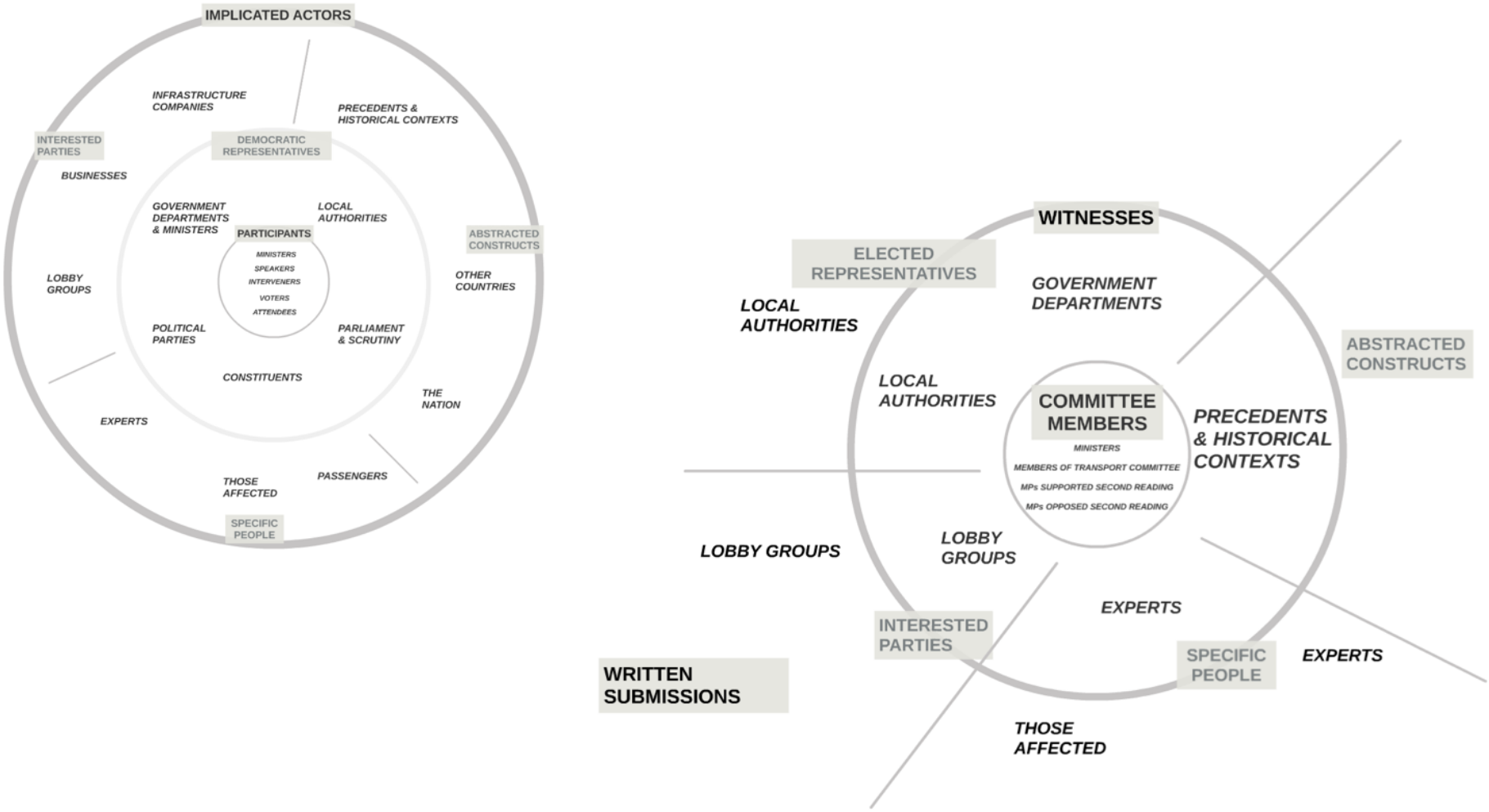

Figure 8.8: The assemblages of the Second Reading debate (left) and of the Committee stage (right) showing some groups of implicated actors moving into a participatory role and others left out of the process as it moves from one stage to the next.

The Committee calls upon witnesses to give further account of the issues that were speculatively raised during the Second Reading. They collect evidence to support their arguments, either as supporting the case for the railway, or questioning the need for it, or by providing more details of the impact it will have. The Committee stage provides this opportunity to call upon witnesses with relevant experience or recognised expertise, producing evidence which can then be referred to in subsequent debate. There are additionally a number of categories of actors from the Second Reading who might also be thought of as relevant but who are noticeably absent in the Committee stage.

8.3.3 Specific actors are represented by affiliated groups

Individuals affected by the Bill were called upon throughout the Second Reading as implicated actors deserving of specific attention but many of these were not called to present evidence to the subsequent Public Bill Committee. This is pragmatic: it is not feasible for a large number of individuals to appear in a small number of sessions and there would, in any case, be additional consultation stages during the future planning and development of the project. These wider consultations, for example a series of "roadshows" which seek to explain the project to the residents along its route, would not be documented in the same detail as that provided here nor do they form part of the legislative process of the Bill. A separate committee would also be set up to hear the objections of those residents as part of the more detailed High Speed Rail (London-West Midlands) Bill which took place after the Preparation Bill was approved but was not scheduled at the time this thesis was underway[78].

Some categories of actors: the "people", the various towns and communities, and the more abstract collectives of "nation" and "country", who were implicated in the Second Reading, continued to be represented in the Committee proceedings even if they didn't appear in the room. This representation is provided through the attendance of others, by the grass roots lobby groups who do appear and by the backbench MPs whose constituencies are affected who sit on the Committee. Specific individuals from important groups of actors who were absent from the Committee room were therefore represented by others from affiliated or related groups, who share or approximate their point of view on the proposals contained in the Bill.

Businesses were specifically referred to in the Second Reading, particularly where they might lose their premises or win construction contracts for HS2 or where infrastructure and transport providers were used as examples of good, or bad, practice. In Committee few of these implicated businesses were directly involved in the proceedings but, in the same way that affected individuals were represented by proxies, some business interests were represented by members of lobby groups such as the Chamber of Commerce, Rail Freight Group and the Institute of Civil Engineers. The exception to this, and which brings into the Committee the otherwise missing category of the infrastructure companies that were implicated in the Second Reading, is the appearance of

[78] This separate committee has subsequently concluded after 160 days of sittings and almost 1600 witnesses. The work undertaken in this thesis could be viewed as a pilot study for this larger scale version.

witnesses from Crossrail, HS1 and Network Rail. However, these infrastructure providers appear as Government departments with experience in infrastructure development rather than as individual businesses who might be affected by the project.

There is a fluidity about this representation of specific individuals and groups which can be compared with the fluidity of the debating chamber seen in section 7.2 where MPs arrive and leave during the course of the debate. Those fluctuations in attendance were facilitated by the conventions of parliamentary practice, the physical layout of the chamber and the way that MPs chose to interact with it. The choice to attend the debate was made by the individual MP and the structure of the parliamentary process and the conventions of the main chamber supports their discretion to appear in the main chamber and to represent their constituents or their party. In the main chamber there is a tacit acceptance that the presence or absence of an individual participant at a given time may have no appreciable effect on the proceedings - attendance is neither mandatory nor necessarily expected. Participants might make a contribution that will be recorded but it is the vote taken at the end of the session that determines whether the Bill is approved and the process continues. Although MPs may choose whether or not to contribute to the debate their attendance and decision at the voting stage is generally constrained by their party and its whips.

All participants in the Committee stage appear by invitation from the programming sub-Committee. This small delegation of MPs, dominated by the same party whips who manage the votes in the main chamber, controls who will appear in the room and therefore which perspectives will be formally represented from one stage to the next. The shift from implication to participation and the fluidity of actors between the two stages of Second Reading and Committee is thereby carefully controlled. Some individual's perspectives may be brought into a collective focus through their representative groups while others may be excluded and this process, as with the selection of Committee members, remains undocumented in the Public Bill Committee process. This lack of information represents a gap in the parliamentary record which has otherwise in this thesis provided an exemplary amount of data to support the analysis of the stages studied.

In the comparison between the two group of actors illustrated in Figure 8.8, there are two groups in addition to those noted above which can be seen to have directly moved from a position of implicated outsider to one of active participation inside the Committee room. These two categories, of "expert" (along with the expertise that this implies) and "precedents" have particular relevance in design and for this reason are discussed below in relation to how they appear in the debate and the subsequent Committee meetings.

8.3.4 Expertise

The notion of expertise in the design process is recognised through design literatures as a relevant factor both in terms of the professional practice of an individual designer and of the likelihood of success of the design process in which they are engaged.

Expertise in MPs can be considered in a number of ways. It might be measured in terms of their ability to be re-elected to the House of Commons or, while they are there, in their ability to be promoted through the backbenches to a Ministerial position. One manifestation of this political expertise can be seen in the debating chamber where, for example, the Secretary of State for Transport retains control of the debate and maintains the direction in which it proceeds (as shown in section 5.2 above). But there are numerous backstage activities that might also be considered part of this process of acquiring political expertise and progressing from, what Lawson and Dorst (2009) refer to in their categorisation of design expertise, novice to visionary[79].

Expertise on the specific subject being debated, for example high speed rail or transport, is not as consistently apparent than this more generalised political skillset. Arguably, an individual politician's ability to quickly acquire expertise on a given subject might be seen as a measure of their political expertise. However, the transient nature of this knowledge and those who hold it is seen to be problematic in the exchange shown in Excerpt 8.9 between the Secretary of State for Transport and his Opposition counterpart during the Second Reading of the Preparation Bill.

There was no implication of a lack of expertise from either contributor about each other. However, the reference to an apparently efficient Labour predecessor Lord Adonis (E8.9:667), who was widely credited with initiating the HS2 project, the revolving door of the Ministerial offices leading to a lack of continuity between successive Ministers (E8.9: 670), and the hope to maintain continuity in the future (E8.9: 672), all suggest that a long term of office is seen to be a measure of a politician's effectiveness, and of a Government's ability to drive a project forwards.

[79] see Crewe, 2015:118 for examples of this, where MPs prospects are reviewed in terms of how well they perform within the political hierarchy of their parliamentary party

661 26 Jun 2013 : Column 350
662 **Maria Eagle:** My goodness, I find myself in total agreement with the hon.
663 Gentleman.
664 Despite the importance of this project, there has been a real lack of drive from
665 Ministers - I am not necessarily talking about the Secretary of State - in taking the
666 decisions and delivering the action needed to make it a reality. The former Labour
667 Transport Secretary, Lord Adonis, set up HS2 Ltd as long ago as 2009. By August
668 of the same year, he had already confirmed plans for a new north-south rail line
669 because he was a high-speed Secretary of State. Nothing has moved anywhere
670 near as fast at the Department for Transport since he left, except the revolving
671 door that has meant I am facing my third Transport Secretary since the election.
672 I hope very much that the Government reshuffle that is rumoured to be on the
673 cards does not deliver yet another change. I am sure that the right hon.
674 Gentleman will agree with me on that.
675 **Mr McLoughlin:** I hear what the hon. Lady says, but she should look at the
676 average length of service of Labour Secretaries of State for Transport - they were
677 also fairly rapid through those doors.
678 **Maria Eagle:** It is starting to worry me, when I contemplate my political future,
679 that the average length across the parties of Secretaries of State for Transport
680 appears to be somewhat on the short side. I hope that the right hon. Gentleman,
681 while his Government are still in office, and I can increase the average length of
682 time served.

