

Strengthening the Practitioner Focus in Environmental Assessment

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Strengthening the practitioner focus in environmental assessment

Abstract

Environmental assessment (EA) is intended to ensure that environmental issues, in a broad sense, are considered in decision making. EA is globally institutionalised through national and international legislation, policies and guidelines, and a field of practice. However, there is a gap between the expectations on EA presented in these regulatory and guiding documents and how it is addressed in practice. This thesis explores the reasons for this gap, focusing on EA practitioners' daily work.

The aims of the research are development of theory and generation of new empirical knowledge about how EA practitioners think and act in their daily practice. At the heart of the research is the development of a conceptual framework, space for action, that centres on practitioners' possibilities for influencing practice. The two-dimensional framework is developed iteratively, through empirical and theoretical investigations. The empirical investigations centre on: challenges for practitioners from the multiple perspectives available to apply when deciding appropriate actions; how practitioners think and act when seeking possibilities to influence practice; and, the consultant's role in determining quality. The theoretical basis for the framework integrates and builds on earlier work by planning theorists and elements from frame theory.

The first dimension in the framework concerns how practitioners decide on appropriate actions. This process restricts which perspectives practitioners decide to act on and argue for in practice and, subsequently, which perspectives that have potential to be addressed in EA. The second dimension concerns whether these suggestions for appropriate action are enacted and agreed upon in EA processes. These interactions restrict practitioners' possibilities of exerting influence on practice, in terms of both the actual scope of an EA, and how the issues and impacts included are addressed, hence influencing EA quality. The results reveal that these dimensions are important for understanding the gap between expectations of improvements and actual practice. They also reveal a need to recognise the evolving and multi-perspectival character of EA, together with opportunities for advancing the field of practice through critical reflection, reframing and multi-profession collaboration. Overall, this thesis contributes to understanding the important role of practitioners in shaping the field of practice, and provides a new theorisation that strengthens the practitioner focus in EA research.

Keywords: Environmental assessment, EIA, SEA, practitioner, consultant, perception, health, quality, frame theory, space for action

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Dedication

To Björn, Annie and Valter

*We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.*

T.S. Eliot 'Little Gidding'

Acknowledgements

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beginning of the PhD project, for kind support and for introducing me to the subject of health.

Furthermore, I want to extend my gratitude to all my colleagues at the Department of Urban and Rural Development, in particular fellow PhD students, colleagues at the Division of Landscape Architecture and the Spira research group for providing support and fruitful discussions. Special thanks to my former and current colleagues Andrew Butler, Camilo Calderon, Klara Fischer, Kerstin Nordin, Antoinette Wärnbäck and Ann Åkerskog for acting as 'critical friends' of my research, posing challenging questions, introducing new perspectives and providing moral support during low times – which included listening to all my ideas and worries over and over again. Thank you, without you this work would by no means have been so fulfilling as it eventually became! I would also like to direct warm thanks to all my colleagues at the former EIA Centre, for sharing their knowledge and enthusiasm for environmental assessment. From this group in particular, in addition to those already mentioned, Anna Axelsson, Veronica Driberg, Linda Engström, Tabita Gröndal and Lisa Åhrgren are thanked for making me feel warmly welcome when new in Uppsala, to where I just had moved to start my PhD studies. Furthermore I am grateful for the input given by Cecilia Waldenström, opponent of my 50% seminar, and Mat Cashmore, opponent of my 90% seminar, who helped me see my work from new perspectives.

I am also grateful to all those not already mentioned who I had the opportunity and pleasure to meet and discuss my research. I am immensely grateful to those practitioners who kindly shared their time, experiences, knowledge and reflections with me. This project would literally not have been possible without you! I would also like to thank Julia Nowacki and Marco Martuzzi for inviting me to a WHO meeting in Bonn, which helped me to put my research in context. I am grateful to Loes Geelen, Roel Meeuwse, Jan Nuesink, Willemijn Smal and Brigit Staatsen for making my short research visit to the Netherlands possible and enjoyable - it provided me with invaluable insights into my research.

I would also like to thank Mary McAfee for excellent work of editing my English in the cover story of this thesis and in papers I and III; and Anni Hoffrén for skills and support with the layout of this thesis. Any mistakes remaining in language and layout are mine. Likewise, despite all the above-mentioned support, I alone am responsible for the interpretations and arguments in this thesis, including any potential errors.

I conclude by thanking my extended family and friends for all their love and support: those of you who live far away but never are more than a phone call away, and those of you living almost next door and helping out in

everyday family life. I appreciate you enormously. My mother deserves extra warm thanks for providing tremendous amounts of family support, always. Thanks also to Annie and Valter, all your hugs and remarkable ideas and questions bring joy to my life and help me to keep track of what is important. And finally and above all, to the love of my life: Björn, thank you for your patience and for taking on such a huge work load at home during the intense period of my PhD studies, for listening for hours and hours when I just had to talk, for your insightful comments on my work and, lastly, for all the laughs and endless love. You make dark times brighter and bring shimmer to my everyday!

December 2015, Uppsala
Mari Kågström

Contents

List of Publications	13
Abbreviations	15
1 Introduction	17
1.1 Initial problem statement and development of research focus	19
1.1.1 Empirical point of departure	19
1.1.2 Theoretical point of departure	19
1.1.3 Development of research focus	20
1.2 Purpose and aims	21
1.3 Research questions	21
1.4 Research strategy	22
1.5 Structure of the thesis	22
2 Research strategy	25
2.1 Theory of science	25
2.2 Four research phases and an iterative research approach	27
2.3 Phase 1: Challenges for practitioners	30
2.3.1 International literature review of EA practice as regards health inclusion	31
2.3.2 Empirical desk studies of the Swedish practice	32
2.3.3 Towards research phase 2	32
2.4 Phase 2: Practitioners' possibilities for influencing practice	33
2.4.1 Selection of an EA process for examination	34
2.4.2 Document analysis	34
2.4.3 Semi-structured interviews	35
2.4.4 Towards research phase 3	36
2.5 Phase 3: The consultant's role in determining quality	36
2.5.1 Semi-structured interviews	38
2.5.2 Validation workshop	38
2.5.3 Towards research phase 4	38
2.6 Phase 4: Reflection on findings, clarifications and establishment of the contribution from the thesis	38
2.7 Research quality	40
2.7.1 Validity and ethics	40
2.7.2 Opportunities and dilemmas as an industrial PhD student	43

3	Conceptual framework	45
3.1	Positioning the approach to space for action	45
3.2	Development of conceptual framework made in phase 2	46
3.3	Refinements made during phase 3	47
3.4	Clarifications made during phase 4	49
3.5	Evaluation of the usefulness of the framework	52
4	Summary of papers	55
4.1	Paper I – ‘Human health frames in EIA: the case of Swedish road planning’	56
4.2	Paper II – ‘Space for action: how practitioners influence environmental assessment’	56
4.3	Paper III – ‘Between “best” and “good enough”: how consultants guide quality in environmental assessment’	58
5	Presentation and discussion of main findings	59
5.1	PQ – How can practitioners’ possibilities to influence practice be better theorised, to strengthen the practitioner focus in environmental assessment research?	59
5.2	SQ1 - What challenges does the multiple framing of health in the field of environmental assessment create for practitioners?	60
5.3	SQ2 - How do practitioners think and act when seeking possibilities to influence practice?	62
5.4	SQ3 - What is the consultant’s role in determining quality in environmental assessment?	65
5.5	Contribution	66
	References	69

List of Publications

This thesis is based on the work contained in the following papers, referred to by Roman numerals in the text:

- I Kågström, M., T. Hilding-Rydevik & I. Sjöberg (2013). Human health frames in EIA: the case of Swedish road planning. *Impact Assessment and Project Appraisal* 31(3), 198-207. doi:10.1080/14615517.2013.772708
- II Kågström, M. & T. Richardson (2015). Space for action: how practitioners influence environmental assessment. *Environmental Impact Assessment Review* 54, 110-118. doi:10.1016/j.eiar.2015.06.003
- III Kågström, M. Between ‘best’ and ‘good enough’: how consultants guide quality in environmental assessment. Manuscript, submitted in December 2015.

Papers I and II are reproduced with the permission of the publishers.

My contribution to the papers included in this thesis was as follows:

- I I made the main contribution to the research design, collection of empirical material, analysis and writing of the text.
- II I collected the empirical material and made the main contribution to the research design, development of the conceptual framework, analysis and writing of the text.
- III I was the sole author of this paper.

Abbreviations

EA	Environmental Assessment
EIA	Environmental Impact Assessment
HIA	Health Impact Assessment
IA	Impact Assessment
SEA	Strategic Environmental Assessment

1 Introduction

Environmental assessment (EA) is a widespread and well-established field of practice. From its introduction in the National Environmental Policy Act of 1969 in the USA, there has been tremendous recognition and development of EA, which is now used in most countries in the world, in a broad range of decision-making contexts (Morgan, 2012). This means that EA is recognised as an important mechanism in the wider context of environmental governance (Arts *et al.*, 2012; Cashmore *et al.*, 2015). Furthermore, EA, together with a larger family of impact assessments (IA), is recognised as essential for ensuring that sustainability issues are considered in decision-making (Pope *et al.*, 2013). Nevertheless, although widely institutionalised and with high expectations, EA practice has constantly been criticised for not performing well enough, and in particular for not being effective enough in adequately influencing decision making (*e.g.* Benson, 2003; Bond *et al.*, 2004; Geneletti, 2006; Gunn & Noble, 2011; Hildén *et al.*, 2004; O'Faircheallaigh, 2010; Steinemann, 2000).

Solutions to these problems within the EA field have preliminarily been based on recognition of EA as a rational and systematic process (*cf.* Jay *et al.*, 2007; Owens *et al.*, 2004; Weston, 2000). Studies of how EA should be applied, for example including best practice guidelines, have long dominated EA literature (Retief, 2010). A high level of confidence has been placed in the institutionalisation of different sorts of quality control mechanisms, such as regulations, review bodies and licensing of practitioners (Kruopienė *et al.*, 2009; Lyhne *et al.*, 2015; Sandham *et al.*, 2013). Today, there is a burgeoning field of national and international legislation, policies and guidelines concerning EA, creating a web of rules, values, roles and responsibilities, which establish and emphasise certain ways for EA practitioners and actors to think and act (Arts *et al.*, 2012; Cashmore *et al.*, 2015; Meuleman, 2014).

However, the numerous guidelines and control mechanisms that EA practitioners are expected to handle have proven not to be sufficient to bridge the gap between what is expected and desired of EA, and real-life practice (*cf.* Morgan, 2012). In recognition of this dilemma, a growing stream of research is seeking alternative explanations and solutions to close the gap. This includes examining the context dependency of how key stages of EA are recognised and handled (Blicharska *et al.*, 2011; Richardson, 2005) and how EA itself is implemented and influences decision-making (Hilding-Rydevik & Bjarnadóttir, 2007; Hilding-Rydevik & Åkerskog, 2011; Runhaar, 2009). Furthermore, it is argued that EA practitioners and other EA actors do not make rational decisions (Kørnøv & Thissen, 2000). Others argue that their values, attitudes, needs, attitudes and perceptions, as well as interrelations between these, are significant for decisions made and actions taken at every stage of EA processes, and shape whether and how EA will influence decision making (*e.g.* Beattie, 1995; Blicharska *et al.*, 2011; Canter & Canty, 1993; Cashmore & Richardson, 2013; Ehrlich & Ross, 2015; Kolkman *et al.*, 2007; Kørnøv & Thissen, 2000; Kørnøv *et al.*, 2014; Lawrence, 2000; Nilsson & Dalkmann, 2001; Owens *et al.*, 2004; Richardson, 2005; Runhaar, 2009; Valve, 1999; Wilkins, 2003; Wärnbäck & Hilding-Rydevik, 2009; Wärnbäck *et al.*, 2013).

This body of research is redirecting the focus towards the micro practices of environmental assessment; to the opportunities and challenges EA practitioners encounter in their daily practice in making decisions on appropriate action and in striving to have these decisions agreed and enacted in EA processes. It is in this daily work of practitioners that the research in this thesis is grounded. By following the direction of the researchers cited above and by providing an additional analytical lens, the research presented in the thesis makes a valuable contribution to strengthening the practitioner focus in EA.

Finally, some words on the definition of EA practitioners in this thesis. 'EA practitioners' refers to those professionals working within EA processes, such as those involved in managing EA processes and preparing and reviewing EA reports. This group also includes EA consultants, *i.e.* those working in the private sector who are contracted to undertake EA work. The term 'EA actors' is used to refer to a wider group of actors, including actors that take part in or influence EA work as policy and decision makers or through other channels, including representatives of non-government organisations and members of the public.

