

UNIVERSITÉ DU QUÉBEC À MONTRÉAL

LA GOUVERNANCE DES GRANDS PROJETS D'INFRASTRUCTURE
PUBLIQUE

THÈSE
PRÉSENTÉE
COMME EXIGENCE PARTIELLE
DU DOCTORAT EN ADMINISTRATION

PAR
MAUDE BRUNET

OCTOBRE 2017

UNIVERSITÉ DU QUÉBEC À MONTRÉAL
Service des bibliothèques

Avertissement

La diffusion de cette thèse se fait dans le respect des droits de son auteur, qui a signé le formulaire *Autorisation de reproduire et de diffuser un travail de recherche de cycles supérieurs* (SDU-522 – Rév.01-2006). Cette autorisation stipule que «conformément à l'article 11 du Règlement no 8 des études de cycles supérieurs, [l'auteur] concède à l'Université du Québec à Montréal une licence non exclusive d'utilisation et de publication de la totalité ou d'une partie importante de [son] travail de recherche pour des fins pédagogiques et non commerciales. Plus précisément, [l'auteur] autorise l'Université du Québec à Montréal à reproduire, diffuser, prêter, distribuer ou vendre des copies de [son] travail de recherche à des fins non commerciales sur quelque support que ce soit, y compris l'Internet. Cette licence et cette autorisation n'entraînent pas une renonciation de [la] part [de l'auteur] à [ses] droits moraux ni à [ses] droits de propriété intellectuelle. Sauf entente contraire, [l'auteur] conserve la liberté de diffuser et de commercialiser ou non ce travail dont [il] possède un exemplaire.»

REMERCIEMENTS

Ce projet doctoral a émergé il y a déjà de nombreuses années, grâce à des contacts que j'avais initiés préalablement avec les acteurs gouvernementaux qui ont collaboré à cette recherche. Je remercie sincèrement tous les participants qui ont contribué à ce projet doctoral : les instances décisionnelles qui ont approuvé le projet, les personnes interrogées dans le cadre des entrevues, et plus largement toutes les personnes membres des équipes des projets étudiés. Ce projet n'aurait pas été possible sans vous.

Je remercie également tous les membres de mon comité de thèse et de mon jury, qui m'ont accompagnée et encadrée dans ce parcours académique de façon exemplaire. J'ai eu le privilège d'avoir Monique Aubry comme directrice de thèse, qui a joué son rôle d'encadrement et d'orientation à merveille, autant quant au positionnement théorique, que pour l'accès au terrain et la diffusion de mes résultats dans des conférences et des publications scientifiques. À Nathalie Drouin et Joseph Facal, je vous remercie d'avoir orienté mon cheminement depuis le début de ma scolarité ; nos rencontres ponctuelles m'ont permis de valider les grandes orientations de ma recherche. Vos expertises complémentaires m'ont été très bénéfiques, vos judicieux conseils ont su faciliter ma tâche et mon apprentissage. À Jean-Louis Denis, je vous suis très reconnaissante d'avoir accepté de prendre le rôle de membre externe du jury, votre apport a permis d'enrichir cette présente contribution et de lancer des pistes prometteuses pour la suite.

À mes collègues et amis, je vous remercie sincèrement pour votre soutien, votre écoute et vos encouragements tout au long de ce parcours. J'ai beaucoup apprécié nos échanges d'idées, constructifs, qui m'ont permis de cheminer et d'en arriver à des

résultats articulés, qui je l'espère sauront apporter un éclairage nouveau sur la gouvernance des projets. Merci à Jean-Sébastien Marchand pour ton soutien et des sessions de travail motivantes, merci à Tushare Jinadasa et à Jean-François Bernier pour votre hospitalité et votre soutien lors de mon terrain doctoral à Québec.

Je remercie les professeurs qui m'ont enseigné lors de la phase de scolarité du doctorat, vos apports ont été considérables dans mon parcours et le développement de mon cadre théorique de thèse. Merci à Brian Hobbs, Étienne Charbonneau, Hudson Meadwell, Louise Ménard, Linda Rouleau, Richard Déry, et Ann Langley. Je remercie plus largement tous les participants des nombreuses conférences auxquelles j'ai pris part ces dernières années, les commentaires émis m'ont permis d'avancer et de repousser mes limites. Je remercie tout spécialement Svetlana Cicmil, Andrew Davies, Graham Winch et Jonas Söderlund.