Excerpt 8.9: The transient nature of political appointments is discussed during the Second Reading. A succession of transport minsters implies that the continuity needed to drive an important project is lacking. HoC 2013:col 350

Other participants in the debate call upon their own expertise in transport, rail and high speed rail by referring to their membership of the Transport Select Committee which is used to give their contributions authority.

1229 **Iain Stewart (Milton Keynes South) (Con):** It is always a great pleasure to
1230 follow the hon. Member for Liverpool, Riverside (Mrs Ellman), the Chairman of the
1231 Transport Committee. I have had the privilege of serving on the Committee for
1232 more than three years now. I have studied this subject not only through my
1233 Committee work, but through other personal research and I do not think I have
1234 studied any subject in more depth. I will try to put concisely my observations on
1235 the project in the next few minutes.

Excerpt 8.10: Reference is made to a participant's expertise gained from serving on the Transport Select Committee and personal research into the subject of the debate. HoC 2013:col 362

In the excerpt above Iain Stewart's three years on that Committee was used to qualify his own personal interest in High Speed Rail. This establishment of credentials is similar to that seen in the introduction to written submissions in section 8.2.3. This participant's reference having not "studied any subject in more depth" suggests that he regarded his specialist knowledge as a valuable asset to the debate and to provide rhetorical ethos to the observations he will make.

Membership of the Transport Select Committee was recognised by another MP during their contribution to the debate and, as seen above in section 7.1, was also relevant in the selection of MPs onto the Public Bill Committee where six members of the Public Bill Committee (including Iain Stewart) had also been members of the Transport Select Committee.[80] This awareness of their own expertise within the debate, as seen in the examples above and in those who submitted written evidence seen in section 8.2.3, parallels the recognition of expertise in professional design practitioners made by Schön.

As the debate proceeded, these individuals call upon the specialist knowledge that their expertise brings to the debate. Iain Stewart, following on from the contribution above, concluded, in Excerpt 8.11 below, that the proposed solution of a high speed railway line proposed in the Bill is the correct one.

1256 term. I have come to the conclusion from all my research, and from looking at all
1257 the projects and models that have been proposed, that we need to build a new
1258 north-south strategic rail line.

Excerpt 8.11: A participant's expertise is used to justify the solution of a new railway line proposed in the Bill HoC 2013:col 362

Another member of the Transport Select Committee drew upon his Committee experience to bring his "perception, understanding [and] analysis" to the debate.

This expertise was used to confirm the perceived value of high speed rail as seen by the Transport Select Committee on field trips to other countries where "everyone we met" (E8.12: 2239) was firmly in favour of the development of high speed rail networks.

2235 We have not had any real perception, understanding or analysis in the debate of
2236 what high-speed rail has meant for our partner countries in Europe. I am a
2237 member of the Select Committee on Transport and we went to France and to
2238 Germany. Nobody in those countries is suggesting that they should close down
2239 their high-speed routes. Indeed, everyone we met, from local residents to other
2240 stakeholders, Government people and business people, was determined to
2241 expand the network.

Excerpt 8.12: Expertise gained by another member of the Transport Select Committee is called upon to support the proposal for HS2. HoC 2013:col 384

The value of this expertise is not universally recognised, for example by one of the opponents to the Bill who refers to the same field trips as a "pilgrimages around the European Union" (8.13:2255):

[80] This potential build-up of expertise generated by the enrolment of members with experience relevant to the debate counters a general criticism of the PBC system, which argues that expertise is wasted in a system of single issues Committees that are created in an ad hoc basis and then disbanded when consideration of its Bill is concluded (Russell, Morris & Larkin, 2013).

2255 **Mr Cash:** In his pilgrimages around the European Union, did my hon. Friend have
2256 the opportunity to speak to the citizens of Lyon and see whether they were as
2257 enthusiastic as he is about high-speed rail? I hear something quite different.

Excerpt 8.13: The expertise of the Transport Committee is questioned as being selective and undertaken on a religious rather than rigorous basis. HoC 2013:col 385

The religious terminology used by this participant alongside his questioning of the conclusions drawn implies that the Select Committee might have exercised faith rather than rigour in their collection of evidence. Exchanges of this nature, where contradictory claims and counter claims are made, are commonplace in parliamentary debate. They are in some ways encouraged by conventions, such as parliamentary privilege, which protects participants from legal action against statements they might make, and also by etiquette which prevents MPs from suggesting that others are not telling the truth[81].

As the debate continued, and as claims and counter claims were made about the evidence reported by participants, the demonstration of political expertise combines with expertise in transport policy. This underlines the political context of the situation within which participants are working and the relationship between their expertise on the one hand in political debate and on the other in the subject being debated. A parallel with the designer emerges who is on one hand supposed to be capable of generating creative and appropriate solutions but at the same time is expected to adopt or assumes knowledge in the specific area in which the problem is presented. That process is clearly documented by Dorst in his frame creation model, as illustrated in Figure 2.8 above.

8.3.5 Experts: implicated and invited

Participants who do not claim to have expertise of their own call upon the expertise of others. In the Second Reading, these were categorised as “experts” in the typology of implicated actors outlined above in section 7.4. During the Second Reading two expert witnesses were implicated in the debate with opposing views on the HS2 project, one supporting claims made for the regional benefits to North Wales and the other suggesting that London would receive the main benefits.

2471 rail that runs direct to London. Even the experts are questioning the proposals.
2472 Professor Mackie of the University of Leeds has said:
2473 "For various reasons HS2 is rather unlikely to make much difference to the north-
2474 south divide. A spatial analysis would probably show London to be the main
2475 benefiting region".
...

[81] The acceptance of this potential or perceived lack of integrity of participants in parliamentary proceedings when called upon to give evidence is illustrated in a report published by one Committee that, having found clearly contradictory statements being presented as evidence that “we do not attempt to judge which of this is the correct account, but it seems impossible that both should be correct”. (HC303 Eighth Report of the Public Administration Committee, 2002).

2529 26 Jun 2013 : Column 391
2530 area of north Wales, although it is not directly on the line. I am delighted that
2531 such eminent Welsh experts as Professor Stuart Cole of the university of
2532 Glamorgan are pointing to the real benefits to Wales in terms of inward
2533 investment due to speedier connections and greater capacity.

Excerpt 8.13: Two experts, with conflicting opinions, are implicated in the Second Reading debate. HoC 2013:col 389 and col 391

The individuals referred to, as with all implicated actors to whom such views are ascribed, were not available to be subjected to scrutiny or further question until the Committee stage where they may then be called upon to give their evidence in person. However, the two academic experts invited to attend and give evidence before the Committee are not the same two referred to in the Second Reading debate. This underlines the fluid approach to the identity of individuals involved: the absence and presence of different participants that contribute to the assemblage of actors.

Professor Tomaney, the first of the two experts called to appear, is described by another witness as "probably one of the best experts on high-speed rail"[82]. In his evidence he suggests that HS2 would not, as the Government claimed, rebalance the economy of the country in favour of the northern regions but would instead benefit London and the south[83]. He proposed that the money spent on the high speed line would create targeted benefits in those regions if it were spent on the development of more localised, intra-regional rather than inter-regional, infrastructure projects. In contrast Professor Hall presents a more supportive account of HSR, describing his "damascene conversion over the years in favour of high-speed"[84]. In the context of the presentation of evidence in support of a carefully argued case and when used as a personal reflection rather than an inter-personal criticism, the use of such religious terminology appears less questionable or value-ridden than when used in the rhetorical exchanges of the main chamber.

Professor Hall went on to qualify his support of the project by suggesting that it would only deliver benefits if it were supported by additional investment in the development of the kind of intra-regional connections advocated by Professor Tomaney. The main high-speed line was then described by Hall as a form of "irrigation" (Excerpt 8.14). Such irrigation which if properly constructed would, the witness claims, reach into the centre of the regions that it connects together, and also would be connected into the surrounding districts by local metro or light rail systems.

[82] HoC Public Bill Committee, 11 July 2013:col 48

[83] HoC Public Bill Committee, 11 July 2013:col 33

[84] HoC Public Bill Committee, 11 July 2013:col 103

4591 ***Professor Hall:*** That is not merely fair but the key conclusion from the
4592 research. I choose my words carefully here, because this becomes
4593 somewhat political. If somebody at a regional level has both the will and
4594 the financial means to do this, then you can cause a high-speed line to
4595 irrigate the region. That is a wonderful French term that we have been
4596 recently using in a conference in Manchester. It is essential to take those
4597 additional measures, and they will cost money.

Excerpt 8.14: High Speed Rail is proposed as a form of irrigation by an expert witness. HoC Public Bill Committee, 11 July 2013:col 102

This agricultural metaphor, of the railway as an irrigation system, reflects the description of the London and Birmingham Railway as a form of fertilisation (see section 5.1.7). In the nineteenth century debate the railway was seen as a way of monetising the products that were grown on the landowners' property whereas in the 21st century the high speed railway is presented as a way of monetising the people that can be carried along it. This view was also seen earlier, in section 5.2.5, where the use of Government subsidy for the railway was justified by the Minister because it was a way of helping people to get to work. Both demonstrate the fundamental economic arguments behind the project in question and demonstrate an historically situated view of what is seen by participants to be important to the growth of the respective economies of the time.

Both experts in the Public Bill Committee call upon a separate evidence base to that produced by the Government and its departments. Professor Hall refers to his own study of the French TGV system and Professor Tomaney to his study of the development of HSR in Spain and Japan. The relevance of this evidence to the HS2 project is drawn out through the questions put to the witnesses. Their physical presence and participation allows the Committee to build up further examples to support their case for, or against, the Bill. An integral element of this evidence, used by these expert witnesses as a matter of course, is the reference to precedents where previous examples of HSR are called upon to inform the present debate.

8.3.6 Precedents

In the Second Reading participants called upon precedents as a way of constructing virtual prototypes that allowed them to share their visualisations of the proposed solutions and to debate the issues raised by doing so (see Chapter 6). In the Committee stage these prototypes, while still not physically present, were represented by members of the organisations who had constructed them. These witnesses represent a direct link between what might be referred to in the debate as an abstract and non-human actor. A large infrastructure project like Crossrail is represented in the committee room through the concrete presence of a human actor who takes responsibility for the agency that was previously, in the Second Reading, accorded to the project. This relationship between concrete and abstract and between implicated and active marks the movement between the stages of the debate and also signifies where design and ANT, as adopted in this thesis, intersect.

Much of the expert evidence provided to the Committee refers to HSR projects in other countries but the Committee didn't call upon witnesses from representatives of those countries. Instead the experiences of two of the most recent and major infrastructure projects undertaken in the UK formed the basis of an evidence session, described by one of the Committee members as being "all about lessons learnt from previous projects."[85]

Two of these lessons were provided by HS1 and Crossrail. HS1 Ltd, also referred to in the Second Reading as Eurotunnel, was responsible for building what, at the time of the HS2 debate, was the only stretch of comparable high speed railway line in the country[86]. Crossrail, described as Europe's largest infrastructure project that would link east and west London with a new underground railway tunnel, was still under construction at the time of the Public Bill Committee.