1.1 Initial problem statement and development of research focus

This section presents the two departure points for the thesis: one empirical (section 1.1.1) and one theoretical (section 1.1.2). This is followed by an account of how the research focus developed during the PhD project (section 1.1.3).

1.1.1 Empirical point of departure

Environmental assessment (EA) has been recognised as an important, but ‘unrealised’, opportunity for promoting and protecting health (Bhatia & Wernham, 2008 p. 39; Fehr *et al.*, 2014). ‘Unrealised’ relates to weaknesses in health inclusion that have been reported over almost three decades, alongside repeated calls for improvements (Bhatia & Wernham, 2008; Burns & Bond, 2008; Carmichael *et al.*, 2012; Fehr *et al.*, 2014; Fischer *et al.*, 2010; Harris *et al.*, 2009; Hilding-Rydevik *et al.*, 2005; Kørnø, 2009; Noble & Bronson, 2005; Noble & Bronson, 2006; Steinemann, 2000; WHO, 1987). While there seems to be quite good knowledge of the shortcomings of EA reports, less is known about the underlying reasons, which creates an empirical knowledge gap.

A critical factor is that health, as a concept, has multiple meanings existing in parallel (Medin & Alexanderson, 2000; Tones & Green, 2008). This is reflected in policy and legislation in Sweden, providing multiple and quite contrasting perspectives on health which create a dilemma for practitioners attempting to decide how to include health in EA (Paper I). The empirical research requirement which follows from this is to examine how practitioners navigate this space and associated implications for theory and practice.

1.1.2 Theoretical point of departure

Environmental assessment (EA) has long been recognised as having weak theoretical foundations (Lawrence 1997). This weakness is repeatedly echoed in calls for more extensive use of theory, theory advancement and advancement of the EA research agenda (Cashmore, 2004; Kørnø, 2015; Morgan, 2012; Pope *et al.*, 2013; Runhaar & Arts, 2015; Wallington *et al.*, 2007). There is thus a general need to engage with and develop theory in the EA research field.

The dominant view of EA to date has been as a technical rational model with embedded top-down thinking, which downplays practitioners’ capability to influence practice, seeing them more as neutral, value-free preparers of information, capable of making objective choices based on analysis of all necessary information (Jay *et al.*, 2007; Weston, 2000).

However, as mentioned in the introduction, in EA research there is growing concern about what is going on in micro practice, shifting the focus towards the influence on practice from practitioners' thoughts and actions (e.g. Cashmore & Richardson, 2013; Kørnøv & Thissen, 2000; Kørnøv *et al.*, 2014; Lawrence, 2000; Richardson, 2005; Valve, 1999; Wilkins, 2003). In-depth studies of how practitioners think and why they act in a certain way are still rather few, however, growing in number. There are even fewer studies connecting these two dimensions to each other. Recognising these concerns, a particular research requirement can be identified, namely the need to support the field of research by developing new ways of theorising how practitioners think and act in their daily practice, and what this implies for their influence on, and capability to influence, practice.

1.1.3 Development of research focus

The research focus was gradually refined during the PhD project, in response to interim empirical and theoretical findings. This section describes the overall development. The refinements were made in an iterative process that followed certain phases. These are referred to in the following text in brackets, and described in detail in Chapter 2.

This PhD project represented a cooperative venue between the Swedish consulting firm Tyréns and SLU, whereby I performed my PhD studies at SLU but was employed at Tyréns¹. This also meant that when I was accepted as a PhD student, a broad research topic, 'health inclusion in EA', had already been established in discussions between Tyréns and SLU. The overall expectation for the PhD project was to find better ways for including health in EA, either from a normative or methodological point of view. Consequently the initial gathering of data focused on gaining an overview of weaknesses as regards health inclusion and the reasons for these (phase 1), as well as what seemed to be specific in cases of 'best practice' (phase 2).

However, what attracted my interest in the initial investigations was the wide range of perspectives on health provided in legislation, policies, guidelines and EA reports, as described in section 1.1.1 This made me question what this meant for practice and for practitioners. How did practitioners decide how to act given the multiple perspectives on health? Who had the possibility to influence the perspective used, and why?

This led me to explore how these kinds of questions were addressed in EA research, which revealed that they were under-investigated, as described in

¹At Tyréns, I worked part-time as a consultant during my PhD studies. However, this work was reduced to a few days a year during the final half of the PhD project, as I reduced my full-time work to part-time due to parental leave.

section 1.1.2. What emerged was thus an interest in exploring ways to support theory development in connection with these issues.

In line with this, the research focus was widened to embrace EA practice in general, not necessarily connected to health inclusion. The focus was first widened by using health as an example of the continuous expectations on EA to evolve through the integration of ‘new’ issues, arguing that how these are implemented is critical for the effect (if any) they have on EA practice (phase 2). Health inclusion in EA, in terms of the issues and impacts addressed, was then used as an empirical base for examining quality performance in EA, thereby addressing a central debate in EA (phase 3).

Health inclusion in EA, and the related field of health impact assessment (HIA), is recognised in this thesis as being grounded in values, rationales, needs, policies and disciplines that in critical regards are different to mainstream EA practice (Cashmore & Morgan, 2014; Harris *et al.*, 2009). For example, there is a focus on health equity and social determinants of health (Dahlgren & Whitehead, 2007; Hilding-Rydevik *et al.*, 2005; Noble & Bronson, 2005; Noble & Bronson, 2006). However, the thesis also recognises HIA and health inclusion in EA as fields of experience, knowledge, perspectives and problematisations that are of significant value for core questions in EA, such as: implementation of new issues and perspectives in EA (Paper II), quality performance (Paper III) and multi-disciplinary work (Morgan *et al.*, 2012), as well as fields which have much to learn from debates and knowledge from the wider field of EA (Morgan, 2003).

1.2 Purpose and aims

The purpose of this thesis is to strengthen the practitioner focus in the EA research field by examining practitioners’ possibilities to influence practice and how this can be theorised. The twin aims following from this are development of theory and generation of new empirical knowledge about how EA practitioners’ think and act in their daily practice. These aims are intertwined, meaning that the empirical knowledge is necessary for supporting theory development.

1.3 Research questions

The thesis examines one primary research question and three secondary research questions. The primary research question directly addresses the need for theoretical development in the field. The three secondary research questions are empirical and each supports specific empirical investigations that lead

towards the theoretical contribution sought in the primary research question. The research questions were gradually developed in parallel with the research focus development presented in section 1.1.3.

Primary research question

PQ - How can practitioners' possibilities to influence practice be better theorised, to strengthen the practitioner focus in environmental assessment research?

Secondary research questions

SQ1- What challenges does the multiple framing of health in the field of environmental assessment create for practitioners?

SQ2 - How do practitioners think and act when seeking possibilities to influence practice?

SQ3 - What is the consultant's role in determining quality in environmental assessment?

1.4 Research strategy

The research strategy guiding the research consists of four phases. The first three phases each correspond to the three secondary research questions. The fourth phase includes a synthesis of the empirical findings, a reflection on the theoretical development and establishment of the theoretical contribution sought in the primary research question. The research uses multiple qualitative approaches of empirical investigation and examination of frame theory and theories of space for action. The research strategy is further presented in Chapter 2.

1.5 Structure of the thesis

This thesis consists of five chapters and three appended papers. Chapter 1, of which this section forms part, provides: a general introduction to the field studied; the initial problem statements and the research focus development; the purpose and aims of the thesis; and an outline of the research strategy adopted. Chapter 2 provides a detailed explanation of the research strategy, while in Chapter 3 the conceptual framework developed for this thesis is presented and evaluated. Chapter 4 provides an overview of Papers I-III and their contribution to answering the research questions. Finally, Chapter 5 presents

the main theoretical developments and the empirical findings and discusses these in relation to the research questions. Following from that, the contribution of the thesis is summarised and discussed in relation to its purpose and aims.

2 Research strategy

This chapter presents the research strategy that was followed to address the primary and secondary research questions. The chapter begins with a presentation of the ontological and epistemological basis for the research (section 2.1). This is followed by section 2.2, outlining the four main research phases connecting to the four research questions and presenting the iterative research approach adopted for the thesis. The following four sections 2.3-2.5 present each research phase separately. The chapter ends with section 2.6 addressing research quality.

In order to better explain how one phase led into the next, this chapter also mentions some of the interim research findings that were important in guiding the development of subsequent phases of the research. These findings are more fully presented in the following chapters and Papers I-III.

2.1 Theory of science

This section presents the ontological and epistemological basis for the research in the thesis and the subsequent choices that were made concerning theoretical perspectives, research strategy and relevant sources for validation.

The research is based on a constructivist ontology, where the ‘reality’ under examination is understood as being socially constructed (Bryman, 2008). This means that people understand the world by attaching meaning to it (Bryman, 2008), and that this meaning is constructed in daily interactions between people (Burr, 1995), and influenced by social, political and cultural processes (Furlong & Marsh, 2010). Meaning, then, is contingent and reality is consequently understood as being in a state of constant change, where social phenomena, order and categories continuously become challenged, re-established and renewed (cf. Strauss et al., 1973 in Bryman, 2008 p. 19-20)

It is nevertheless acknowledged that there is pre-existence (Bryman, 2008) of a world of ‘things’ such as air pollution, health inequity and cardio-vascular

disease. However, no social role is ascribed independently of the meaning people attach to such things, of their understanding or interpretation of reality (Furlong & Marsh, 2010; Gergen, 2001). Reality is thus understood as being based on perception and representation rather than as being objective, and as contingent rather than static. People are understood as acting on the basis of the meaning they attribute to their acts, and to the acts of others, not on 'objective' reality, and so actions cannot be understood as 'objective' or 'value-free'.

This means that knowledge about reality and human action cannot be produced outside the meaning people attribute to it (Furlong & Marsh, 2010). It then becomes necessary to adopt a research strategy that does not separate what is being studied from who is being studied, but instead attempts to gain insights into the research subjects' interpretations of reality; in other words, into their points of view (Bryman, 2008).

The research in this thesis is subsequently based on theories - of frames and space for action - that emphasise reality as perceived, negotiated and contingent. The theories used seek to explain: how individuals make meaning of situations; the role of values and practices embedded in contexts of relevance; and what this implies for guiding individuals' actions and their ability to influence practice. The theoretical basis for the thesis is further explained in Chapter 3 and Papers II-III.

The main method for collecting empirical data about practitioners' situation, opinions and actions was semi-structured interviews (see sections 2.4.3 and 2.5.1). This was supported by desk studies such as document and literature reviews, observations and reflections made during my own practice as an EA consultant and conversations with colleagues at Tyréns and other EA practitioners and researchers at workshops, conferences and study visits (sections 2.3-2.7). Insights into the practitioners' points of view and explanations of behaviour, and practitioners' possibilities for influencing practice, were sought through an iterative process, weaving back and forth between empirical and theoretical work for gradual refinement of the research focus and the theoretical concepts and perspectives developed (section 2.2). This constructivist research approach suggests a particular way of thinking about validity, which is addressed in section 2.7.

2.2 Four research phases and an iterative research approach

The research was performed in four main research phases. These sections are briefly introduced in Table 1 and Figure 1, and described more fully later in the chapter. The first three research phases included empirical and theoretical investigations addressing the three secondary research questions. During these phases, a conceptual framework was gradually developed. Phase 4 included reflections on the research undertaken.

Table 1. *Research strategy used in the research described in this thesis*

	Phase 1	Phase 2	Phase 3	Phase 4
Research question	PQ and SQ1	PQ and SQ2	PQ and SQ2- SQ3	PQ and SQ1-SQ3
Conceptual framework development	Creation of an initial approach for the framework	Development and application of the framework	Application, refinements and evaluation of the framework	Reflection and clarification of key concepts
Theory	Frame theory	Space for action incorporating frame theory	Space for action incorporating frame theory	Space for action incorporating frame theory
Empirical investigation	Literature review and other desk studies	Document reviews and semi-structured interviews	Semi-structured interviews and validation workshop	
Analytical context	Inclusion of health in EA	Implementation of 'new' issues in EA	The consultant's role in regulating EA quality	EA practice
Publication	Paper I	Paper II	Paper III	Thesis cover story

The research in all phases was conducted in an iterative manner (Yin, 2009), which meant alternating between the empirical and theoretical investigations. However, the balance between theoretical and empirical work differed between the research phases (as indicated in Figure 1).