Je remercie les organismes subventionnaires qui m'ont offert de généreuses bourses, qui m'ont permis de me concentrer sur mes études et d'y exceller : le Conseil de recherches en sciences humaines du Canada et la Chaire de gestion de projet de l'ESG UQAM.

Finalement, aux derniers mais non aux moindres, je remercie mon père, ma mère, mon frère et mon conjoint. Cette thèse vous est dédiée. Papa, ton cheminement similaire parcouru lorsque j'étais jeune m'a largement inspiré à suivre la voie de la recherche. Maman, merci de ton soutien inconditionnel tout au long de mon parcours, tu m'as beaucoup aidé. Ludovic, merci d'être mon frère, merci d'être qui tu es avec toutes tes qualités, tes réalisations et ton potentiel. Simon, merci d'être dans ma vie, merci d'avoir été avec moi ces deux dernières années, de m'avoir épaulée et soutenue comme tu l'as fait. Je vous suis très reconnaissante.

TABLE OF CONTENTS

REMERCIEMENTS.....	ii
LIST OF FIGURES	x
LIST OF TABLES.....	xi
LIST OF ABBREVIATIONS AND ACRONYMS	xii
RÉSUMÉ	xiii
ABSTRACT.....	xv
INTRODUCTION	1
CHAPTER I	
LITERATURE REVIEW	7
1.1 Governance Framework.....	7
1.1.1 The Governance of Public Projects: Ontological Contours.....	9
1.1.1.1 Governance	9
1.1.1.2 Project Management	16
1.1.1.3 Public Administration	18
1.1.2 The Governance of Public Projects: Governance Framework for Public Projects.....	23
1.1.2.1 Definition of the Concept.....	23
1.1.2.2 Front-end Management.....	25
1.2 Infrastructure Projects.....	27
1.2.1 Economic Perspective.....	27
1.2.1.1 Agency Theory.....	28
1.2.1.2 Transaction Costs Theory	30
1.2.2 Contingency-Based Perspective.....	33

1.2.3 Institutional Perspective.....	37
1.3 The Theoretical Bases.....	42
1.3.1 Statement of Research Question	42
1.3.2 Theoretical Bases	44
1.3.2.1 The Process Approach	45
1.3.2.2 Actor-Network Theory.....	50
1.3.2.3 The Practice Perspective	56
1.3.3 The Initial Conceptual Framework	62
1.3.3.1 Levels of Public Governance	63
1.3.3.2 Process of Translation.....	65
CHAPTER II	
METHODOLOGICAL APPROACH.....	68
2.1 Epistemological Stance.....	68
2.1.1. Constructivism	70
3.1.2 Epistemology of Practice	73
2.2 Research Design.....	77
2.2.1 Research Strategy.....	78
2.2.2 Case Study	80
2.2.3 Data Collection	81
2.2.4 Analysis Strategy	84
2.2.5 Quality Criteria and Limitation.....	85
2.2.6 Ethical Concerns	88
2.3 Case study	90
2.3.1 Cultural Context.....	90
2.3.2 The Quebec Governance Framework for Public Infrastructure Projects...	95
CHAPTER III	
ARTICLE 1: The three dimensions of a governance framework for major public projects.....	98
3.1 Abstract.....	98

3.2 Introduction.....	98
3.3 Literature review	101
3.3.1 Project management.....	101
3.3.2 Project governance.....	102
3.3.3 Governance framework for public projects	104
3.3.4 Research question	106
3.4 Methodology	106
3.5 Results.....	108
3.5.1 Proposition 1 – A governance framework for major public projects can lead to greater government efficiency.....	108
3.5.1.1 Scientific Management	108
3.5.1.2 New Public Management.....	111
3.5.1.3 New Public Governance	113
3.5.2 Proposition 2 – A governance framework for major public projects can lead to greater government legitimacy.....	114
3.5.2.1 Public Administration	114
3.5.2.2 New Public Management.....	116
3.5.2.3 New Public Governance	117
3.5.3 Proposition 3 – A governance framework for major public projects can lead to greater government accountability.....	118
3.5.3.1 New Public Management.....	118
3.5.3.2 New Public Service	119
3.5.3.3 New Public Governance	120
3.6 Discussion.....	122
3.6.1 Theoretical anchoring of governance frameworks for public projects	122
3.6.2 Phronetic research applied to governance frameworks for public projects.....	123
3.7 Conclusion	124
3.8 References.....	126