The experience of planning and building these projects, including the selection of the route, the impact on properties along the route, the mitigation measures employed to reduce noise and the economic benefits and dis-benefits of the line, were all called into the Second Reading debate, often by either the Minister or by MPs whose constituencies were affected. The presence of witnesses from these projects in the Committee room provided an opportunity for members to more directly engage with the issues from the perspective of those who were responsible for dealing with them.

In Committee these witnesses were questioned about how they dealt with specific issues during the building of their projects. These questions performed three functions. Firstly, the Committee members called upon the experience of the witnesses to provide to support their decision on the HS2 proposal: to make their earlier debate prototypes more concrete. Secondly they use their time with the witnesses to impress upon them the value of the direct transfer of the knowledge gained by their experiences: HS2 should learn from the experience and expertise of HS1 and Crossrail. Thirdly, the HS2 project at the time of the PBC witness sessions was due to physically connect with both HS1 (via an existing rail link that runs around north London) and Crossrail (at a proposed interchange in west London). These points of contact, literally where the rails of the respective projects would meet, provided an opportunity for a series of questions about the ability of HS2 to work with other organisations and its general competence in the field.

Both the experts and precedents seen here perform a common function that draws the past into the present in the same way as the precedents examined in Chapter 5. The difference in Committee is that this past experience is now physically embodied in the room through the person or representative of the actor involved rather than through the virtual constructions that were necessary to bring them, implicated, into the debate in the main chamber.

[85] HoC Public Bill Committee, 11 July 2013, col 131

[86] Reference to this project across the wider parliamentary discourse was noted in Chapter 4.

These witnesses are recognised as experts in their respective fields who drew upon their study of previous projects and how these had been seen to solve the problems they were intended to address. The precedents drew upon expertise gained in their experience of previous, or still current, UK rail projects that had been developed as similar kinds of solutions to similar kinds of problems.

8.3.7 Conclusion: implication and participation in the parliamentary context

The Committee brings implicated actors into an active role of participation. The activity is centred around a core team of supporters of the Bill led by the Minister whose Government majority is built into the Committee structure. Other actors who are invited to participate include other aspects of the democratic process such as local authorities affected by the Bill and lobby groups who seek to increase or decrease those affects. Experts and precedents, which can be thought of as having specific design equivalents, are another group of actors that are seen to persist from the debate to the Committee stage and are therefore given a more active role.

The persistence of actors from one stage of the HS2 debate to the next are filtered through a number of aspects of the parliamentary context:

- the voting system that elects MPs as participants;
- the party structures that promotes MPs to be whips;
- the whips and party manager who select Committee members;
- the sub-Committee who select the witnesses;
- the structure outside of Parliament, such as lobby groups and businesses, that have brought participants into the position where they are deemed to be capable of performing the functions required of them.

These aspects of the parliamentary process present a wider context in which the debate takes place. Specific instances of these aspects can be identified and represented in concentric circles of participation. The construction of this representation for separate stages of the Bill provides a comparative tool which, in this section, has been used to identify experts, expertise and precedents as elements that are seen to persist from one stage to the next.

In a parliamentary context, where the record is detailed and the structure relatively transparent, these various aspects are easily identifiable. Moreover, where there is a lack of information available and where these influences are not clear, such as that relating to the process of selection of Committee members and Committee witnesses, this absence of information, in contrast to the amount of other data available, is clearly noticeable.

In a design studies context, where researchers must actively engage in the creation of data, or where design meetings are less formal and structures less rigid, it is possible that the lack of this kind of information may not be apparent. In this design studies context attention must also be diverted towards pragmatic issues around the collection of data or the identification or qualification

of formal elements such as turn taking or rhetoric which are, in the parliamentary context, as seen in many of the examples in this thesis, clearly exposed.

8.4 Conclusions

In the Second Reading of the High Speed Rail (Preparation) Bill the conventions of parliamentary exchanges and the formal structure of the proceedings was shown, in Chapter 5, to constrain the ability of participants to develop and maintain radical frames that might be used to bring new perspectives into the debate. This allowed the Minister to retain his control of the flow of the debate towards its intended aim of supporting the Government's proposals. In the comparison between the Second Reading and the Committee sessions undertaken in this chapter, these constraints are found to persist in the subsequent stage: the range of perspectives drawn into the debate are limited by the formal procedures that exist for the selecting of Committee members and of the witnesses who will appear before them. Even where there is a semblance of balance between supporters (who would be expected to maintain the normative flow towards acceptance of the Bill) and opponents (who might be expected to attempt to reframe the debate in such a way that might in some ways deflect, if not derail it), there are controls exercised by the Government, the Minister and by the Chair that constrain this potential. This process limits both who can participate in the proceedings and the contributions they can make. These constraints on participation are also present in design contexts. The method adopted here of identifying the different participants and following them through the parliamentary process has rendered the constraints clearly visible. The parliamentary record makes these constraints visible in a way that may not be so accessible in a design context.

These constraints affect who can be enrolled into the proceedings, which perspectives are represented at which points and therefore what effect these various actors might have on the progress and outcomes of the Bill. In the Second Reading this was potentially less critical to the development of the debate since the constituent parts, as constructed and illustrated in Chapter 7, were drawn from a wide source of elected MPs who could in turn call upon an unlimited set of implicated actors. That group of implicated actors who were brought into the debate was, through its virtual nature, easily extended and the perspectives of this collective but disparate membership were readily assimilated into the debate and into the representation of the debate as an assemblage.

When the debate moved into the next stage in the Committee room some of those implicated actors became invited participants. At the point at which they are physically present in the room the virtual, imagined contributions called upon in the Second Reading become concrete and interactive. They can be questioned and their response scrutinised, allowing their perspective on the Bill to be made more explicit and available for future reference. Further, the whole of the proceedings are recorded and can be referred to in subsequent debates within Parliament and in subsequent analysis undertaken elsewhere. In this respect, the stakes are somewhat higher and

this is recognised in the way that the proceedings are organised around the controlling interest of the Chair and the Minister.

The presence and absence of different MPs in the debating chamber of the House of Commons was shown, in Chapter 7, to fluctuate through the course of the debate as they arrived and departed according to their commitment to the debate, to their need to contribute to it or to their other commitments in their daily schedule. In the main debate, these fluctuations are minor variations on the overall assemblage that leads up to the vote. In the Committee room there is less fluctuation. This chapter has shown how the members of the Committee are fixed and their direction is controlled by the Shadow Minister and Government Minister responsible for the Bill. The only fluctuation in participation occurs between the witnesses who arrive and leave according to the determination of the programming subcommittee and any additional control from the Chair.

By making this detailed review of participation from the debate to the Committee room, it becomes clearer who is engaged in the process, what perspectives they bring to it and what impact they might have on it. This exploration of who is the designer and what is being designed provides a view of a majority Government that is clearly in control of the design process. This process is embodied in a piece of legislation which represents both a railway that, as envisioned, will link up specific cities but also carries with it a view of a country, the UK, as a single nation and a selected view of that country's population as a group of democratically and economically active citizens.

As the assemblage of the Committee is constructed it places the Government Minister and the party whips at the centre of a design process which follows the conventions and protocols evolved over the history of the UK parliamentary process. In identifying how these participants are selected, it has become apparent that the process of selection, both of the Committee members and its witnesses, is not transparent. This lack of transparency makes it necessary to make some assumptions about bias within the Committee based on the allegiances of individual members and the actions of the central figures such as the Minister and the Chair.

The results of this comparison between how the Committee operates in relation to the preceding debate, and the recognition of the assumptions that have to be made when doing so, reflect a similar area of inquiry being undertaken in the field of political science. The credibility and integrity of Public Bill Committees has been recently questioned by academics who claim that "the scrutiny of bills is arguably where the House of Commons is at its weakest - and the Committee stage is central to that weakness" (Russell, Morris & Larkin, 2013:3). This thesis, although taking a different, design approach to the debate confirms this weakness. However, the amount of data that is available from the transcripts of the meetings and the information that can be sourced relating to the individuals and the procedures involved, when compared to the amount of data usually recorded in studies of more conventional design processes, provides a reasonably solid background from which assumptions can, if required, be drawn.

This chapter also confirms the importance of the contribution made by the witnesses called to give evidence which is used to validate MPs views and to demonstrate a broader level of representation and consultation. The process of consultation and its attendant additional level of participation, which is taken for granted in design literatures, has only been incorporated into the scrutiny of public bills since 2007 when the system of Public Bill Committees replaced the previous system of Standing Committees. The key innovation of this change was the creation of additional powers for the Committee to take oral and written evidence (Russell, Morris & Larkin, 2013:13). This kind of innovation of the parliamentary process itself has not been the subject of design interventions such as PolicyLab. Such interventions have instead been concerned with reviewing and advising how designers and design thinking can assist with the making of policy rather than the infrastructure with which those policies are constructed.

The broader range of active participants engaged with the Committee stage allows some of the implicated actors from the previous debate to adopt a more active role of witness in the ongoing proceedings. However, the selection of these witnesses, the selection of the Committee they appear before, and the conventions that determine how they might be questioned remains embedded within a controlled and constraining environment. This environment reduces the range of the perspectives that can brought into the debate and the scope that those perspectives might then have on the development of the debate and the potential success of the project it describes.

In common with conclusions drawn in previous chapters the parliamentary process, and those who participate in it, share some characteristics of designing and designers. The recognition of prior experience and references made to previous projects that inform the progress of the current project have been observed through the contributions made during the Committee sessions examined above. The drawing upon a wider pool of experience and expertise that offers a different way of looking at the issues involved, a shift in perspective, is also present as is a reflective process of self identification with the team. These observations are facilitated by the exploration of a putative design team in the parliamentary debate, the drawing together of the various groups of actors found into an assemblage that centres around the Bill, and then the migration of that assemblage of actors which can be formed and followed as the Bill passes from one stage to the next.

Different kinds of contribution and different levels of participation are tracked in the process of doing this. A striking result of this exploration, described in Chapter 4 as the constraining of the radical frames, is the selective and sometimes opaque process by which actors become participants. Although this process can be opaque it is, through the availability of extensive documentary sources, clearly seen as such. This clarity is not necessarily apparent in documents generated in conventional design situations.

The Bill emerges from this analysis as an explicit statement or design objective of the Government to build a railway line that connects together cities and regenerates the regions around them. It functions as an object that can be used to manipulate the way that the present unfolds as seen by the Ministers isolation of two words and the MPs reuse of those words in the Third Reading. It also

provides a vision of the future, both explicitly in terms of a new railway line but also implicitly in terms of how future debates about how the new line might be extended. It is both the product of the debate and the means of facilitating that debate.

A recurrent theme of this, and previous chapters is the quality and quantity of the archival material that is generated by Parliament as it proceeds through its formal structures. If, as this thesis has done, the parliamentary process is considered to be a design process, and a number of connections have been made that affirm this view, then this archive of parliamentary meetings and debates provides an unparalleled source of data with which to study design, both in the detailed interactions examined in Chapters 5 and 6, but also at the more structural and contextual levels explored in Chapters 7 and 8.