Empirical investigation was used to capture and analyse stories about social phenomena or practices of relevance to practitioners: their thoughts and actions, their situations and what seemed problematic or challenging in practice. This involved collecting empirical material, drawing out significant findings and developing categorisations.

Theory is understood in this thesis as concepts with systematised relationships, providing explanations of social phenomena (Bryman, 2008). Theory was used here to conceptualise the empirical findings and develop theoretical perspectives on how practitioners decided on an appropriate way to act, the links between thought and action and practitioners' possibilities to influence practice.

The iterative process meant that empirical findings and categories were brought into theoretical work, resulting in new insights and concepts which provided possible connections and explanations of the empirical findings. These theoretical concepts were then used for revisiting and reorganising the empirical material and for guiding the collection of new material. This in turn refined the focus and brought back more nuanced questions to the theoretical work. Theory development was thus informed by empirical investigations of social phenomena in specific contexts, and by abstracting conceptualisations of these phenomena into theoretical perspectives. The empirical and theoretical work conducted in each of the four research phases is described in more detail in the following sections.

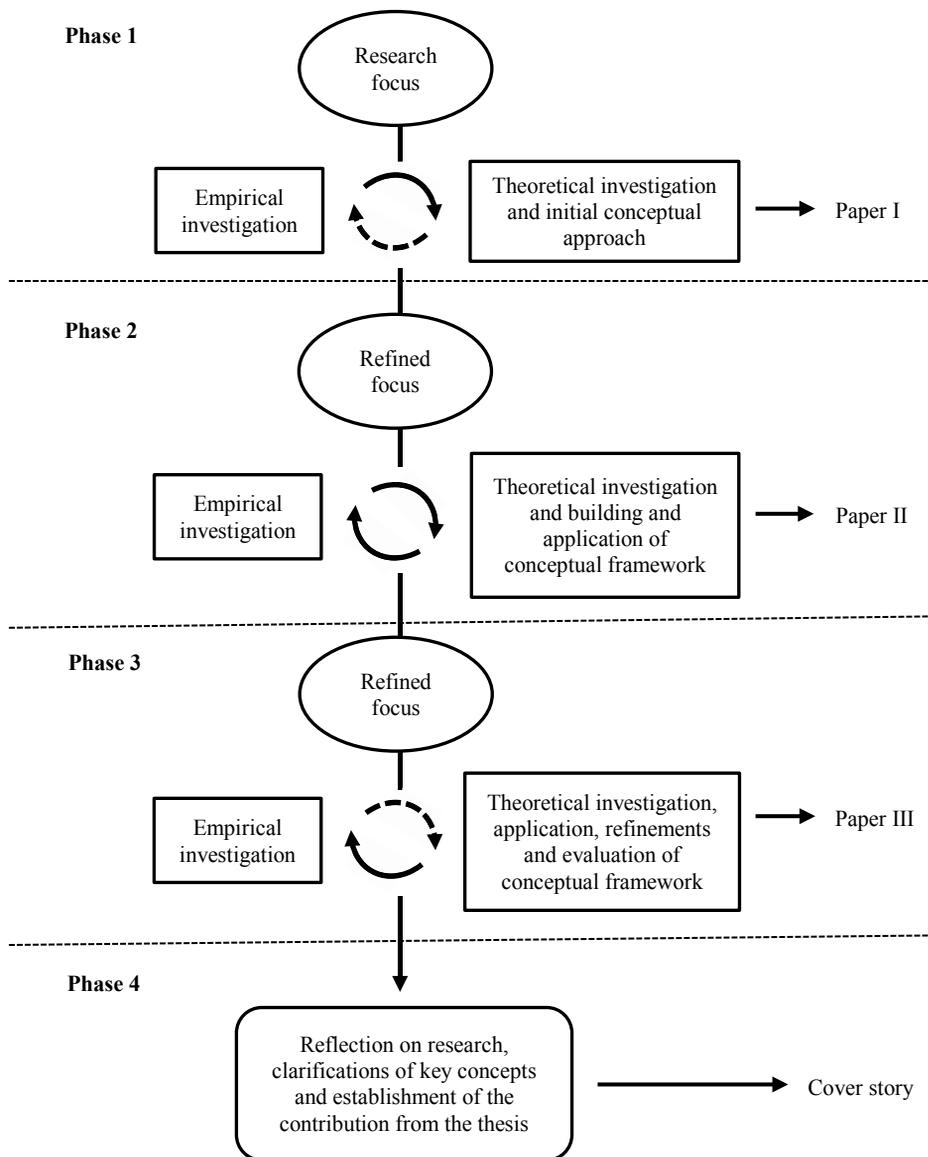


Figure 1. Research strategy. The circular arrows illustrate the iterative process adopted for the research. Crosshatched arrows indicate that the input from these investigations to the development of the conceptual framework was less than that from the investigations indicated by continuous arrows.

2.3 Phase 1: Challenges for practitioners

This section presents the empirical and theoretical investigations that were part of phase 1 (Figure 2). It starts by outlining the research, followed by a presentation of the transport planning focus developed for this phase. The empirical investigations are then presented in sections 2.3.1 and 2.3.2. This is followed by a concluding section (2.3.3) describing how certain interim findings helped to refine the research focus leading towards phase 2.

Phase 1 was the point of departure in development of a conceptual framework and addressed the first secondary research question (SQ1): *What challenges does the multiple framing of health in the field of environmental assessment create for practitioners?*

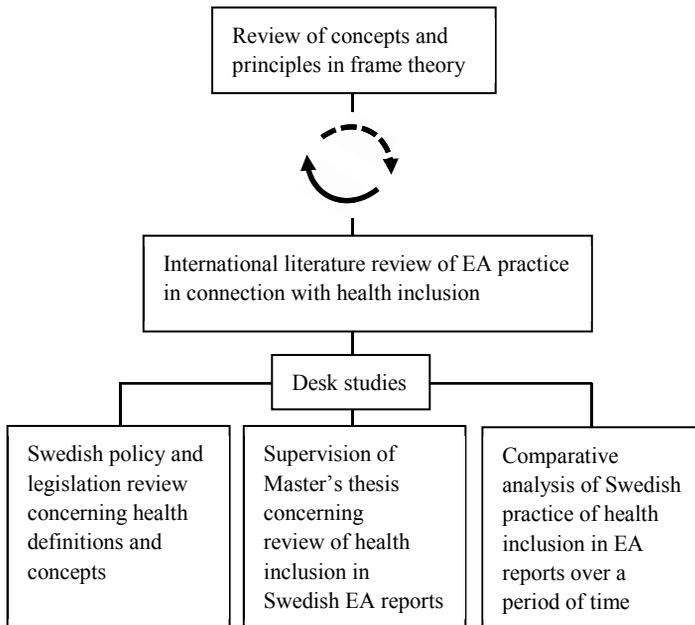


Figure 2. Research phase 1. The circular arrows illustrate the iterative process adopted for the research. The crosshatched arrow indicates that the input from these investigations to the development of the conceptual framework was less than that from the investigations indicated by the continuous arrow

The problem formulation and issues of interest were primarily generated from the empirical investigations, the latter involving a literature review of international experiences of health inclusion in EA and desk studies of Swedish practice (Figure 2). Engagement with theory included investigation of theories that recognised and explained the existence of multiple perspectives on a phenomenon and connections between conceptual perspectives and behaviour. Frame theory was found to be relevant and different ways to conceptualise frames along with their limitations and potentials were further investigated, in particular in connection to where frames come from and what they do (e.g. as expressed by following scholars: 6, 2005; Dewulf *et al.*, 2009; Schön & Rein, 1994; Van Gorp, 2007)

During this phase, there was a particular focus on transport planning because of the recognition of the numerous interactions between health and transport (McCarthy, 2006; WHO, 1999; WHO Regional Office for Europe & UNECE, 2004). Furthermore impact assessments, especially HIA, are recognised as important for guiding decisions regarding transport (Dora & Phillips, 2000; Dora & Racioppi, 2003). This meant that a wide range of health issues and perspectives could be discussed in relation to EA. In addition, the Swedish Road Administration (since 2010 part of the Swedish Transport Administration) was one of the first Swedish authorities to publish EA guidelines, which could partly be explained by the first regulatory demand for EA being incorporated in the Road Act (SFS). The guidelines were later updated a few times and widely used by EA practitioners, including in applications beyond road planning, which meant that EA practices relating to transport planning had the potential to influence EA in other sectors. The impacts that established practices in one sector can have on another are well known in relation to the influence of EIA on SEA (e.g. Wallington *et al.*, 2007).

2.3.1 International literature review of EA practice as regards health inclusion

A narrative literature review was conducted. This approach meant gaining an overview of the topic and potential studies of interest through collection of a broad scope of literature and critical interpretation of the selected literature, as opposed to focusing on making a more comprehensive and replicable account of the literature on the topic, as is often the case with systematic literature reviews (Bryman, 2008). The review included national and international academic and 'grey' literature covering practices and evaluations of practices for inclusion of health in EA and other related processes with the purpose of assessing health in connection to projects and plans - in particular for transport planning. This work is presented in Paper I, in a report in Swedish (Kågström, 2009) and in a popular science article, also in Swedish (Kågström, 2010).

The review included: identification of relevant search terms, databases and literature; organisation of selected literature; and initial formulation of themes from issues of interest, which served as a base for the subsequent desk studies. The main interest was the multiple perspectives on health found in legislation and EA reports.

2.3.2 Empirical desk studies of the Swedish practice

Themes from the literature review were further examined in three desk studies following on from each other (Figure 2). All of these are reported in Paper I.

The first study included examination of definitions and perspectives on health provided by policies and legislation of importance for health inclusion in Swedish EA practice (also reported in Kågström, 2009; Kågström, 2010).

The second study was set up as a Master's project broadly reviewing how health is included in Swedish EA reports for road planning. The Master's student developed and applied a checklist for examining approaches to health assessment in EA reports in terms of: health definitions; health determinants; health consequences; affected population; methods used; and health competence involved (Sjöberg, 2010).

The third step was comparison of the findings from the Master's project with those from an earlier study (Alenius, 2001), in order to assess the developments in Swedish practice (if any) during the intervening years. The comparison had a quantitative component. Among other analyses, Sjöberg (2010) and Alenius (2001) present the results from the application of checklists numerically, *e.g.* how many reports out of the total number of reports examined in the study included an assessment of health impact from noise disturbances. These data were used to calculate the percentage of EA reports in the respective studies that included key health determinants, as well as an assessment and presentation of their impact on health (see Figure 2 in Paper I, p. 203).

2.3.3 Towards research phase 2

The empirical and theoretical investigations revealed a need for further examination of how practitioners navigate a space created by the multiple perspectives on health in Swedish policies and laws of relevance, and the resulting implications for practice. Interim results from the studies in phase 1 were presented at: one international and three national conferences; eight seminars for consultants in four different cities; a seminar for the Swedish Environmental Protection Agency; and in teaching at the supplementary training course for EA professionals hosted by SLU. All these events fed into conversations with practitioners about their practice. From these conversations the research need identified gained further support.

2.4 Phase 2: Practitioners' possibilities for influencing practice

This section presents the empirical and theoretical investigations that were part of phase 2 (Figure 3). The section starts by presenting the refined research focus for this phase, followed by a short summary of the research approach taken. The following three sections present different stages of the empirical investigation of an EA for a road planning project. This is followed by a concluding section describing how certain interim findings helped to refine the research focus leading towards phase 3.

For phase 2, the research focus was refined in line with the needs identified in phase 1 and addressed the second secondary research question (SQ2): *How do practitioners think and act when seeking possibilities to influence practice?*

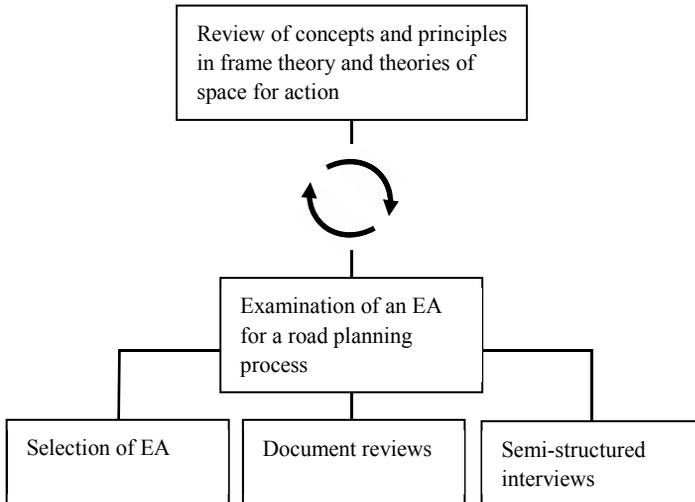


Figure 3. Research phase 2. The circular arrows illustrate the iterative process adopted for the research.