CHAPTER IV

ARTICLE 2: The governance of major public infrastructure projects: The process of translation	133
4.1 Abstract.....	133
4.2 Introduction.....	134
4.3 Theoretical background	135
4.3.1 The process approach.....	136
4.3.2 Translation	136
4.3.3 The practice perspective	137
4.4 Methodological approach.....	140
4.5 Results.....	142
4.5.1 The Quebec governance framework for public infrastructure projects ...	142
4.5.2 Project MP's development: From the initial request to the end of the planning phase	145
4.5.3 The process of translation of the governance framework: Illustration through practices.....	148
4.5.4 The multilevel nature of the translation process: Institutional, organizational and project levels	155
4.6 Discussion.....	158
4.6.1 The process of translation of the governance framework.....	158
4.6.2 Organizational change	160
4.7 Conclusion	160
4.8 References.....	163
CHAPTER V	
ARTICLE 3: Governance-as-practice for major public infrastructure projects: A case of multilevel project governing.....	168
5.1 Abstract	168
5.2 Introduction.....	168
5.3 Theoretical background	170
5.3.1 The practice perspective	170

5.3.2 Strategy-as-practice.....	172
5.3.3 Projects-as-practice	172
5.4 Methodological approach.....	174
5.5 Main findings	179
5.5.1 The projects.....	180
5.5.2 Ostensive practices.....	181
5.5.3 Performative practices as enacted in the projects	187
5.6 Discussion	192
5.6.1 The enactment of practices and project governing	192
5.6.3 Governance-as-practice.....	195
5.7 Conclusion	198
5.8 References.....	200
CHAPTER VI	
DISCUSSION	204
6.1 Integrative Framework.....	204
6.1.1 From institutions to an institutionalized governance framework (Article 1).....	205
6.1.2 The process of translation (Article 2)	206
6.1.3 Governance-as-practice (Article 3).....	207
6.2 Theoretical contributions of the thesis	208
6.2.1 Multilevel governance of public projects	208
6.2.1.1 Governmentality	209
6.2.1.2 Macro-micro divide	211
6.2.2 Process and Practice Perspectives on Projects.....	212
6.2.2.1 The process approach.....	212
6.2.2.2 The practice perspective	214
6.2.3 Materiality and project governance	217
6.3 Emerging themes	218
6.3.1 Organizational and institutional change.....	219

6.3.2 Project actors.....	220
6.4 Limits and avenues for research	222
CONCLUSION.....	224
APPENDIX A INTERVIEW GUIDE.....	229
APPENDIX B CODING STRUCTURE.....	234
APPENDIX C ETHICAL CERTIFICATE.....	235
REFERENCES	236

LIST OF FIGURES

Figure	Page
1.1 The governance of public projects.....	8
1.2 The initial conceptual framework for the doctoral research.....	63
4.1 Timeline of project MP.....	146
4.2 The process of translation for project MP.....	156
5.1 The process of project governing for major public infrastructure projects.....	196
6.1 The integrative framework for the doctoral research.....	205

LIST OF TABLES

Table	Page
4.1 Data collected.....	141
4.2 QFG project phases, deliverables and overview of content.....	144
4.3 Twelve observed practices.....	149
5.1 Data collected for the doctoral research.....	176
5.2 Example of evaluation for the enactment of a practice.....	178
5.3 Main characteristics and key episodes of the four cases.....	180
5.4 Ostensive practices.....	183
5.5 Performative practices as enacted in the projects.....	188

LIST OF ABBREVIATIONS AND ACRONYMS

CM:	Council of Ministers
DA:	Dossier d'affaires (Business Case)
DO:	Dossier d'opportunité (Opportunity Case)
FTP:	Functional and Technical Program
GPP:	Governance of Public Projects
IDP:	Integrated Design Process
NPA:	New Public Administration
NPG:	New Public Governance
NPM:	New Public Management
NPS:	New Public Service
PM:	Project Manager
PMO:	Project Management Office
PMP:	Project Management Plan
PPP:	Public-Private Partnerships
PPS:	Preliminary Plans and Specifications
QA:	Quality Assurance
QGF:	Quebec Governance Framework (la Directive)
SCT:	Secrétariat du Conseil du trésor (Quebec Treasury Board)
SQI:	Société québécoise des infrastructures
TMO:	Temporary Multi-Organizations

RÉSUMÉ

La gouvernance des grands projets d'infrastructure est un sujet d'importance en gestion de projet, étudié depuis déjà plusieurs décennies. Malgré cet intérêt pour comprendre les mécanismes et la complexité de ces projets d'envergure, encore à ce jour, l'exécution de ces projets n'est pas satisfaisante en termes de performance. Sur le plan théorique, la plupart des études qui ont été menées à ce sujet ont mobilisé des perspectives économiques, contingentes et institutionnelles. Pourtant, on en sait encore peu sur la façon dont les acteurs traduisent et adoptent les cadres de gouvernance en pratique. Cette recherche doctorale vise à étudier comment un cadre de gouvernance des grands projets d'infrastructure publique est traduit en pratique.