9 Conclusions: A design analysis of parliamentary debate

9.1 Design analysis: a summary of results

This thesis set out on an exploratory route to consider parliamentary debate as a design process and, by extension, how the participants in the parliamentary process might be seen to act as designers and interact as a design team. The study also sought to contribute to more challenging debates, including the scope and function of design studies and about the processes of a parliamentary democracy which has been observed to be transparent, but also disengaged from, the public it serves[87].

These issues were expressed in terms of what this thesis set out to address:

- Identifies aspects of design, as observed in the literature of design studies, which can be used as a way of analysing activities not conventionally considered to be designing.
- Analyses activities observed in parliamentary debate from the perspective of the design activities identified.
- Adopts two scales to approach debate: of the interactions between the individuals involved in the activities and of the context in which the activities take place.
- Considers what insights into these parliamentary activities can be drawn from this design analysis.
- Examines what insights this approach might bring to the study of design.

From the outset it was clear from the literatures that there are a variety of accounts of design and it was therefore necessary to invest time in a decision about what aspects of design should be called upon. The notion of design as a shift in perspective was adopted as the starting point. This was traced from Jones' early multi-disciplinary perspectives through Schön's seminal account of reframing and its subsequent translation into a variety of design interventions. This was augmented with reference to more recent intersections with ANT.

ANT's widely acknowledged relationship between object and agency describes on the one hand what a designer intends of the object they are designing and on the other what the object does as it moves through the environments in which it is placed. This agnostic approach of ANT to human

[87] The lack of voter engagement in the UK has been investigated by the Political and Constitutional Reform Committee in their report *Voter engagement in the UK: follow up* Online at: http://www.publications.parliament.uk/pa/cm201415/cmselect/cmpolcon/938/938.pdf

and non-human actors provided a flexible view of what was important to the study and although this was largely focussed on the human actors involved, the possibility of the Bill, the railway or the parliamentary building would always be open to exploration. This flexibility is also supported by some of the more pragmatic perspectives developed by ANT scholars which provided further contributions to the methodological approach adopted: the following of actors, the description of activities, the use of sensitising terms and the notion of the assemblage provided useful conceptual reference points but were not adopted as methodological straitjackets.

9.1.1 The construction of different versions of a railway

A potential starting point for this exploration may have considered the railway as the design object but in the first study of the LBR this assumption was questioned when the railway was seen to be reframed as an agricultural fertiliser. This process of reframing continued to be observed as the railway became a number of other objects in the service of those who were debating it. These numerous versions of the railway were reframed in examples drawn from the past and reimagined in visions of the future. In its simplest formulation the debate could be seen as a binary pair of “this railway” and “not this railway” which reflects the controversial nature of the debate.

New frames are accompanied by different sets of values. Examples in the debate included a fundamentalist approach to Welsh devolution, a progressive redefining of the tax system or aspects from other infrastructure projects which had prevailed over controversial opposition. The notion of frames as agents of friction and flow was introduced in Chapter 5 as a result of observing the effect of different perspectives introduced by participants. These perspectives were distinguishable by how far they attempted to shift the debate away from the normative version of the railway introduced by the Government in their Bill. The way that the debate proceeded, for example through the etiquette of spoken interventions and the formal taking of turns, appeared to control the extent to which more radical frames, and therefore more radical values, could be introduced into, and allowed to persist through, the debate.

By using the concept of reframing as a way of approaching a debate, it was possible to gain insight into the different perspectives that are introduced**,** different versions of the railway that are created from these perspectives and different values that are propagated in the process. In this analysis, framing operated as a shift in perspective and as such, within the notion of design adopted in this thesis, has been viewed in broad terms as a form of designing.

By following the process of reframing it is possible to identify where and how prior projects are referenced, how different and disparate alternatives are explored and when speculative futures are imagined and created. If we ask, as this thesis does, how might the parliamentary process be viewed as a design process and what does it look like, then the answer lies in these shifts in perspective and the way that parliamentary process supports them.

However, much of this might be established without reference to design. Frame analysis is well established as a method of interpreting political debate (see for examples Benford and Snow,

2000) while Isabela and Norman Fairclough's critical discourse analysis (Fairclough & Fairclough, 2011) provides accounts of Parliament without reference to either framing or design.

9.1.2 Design and framing in the debate

Where design and framing can be found within the same analytical approach, for example in Schön and Rein's study of the German government's pension plans in *Frame Reflection* (1994), this has been used across a wider timeframe and with reference to broader units of analysis than the detailed readings employed in the current study. Schön and Rein saw the creation of frames as a process that might be improved with the development of a designer sensibility, or the intervention of a designer, within the process of policy development. This pre-empts, or perhaps inspires, more recent work that is taking place within the area of policy making, but these two approaches are both primarily concerned with the individuals who are engaged in the process and demonstrate little recognition of the conventions and contexts within which the individuals are bound to operate.

In this parliamentary context the frame analysis undertaken in this thesis provided a method for approaching the debate and in doing so helped to identify features of it. The more persistent frames were those that were aligned with, rather than challenged, the dominant perspective being pursued by the Government. This dominant perspective was seen to be implicitly upheld through the conventions of the debate. The limited scope that these constraints impose upon participants recalls the limited scope of the reframing exercise that Dorst reported when Sydney's late night drinking problem was unsuccessfully reframed as Sydney's late night drinking festival, a limited shift which inherited the problems of the alcohol and failed to solve the problems of the violence which the alcohol induced. There appeared, in the Second Reading of the Bill to be little scope for more radical frames to persist beyond their initial introduction. The structure and conventions of the debate allows the Minister to retain control of the narrative that is followed. This examination of framing begins to address a second of the research questions raised here that asked how a design perspective can support an interpretation of debate.

A type of framing more specifically related to the design process, in the form of precedents, provided a more specific comparison with design and also gave access to some of the values that are carried through the design process by them.

9.1.3 Precedents as a design frame in the debate

The identification of the use of precedents in the debate provided a direct link between the kind of framing already identified in the earlier analysis of parliamentary debate and the kinds of shift in perspective that can be more clearly identifiable as a part of a design process. The identification of precedents in Chapter 6 provided a collection of design perspectives variously relating to the negotiation of problem and solution pairs, incremental design stages, forms of virtual prototyping, mechanisms of identifying the team and how the team members identified with each other. Each of these took the analysis closer to what can be thought of as a design analysis as the participants in the debate were seen to engage in a range of recognisable design activities.

A persistent finding was the continued presence and relevance of the values that were introduced and carried through the debate by the use of precedents. A striking example of this was the invocation for a more feudal approach to urban planning from one participant's reflections on the circumstances that led to the building of the Tower of London. This persistent connection between value and frame is not unexpected, is widely documented in the literature, and is confirmed in this study.

In the context of this study, of looking at debate from a design perspective, the connection between the frames introduced by participants and the underlying values these frames carry with them emphasised the following points:

- the importance of recognising the identity of the individuals involved;
- how they came to be there, and
- how they identified with other individuals in their team.

These points expose the need to identify the individual participants involved and the kind of contribution they make to the process.

9.1.4 Individuals, teams and the construction of the assemblage

Some precedents act as a means of self identification by a team. A more specific examination of this team led to an appreciation of its fluidity as participants arrived and departed through the course of a debate and engaged with it in different ways. These different ways are facilitated through different means: by the general election that puts them there in the first place and provides a mandate for government; by the layout of the chamber that allows free movement around it; by the party political frameworks that determine how they should vote at the end of each debate. The boundaries of team membership become more fluid still as the democratic function of representation is recognised in the explicit relationship between an MP and their constituents who were implicated in the debate if not physically present at it.

Design teams also comprise of different members who are called upon at different times to contribute their particular insights or skills and the relationship between MP and constituent reflects that of the designer and client. There is a distinction of scale in the parliamentary setting, where the team can at any point involve up to 650 active members in the same room and each of these MPs represent thousands of constituents, alongside any other interests they may have in the debate.

The parliamentary team was further extended to include other categories of implicated actors who were referred to during the debate. This extended formulation could accommodate various interests drawn from other contexts including abstract constructs such as "the nation", geo-political entities of competing countries and historical sources that provided expertise from Victorian engineers and other more recent precedents. This array of different perspectives can be viewed as a kind of assemblage constructed by and with the parliamentary environment. The assemblage is a construct of indeterminate membership that forms and reforms during the course of the debate.

9.1.5 The debate as an assemblage

This view of the assemblage is comparable to the view of the user assemblage proposed by Wilkie (2010) or the object assemblages of Kimble (2012) or Yaneva (2009b). As a fluid construct, this view can account for wider categories of actors such as the physical layout of the chamber and the video cameras that record the activities taking place within it. In this way the debate as an assemblage also reflects aspects of actor networks of the design studio explored by Yaneva (2009a) and Mewburn (2009) where the objects and spaces in which design takes place are recognised but without necessarily privileging the actions of the individual designer or the status of human actors. This further underlines the relationship between design and debate posed in the research questions.

By constructing this design assemblage as a visual representation of the debate it was possible to compare it with similarly constructed assemblages from other debates. Making this comparison between one debate and the next provides a means of tracing the different actors involved between each event. In the case of the move from Second Reading to Committee, this sees some of the implicated actors move into an active participatory role. In recognising this move it becomes clear that the controls and constraints that were seen to operate in the earlier debate are also actively engaged through the process of selection, both of elected MPs who sit on the Committee and the witnesses who will appear before them to give evidence.

9.1.6 The construction of evidence and the design of Parliament

The collection of evidence as a function of the Committee hearing was seen as a mechanism by which the information and evidence which are presented as unchallengeable facts by MPs in the main chamber can be tested and verified. This is undertaken in the Committee by reference to third parties: witnesses who are able to draw on more direct experience and more recognisable expertise than might be available to MPs. This stage sees some of the implicated actors brought into a participatory role. The list of witnesses who appear is produced through the application of unknown criteria which leads to the possibility that the evidence they present is predetermined and prefabricated by the programming sub Committee responsible for that list. This construction of evidence appeared on the surface to be an undemocratic process but was also seen to follow the democratic make up of Parliament. Parliament, through the accrual of convention and the adherence to etiquette, supports and maintains the dominance of the Government and its elected majority. More widely drawn and inclusive than the more generic notion of the team, an assemblage includes the influence of these constructed elements as a part of its makeup.

The physical presence of experts and precedents in the Committee room extended the connections made earlier between these recognisable design entities and the debate process. This calling in of the third parties, some of whom represent people directly affected by the proposals in the Bill, reflects the more conventional process of user consultation seen in public planning processes and other design contexts. The PBC for this Bill, led by the Minister, used the questioning of witnesses as a way of promoting the Government case for the railway line and

collecting witnesses' responses to that case as evidence that they support it. This top down approach contrasts with engagements with the users that might be considered to be more collaborative or participatory. The widest collaboration of the parliamentary process takes place in a general election when participants are granted the power to represent their constituents.