Empirical investigation included document analysis and semi-structured interviews, two of the most common methods in case studies (Stake, 1995). Theory engagement during this phase included: investigations of how practitioners' possibilities to act has previously been conceptualised in the EA research field and beyond, and integration of elements from these theories to elements from frame theory (as thoroughly described in Paper II). Although the empirical focus was on inclusion of health and EA in road planning projects, the analytical focus was widened to implementation of 'new' issues in EA in general, with health serving as an example of a new issue (see section 1.1.3).

2.4.1 Selection of an EA process for examination

The departure point was to select an EA that was considered by practitioners to be an example of good practice for inclusion of health. This meant delegating judgement on what could be considered good practice to the practitioners, without providing them in advance with criteria on how to make this judgement. The focus on good practice was adopted in order to learn as much as possible about these kinds of EA (*cf.* 'instrumental' cases in Stake, 1995 p. 3) as a basis for improving practice. This was in line with the methodological research approach for the thesis at that time (see section 1.1.3).

Practitioners occupying the role of EA and environmental specialists at the Swedish Road Administration and the Swedish Rail Administration² were asked to nominate projects which had been through the three major planning phases in use at that time³, with the EA for the last phase being no older than five years. The aim was to examine whether and how health inclusion had been developed between these phases. This resulted in some suggestions, but the answers also indicated that there were few, if any, cases that were considered good. Another reason was that few transport projects underwent all three planning levels, as for most of them the middle level was not considered necessary. In order to proceed, practitioners and researchers knowledgeable about the suggested projects were asked for their opinions (as recommended in Yin, 2003) and the EA recommended by most was selected.

2.4.2 Document analysis

The focus for the document analysis was to understand the successive handling of health in the EA process. The documents included four kinds of material: 1) environmental assessment sections in four road technical reports; 2) two full environmental assessment reports; 3) one additional report regarding health

²In 2010 these two administrations became part of the Swedish Transport Administration.

³In 2013 new legislation was introduced which, *inter alia*, influenced the division and names of different road planning phases (SFS, 2012:439).

assessment; and 4) written statements from the government and national and regional authorities. These documents are explained in more detail in Paper II.

A checklist was developed for performing a qualitative content analysis of the two full EA reports, a common approach for qualitative analysis of documents (Bryman, 2008). The checklist was initially developed from the themes identified in phase 1, tested by applying it to one of the full EA reports, refined and, finally applied to both of the full EA. Since the other documents were much shorter, it was decided that only notes would be taken in connection with themes of relevance, instead of full application of the checklist. The overall themes in the checklist were:

- Health definition
- Scope of health determinants
- Methods for health assessment
- Inclusion of population data and assessments covering sensitive groups
- Presentation of health impact included (*e.g.* positive/negative; cumulative; physical, social and mental)
- EA practitioners and actors.

2.4.3 Semi-structured interviews

The findings from the document analysis served as the basis for the development of an interview guide for performing qualitative semi-structured interviews with seven practitioners engaged in EA processes (Paper II). The interviews sought insights into practitioners' perceptions of their situation, their reasons for and opinions about the choices made, and actions taken that had led to the approach to health found in the reviewed EA documents (Paper II).

The use of the guide made it possible to formulate interview questions and pose follow-up questions in a way that suited each interview situation, without losing track of the themes and aim of the interviews (Trost, 2005). The initial guide was tested in a pilot interview with a consultant who had knowledge about the selected case, but was not involved in the planning phases selected for study. Based on this experience, the guide was revised and given a tighter focus with more open-ended questions. The final guide was organised around the following themes:

- Informants' work experiences and professional training
- Practitioners involved and their collaboration or conflicts
- The work process regarding inclusion of health in EA
- Development of practice for inclusion of health in EA over time.

The analysis of the interviews began with reading all the transcripts and marking and labelling quotes of interest (*cf.* Bryman, 2008; Kvale & Brinkmann, 2009). This work was supported by the software *Atlas.ti* (Paper II). Categories were then developed by searching for connections between labels. From this work, a narrative was written to construct what had happened during the case. Use of a combination of different approaches, in this case categorisations and narratives, is common when analysing interviews (Kvale & Brinkmann, 2009). The construction was made by concentrating and connecting the informants' stories to a more coherent and richer narrative of their practice (Kvale & Brinkmann, 2009). Main actions in connection to health inclusion and the actors who took these actions were outlined. To this was added a few lines about how the informants perceived health inclusion in EA, such as possibilities and obstacles, and practitioner attributes, such as expert, powerful, attentive, skilful, reactive, slow, producing and flexible. These latter were interpreted from how they had spoken and explained actions and expectations of themselves and others. The findings from the narrative were finally used to refine the initially formulated categories.

2.4.4 Towards research phase 3

Application of the framework revealed that it seemed to be of importance in particular for understanding how a certain group of practitioners, namely EA consultants, gained influence on practice. Furthermore, it seemed to be of particular interest to go into more depth with processes of self-restriction (see definition in section 3.3).

2.5 Phase 3: The consultant's role in determining quality

This section presents the empirical and theoretical investigations that were part of phase 3 (Figure 4). The section starts by presenting the refined research focus for this phase, followed by a short summary of the research approach taken. The following two sections (2.5.1 and 2.5.2) present the empirical investigations, followed by a concluding section (2.5.3) presenting how certain interim findings helped to refine the research focus leading towards phase 4.

For phase 3, two refinements of the research focus were made to support the needs identified in phase 2 and to address the third secondary research question (SQ3): *What is the consultant's role in determining quality in environmental assessment?*

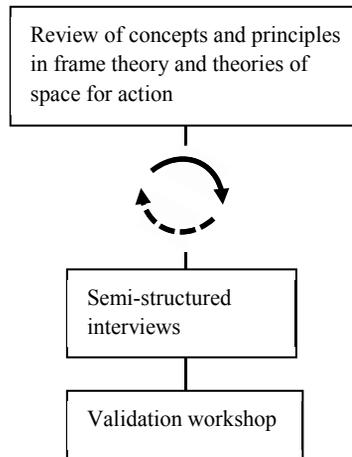


Figure 4. Research phase 3. The circular arrows illustrate the iterative process adopted for the research. The crosshatched arrow indicates that the input from these investigations to the development of the conceptual framework was less than that from the investigations indicated by the continuous arrow.

The refined focus on consultants was driven by: the results from research phase 2; and the widely recognised (Morrison-Saunders & Bailey, 2009), but under-investigated, role of consultants in EA (Landim & Sánchez, 2012). The study focused on important elements guiding consultants’ decisions for appropriate action and their possibility to have these decisions accepted, thus gaining more information about the restrictive processes conceptualised in phase 2. The refined focus on quality was made based on the empirical findings. It was noted that a central component in consultants’ stories of their practice was a ‘level of approval’, which they related to a quality level that was generally approved by decision makers (Paper III). Theoretically, this phase meant testing the use and value of the framework by applying it to a central debate in EA - the quality issue, thereby exploring if the framework could reveal new dimensions of practice to an already established core concern in EA.

Empirical data were collected through qualitative semi-structured interviews and a validation workshop, as presented below. Theory engagement during this phase included: investigations of how the two issues of focus for this phase (quality and consultants) had previously been conceptualised in the EA research field; and refinement of conceptualisations of space for action from phase 2.

2.5.1 Semi-structured interviews

Semi-structured interviews were conducted with 19 Swedish EA consultants (Paper III). As in phase 2, the interviews were conducted using an interview guide. The guide was designed from the conceptual framework. During the interviews, questions were asked in a way that made the interviewees thoroughly reflect on practice. Before the interview, the interviewees were asked to select a case and think about what had happened during this case, why, and what they thought about that.

The analysis of the interviews included: close reading of the transcripts of the interviews; labelling quotes of interest; shaping categories by searching for connections between the labels; and placing these categories in relation to each other and the research focus for this phase (Paper III).

2.5.2 Validation workshop

A validation workshop took place at a consulting firm in the context of its annual EA competence building day and was attended by 23 internal EA consultants (Paper III). During the workshop, the findings from the interviews were presented in statements. The consultants were divided into groups, each discussing one of the statements. The discussions held were then presented by the groups and further discussed in plenum. A strong majority agreed with the interpretations I had made (Paper III).

2.5.3 Towards research phase 4

The research revealed a need for further reflections on the relevance and usefulness of the framework. Since all the empirical material concerned the Swedish context, it was of particular relevance to reflect on this supported by international perspectives.

2.6 Phase 4: Reflection on findings, clarifications and establishment of the contribution from the thesis

This section presents the research strategy for phase 4 (Figure 5). The phase had two components. The first included an evaluation of the framework and the second clarifications of key concepts in the conceptual framework, as a response to issues raised during the evaluation.

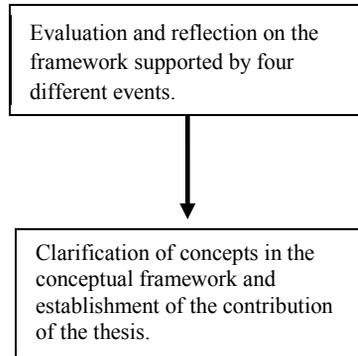


Figure 5. Research phase 4. The circular arrows illustrate the iterative process adopted for the research.

During phase 4, the interim findings from research phase 1-3 and the usefulness of the framework were reflected upon. This reflection was supported by conversations with practitioners and researchers from different national and international contexts during four different events that took place in the final year of my PhD studies (*cf.* section 2.7.1). The first two events considered my emerging findings in an early state and the second two my findings in a more finalised state.

The first event was the annual conference of the International Association of Impact Assessment which took place in Florence, Italy, and where I held a presentation and attended sessions in connection with *e.g.* health inclusion in impact assessments and quality. The second event was a research visit to the Norwegian University of Life Sciences in Ås, Norway, where I held a presentation, followed by a discussion. The third event was a meeting entitled 'Health Impact Assessment and health integration into environmental assessments: implementation strategies, compliance and good quality assurance'. The meeting was hosted by the World Health Organisation Regional Office in Europe, in Bonn, Germany. I was invited as temporary advisor on the topic of the meeting. The fourth event was a study visit to the Netherlands, where I held presentations followed by discussions with representatives from Utrecht municipality, the National Institute for Public Health and the Environment, the Netherlands Commission for Environmental Assessment and the consulting firm Royal HaskoningDHV.

The first two events provided me in particular with opportunities to compare my empirical findings to international experiences. This led to

reflection on the relevance of the framework and whether some parts more than others resonated with the experience of the event participants. Similar opportunities were provided in the second two events. Added to this were opportunities to reflect on ways to change practice and how different contexts could influence frames held by individuals. The outcomes from these reflections served as a basis for refinement of the conceptual framework through further investigation of key elements in frame theory.

2.7 Research quality

The sections below describe how I engaged in the issue of enhancing the quality of my research. The first section (2.7.1) concern issues of validity and ethics in my research, while the second (2.7.2) has a particular focus on opportunities and dilemmas for quality that resulted from my role as an industrial PhD student.

2.7.1 Validity and ethics

How to evaluate research quality in qualitative studies is quite a contested issue and there are several different, but partly overlapping and complementary, schemes of criteria (Bryman, 2008). With the ontological and epistemological premises that underpin this thesis (see section 2.1), and the research purpose of strengthening the practitioner focus (see section 1.2), it did not make sense to relate quality to claims about universal and objective truth. Quality is better related to whether theoretical reasoning is rooted in rich analysis of real-life practice and the findings that resonated with practitioners. A relevant consideration from this perspective is also whether the research has helped to bring the field of practice forward and whether practitioners contributing to the empirical material experienced negative consequences from participating in the research (*cf.* related issues in Bryman, 2008; Fischer, 2003; Kvale & Brinkmann, 2009). These issues raise the entangled issues of research validity and ethics.

Validity could be said to concern the logic of arguments, the use of methods and theory, and their consistency with empirical findings, as well as “the compatibility of the constructed realities that exists in the minds of the inquiry’s respondents with those that are attributed to them.” (Fischer, 2003 p. 154), *i.e.* whether the researcher’s interpretation reflects the phenomenon being studied in a way that sounds true for the research subjects. Reporting knowledge that is as valid as possible is also an ethical responsibility (Kvale & Brinkmann, 2009).