More flexible and ongoing approaches to parliamentary participation, as advocated for example by Kimbell (2015) and Binder et. al (2015), are increasingly being drawn into areas of policy development. These approaches do not however appear to engage with the structure of parliament and its long-standing conventions and etiquettes which appear to be resistant to scrutiny. Where these structures have been appraised and revised, for example with the 2009 Wright Committee review of the parliamentary process[88], the implementation of recommendations have remained partial and the impact on the process therefore negligible. This represents one of the constraints within which debate takes place and an acknowledgement of this has been brought into focus through this design analysis of the participants taking part and the attendant exploration of the form and structure of how and where they do so. This insight into the parliamentary process is directly generated through the application of a design analysis of the debates and directly answers the research question that asked what insights into Parliament might be generated by a design analysis of it.

As various perspectives are drawn into the assemblage it appears to operate as a designer. It reflects on its previous experience, it draws in new perspectives, rejecting some and developing others as it navigates between problems and solutions and constructing versions of the past that inform its visions of the future. As it reforms through the prescribed stages that must be followed to take the design from the drawing board through a series of convergent and divergent stages it carries these futures forward, projecting values that reflect and resonate with the dominant forces within which it operates. This is one example of how Parliament looks like a design process.

9.2 Design analysis – a methodological review

The results summarised above present a broad account of debate as design based on the exploratory and empirical work of previous chapters. These correlations between design and debate are constructed from the several engagements with the data described above and which are presented collectively as a design analysis of the debate. The method followed identified notions of what has been previously observed within design practice and used them as a way of approaching and interpreting the transcript, and other available records, of a debate. The development and application of this design analysis provided a mechanism through which several distinct and characteristic design activities were observed.

[88] Select Committee on Reform of the House of Commons, First Report of Session 2008-09, Rebuilding the House, HC 1117

Finding design activity in a debate is not an end in itself although the process of doing so, as already noted above, produced useful insights into the debate. A further contribution that follows from this is the demonstration of the potential of using this approach. There are many other observations of design practice that could be drawn upon to extend this work, drawing on the substantial data source that has been identified in the parliamentary record, and that could produce further insights and understandings.

9.2.1 Using design as a form of analysis

The method developed here takes as its starting point the findings of design studies which are often in turn based on studies that have adopted methods from the social sciences. Schön's use of framing for example can be traced to Gamson and Lasch (Rein and Schön, 1996:89) and Dorst's to Schön but also to Lakoff and Johnson (Dorst, 2015:63). The widespread adoption of multiple methods as an approach to the study of design is specifically invited in Design Thinking Research Symposia (McDonnell & Lloyd, 2009).

This thesis presents a complementary trajectory to the approach of the Design Thinking Research Symposia as it adopts a number of methods from social sciences that have been filtered through design research. They are used here to take design studies back into the domain of the social sciences, through an engagement with Parliament and through the comparisons already made between other approaches to debate and the proposed methodological assemblage of design.

9.2.2 Access to data

An integral part of this design analysis is the process of accessing the data and the mechanisms in place for collecting and disseminating the transcripts and proceedings of the UK Parliament. These transcripts only record what is publicly performed and there are limitations to what can be inferred about the intentions of participants whose contributions are, to some extent, delivered for the record. But these records provide a showcase of how those participants wish to be seen to engage with the issues at hand and demonstrate how the democratic process is performed in its highest, and most accountable, forum. As already argued above, the design analysis of the debate in this thesis provides an opportunity to approach this performance from a novel perspective that contributes to the process of accountability. These records are freely available and can be used and reused as a source of data from which, building on their use in this thesis, further interpretations of the design of democracy, and the enactment of democracy as design, might be developed.

9.2.3 Design and ANT

Arriving at a view of the debate as an assemblage has involved a number of steps and a number of unexpected methodological developments that were not anticipated at the start of the thesis. It was an early intention that the model used in the first study, the NFMR design model developed by Valkenburg and Dorst, would be used throughout the study as a way of building up a solid, rigorous and repeatable method. This would provide a marker for design taking place and produce insights

into the way that design was being done. The NFMR model, ostensibly a descriptive method, was found to be prescriptive as an analytical tool in this context. A more focussed approach to frame analysis, and then the adoption of a structured interpretation of precedents as frames, provided a source of ongoing modifications to how debates could be approached from design perspectives. Further acknowledgment of ANT influences considers these and other notions of design to be employed as sensitising terms which allow the debate to be viewed from a number of different perspectives while looking out for key events, activities or behaviours which contribute to an overall perspective of design. Some of these perspectives were observed from the data as having been brought directly into the debate by participants. Others, such as frame flow and implicated actors, have been applied from the outside by the researcher.

9.2.4 Alternative approaches

Different design methodologies might have been employed to that used in this research. To give two examples, the NFMR model could be used, as originally planned, as a single approach to explore how a debate can be divided into discrete design episodes and what activities are involved in those episodes. Another alternative, perhaps a Linkography of the debate could be constructed to explore how Parliament might be seen as a series of cognitive steps, forward and backwards, towards its resolution. Either of these approaches might, in their different ways, generate insight into the debate and of extending the scope of design research in the process. This is a subjective evaluation, but neither of them appeared to be flexible enough for two main reasons. Firstly, they both impose a fixed model upon the proceedings which would prescribe the way that the research must proceed and the way that results can be generated. While these models have been shown to be useful in the formal study of design practice they offer a less flexible approach than that produced in this thesis. Secondly, and more crucially, neither of them provide an obvious mechanism to account for the wider contexts within which the debate and its participants are operating and much of the insight into the etiquette and conventions of the debate found here may not have been accounted for. They might, however, form a useful adjunct as part of future, multiple methods, work in this area.

9.3 Comparing parliamentary debate with design

This thesis has drawn a number of perspectives from design research and used them as a lens for examining parliamentary debate. This process has produced a number of points of comparison between debate and design which are summarised in this section.

A useful starting point for this comparison comes from Horst Rittel whose definition of the wicked problem, with Webber, provided a useful link between debate, dilemmas and design (Chapter 4). As part of his appraisal of design methods, and the need for a more situated and less technical approach to design, Rittel was concerned that design should be recognised as an intrinsically political process and that designers should acknowledge the social and political dimensions of their actions (Rittel, 1984:326). Although he doesn't take the process of design into the political arena in

the way that more recent work has been shown to do (Chapter 2) the conclusions he makes about design as an inherently political and collaborative process of argumentation (Rittel, 1972) provides a useful context to the work reported in this thesis.

If we accept Rittel's conclusion (as Buchanan, 1992 and Harrison, 2012 have) and accept this wider notion of design as a situated social process this does not necessarily mean that the reverse is also true. If design is a form of political debate it does not follow that political debate is a form of design. It is necessary to make a more detailed examination to explore to what extent the comparison holds. This detailed examination has been an intrinsic element of the empirical work of this thesis where characteristics of design have been used as a way of looking at parliamentary debate.

Generic design models were employed (Chapter 3) to locate the context of the debates studied within the parliamentary process. The use of a stage gate model traced the progress of a Bill through Parliament, following a similar path to a new product passing through the design process. At the end of each stage in the design context a group of senior managers "sit together at a gate meeting and together decide on and commit to a project" (Cooper, 1994:6). This is a formal process of approval and one which, in the case of the London and Birmingham Railway, was shown to be an effective mechanism for stalling the progress of a project. At this level the comparison between design and debate as a formal decision making process is straightforward.

For Cooper (ibid), stage gates collectively describe the design process from idea to launch, and place emphasis on both the early planning of a project and on the customer or user's response to it when completed. On the scale at which the stage gate was applied to the HS2 Preparation Bill in this thesis, the early planning of the project is represented in the significant amount of work needed to produce a Bill at its First Reading. However, at the other end of the process, where the Bill is approved, this is not the launch of the railway but the approval of an Act of Parliament. This comparison with the design process requires a shift from a view of the product (such as a railway) and of its customers or users (such as the passenger) to a view of an act of Parliament (as a product) and of the people who the members of that Parliament represent (as the customers or users). The notion of designer, product and user can be recognised here although to do so requires an acceptance of the wider notion of design proposed by scholars such as Rittel, Buchanan and Harrison. The stage gate model provides a means of identifying the wider context in which the process takes place and recognises the inclusion of a variety of stakeholders who are necessary to make the decisions. However, the Parliamentary context carries broader implications regarding what is the product and its users and the stage gate model does not account for the wider perspectives of the actors involved.

Those perspectives are however represented in the double diamond model which provides a mechanism for tracing the convergent and divergent flow of the process. These flows can be

observed both in design and debate where, at specific points in the process, a different perspective or group of perspectives are brought to bear on the situation.

In a conventional design narrative, the convergence and divergence is constructed around the designer. The first divergent stage of discovery shows the designer exploring the task in hand, testing the limits of the design problem and the nature of the needs which are to be met. This is followed by a convergent stage of definition where those needs are narrowed down to a form a closer relationship with the objectives that the design must fulfil. The third stage of development represents a further series of divergent activities where solutions are sought, iterated and tested before these are finally converged into delivery stage where the final product is identified, tested and launched. This represents a series of perspective shifts as the design progresses and the designer modifies their view of the task and how they will address it. In this way the design processes of convergence and divergence are undertaken by the designer themselves in relation to the product they are designing (Design Council, 2005).

In the parliamentary context the number of perspectives increase as the debate is widened out to the full house of MPs and their representatives or to the Committee with its limited, but varied, witnesses. These divergent processes can be contrasted with the binary votes that take place in the divisions that move the Bill forward and with the subsequent re-presenting of the Bill or the compilation of amendments which act as convergent stages. At these points the available options are limited and the scope is restrained. Using the double diamond model as a comparator it can be seen that there are structural similarities between the view of the design process as it mediated by the designer, and of the progress of a Bill mediated through the parliamentary process.

Building on Rittel's understanding of design as a wider social process, more recent work, such as Kimbell (2015), Wilkie (2010) and Goldschmidt (2009) proposes that the designer operates within a wider sphere, drawing in perspectives from beyond the studio. These perspectives can be considered to be those of additional actors who are, in various ways implicated in the design process. This view of design also extends beyond the studio and continues through the objects produced – e.g. the door locks and the pharmacy tests – and which enrol users to interact and adapt the designer's intention to the situation at hand. This view of design as a wide collaborative project operating across an extended team of participant, actors and objects allows a more direct comparison to be made between debate and design.

Here the design is a more fluid object. From this perspective the parliamentary Bill can be more clearly compared with a design object as it passes through distinct stages in which it's critical attributes are named, the problem it addresses restated and reframed and the solutions which have been proposed are tested against precedents. As the Bill progresses through the parliamentary stages it is modified and amended and its new attributes are restated, compared with other precedents and tested against alternative solutions before being subjected to an approval stage whereby, if it passes, it will proceed further towards its final form. In some ways this process of testing can be considered to be similar to a prototyping cycle where a product is

presented, not in its finished form, but as a way of gleaning information about possible points of failure and levels of performance. In this parliamentary context these tests might pertain to the railway or to broader areas of policy which the Government is seeking to assert.

The physical structure of the parliamentary building, with its adversarial chamber and its physically enacted voting mechanism that involves walking through the relevant lobby, offers a further point of comparison to this more fluid notion of design. In this physical enactment of the democratic process the MPs and the people they represent form a wider construction of a design assemblage that extends into the architecture of the building. This aspect of the parliamentary process relates to Mewburn's Actor Network view of the design studio (Mewburn, 2009) and the physicality of Yaneva's office as a design environment (Yaneva, 2009a).