The question of validity permeates the whole research process and rests upon the “quality of craftsmanship” (Kvale & Brinkmann, 2009 p. 248), as well as on dialogue with scholars familiar with the themes investigated and the theories applied for interpreting them (peer validation) and the people investigated (Kvale & Brinkmann, 2009). The latter validation community can be expanded to include not only respondents, but also those that are part of the same setting (*cf.* Fischer, 2003; Kvale & Brinkmann, 2009), or in terms more relevant for this thesis, to the same community of practice.

Dialogue with scholars as a means of validating the relevance of chosen methods and theories and the logic and soundness of the arguments presented took place throughout the whole research process (*cf.* ‘peer-review’ in Kvale & Brinkmann, 2009). This was in particular undertaken in forms of supervisor and research group meetings at SLU and in national and international seminars, meetings and conferences. Whether my interpretations found a resonance among the community of practice was also evaluated during the whole research process in seminars and workshops with practitioners (as presented in sections 2.3-2.6), and in informal conversations with colleagues at Tyréns (see section 2.7.2) (*cf.* Fischer, 2003; Kvale & Brinkmann, 2009).

Important elements in quality ‘craftsmanship’ are, according to Kvale and Brinkman, (2009), to check, question and theoretically interpret findings. Equally important is the intertwined ethical issue of fostering practical research skills in order to “engage in contextualized methods of reasoning rather than calculating from abstract and universal principles” (Kvale & Brinkmann, 2009 p. 67). At the core of these research skills is the ability to continuously reflect over choices and interpretations made (*cf.* Bryman, 2008) and to be transparent about the choices made (Kvale & Brinkmann, 2009). This reflexivity is particularly important since researchers, like all other people, draw on frames for understanding the world, which means it is not possible for them to be reference-free (section 2.1, *e.g.* Furlong & Marsh, 2010). An important aspect in research is, however, for researchers to strive to be better aware of their frames.

When I started my PhD studies, I brought with me a reference frame of EA practice from my own personal experiences as an EA consultant. When I was accepted as a PhD student, I had worked as an EA consultant with a variety of project and plans for about five years. My familiarity with the practice was an advantage in two senses. First, it brought an enhanced sensitivity to the topic, which made it easier to capture nuances during the interviews (Kvale & Brinkmann, 2009). Second, it meant being able to recognise what seemed reasonable and relevant during interpretations. However, it also meant that I risked not noticing things I was not already aware of, or dismissing things that did not ‘fit’ with my reference frame. Sometimes my findings resonated with

my own experience, sometimes the opposite, and sometimes they made me reflect upon things I never has thought about before. I tried to be attentive to this and searched for ways to reflect on and validate my interpretations.

A main means for reflection and fostering research craftsmanship was the iterative process adopted for the research (see section 2.2), which made it possible to be in a more or less constant state of reflection. During this process, empirical findings were theoretically interpreted and the knowledge produced was checked and questioned in the weaving back and forth between empirical and theoretical work. The basis for the theoretical development was the close empirical investigations, which meant the value-laden contexts became important for the interpretations, which, as stated above, is an important premise in research ethics (*cf.* Kvale & Brinkmann, 2009).

Reflection was also spurred by the search for relevant concepts and theories, which meant I looked into diverse bodies of research literature, especially in connection to frames and space for action. This opened up for other potential ways of understanding the phenomenon studied and thus functioned as a source for reflection. Different perspectives were provided by the different methods employed and empirical material collected. Finally, opportunities for reflection were also provided through my own EA consultant work (see section 1.1.3). My closeness to practice, however, also made it necessary to establish a critical distance (see section 2.7.2).

Common ethical measures to protect informants from negative consequences involve the researcher asking for and receiving their consent, keeping the material confidential and informing informants in advance of the research (Bryman, 2008; Kvale & Brinkmann, 2009). It was easy to receive consent from the practitioners who participated in the semi-structured interviews (see sections 2.4.3 and 2.5.1). They were also told in advance the topic of my research. However, there was a dilemma here (Bryman, 2008), since at the time of the interview I did not have a clear picture of where I was heading, which meant that the presentation of my research was quite vague. Nevertheless, I do not believe that being able to inform the interviewees about my final research focus in advance of the interviews would have had a significance influence on their consent or participation, or their answers to my questions (except that my questions would probably have been formulated slightly differently). The main dilemma connected to informant consent was that in my role as EA consultant during the PhD studies (also see section 2.7.2), I sometimes found myself in situations of high interest for my research where I had not set out to collect empirical material. Although my colleagues and other participating practitioners were informed of my twin role as consultant and PhD student, this meant that it was not always explicitly stated

in every situation that what happened there could inform my research (*cf.* Bryman, 2008). In the rare cases that this material was a core concern for the research, my strategy for keeping the informants from negative consequences was to anonymise this material in field notes and publications (*cf.* Bryman, 2008; Kvale & Brinkmann, 2009). This anonymisation was also applied as a standard approach for the material collected in the semi-structured interviews.

Finally, a core issue for quality in qualitative research is that the purpose should be to have an impact on theory and practice (Bryman, 2008), towards improving the empirical situation investigated (Kvale & Brinkmann, 2009). This relates to the core concern in the research described in this thesis, which is to advance the EA field of practice through strengthening the practitioner focus in EA research.

2.7.2 Opportunities and dilemmas as an industrial PhD student

This section describes the influence on research quality of the opportunities and dilemmas that resulted from my role as industrial PhD student (see section 1.1.3), having one foot in practice and one in academia.

Being employed at a consulting firm and working in actual EA projects opened up access and opportunities that I otherwise never would have had (*cf.* Bryman, 2008). My work at Tyréns included participating in EA work as a consultant, as well as in staff meetings. I coordinated and authored health chapters in EA and took part in internal EA development work such as developing in-house guidelines. I also had the role of internal EA quality reviewer and sounding board for my colleagues in EA-related issues, not necessarily limited to health.

This was fruitful for my research, since I had the opportunity to study practice from the inside and gain a much more contextualised experience of practice, for example through taking part in conversations during coffee breaks, internal meetings, strategy work and the ups and downs of colleagues' lives, all necessarily part of daily practice. However, this closeness to practice *per se* and to practitioners was also a research dilemma, which created two major needs for adopting strategies in order to: step out of my role as practitioner and learn to think as a researcher; and be critical to practice but still maintain good relationships with employer and colleagues (*cf.* Bryman, 2008).

The moment I realised that I had started to change mode of thinking was when during work as consultant I found myself more engaged in reflecting on how and why I and participating practitioners acted in certain ways, rather than the content of the discussion. More practically, I concluded that the major difference in thinking for me was when I shifted from struggling to solve a problem by drawing only on a broad repertoire of EA practice experiences to

also making use of abstract principles for going from the specific to the general, which provided a new lens for looking at the problem and possible ways forward. This shift was supported by the theoretical focus of the research, which made me engage with theory profoundly.

Keeping a critical distance was also made easier by limiting my time as a consultant in the latter half of the PhD project to only a few days a year (see section 1.1.3). It should also be clarified that although the role of consultants became part of the research focus in the later part of my studies (see section 2.5), it was EA consultants in general, not EA consultants at Tyréns, that were my research focus.

I did not find it difficult to be critical of Tyréns as my employer and of my colleagues. For example, Tyréns made no attempts to influence the design or results of the research (*cf.* Bryman, 2008) and my colleagues met my questions with open minds. However, there is always the possibility that feelings of wanting to keep good relations could slightly influence what questions I asked and the interpretations that I made, without me being fully aware that this was the case. However, I think that some could interpret my results as being tough on consultants, while others might think that I draw a too positive picture of them. Nevertheless, I have done my best to critically reflect on my choices made and used several sources for validation of my interpretations, as presented in the section above.

3 Conceptual framework

This chapter presents the conceptual framework developed in this thesis. It begins by positioning the framework in relation to theories of space for action and frame theory (section 3.1). This is followed by a presentation (section 3.2) of the conceptual framework developed in research phase 2, while section 3.3 presents the refinements made in research phase 3 and section 3.4 presents the clarifications of key concepts made in phase 4. The chapter ends with an evaluation of the usefulness and relevance of the framework (section 3.5). A wider discussion and reflection on the framework and the theoretical contribution of this thesis is provided in Chapter 5.

3.1 Positioning the approach to space for action

The conceptual framework developed in this thesis is named *space for action*. It seeks to conceptualise practitioners' possibilities for influencing practice as they perceive to be appropriate, thereby having the potential to reproduce, adapt, challenge or introduce new practices.

Space for action (or similar) is a widely used concept. However, it is variously defined and used in different disciplines such as social psychology, behavioural geography and planning (Healey & Underwood, 1978). The framework in this thesis is built on the earlier different, but complementary, work of several planning theorists (Grange, 2012; Healey & Underwood, 1978; Tait, 2002), and draws on elements from frame theory (Paper II). It was in particular the work by Healey and Underwood (1978) that inspired the combination with frame theory, but frame theory is not explicitly referred to in their work. A central assumption by Healey and Underwood is that how planners strive to act can be related to their ideas or conceptualisations of planning. Furthermore, they argue that action space is related to the power a

planner has to “impose his definition of appropriate action” (Healey and Underwood 1978, p. 90).

In the EA literature, common kinds of constraints on practitioners’ abilities to fulfil what is expected of them in terms of adequate implementation of new issues or good quality performance are scarcity of clear regulations, methods, guidelines, baseline data and financial support (*cf.* Bhatia & Wernham, 2008; Hilding-Rydevik *et al.*, 2005; Noble & Bronson, 2006; Steinemann, 2000; Wärnäck & Hilding-Rydevik, 2009). These constraints are recognised as important in this thesis, but are not the research focus. The focus is rather on how practitioners, despite all those constraints, think and act when navigating possible ways forward. The framework thus pays close attention to EA practitioners’ perceptions of their situation, and to the values, beliefs, norms, interests, ideas and perspectives that underlie their actions (*cf.* Healey & Underwood, 1978; Schön & Rein, 1994; Van Gorp, 2007), in other words, to the frames drawn on by practitioners in guiding their work.

The concept of frames is widely used in many disciplines, including cognitive psychology, linguistics and media studies (Benford & Snow, 2000), as well as in disciplines more closely related to this thesis, such as policy studies (Fischer, 2003; Schön & Rein, 1994), planning (Healey, 2007; Healey & Underwood, 1978) and EA (Runhaar *et al.*, 2010; Saarikoski, 2006; Valve, 1999). This disciplinary breadth also implies that there are several quite different ways to conceptualise and apply concepts of frames (6, 2005; Dewulf *et al.*, 2009). For example, the difference between emphasising “frames as cognitive representations” or “framing as interactional co-constructions” (Dewulf *et al.*, 2009 p. 156).

The broad range of conceptualisations of space for action and frames means that some of them are problematic to combine. A key premise for the combination made in the research in this thesis was that the theories were built on a shared understanding of frames and space for action as being socially constructed (*e.g.* Healey & Underwood, 1978; Schön & Rein, 1994).

3.2 Development of conceptual framework made in phase 2

The framework is thoroughly presented in Paper II. This section provides a synthesis of how the framework was developed in research phase 2.

The original framework had two dimensions (Table 2). The first dimension was named potential space for action, and concerned individuals’ processes of shaping boundaries for how to act (Paper II). This was closely linked to the two functions of frames widely recognised in the literature on frame theory, namely to organise experience and to bias for action (6, 2005). Organising experience

meant that a frame “transforms fragmentary information into a structured and meaningful whole” (Van Gorp 2001 p. 5 in Fischer, 2003 p. 144), which included ruling some things in as relevant and appropriate, while ruling others out (*cf.* 6, 2005). Biasing for action was connected to the ability of frames to “represent people’s worlds in ways that already call for particular styles of decision or of behavioural response.” (6, 2005 p. 94). Following this, frames were conceptualised as providing boundaries for what were perceived as appropriate ways to behave, and as biasing for corresponding action (Paper II).

The second dimension was named actual space for action, and concerned external boundaries put on individuals through other practitioners’ reactions to their action (Paper II). This could be different kinds of action (or non-action) which either accepted or rejected individuals’ action. These actions could limit individuals’ possibilities for acting in line with their perceptions of appropriate action, thereby restricting their possibilities to influence as they perceived appropriate.

Table 2. *Two dimensions of space for action (modified from Table 1 in Paper II, p. 114)*

Potential space for action	Actual space for action
Potential spaces for action are shaped by individuals’ internal processes of making meaning of a situation and thus their and others position within it. These processes shape frames that guide individuals’ understandings of appropriate action and thus how they aspire to act. Potential spaces for action is thus the spaces which people frame as appropriate to have in a certain situation.	Actual spaces for action are externally shaped and depend on relations between individuals in their social context for a specific situation and practice. These relations become evident in actions taken by individuals, which are guided by their frames of appropriate action, in certain situations. These processes shape individuals possibilities to have their interpretation of appropriate accepted by relevant others, thereby having ability to influence as they interpreted as appropriate and to make full use of their potential space for action.