The designer is also a more fluid concept, starting perhaps with the individual Secretary of State who stands at the dispatch box to describe the proposed product. The designer role is readily extended into a team of other members of the Government, other elected Members of Parliament and the wider publics who those members represent. A selection of those wider publics are called upon to test the proposals more rigorously as they appear before the Select Committee to provide additional evidence of how the product might be received by its intended users, how it might be used, where it might fail and what previous experience might be called upon to substantiate these positions. This extended view of the designer recalls and reinforces Kimbell's extension of design through to the patient and pharmacy assistant who modify and extend the functionality of their equipment

The main participants in the parliamentary process are politicians rather than designers and what is produced is the implementation of a policy rather than a designed object. This thesis has adopted a view of these participants and policy objects as designers and products. This view is supported through the adoption of the wider notion of design set out by Rittel and extended from the design research trajectory mapped out in Chapter 2.1. This makes it possible to draw upon the significant amount of knowledge and expertise that has been developed through the discipline of design studies.

Drawing on this knowledge and expertise facilitates a comparison between design and debate which can be applied at a number of different scales and to a number of different activities which can be observed at those scales. A number of points of comparison can then be mapped between design and debate that begin to fill in the details lacking from the generic models reviewed earlier. The use of framing, the calling of precedents, the assemblage and mobility of the design team all contribute to this comparison but do not complete it. More examples could be called upon from the various strands of design research and these examples would help to complete this picture, for example user profiling, needs analysis, problem/solution pairing.

Such comparisons do not produce evidence that parliamentary debate is a design process but rather provides, through the different points at which they are applied, an analytical device through which the similarities observed support the construction of novel perspectives on both debate and design that may not have otherwise be seen.

9.4 Design analysis - contributions and future work

9.4.1 Methodological contribution: What is Design Studies Good For?

The research in this thesis proposes and explores a flexible design analysis methodology that draws together findings from existing design studies and uses them as a collection of sensitising terms with which to approach activities outside of conventional design contexts. This methodology is flexible, partly through the adoption of the ANT notion of sensitising terms and partly through the potential for various other design studies findings to be employed in a similar way. This thesis contributes an answer to Tonkinwise's (2014) question "What is Design Studies Good For?" by demonstrating that design studies is good for bringing together numerous methods, for creating insights into design activities, and providing a platform from which these methods and activities can then be extended to other contexts. This presents design as an analytical approach to parliamentary processes which can be used alongside other analytical methods and with design interventions in policy development.

9.4.2 Data contribution: using the the parliamentary record as design data

The research in this thesis recognises the value of parliamentary debate as a source of design data. Through the development of this research methodology, parliamentary data provides an extensive record of a design context where participants are designers and the various objects that they are debating: a Bill; a railway; a democratic function; or a country; are the design objects they are producing. Parliamentary records provide a rich data source which is readily available for further exploration of specific debates and of the process by which those debates are undertaken. This naturally occurring data is extensive and explicitly illustrates a number of design characteristics that occur in the meetings they record. These characteristics, while clearly relevant to the findings of design studies, can be difficult to access from records of conventional design meetings or experiments.

9.4.3 Visual methods contribution: a visual engagement with the archive

The first study, drawing on nineteenth century sources, found few historical sources of detailed transcripts of debates. This reduced the potential for the thesis to draw meaningful historical comparisons between the LBR and HS2 debates but provoked a wider review of available material and an exploratory method of visually representing that material using software not normally used in this way. This use of Prezi as a research tool, described in Chapter 4 above as a part of the navigation and identification of sources, was presented as a methodological contribution at the 2015 International Visual Methods Conference

9.4.4 Design studies contribution: the relevance of context

The research in this thesis provides a contribution towards understanding the importance and relevance of the context in which debate, and design, takes place. Design studies can become focussed on the single context of the designer, the design team, the design process or the design object. When looking for these elements within parliamentary debate it is clear that they are contingent upon a variety of contexts that determine their presence and that control their interactions both with each other and the environment in which they are found.

The importance of recognising these wider contexts, seen for example in the range of implicated actors drawn into the debate, the constraints placed on participants through the conventions of turn-taking and the opaque process of participant selection, is relevant to ongoing studies of design. The utility of the parliamentary record in making these contexts evident, further underlines the potential of directing the focus of design studies towards this data. The parliamentary record provides detailed transcript of meetings, all previous contributions made by all participants to all previous meetings, a clear view of the structures and conventions that are explicitly adopted in the parliamentary process and an implicit acceptance, and explicit display of participant's rhetorical engagement with the debate. All of these aspects are relevant to the study of design but are not always readily accessible to the design researcher.

9.4.5 Method contribution: the assemblage as a method of collating and comparing contexts

The notion of the assemblage as a way of representing and comparing these engagements provides a means of bringing together disparate groups of actors and comparing them across different stages of the process in which they appear. This thesis does not claim to make a major contribution in this area, but builds on the point argued above by proposing a means of acknowledging wider contexts within a simple representational schema that can include the participants, the room in which they participate, the implicated actors and the pasts and futures to which they refer as the process unfolds. The notion of the design assemblage is primarily found in other studies within a user context rather than this broader approach to participants and the process in which they are involved.

9.4.6 Beneficiaries of the research reported in this thesis

There are a number of different beneficiaries of this research.

Within the field of design research, the identification of the parliamentary record as a source of design data in this thesis demonstrates an extensive and openly accessible documentation of numerous debates and associated meetings. These data sources can be used by design researchers without incurring costs and without the methodological problems associated with other forms of experimental design research. The compilation of selected examples and the combination with insights from ANT demonstrate one method of achieving this.

The empirical work of using design studies as an analytical tool provides a proof of concept that illustrates how insights from design research can be used in wider contexts. This provides further scope for design researchers to continue to extend their engagement with policy in the parliamentary context where policy is tested through debate.

Beyond the field of design research the identification of a number of aspects of design research, as used in this thesis, proposes an extensible collection of tools for use by other disciplines, such as political sciences, in their own engagement with parliamentary debate and the context in which it takes place.

The demonstration of Prezi as a tool for visually manipulating data offers benefits for researchers in any field where access to facsimile documents or other visual resources is required to be viewed at variable scales and with arbitrary annotations.

The insights into the parliamentary process drawn in this thesis are also relevant outside of an academic context, as a complementary method available for use in reviews of parliamentary process such as the Wright Committee. This ultimately points towards a method of representing the workings of democracy to a wider public.

9.4.7 Lines of inquiry that were not explored or expanded

Some elements of this thesis became less relevant to the work in hand as it progressed and were therefore side-lined. The historical comparison between the development of the two railway lines became more of a part of the methodological development around how data is approached rather than a separate analysis of the differences and similarities between debate and infrastructure across the relevant centuries. The research process has however identified a wider historical discourse around the development of the London and Birmingham Railway, primarily in the review of archival news sources, that could reward further attention. The problematic lack of relevant data also provoked the exploration of the use of Prezi as a research tool for engagement with data sources.

A closer engagement with ANT was initially envisaged as a result of the literature review and the number of possible connections identified between ANT and design. Some of these perspectives were adopted but an ANT analysis of Parliament would have been counter to the intention to undertake a design analysis of Parliament. The connections between design and ANT (e.g. Binder, Brandt, Ehn & Halse, 2015; Wilkie & Farias, 2016) and, to a lesser degree, design and Parliament (e.g. Bason, 2014; Kimble, 2015;) are however becoming more established as they are picked up by design scholars in a development of design studies to which this thesis makes a contribution.

9.4.8 Research questions revisited

Finally, to return to the research questions that were initially set to guide this research it has been clearly demonstrated here how Parliament can be viewed as a design process from a structural

and interactional level. The detailed examination of those interactions has, through a “sensitising” collection of design perspectives, provided an account of the individuals involved and how they engage with the proceedings and the various contributions that they make. These contributions have also been observed, through the design perspectives of framing and precedents, within the wider contexts of the values that they introduce into the debate and of the mechanisms of the debate that modulate the effect those values may have as the debate proceeds. At a more structural level the conventions of the debate, the control that those conventions impart to specific participants and the implicit bias within the parliamentary process that determines how some of participants are selected to engage with it, are insights which have been clearly seen through the design perspective adopted.

Two final points emphasise the design contribution that these questions have provoked. Firstly, all aspects outlined above have shown that design, with acknowledgement of its intersection with ANT, can be used as a form of analysis. Secondly, this thesis has shown that Parliament, as a demonstrable form of design practice, and through the extensive records that it generates, is available as a source of design data for future studies that might further increase our understanding of design as a context, an activity, a process and an assemblage of active and implicated actors.

9.4.9 Future work

This thesis has developed a methodological principle by which aspects of design activity are used to approach and interrogate parliamentary data. This was established through specific empirical engagements using specific examples of design activity applied to the transcripts of a specific debate. As noted at the end of Chapter 6, other aspects of design such as problem/solution negotiation or user profiling could be used in a similar way. This thesis focussed on the shift in perspective as a design starting point that led to the identification of a designer/debate as an assemblage. Alternatives approaches might focus on other aspects of design and could be configured in different ways, such as a user/debate, product/debate or debate/discourse assemblage, which offer the potential to extend the work done here.

Using the same approach as taken in this thesis, different debates could be analysed in the same way to generate insights into other specific policies and principles that those debates are promoting. Following the theme of infrastructure development, others case studies might be the provision of affordable housing for an expanding population or debates on, for example, education or healthcare.

Alternatively, and taking a broader perspective on the contexts examined in Chapter 7 and 8, a wider view of the parliamentary conventions and procedures that control how the debates are structured and how this structure is maintained which, following Wilkie and Farias, might engage with the design of Parliament as a “studio of studios”.

These possibilities could build on the work of this thesis to interrogate and interpret Parliament as a place where design occurs across a number of levels that include specific Government proposals, successive parliamentary stages and the performance and maintenance of the wider democratic process.

References

Alexander, C., Ishikawa, S., Silverstein, M. (1977) *A Pattern Language*, New York: Oxford University Press.

Argyris, C., & Schön, D. (1978) *Organizational learning: A theory of action perspective,* Reading, Mass: Addison Wesley.

Banham, R. (1960) *Theory and Design in the First Machine Age*, London: Architectural Press.

Bason, C. (ed.) (2014) *Design for Policy*, London: Gower.

Bateson, G. (1972) *Steps to an Ecology of Mind*, Chicago: University of Chicago Press

Baxandall, M. (1985) *Patterns of Intention*, London: Yale University Press.

Benford, R.D.R. & Snow, D.A. (2000) 'Framing processes and social movements: An overview and assessment', *Annual Review of Sociology*, 26, pp.611–639.

Binder, T., De Michelis, G., Ehn, P., Jacucci, G., Linde, P. & Wagner, I. (2011) *Design things*, Cambridge MA: MIT Press.

Binder, T., Brandt, E., Ehn, P., & Halse, J. (2015) 'Democratic design experiments: between parliament and laboratory', *Co-Design,* 11(4) pp.152-165.

Blyth, R., Schadewitz, N., Sharp, H., Woodroffe, M., Rajah, Dino & Turugare, R. (2012) 'A frame signature matrix for analysing and comparing interaction design behaviour', in *BCS HCI Conference, 12-14 September*.

Boudon, P. (1973) *Lived-in Architecture*, Cambridge: MIT Press.

Broadbent, B. (1966) 'Creativity', in Gregory, S (ed.) *The Design Method*, Butterworths: London, pp.111-120.

Brown, T. (2009) *Change by Design*, New York: Harper Collins.

Buchanan, R. (1985) 'Declaration by Design: Rhetoric, Argument and Demonstration in Design Practice', *Design Issues*, 2(1) pp.4–22.

Buchanan, R. (1992) 'Wicked Problems in Design Thinking', *Design Issues*, 8(2) pp.5–21.

Buchanan, R. (2001) 'Design and the New Rhetoric: Productive Arts in the Philosophy of Culture', *Philosophy and Rhetoric*, 34(3), pp.183–206.

Bucciarelli, L. & Schön, D. (1987) 'Generic Design Process in Architecture and Engineering: A Dialogue Concerning at least Two Design Worlds', in Waldron, M. *Proceedings from the NSF Workshop on the Design Process*, Oakland, CA. 43-67.

Bucciarelli, L.L. (1994) *Designing Engineers*, Cambridge: MIT Press.

Bucciarelli, L.L. (2002) 'Between thought and object in engineering design', *Design Studies*, 23(3), pp.219–231.

Busby, A. (2013) The Everyday Practice and Performance of European Politics : An Ethnography of the European Parliament, Thesis, University of Sussex.

Çalışkan, O. (2012) 'Design thinking in urbanism: Learning from the designers', *Urban Design International,* 17, pp. 272-296.

Callon, M. (1986) 'Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay', in Law, J. (ed.) *Power, action and belief: a new sociology of knowledge?* London: Routledge, pp. 196–223.

Casakin, H. & Goldschmidt, G. (1999) ‘Expertise and the use of visual analogy: implications for design education’, *Design Studies*, 20(2), pp.153–175.

Chai, K.-H. & Xiao, X. (2012) ‘Understanding design research: A bibliometric analysis of Design Studies (1996–2010)’, *Design Studies*, 33(1), pp.24–43.

Clarke, A. & Montini, T. (1993) ‘The Many Faces of RU486 : Tales of Situated Knowledges and Technological Contestations’, *Science, Technology, & Human Values*, 18(1), pp.42–78.

Cooper RG (1994) *Third generation new product processes.* Journal of Product Innovation Management, 11: 3–14. Blackwell

Coyne, R. (2005) ‘Wicked problems revisited’, *Design Studies*, 26(1), pp.5–17.

Crewe, E. (2015) *The House of Commons*, London: Bloomsbury.

Crilly, N. (2015) ‘Fixation and creativity in concept development: The attitudes and practices of expert designers’, *Design Studies*, 38, pp.54–91.

Cross, N. & Clayburn Cross, A. (1995) ‘Observations of teamwork and social processes in design’, *Design Studies*, 16 pp.143–170.

Cross, N., Christiaans, H., and Dorst, K. (eds.) (1996) *Analysing Design Activity.* Chichester: Wiley.

Cross, N. & Edmonds, E. (2003) *Expertise in Design*, Sydney: Creativity and Cognition Studios.

Cross, N. (1989) *Engineering Design Methods*, Chichester: Wiley.

Cross, N. (2001) ‘Designerly Ways of Knowing: Design Discipline Versus Design Science’, *Design Issues*, 17(3), pp.49–55.

Cross, N. (2004) ‘Expertise in Design: An Overview’, *Design Studies*, 25, pp. 427–441.

Cross, N. (2007) ‘Forty years of design research’, *Design Studies*, 28(1), pp.1–4.

Cross, N. (2011) Design Thinking: Understanding how designers think and work, Oxford: Berg.

Daley, J. (1968) ‘A philosophical critique of behaviourism in architectural design’, in Broadbent, G. & Ward, A. (eds.) *Design Methods in Architecture*, London: Lund Humphries, pp. 71-75

Danholt, P. (2005) ‘Prototypes as performative’, in *Proceedings of the 4th decennial conference on Critical computing: between sense and sensibility* (CC '05), Olav W. Bertelsen, Niels Olof Bouvin, Peter G. Krogh, and Morten Kyng (Eds.). ACM, New York, NY, USA, 1-8.

Darke, J. (1979) ‘The Primary Generator and the Design Process’, *Design Studies*, 1(1), pp.36-44.

Demirkan, H. & Afacan, Y. (2012) ‘Assessing creativity in design education: Analysis of creativity factors in the first-year design studio’, *Design Studies*, 33(3), pp.262–278.

Design Council (2005) *A Study of the Design Process*, online at http://www.designcouncil.org.uk/sites/default/files/asset/document/ElevenLessons_Design_Council%20(2).pdf [Accessed December 2015]

Design Council (2006), *Red Report: Democracy*, Online at: http://web.archive.org/web/20060818164734/http://www.designcouncil.org.uk/mt/red/publications/publicationscontainer/democracy_parts1and2.pdf [Accessed March 2016]

Design Council (2013) *Design for public good*, online at http://www.designcouncil.org.uk/sites/default/files/asset/document/Design%20for%20Public%20Good.pdf [Accessed March 2016]

DiSalvo, C. (2012) *Adversarial Design*, Cambridge, MA: MIT Press.

DMG/DRS (1973) The Design Methods Group and Design Research Society Design Activity International Conference, 29-31 August, The Polytechnic of Central London.

Doboli, A & Umbarkar, A. (2014) ‘The role of precedents in increasing creativity during iterative design of electronic embedded systems’, *Design Studies, 35 (3)*, 298-326

Dong, A., Kleinsmann, M. S., & Deken, F. (2013) 'Investigating design cognition in the construction and enactment of team mental models', *Design Studies*, *34*(1), 1–33.

Dorst, K. & Cross, N. (2001) 'Creativity in the design process: co-evolution of problem–solution', *Design Studies*, 22(5), pp.425–437.

Dorst, K. (1997) Describing Design - A comparison of paradigms. Thesis. TU Delft.

Dorst, K. (2015) *Frame Innovation*, Cambridge MA: MIT Press.

Dunne, A. & Raby, F. (2013) *Speculative everything*, Cambridge MA: MIT Press.

Dunne, A. & Raby, F. (2016) *Spymaker project notes*, Online at http://www.dunneandraby.co.uk/content/projects/73/0 [Accessed March 2016]

Eckert, C. & Stacey, M. (2000) 'Sources of inspiration: a language of design', *Design Studies*, 21(5), pp.523–538.

Earl, C., Eckert, C. & Clarkson, J. (2005) 'Design change and complexity' in *2nd Workshop on Complexity in Design and Engineering*, University of Glasgow Online at: http://www.dcs.gla.ac.uk/~johnson/complexity/Proceedings/CiD2005.PDF [Accessed March 2016]

Eckert, C.M., Blackwell, A., Bucciarelli, L. & Earl, C. (2010) 'Shared Conversations Across Design', *Design Issues*, 26(3), pp.27–40.

Eilouti, B.H. (2009) 'Design knowledge recycling using precedent-based analysis and synthesis models', *Design Studies*, 30(4), pp.340–368.

Eno, B. & Schmidt, P. (1975) Oblique, strategies: One Hundred Worthwhile Dilemmas, the authors.

Fairclough, I. & Fairclough, N. (2011) Practical reasoning in political discourse: The UK government's response to the economic crisis in the 2008 Pre-Budget Report. *Discourse & Society*, 22(3), pp.243–268.

Flyvberg, B. (2005) 'Design by Deception', *Harvard Design Magazine*, Spring/Summer, pp. 50-59.

Forty, A. (1986) *Objects of Desire*, London: Thames and Hudson.

Fowles, B. (nd) The Waggon-wheel, the Slate and the…, *The newsletter of the Design Research Society*, No. 2

Fox, N. & Alldred, P. (2015) 'New materialist social inquiry: designs,methods and the research-assemblage', *International Journal of Social Research Methodology*, 18:4, 399-414.

Fry, T., Dilnot, C. & Stewart, S. (2015) *Design and the question of history*, London:Bloomsbury.

Gero J.S. (1990) 'Design prototypes: a knowledge representation schema for design', *AI Magazine*, 11(4), pp. 26–36.

Gibson, J. (1986) The Ecological Approach to Visual Perception, Lonon: Erlbaum.

Goffman, E. (1959) *The Presentation of Self in Everyday Life*, New York: Doubleday.

Goffman, E. (1974) *Frame Analysis*, London:Harper & Row.

Goldschmidt, G. & Eschel, D. (2009) 'Behind the Scenes of the Design Theatre: Actors, Roles and the Dynamics of Communication' in *About: Designing*, eds McDonnell, J & Lloyd, P., Leiden: CRC Press/Balkema, pp.331-338.

Goldschmidt, G. (1988) 'Creative Architectural Design: Reference Versus Precedence', *Journal of Architectural and Planning Research* 15 (3), pp. 258-270.

Goldschmidt, G. (1995) 'The designer as a team of one', *Design Studies*, 16(2), pp.189–209.

Goldschmidt, G. (2014) *Linkography: unfolding the design process*, Cambridge: MIT Press.

Gregory, S. (1966) *The Design Method*, London: Butterworths

Harrison, A.K. 2012. *Wicked Problems//Weak Designs*, Thesis, University of Sydney.

Henderson, K. (1991) 'Flexible Sketches and Inflexible Data Bases: Visual Communication, Conscription Devices, and Boundary Objects in Design Engineering', *Science, Technology & Human Values*, 16(4), pp.448–473.

Henderson, K. (1999) *Online and On Paper*, Cambridge: MIT.

Hennion, A. & Farías, I. (2016) 'For a sociology of maquettes' in Wilkie & Farías (eds.) *Studio Studies*, London: Routledge, pp.73-88.

Hey, J. (2008) *Effective Framing in Design*. University of California, Berkeley.

HoC, (2013) High Speed Rail (Preparation) Bill Second Reading, vol 564, part 24.

HoC, (2013b) High Speed Rail (Preparation) Bill Report Stage and Third Reading, vol 569, part 67.

Hoppe, Robert (1996) *"*Donald A. Schön and Martin Rein, Frame reflection: towards the resolution of intractable policy controversies"*, Policy Sciences*, 29 (1). pp. 69-77

IDEO, (2003) IDEO Methods Cards: 51 Ways to Inspire Design, Palo Alto: IDEO.

IDEO, (2009) *Tim Brown on Design,* Online at: https://vimeo.com/5861210 at 00:11. Accessed 8 May 2015.

Jansson, G. & Smith, S. (1991) 'Design fixation', *Design Studies*, 12(1), pp.3-11.

Jeffries, K.K. (2007) 'Diagnosing the creativity of designers: individual feedback within mass higher education', *Design Studies*, 28(5), pp.485–497.

Jones, J.C. & Thornley, D.G. (1963) *Conference on design methods*, Oxford: Pergamon.

Jones, J.C. (1970) *Design Methods: seeds of human futures*, London: Wiley-Interscience.

Jones, J.C. (1984) *Essays in Design*, Chichester: Wiley.

Joost, G. & Scheuermann, A. (2006) 'Audiovisual Rhetoric: A Metatheoretical Approach to Design' in Design Research Society International Conference, Lisbon, 1-4 November.