3.3 Refinements made during phase 3

The refinements made during phase 3 are briefly presented in Paper III. This section provides a more detailed presentation, which also more explicitly follows the example of how the two dimensions in the framework influence how issues surrounded by multiple perspectives are addressed in EA.

When applying the framework to new empirical material and in a new analytical context, in phase 3 (see section 2.5), some refinements of the two dimensions were made. On reflection, the dimensions developed in phase 2 (see section 2.4) were seen to be a little ambiguous. For example, when referring to potential space for action, this space could be understood as: the

space a practitioner perceived appropriate; or the potential space for health to be implemented. For clarification, each of these two dimensions was divided into two separate but entangled sub-dimensions, introducing the idea of restriction (Table 3).

Table 3. *The dimensions of potential and actual space for action, divided into sub-dimensions (modified from Table 1 in Paper III p. 3).*

Potential space for action	
<i>Self-restriction</i>	<i>Initial restrictions on the issue to be handled</i>
- How is it appropriate for me to act?	- Which perspectives are acted on and argued for?
Actual space for action	
<i>Interactional restriction</i>	<i>Further restrictions on the issue to be handled</i>
- How is it possible for me to act?	- Which perspectives are accepted and enacted?

The first sub-dimension in the original dimension ‘potential space for action’ concerned individuals’ ‘self-restriction’. This involved *e.g.* perspectives on health that practitioners were aware of, but did not perceive as appropriate to feed into EA processes (Figure 6). These kinds of restrictions then necessarily provided initial boundaries for perspectives on health that had the potential to be addressed in EA.

The first sub-dimension in the original dimension ‘actual space for action’ concerned restrictions on individuals through action by others (or inaction by others). This sub-dimension was referred to as ‘interactional restriction’. These restrictions provided further boundaries on the perspectives on health that could be addressed in EA. Finally, the perspectives on issues and impacts that are addressed in EA should thus be understood as a consequence of restrictions on practitioners.

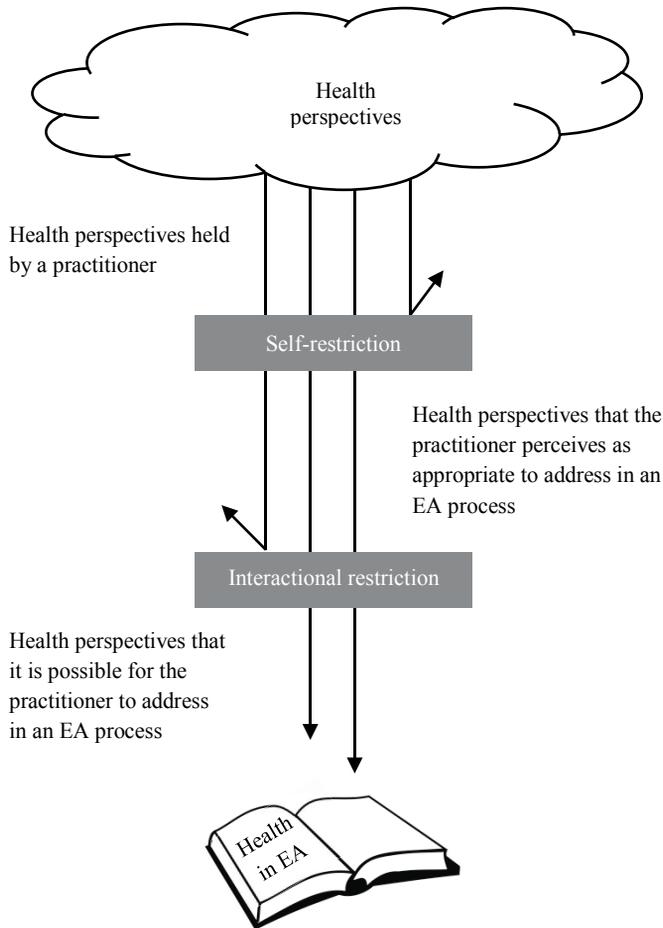


Figure 6. The inclusion of health in EA, as influenced by processes of self-restriction and interactional restriction.

3.4 Clarifications made during phase 4

This section presents the issues that were identified as creating a need for further clarification of the framework, and the subsequent clarifications that were made in response. For this, I return in more detail to the theories previously investigated, but mainly frame theory.

Looking back to the building and development of the framework in phases 2 and 3 revealed that the main focus was on restrictions. The function of

frames was, for example, mainly recognised as providing boundaries. The empirical findings, however, revealed that these boundaries were quite contingent and context-dependent. For example, some practitioners seemed to have adopted a broader understanding of health than in some years previously. Furthermore, practitioners' perceptions of the perspectives on health that needed to be addressed in order to fulfil regulations differed among contexts and individuals (Paper III). To this could be added the questions raised in dialogue with practitioners (section 2.6) about how practice can change.

There are important elements in this in connection with how frames were conceptualised in the framework. There seemed to be a need to clarify that the function of frames was not only about putting restrictions on practitioners, but also a device supporting change in practice through reframing (*cf.* Dewulf *et al.*, 2009; Schön & Rein, 1994). Connected to this twin nature of frames was also a need for further clarification of relations between individuals and their context (*cf.* Healey & Underwood, 1978; Schön & Rein, 1994). The concept of frame was therefore further developed by clarifying the function of frames in three main ways: in structuring and maintaining action; in inducing change; and, in recognising the reciprocal relationship between individuals and their context.

In Paper II, frames were conceptualised as being constructed in interactions between people. This would imply that there are a multitude of frames, continuously being shaped, conformed, rejected and reshaped. Frames constructed and held by individuals were, however, also understood as being influenced by frames embedded in contexts of relevance.

Schön and Rein (1994) explain the latter by arguing that frames are present at different levels of abstraction and that individuals' frames are more or less tightly connected to these. These levels are differently emphasised by frame theorists. Goffman (1981) and Van Gorp (2007) emphasise the importance of culture. Culture is referred to by Van Gorp as "an organized set of beliefs, codes, myths, stereotypes, values, norms, frames, and so forth that are shared in the collective memory of a group or society" (Van Gorp, 2007 p. 62). Schön and Rein (1994) recognise something similar with, in their terms, meta-cultural frames defined as "the broadly shared beliefs, values and perspectives familiar to the members of a societal culture and likely to endure in that culture over long periods of time" (Schön & Rein, 1994 p. xiii). They also emphasise frames present in actors' institutional contexts, which in turn are rooted in the abovementioned meta-cultural frames (Schön & Rein, 1994). Healey and Underwood (1978), in contrast, when arguing where planners' ideas and conceptualisations derive from, focused on ideas present in: education; literature planners engage with; and their organisational context. They also

found that experience acquired in the course of planning work was highly important for providing planners with different norms. Healey and Underwood also emphasised that individual planners' ideas could influence those, thereby pointing to a reciprocal relationship between individual planners' ideas and ideas present in contexts of relevance.

The notion of how easily frames change, named reframing (Schön & Rein, 1994), is differently recognised in this literature. There could be said to be a connection to a level of abstraction, implying that the more rooted they are in higher levels of abstraction, such as culture, the more stable they are, and *vice versa*. Van Gorp, for example, argues that because frames are part of culture, they become so natural that they go unnoticed and thereby "their impact is by stealth." (Van Gorp, 2007 p. 63). Laws and Rein illustrate frame resistance by emphasising what happens when frames are challenged: "conventions of belief are continuously challenged by personal experience and organized groups, but that these processes, in turn, promote ad hoc adjustments that try to abate the challenges in order to maintain the continuity of beliefs." (Laws & Rein, 2003 p. 202)

A major difference in the theorisation of reframing is whether the scholars engage with frames as stable structures that put constraints on action, or as dynamic constructs, shaped, negotiated and reframed in interactions. The latter focus is on the process, (re)framing, rather than on frames (Dewulf *et al.*, 2009).

In paper II it was argued (following Laws and Rein, 2003) that reframing is generally more common in situations of doubt and uncertainty. These situations are more common when new frames are introduced and in situations of frame pluralism, where individuals have several frames to choose between. Gray (2003 p. 32) suggests that "Reframing depends on the ability to entertain a perspective other than one's own, to weigh the relative merits of each perspective and to select the most preferable one." Runhaar and co-workers have suggested that reflection on and modification of perspectives is supported by bringing actors together and shaping "circumstances that stimulate or force actors to actually articulate and self-examine their discourses." (Runhaar *et al.*, 2010 p. 339). Processes designed to manage frame conflicts are commonly facilitated by a neutral mediator. This helps participants to take a step back and reflect on their own perspective, as well as becoming aware that there are alternative perspectives that might be applied (*e.g.* Forester, 2006; Gray, 2003; Runhaar *et al.*, 2010). Reframing then becomes connected to: making people aware of their own frames and those of others; critical self-reflection; and negotiations and discussions of preferable ways forward. Furthermore, practitioners that become more aware of their own frames and those of others enhance their possibilities to develop arguments that fit with the experiences

and concerns of the recipient, thereby becoming more convincing (*cf.* Benford & Snow, 2000; Bugter *et al.*, 2015; Runhaar *et al.*, 2010).

Frames can thus be conceptualised as having a twin nature, or as reciprocal relationships. Frames should therefore be recognised on the one hand as stable structures rooted in culture and institutions, which restrict individuals by providing boundaries for their thinking and acting. On the other hand, they should be recognised as dynamic constructs held by individuals. These constructs still provide boundaries for action, but are continuously being shaped and reshaped in interactions between people and in processes of self-reflection.

Finally, this means that processes of self-restriction and interactional restriction do not take place in a vacuum. Rather, they are influenced by frames present in individuals' cultural, political and institutional context. It also means that that processes of reframing of those frames that guide self-restriction and interactional restriction have the ability to either further establish or change practice.

3.5 Evaluation of the usefulness of the framework

The application of the framework in research phases 2 and 3 revealed that the two dimensions in the conceptual framework were useful because they managed to capture important, albeit different, kinds of restrictions in practice, and provided new empirical findings of value for EA practice. These findings are presented and discussed in the following chapters and in Papers II-III.

Furthermore, from the response that was given in dialogue with practitioners about the research (Chapter 2, mainly section 2.6), the framework was interpreted as being relevant for practitioners. This is because in those dialogues it was noted that the framework was very effective in approaching, quite directly, topical issues relating to EA practice that mattered to the practitioners. The framework resonated with practitioners in two main ways. The first way was that the two kinds of restrictions highlighted by the framework and the subsequent implications for practitioners' influence on practice were recognised by practitioners as reflecting their situation and their practice. The other was that it evoked feelings, often either of enthusiasm or frustration.

This can be illustrated from my research visit to the Netherlands while finalising the thesis (see section 2.6). The framework was discussed with a range of practitioners and revealed, in my interpretation, two different stories of EA practice. The example from the Netherlands described below is only based on a limited knowledge base, and serves here as an illustrative example of what could be the reaction when providing this perspective on practice to practitioners. Similar stories can be found in the empirical material from the

Swedish context, as well as in the different dialogues with practitioners (Chapter 2).

The first story is about certain groups of practitioners becoming very enthusiastic and inspired, in particular emphasising processes of self-restriction. Making them more aware of processes of self-restriction inspired them to critically reflect on the choices they make in connection with EA. Furthermore, it encouraged them to start questioning and re-framing their responsibility towards trying to bring more of their perceptions of what was needed for improvements to the table. In addition, they immediately started to make up strategies for how they as a group could strengthen their possibilities to have their perceptions accepted by others. These strategies included finding 'better' arguments and supporting each other in the task of forwarding and arguing for suggestions for improvements that they thought were needed, but were known to often be rejected by others.

The second story connects to this knowing in advance that actions will be rejected. In this case the introduction of the framework touched on sensitive issues. In short, these practitioners felt that they had very low possibilities to get their suggestions for improvements above some kind of minimum level accepted by relevant others. Furthermore, some even said they had started to stop trying.

This emphasises the inter-connections between the dimensions in the framework. Repeated interactional restrictions or perceptions that suggestions will probably be rejected might lead to practitioners choosing to refrain from making suggestions. Conversely, self-restriction might minimise the probability for disagreement and rejection. Interactional rejection and acceptance can, over time, feed into practitioners' re-framing of what they perceive to be appropriate. In the same way, repeated exposure to new perspectives on what is appropriate can enhance the probability of acceptance by supporting re-framing by relevant others' perceptions of appropriateness. Furthermore, this reasoning is an example of how perceptions of appropriate action, guided by frames, might change over time through social interaction.