Kimbell, L. & Julier, J. (2012) *The social designmethods menu in perpetual beta.*, Online at: http://www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf

Kimbell, L. (2012) 'Rethinking Design Thinking: Part II', *Design and Culture*, 4(2), pp.129–148.

Kimbell, L. (2015) *Applying Design Approaches to Policy Making*, University of Brighton/AHRC.

Kinsella, E A. (2006) 'Constructivist underpinnings in Donald Schön's theory of reflective practice: echoes of Nelson Goodman', *Reflective Practice*, 7(3), 277-286.

Knorr-Cetina, K. & Mulkay, M. (eds.) (1983) *Science Observed*, London: Sage Publications.

Koh, J., Chai, C., Wong, B. & Hong, H. (2015) *Design Thinking for Education*, Singapore: Springer.

Lakoff, G. & Johnson, M. (1980) *Metaphors we live by*, Chicago: University of Chicago Press.

Latour, B. & Woolgar, S. (1979) *Laboratory Life. The social construction of facts*, London: Sage Publications.

Latour, B. (1988) 'Mixing Humans and Nonhumans Together: The Sociology of a Door-Closer', *Social Problems*, 35 (3), pp.298-310.

Latour, B. (1991) 'Technology is Society Made Durable' in Law. J. (ed.) *A Sociology of Monsters Essays on Power, Technology and Domination*, Sociological Review Monograph no38 pp. 103-132.

Latour, B. (1992) 'Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts', in Bijker, W. & Law, J. (eds.), *Shaping Technology/Building Society: Studies in Sociotechnical Change*, Cambridge, MA: MIT Press, pp. 225–258.

Latour, B. (2008) ‘A Cautious Prometheus? A Few Steps Toward a Philosophy of Design (With Special Attention to Peter Sloterdijk)’ in Glynne, J., Hackney, F. & Minton, V. (eds.), *Proceedings of the 2008 Annual International Conference of the Design History Society – Falmouth, 3-6 September 2009*. Boca Raton, FL: Universal Publishers, pp. 2–10.

Lawson, B. & Dorst, K. (2009) *Design Expertise*, Architectural Press, Oxford.

Lawson, B. (1994) *Design in Mind*, Oxford: Architectural Press.

Lawson, B. (2004a) Schemata, gambits and precedent: some factors in design expertise. *Design Studies*, 25(5), pp.443–457.

Lawson, B. (2004b) *What designers know*, Oxford: Architectural Press.

Lawson, B. (2005) *How Designers Think The Design Process Demystified* 4th ed., Oxford: Architectural Press.

Le Dantec, C.A. and E.Y.-L. Do. (2009) ‘The mechanisms of value transfer in design meeting’, *Design Studies*, 30 (2) pp. 119-137.

Lloyd, P. & Oak, A. (2015) ‘Houses of Straw: The Presentation of Design on Television’, *Design and Culture*, 8(2), pp.155-180

Lloyd, P. & Snelders, D. (2003) ‘What was Philippe Starck thinking of?’ *Design Studies*, 24(3), pp.237–253.

Lloyd, P. (2009) ‘Ethical imagination and design’, *Design Studies*, 30(2), pp.154–168.

Lockton, D. (2015) *Design with intent toolkit*. Online at http://designwithintent.co.uk [Accessed 11 May 2015]

Lulham, R. & Kaldor, L. (2013) ‘Creating alternative frames for a retail security problem’ in *5th International Congress of International Association of Societies of Design Research,* Tokyo, pp. 4637–4648.

Marshall, T. (2014) ‘The designer and the designed’ in Yelavich, S. & Adams, B (eds.), *Design as Futuremaking*, London: Bloomsbury, pp242-246.

McDonnell, J. & Lloyd, P. (2009) *About: Designing Analysing Design Meetings*, Leiden: CRC Press.

Mewburn, I. (2009) Constructing Bodies : Gesture, Speech and Representation at Work in Architectural Design Studios, Thesis, University of Melbourne.

Mol, A., (2010) ‘Actor-Network Theory: sensitive terms and enduring tensions’, *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 50, pp.253–269. Online at: http://dare.uva.nl/record/1/330874 [Accessed November 16, 2014].

Moon, J. (1999) Reflection in Learning and Professional Development: theory and practice. London: Kogan Page.

Nunkoosing, K. (2005) ‘The problems with interviews’, *Qualitative Health Research*, 15(5), pp.698–706.

Nuttall, J (1972) “How to Use Technology” in Cross, N (ed.) Design Participation, the proceedings of the Design Research Society’s Conference Manchester, September 1971, Academy Press pp. 19-20

Oak, A. (2009) ‘Performing architecture: Talking “Architect” and “Client” into Being’, in McDonnell, J. & Lloyd, P. (eds.), *About Designing*, Leiden:CRC, pp.305-321.

Open University (2016) *U101 Design thinking: creativity for the 21st century,* Online at: http://www.open.ac.uk/courses/modules/u101 [Accessed January 2016]

Pahl, G. & Beitz, W. (1996) *Engineering Design: A Systematic Approach*, Amsterdam: Springer Verlag.

Paton, B. & Dorst, K. (2011) ‘Briefing and reframing: A situated practice’, *Design Studies*, 32(6), pp.573–587.

Pei, E., Campbell, I. & Evans, M. (2010) ‘Development of a tool for building shared representations among industrial designers and engineering designers’, *CoDesign*, 6 (3) 139-166.

Perry, G.T. & Krippendorff, K. (2013) ‘On the reliability of identifying design moves in protocol analysis’, *Design Studies*, (34), 5, pp.612-635.

Rein, M. & Schön, D.A. (1993) ‘Reframing policy discourse’ in *The Argumentative Turn in Policy Analysis and Planning*. Durham NC: Duke University Press, pp. 145–166.

Rein, M. & Schön, D.A. (1996) ‘Frame-critical policy analysis and frame-reflective policy practice’, *Knowledge and Policy*, 9(1), pp.85–104.

Rittel, H.W.. W.J. & Webber, M. M. (1973) ‘Dilemmas in a General Theory of Planning’, *Policy sciences*, 4(2), pp.155–169.

Rittel, Horst W. J. (1972) On the Planning Crisis: Systems Analysis of the ‘First and Second Generations’.” Bedrifts Økonomen. 8 (1972): 390–396.

Rittel, Horst W. J. (1984) Second Generation Design Methods. In *Developments in design methodology*, Ed. Nigel Cross, 317-327, Chichester, England: John Wiley & Sons.

Rogers, R. & Walters, R. (2006) *How Parliament Works*, London: Routledge

Rowe, P. (1986) *Design Thinking*, Cambridge MA: MIT Press.

Roworth-Stokes, S. (2011) ‘The Design Research Society and Emerging Themes in Design Research’, *Journal of Product Innnovation Managemen*t, 28, pp.419–424.

Roy, R. (1993) ‘Case studies of creativity in innovative product development’, *Design Studies*, 14(4), 423-443.

Russell, M., Morris, B. & Larkin, P. (2013) Fitting the Bill: Bringing Commons legislation committees into line wirth best practice, Report, The Constitution Unit, UCL.

Schön, D.A. & Rein, M. (1994) Frame Reflection, towards the resolutoin of intractable policy controversies, New York: Basic.

Schön, D.A. & Wiggins, G. (1992). Kinds of seeing and their functions in designing. *Design Studies*, 13(2), pp.135–156.

Schön, D.A. (1971) *Beyond the stable state,* London: Maurice Temple Smith.

Schön, D.A. (1983) The Reflective Practitioner: How Professionals Think in Action, New York: Basic Books.

Schön, D.A. (1984) ‘Problems, frames and perspectives on designing’, *Design Studies* 5(3), pp. 132-136.

Schön, D.A. (1988) ‘Designing: rules, types, and worlds’, *Design Studies*, 9(3), pp.181–190.

Schön, D.A. (1992) ‘The theory of inquiry: Dewey’s Legacy to Education’, *Curriculum Inquiry*, 22(2), pp.119–139.

Simon, H. (1976) *The Sciences of the Artificial*, Cambridge, Mass: MIT Press.

Smith, K.M. (2015) ‘Conditions influencing the development of design expertise: As identified in interior design student accounts’, *Design Studies*, 36, pp.77–98.

Soo Meng, J.C. (2009) ‘Donald Schön, Herbert Simon and The Sciences of the Artificial’, *Design Studies*, 30(1), pp.60–68.

Spence, B. (1962) *Phoenix at Coventry*, London: Fontana.

Sturt, G. (1923) *The Wheelwright’s Shop*, Cambridge: Cambridge University Press.

Tang, H.-H., Lee, Y.Y. & Chen, W., 2012. Reexamining the relationship between design performance and the design process using reflection in action. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, 26(02), pp.205–219.

Telier, A. (2012) *Design Things*, Cambridge: MIT.

Tonkinwise, C. (2014) 'Design Studies – What Is it Good For?', *Design and Culture*, 6(1), pp.5–43.

Trancik, R. (1986) Finding Lost Space: Theories of Urban Design, Chichester: Wiley.

Umney, D., Lloyd, P. & Potter, S. (2014) *Political debate as design process: a frame analysis*, Proceedings of the Design Research Society Conference, Umeå, June 2014

Umney, D., Lloyd, P. & Earl, C. (2016) *Design as analysis: examining the use of precedents in parliamentary debate*, Proceedings of the Design Research Society Conference, Brighton, June 2016

Walton, M. (1997) Car: a drama of the American workplace, London: Norton

Webster, H. (2008) 'Architectural education after Schön: Cracks, blurs, boundaries and beyond', *Journal for Education in the Built Environment* 3(2), pp.63-74.

Whitney, D., (1995) *World Class Timing*, working paper, MIT Engineering Systems Division, Online at: https://esd.mit.edu/esd_books/whitney/pdfs/ford.pdf [Accessed: December 2014]

Wilkie, A. (2010) *User Assemblages in Design : An Ethnographic Study*, Thesis, Goldsmiths, University of London.

Wilkie, W. & Farías, I. (eds.) (2016) *Studio Studies*, London: Routledge.

Wynn, D. & Clarkson, J. (2005) 'Models of Designing' in Clarkson, J. & Eckert, C. (eds.), *Design Process Improvement*, London: Springer, pp.34-59.

Valkenburg, R. & Dorst, K. (1998) 'The reflective practice of design teams', *Design Studies*, 19(3), pp.249–271.

Valkenburg, R. (2000) *The reflective practice in design teams*, Thesis, TU Delft.

Venturi, R. (2005) *Vanna Venturi House*, online at http://storiesofhouses.blogspot.co.uk/2005/11/vanna-venturi-house-in-philadelphia-by.html [Accessed 22 Aug, 2015]

Venturi, R. (1966) Complexity and contradiction in architecture, 2nd edition.

Yaneva, A. (2009a) Made by the Office for Metropolitan Architecture: An ethnography of design. Rotterdam: 010.

Yaneva, A. (2009b) 'Making the Social Hold : Towards an Actor Network Theory of Design', *Design and Culture*, 1(3), pp.273–288.

Yaneva, A. (2012) *Mapping Controversies in Architecture*, Farnham: Ashgate.

Yelavich, S, & Adams, B. (eds.) (2014) *Design as future-making*, London:Bloomsbury