4 Summary of papers

This chapter provides an overview of the three papers on which this thesis is based and their contribution to the research questions (see section 1.3). Each paper is the result of empirical and theoretical work conducted during the first three phases of the research strategy and closely follows the progression of the PhD project.

In Paper I, it was concluded that the multiple framings of health created a challenge for practitioners in their work of including health in EA. This challenge was then analysed in Papers II and III in connection with practitioners' possibilities for influencing practice. In Paper I, inclusion of health in EA served as the analytical context. In Paper II, this was widened to a discussion about implementing 'new' or re-interpreted issues in EA, and in Paper III it was placed in connection to EA consultants' influence on quality performance.

In Paper I, frame theory was used for analysis and frames were conceptualised as situated external to individuals, provided by law and policies. In Paper II, the main conceptual framework, spaces for action, for the thesis was built and applied and within this framework frames were conceptualised as socially constructed and held by individuals. In Paper III, the framework was evaluated and refined. The empirical material was unique for each paper.

Table 4. *Key concepts examined in Papers I-III*

	Paper I	Paper II	Paper III
Theory	Frame theory	Space for action incorporating frame theory	Space for action incorporating frame theory
Context of analysis	Inclusion of health in EA	Implementing 'new' issues in EA	EA quality
Research questions	SQ1	PQ and SQ2	PQ, SQ2 and SQ3

4.1 Paper I – ‘Human health frames in EIA: the case of Swedish road planning’

Paper I presents the work conducted in phase 1. The empirical material was collected through an international literature review and desk studies of Swedish practice. The focus of the paper was on exploring the current situation regarding inclusion of health in EA by examining: health frames in legislation and policies of importance for EA in Swedish road planning; their implications for practice; and how present practice (as expressed in EA reports) relates to those frames. The paper concluded by identifying challenges for EA practice and practitioners. The results contribute to the first secondary research question (SQ1), as outlined in Table 5.

Table 5. *Contribution of paper I to the first secondary research question (SQ1).*

Research question	Findings
SQ1 - What challenges does the multiple framing of health in the field of environmental assessment create for practitioners?	Health frames were multiple and contrasting. Large space for practitioners to interpret and implement different frames. Creation of opportunity for practitioners for influencing practice, as well as a dilemma on how to do this.

4.2 Paper II – ‘Space for action: how practitioners influence environmental assessment’

Paper II presents the research performed in phase 2. The emphasis is on the theoretical work of building the conceptual framework, ‘space for action’. The paper presents the development of the framework as based mainly upon theoretical work, while this was actually done in an iterative manner as previously described (section 2.2). This means that the empirical work and findings from the Swedish case study, including document reviews and interviews concerning opinions and actions in connection to inclusion of health in an EA for a road planning project, are presented to a relatively minor degree. The paper contributed to the primary research question (PQ) and the second secondary research question (SQ2), as outlined in Table 6.

Table 6. *Contribution of paper II to the primary research question (PQ) and the second secondary research question (SQ2).*

Research questions	Findings and contributions
SQ2 - How do practitioners think and act when seeking possibilities to influence practice?	<p>Practitioners self-regulate their action.</p> <p>Perceptions of responsibility are important.</p> <p>Perceptions of ‘team’ are important.</p> <p>In situations of agreement, practitioners have the possibility to influence practice in line with their perception of appropriate action.</p> <p>In situations of disagreement, practitioners or some of their actions might be excluded from further EA work, thereby restricting their possibility to influence practice.</p>
PQ - How can practitioners’ possibilities to influence practice be better theorised, to strengthen the practitioner focus in environmental assessment research?	<p>The creation of practitioners’ possibilities to influence is positioned in processes within and between individuals.</p> <p>Potential spaces for action guide practitioners’ perceptions of appropriate action and are shaped by individuals’ internal processes of making meaning of a situation and thus their position and that of others within it.</p> <p>Actual spaces for action shape practitioners’ possibilities to influence in line with their perception of appropriate action. These are externally shaped by actions (acceptance or exclusion) taken by relevant others.</p>

4.3 Paper III – ‘Between “best” and “good enough”: how consultants guide quality in environmental assessment’

Paper III presents the research conducted in phase 3, the empirical work included an interview study and a validation workshop with EA consultants. The paper contributes to the second (SQ2) and third (SQ3) secondary research questions (Table 7) by producing empirical knowledge about how practitioners, in particular consultants, think and act when they seek their possibilities to influence EA quality. It also makes a contribution to the primary research question (PQ) by refining the conceptual framework and evaluating its usefulness by placing it in a central debate in the EA field: quality.

Table 7. *Contribution of paper III to the primary research question (PQ) and the second (SQ2) and third (SQ3) secondary research questions.*

Research questions	Findings and contributions
SQ2 - How do practitioners think and act when seeking possibilities to influence practice?	Consultants balance their action between doing enough to secure their ‘professional reputation’ and not doing too much to keep good ‘client-relationships’. Consultants perceive a need to improve quality performance in EA. A central guide for action is the ‘level of approval’.
SQ3 - What is the consultant’s role in determining quality in environmental assessment?	Consultants have a strong position for regulating quality up to their perceptions of the level of approval. Above this level, they are in a weaker position to argue for improvements. This situation maintains only a ‘good enough’ practice regarding EA quality performance, not ‘best’ practice.
PQ - How can practitioners’ possibilities to influence practice be better theorised, to strengthen the practitioner focus in environmental assessment research?	Providing a framework of spaces for action in central debate in the EA field provides a new understanding of current practices. Restrictions on the perspectives on issues and impacts that are addressed in EA, hence influencing quality, are a consequence of two dimensions of restrictions on practitioners: ‘self-restriction’ and ‘interactional restriction’.

5 Presentation and discussion of main findings

In this chapter the main theoretical developments and the empirical findings are presented and discussed in relation to the research questions (section 5.1-5.4). Following that, the contribution of the thesis is summarised in relation to the purpose and intertwined aims of the thesis (section 5.5).

5.1 PQ – How can practitioners’ possibilities to influence practice be better theorised, to strengthen the practitioner focus in environmental assessment research?

The primary research question was addressed by developing a conceptual framework. This section summarises how the development of the framework contribute to fulfilling the research need identified in section 1.1.2. The conceptual framework itself is thoroughly presented in Papers II and III, and in Chapter 3. Chapter 3 also includes reflections on the relevance of the framework for practitioners (section 3.5). The main findings from the research undertaken for addressing the primary research question are presented and discussed more in detail in the following sections (5.2-5.4) which describe the contribution to the secondary research questions and to fulfilling the purpose and aims of the thesis.

The development of the framework addressed the theoretical research need, by developing new ways of theorising how practitioners think and act in their daily practice and what this implies for their influence on practice. This adds to the small but growing number of in-depth studies of how practitioners think, and why and how they act (*e.g.* Blicharska *et al.*, 2011; Kørnøv *et al.*, 2014; Wärnbäck *et al.*, 2013). It does so in particular by connecting these two dimensions to each other, which was identified in section 1.1.2 as a main need. This research supplements studies emphasising the importance of practitioners’

perceptions of central aspects of EA practice (Morrison-Saunders *et al.*, 2001; Morrison-Saunders & Bailey, 2003; Robinson & Bond, 2003; Wegner *et al.*, 2005) in two main ways; firstly, by providing explanations for links between perceptions and actions and secondly, by adding the perspective of practitioners' possibilities of acting in line with these perceptions. Furthermore, it provides more in-depth conceptualisations for research, drawing attention to practitioners' various possibilities for influencing practice (*cf.* Landim & Sánchez, 2012; Wärnbäck & Hilding-Rydevik, 2009).

The framework also adds more weight to the previously identified need and provides an additional lens for examination of practitioners' and other EA actors' interests and interrelations (Kørnøv & Thissen, 2000), values (Wilkins, 2003), norms (Blicharska *et al.*, 2011), personal judgement (Ehrlich & Ross, 2015) and use of discretion (Kørnøv *et al.*, 2014) for shaping EA practice and its effectiveness. This also meant providing a way forward to address the need for closer investigation in the field of inclusion of health in EA of institutional aspects that affect "the role of different actors and how those roles are currently being fulfilled" (Harris & Haigh, 2015 p. 139). Focusing on frames and perspectives held by practitioners is also aligned with other research in the EA field: with the framing perspective provided by Valve (1999) for shedding light on disagreements in EA processes; the discourse perspective applied by Runhaar *et al.* (2013) for examining EA; and the learning perspective provided in Wärnbäck *et al.* (2013) for examining how long-term interactions influence EA practitioners' and actors' values and priorities.

Drawing it all together means that the theorisations developed in this thesis support research recognising EA as shaped by practitioners' perceptions, meaning-making and interrelations. This shared perspective stands in contrast to the quite dominant view of EA as a rational process (Jay *et al.*, 2007; Weston, 2000), and moves instead towards a strengthening of the practitioner focus in EA research. I will return to what this means for further research in section 5.5.

5.2 SQ1 - What challenges does the multiple framing of health in the field of environmental assessment create for practitioners?

The research in this thesis, as presented in section 1.1.1, used the policy and law situation in Sweden as its point of departure to address the frequently reported weaknesses in health inclusion in EA (*e.g.* Bhatia & Wernham, 2008; Burns & Bond, 2008; Carmichael *et al.*, 2012; Fehr *et al.*, 2014; Fischer *et al.*, 2010; Harris *et al.*, 2009; Hilding-Rydevik *et al.*, 2005; Kørnøv, 2009; Noble

& Bronson, 2005; Noble & Bronson, 2006; Steinemann, 2000; WHO, 1987). The empirical findings in Paper I revealed that the laws and policies of relevance for health inclusion provided multiple and quite contrasting perspectives on health. Furthermore, it was argued in Paper I that this situation created a space for practitioners on deciding how to include health in EA. This indicated in turn that interventions of practitioners were critical for whether and how health was included in EA.

In Paper II, health inclusion was revisited and connected to the wider question of continuous expectations on EA to adapt when including new issues or inventions. Researchers have for example studied inclusion of issues rather new to EA, such as biodiversity (Slootweg & Kolhoff, 2003), climate change (Agrawala *et al.*, 2012; Posas, 2011) and eco-system services (Baker *et al.*, 2013); and new perspectives on issues more traditional in EA such as landscape (Antonson, 2011). As indicated in these studies, the perspectives on these issues, as with health, are often multiple.

Inclusion of new issues raises questions not only of how an issue should be included by adapting it to current EA practice, but also of how confronting a new issue could lead to reform of EA in order to fully consider the issue to be included and, potentially, address common weaknesses in EA practice (*cf.* Baker *et al.*, 2013). Integrating health in EA with a perspective on protecting health is different from promoting health (Paper I). Similarly, addressing landscape in planning and EA as a visual or physical surface is different from recognising it as a dynamic, holistic entity (Antonson, 2011; Butler, 2014). Furthermore, including climate change with a perspective of reducing contributions to greenhouse gases is different from a perspective of enhancing the resilience of planned projects to negative impacts from climate change (Agrawala *et al.*, 2012; Posas, 2011). Each issue thus comes with certain challenges and opportunities. This complex situation is, as indicated in Paper I, a challenge for the EA field. It raises particular challenges for practitioners that, rather empty-handed, have to cope with expectations to adapt to the situation and find a way to deliver (Paper II).

Environmental assessment is continuously evolving as it adapts to these expectations on inclusion (Paper II). The research in this thesis is grounded in a constructivist ontology (see e.g. Burr, 1995; Furlong & Marsh, 2010 in section 2.1). Following this approach means that constant change is embraced as a natural response to the contingent world of which EA practice forms part, a world where perspectives on whether and how an issue should be included, and the value of doing so, are constantly being reviewed, established and renewed. Contingency or changeability in EA practice could also be recognised as necessary for meeting future challenges, such as continuing loss of

biodiversity, climate change and economic and health inequities. This must therefore be expected to continue. The findings in this thesis reveal that this evolution, alongside the multiple perspectives and the corresponding need for building capacity among practitioners for coping with change, is perhaps a greater challenge to the field than has previously been recognised.

5.3 SQ2 - How do practitioners think and act when seeking possibilities to influence practice?

Laws and other regulations have previously been stressed as important for guiding and improving practice, in particular since a central concern for practitioners has been found to be meeting regulatory demands (Hilding-Rydevik *et al.*, 2005; Landim & Sánchez, 2012; Morgan *et al.*, 2012; Runhaar *et al.*, 2013). However, the empirical findings in Papers II and III show that practitioners were also guided in their action by other culturally and socially constructed frames. These frames were drawn on in deciding appropriate ways to act (Paper II). What practitioners decided as being appropriate in turn influenced what they brought to EA processes (as presented in Chapter 3 and in Papers II and III). This means that, regardless of having a broad understanding of multiple perspectives on an issue that was formally required to be included in EA, they sometimes chose to restrict the perspectives on which they actually acted and argued for in EA processes. This process is referred to in this thesis as self-restriction.

Individuals' perceptions of appropriate action also guided them when reacting to the actions of others, either in the form of acceptance or rejection (Paper II-III). Here, this is referred to as interactional restriction (Paper III) and it influences individuals' possibilities for acting in line with their perceptions of appropriate action. Consequently, these interactions also influence how an issue is implemented, for example when individuals' suggestions for improvements are rejected, as explained in more detail in sections 3.2 and 3.3. These findings indicate that practice and its development are decisively shaped by practitioners through processes of self-restriction and interactional restriction (Paper II).

Individuals' frames used for guiding their decisions draw on frames present in different contexts (see section 3.4). In EA literature different contexts or sources are recognised for providing norms and perspectives. The dominance in EA literature of studies of how EA should be applied, including best practice guidelines (Retief, 2010), means that in the EA field these kinds of literature are recognised as important for providing norms that could (potentially) guide practitioners' action (Cashmore *et al.*, 2015). However, research indicates that

perspectives of importance for guiding action are also gained through professional training (Morgan *et al.*, 2012). Furthermore, the EA literature shows that understandings might develop and change through interaction and mutual engagement between practitioners (Wärnbäck *et al.*, 2013). Subsequently, in a specific situation there might be several frames present with potential for influencing what decision an individual makes. There are therefore relevant to further explore which of these that become important guides when practitioners decide on appropriate action.

The findings in Papers II and III revealed that important frames in the Swedish context were practitioners' perceptions of their responsibility and that of others. Furthermore, the findings indicated that Swedish EA practice should primarily be recognised as a practice focusing on agreement and acceptance of others' actions. Nevertheless, there were exceptions in the Swedish context. The empirical findings indicated some situations where practitioners' actions had been rejected in a way that could have large impacts on EA quality and thus, potentially, on further decision-making (Papers II and III).

A main reason for the agreements was interpreted to be the well-established responsibility frames, which meant that practitioners had a rather shared view of each other's responsibilities, as well as of difficulties and limitations with their position (Papers II and III). In addition, there were indications that practitioners working together in particular EA processes considered themselves a team with shared commitments (Paper II).

The Swedish findings indicated that rejection of actions was most common for practitioners that were not acting on behalf of regulatory agencies, *i.e.* lacked formally appointed roles in the legislation, in other words different types of consultants. Their access to EA practice was mainly dependent on the knowledge they could offer (Papers II and III). Furthermore, their influence on practice was dependent on how their responsibility was perceived, and whether or not they were considered part of the team (Papers II and III). I return to the role of consultants in section 5.4. The main point here is rather to highlight that these situations hamper the involvement of professionals new to EA. This relates *e.g.* to the involvement of health professionals, which has been argued to be a key concern for improving how health is included in EA (*e.g.* Nowacki *et al.*, 2010; WHO, 1987).

In a wider sense, EA has been recognised as a multi-professional field (Morgan *et al.*, 2012). As argued above (section 5.2), EA is evolving when adapting to include new issues. Involvement of professionals who are knowledgeable about these issues should therefore be further emphasised as a key concern for the EA field. However, previous literature stresses that involvement of new professionals is difficult (Paper II). For example, a need to

overcome cultural and institutional barriers between professionals has been identified (Carmichael *et al.*, 2012; Fischer *et al.*, 2010; Nowacki *et al.*, 2010; WHO 1987), together with a need to raise awareness and build capacity among these professionals (Burns & Bond, 2008; Nowacki *et al.*, 2010). This is suggested to include *e.g.* training activities where health and assessment professionals can exchange ideas, experience and knowledge (WHO, 1987) and develop shared perceptions of impacts, roles and constraints, which would improve the probability of good communication between *e.g.* EA practitioners, planners and public health professionals (*cf.* Bond *et al.*, 2013). It has also been noted that perceptions of issues of key concern for EA can differ among EA practitioners, *e.g.* perceptions about: ‘the role of science’ (Morrison-Saunders & Bailey, 2003); ‘residents’ involvements’ (Robinson & Bond, 2003); biodiversity (Wegner *et al.*, 2005); the purpose of impact assessment; and what constitutes adequacy (Morgan *et al.*, 2012). The literature indicates that these differing perceptions among practitioners often lead to misunderstandings (Robinson, 2000 *cit.* Wegner *et al.*, 2005) and differences in expectations (Morgan *et al.*, 2012).

From the findings in this thesis, it is possible to say that practitioners’ perceptions of appropriate ways to act, and how they react to others’ actions, is important for shaping the field of practice and its development. The work of practitioners when navigating these uncertainties in practice is perhaps more significant than has previously been recognised (Paper II). This strongly supports the line of research above that recognises the importance of practitioners’ perceptions, and the growing stream of research recognising the importance of values, subjective judgements and interrelations, which is also referred to in section 5.1 (*e.g.* Ehrlich & Ross, 2015; Kørnøv & Thissen, 2000; Morrison-Saunders *et al.*, 2001; Richardson, 2005; Wilkins, 2003).

Furthermore, my research adds weight to the arguments on the need to find ways for diverse professionals to communicate and collaborate. Not being able to collaborate should be considered a lost opportunity, not only for the issue to be included, but also for EA practice itself, which loses chances to engage with perspectives that could help to address longstanding problems in EA, such as quality performance. This thesis opens up a route into this work by clarifying important mechanisms that restrict the possibilities for professionals new to EA to influence practice.

5.4 SQ3 - What is the consultant's role in determining quality in environmental assessment?

In this section, the suggested importance of regulations and practitioners' concern about meeting regular demands (*e.g.* Landim & Sánchez, 2012; Morgan *et al.*, 2012) discussed in section 5.3 is revisited. The empirical findings in Paper III confirm the importance of this concern. However, the research approach adopted in Paper III managed to go into this concern in more depth than has previously been attempted. This deeper analysis revealed that consultants' perceptions of what was needed to meet these demands became a dividing line for how they perceived their responsibilities. This subsequently influenced how they chose to act and, in turn, their possibilities to influence quality performance (Paper III).

Furthermore, what was perceived as being necessary to meet regular demands was found to vary between regional and local contexts, as well as between individuals in the same context (Paper III). A strong majority, however, perceived that the level required in regulations was not adequate to achieve their perceptions of best quality. Rather, it would only lead to a level of quality good enough to secure approval (Paper III).

The findings showed that the perceptions, interventions and personal judgement of consultants were important in determining quality (*cf.* Ehrlich and Ross, 2015; Lawrence, 2007). In individual EA processes, they primarily seemed to work to secure this 'good-enough' level. Improving quality beyond this level was perceived as a secondary responsibility that has to be balanced against maintaining good relations with clients. However in Paper III, consultants were also argued to be driving the field forward, by securing a good enough level and also in recognising the need for, and pushing for, improvements beyond this level. The research approach taken in Paper III provided a more nuanced picture of the relations between consultants and their clients than is generally provided in EA literature. For example, Paper III argues that there is interdependence between these actors, in contrast to the one-way dependency most often suggested (*e.g.* Kruopienė *et al.*, 2009; Snell & Cowell, 2006).

The findings in Paper III thus shed light on the under-investigated role of consultants (Landim & Sánchez, 2012), and on the well-known gap between principles of best practice and real-life practice (*cf.* Morgan, 2012). Furthermore, the findings strengthen the argument made in section 5.3 concerning the important work of practitioners in shaping practice, including EA quality. To this can now be added the important – albeit previously rather unrecognised – role of consultants in driving the field forward. These findings open up a line of inquiry for future research addressing opportunities and

concerns with the private sector holding strong positions in regulating quality and the development of practice.

Furthermore, the findings about the presence of differing perspectives among practitioners not only add to similar findings from previous literature (see section 5.1 and 5.3 *e.g.* Wegner *et al.*, 2005), but also add more weight to the argument concerning the need to recognise EA as a practice of multiple perspectives, provided by law and policy, present in different contexts and held by practitioners.

5.5 Contribution

The purpose of this thesis was to strengthen the practitioner focus in the EA research field. The twin aims following from this were development of theory and generation of new empirical knowledge about how EA practitioners think and act in their daily practice. How the research undertaken contributed to the purpose and aims is summarised below.

The research undertaken in this thesis established links between analyses of practitioners' thoughts and their actions. It provided more in-depth conceptualisations of how practitioners decide on appropriate action, and their possibilities of having these decisions agreed and enacted in EA processes. This provides a new analytical lens for how practice and its development are shaped by practitioners, through processes of self-restriction and interactional restriction. The research strategy meant that the research stayed close to practice throughout the whole project, from collection of empirical material to validation of the usefulness of the framework, in dialogue with practitioners.

By developing and applying this lens for empirical investigations, new empirical knowledge was generated. It was revealed that how practitioners decide on appropriate action and their possibilities for having their suggestions for action enacted and agreed upon in EA processes are crucial for how expectations from regulations and guidelines are implemented. Furthermore, when brought to different groups of practitioners, the framework was validated as meaningful for them to better understand their situation, opportunities and challenges. In some cases it also initiated a will to change. Overall, this thesis contributes to understanding the important role of practitioners in shaping the field of practice and provides new theorisations that strengthen the practitioner focus in EA research. Furthermore, this gives direction to future research, and informs exploration of pathways for change in practice.

The empirical and theoretical findings in this thesis suggest important new directions for research in the EA field, responding to the need for closer attention to the agenda-setting work being done by practitioners. There is a

need for closer investigation of how practitioners perceive and make meaning of their situation by balancing values, interests and needs in their efforts of mastering daily problems and taking forward the field of practice (*cf.* Blicharska *et al.*, 2011; Kørnøv & Thissen, 2000; Wilkins, 2003). This requires further examination of the frames that become critical guides when practitioners decide about appropriate ways to act. Furthermore it is relevant to investigate, in different contexts, whether practice mainly seems to be guided by self-restriction or interactional restriction. There is also a need to examine the practitioner groups that appear to have the greatest opportunities to have their perceptions of appropriate action accepted, subsequently potentially restricting other practitioners' possibilities for influencing practice.

The empirical findings revealing that practitioners are mainly restricted by their role perceptions indicate that it is relevant to critically question the traditional division of these roles. This follows the need for "questioning of what is often taken for granted in EA research and practice" (Runhaar & Arts, 2015 p. 1550011-5). It is also important to explore ways to empower practitioners to make the best use of their potential for improving EA.

Furthermore, the empirical findings revealed that consultants have a strong position in regulating quality and advancing the field. There is thus a particular need to examine the role of consultants and to explore the opportunities and challenges connected to the strong influence of professionals working in the private sector on how public interests are brought in and managed in EA, and consequently in further decision-making. Finally, research concerning ways forward to support practitioners in coping with change and multiple perspectives, for example through critical reflection, are needed.

It is commonly stated that researchers have a responsibility to make their research available to the field of practice. Practitioners have a reciprocal responsibility to make use of the knowledge generated by research to improve their situations and take the field forward. A good start for practitioners is to recognise EA as a field of continuous change, and to reflect on their own role in balancing or mediating different perspectives (*cf.* Richardson, 2005). Simply being aware that these considerations are a necessary part of EA practice might, for example, reduce the stress on practitioners who find it problematic to compromise between their diverging perceptions of appropriateness, for example their perceptions of what action is actually needed for performing a good quality level and the action they perceive is appropriate for them to take, given their position.

The recognition of multiple perspectives also creates a need for practitioners to build capacity to become aware of their own perspectives and those of others. Discussing and critically reflecting on these can make it

possible to develop a practice with space for perspectives and for professionals new to EA. To improve practice, it is relevant to find ways to empower those practitioners who recognise the need for improvements and have the knowledge and will to act on this awareness. The abovementioned enhanced consciousness of one's own perspectives and those of others is an important departure point in this challenge. One way forward would be to work more deliberately on developing convincing arguments (*cf.* Benford & Snow, 2000; Bugter *et al.*, 2015; Runhaar *et al.*, 2010) This work would involve using a combination and wider range of arguments and fitting them to the concerns and experiences of the recipients.

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