En 2008, le Secrétariat du Conseil du trésor du Québec a adopté un cadre de gouvernance, inspiré des cadres norvégiens et anglais. Malgré son adoption en 2008 et sa révision en 2010, des constats ont mené le gouvernement à adopter une nouvelle loi sur les infrastructures publiques en 2013, et à réviser son cadre de gouvernance en 2014. La stratégie de recherche est une étude de cas multiples (quatre cas, correspondant à quatre projets) menée dans le contexte gouvernemental québécois. Quatre grands projets d'infrastructure en phase d'avant-projet sont étudiés, selon l'échantillonnage à variation maximale (contextes différents: santé, culture et justice). La collecte de données a été basée sur l'observation non participante lors de rencontres, des entretiens semi-structurés et une analyse documentaire. La stratégie principale d'analyse consistait à utiliser la théorisation ancrée. La thèse est structurée autour de trois articles.

L'objectif de l'article 1 est de proposer une conceptualisation des cadres de gouvernance pour les grands projets publics basée sur la littérature en administration publique. La gouvernance des grands projets publics est un sujet de recherche d'importance en gestion de projet, plusieurs chercheurs ayant étudié les cadres de gouvernance pour les projets publics comme un outil visant à améliorer la performance. Pourtant, alors que la performance est traditionnellement considérée comme une amélioration de l'efficacité, d'autres aspects doivent être pris en considération. À l'aide de la théorie phronétique et abductive, cet article conceptuel examine la pertinence d'un cadre de gouvernance pour les grands projets publics selon trois dimensions: celles d'une plus grande efficacité gouvernementale, d'une plus grande légitimité et d'une plus grande imputabilité. La contribution principale de cet article est d'enrichir la théorie existante sur la gouvernance des grands projets publics.

L'article 2 investigate le processus de traduction, d'un cadre de gouvernance institutionnalisé à sa mise en œuvre dans la pratique. Cette recherche qualitative repose sur une étude de cas d'un projet d'infrastructure publique dans le secteur de la santé au Québec (Canada). À l'aide d'observation non participante et d'entrevues, la phase de planification du projet telle qu'elle se déroule est présentée. Le processus de traduction est présenté, du cadre de gouvernance ostensif, institutionnalisé, à l'appropriation en pratiques performatives, qui ont résultées en douze pratiques spécifiques : quatre pratiques « structurantes » au niveau institutionnel, cinq pratiques « normalisantes » au niveau organisationnel et trois pratiques « facilitantes » au niveau du projet. La principale contribution de cet article est d'enrichir notre compréhension de la gouvernance des grands projets d'infrastructure publique avec des théories basées sur les processus et les pratiques.

Le but de l'article 3 est d'avancer une conceptualisation pour la gouvernance en tant que pratique ('governance-as-practice') en fonction de champs théoriques basés sur la pratique—soit 'strategy-as-practice' et 'projects-as-practice'. Alors que la gouvernance des projets est reconnue comme un objet de recherche important, ce qui est fait en réalité par différents acteurs ayant à gérer ces projets a été beaucoup moins étudié. Cet article présente une recherche qualitative fondée sur une étude de cas multiple de quatre grands projets d'infrastructure publique au Québec (Canada). Les résultats montrent comment les pratiques performatives ont été promulguées à l'égard des pratiques ostensibles, décrivant un cas de gouvernance à multiples niveaux.

La principale contribution de cette recherche doctorale est de développer une meilleure compréhension de la gouvernance des projets telle qu'appliquée en pratique, telle qu'elle est traduite et promulguée par les acteurs (gouvernance en pratique). Cette perspective de la pratique permet de compléter les connaissances dans le domaine, comme la plupart des études ont porté sur le cadre de gouvernance officiel, institutionnalisé, et non sur la façon dont les acteurs le mettent en application en pratique.

Mots clés : Gouvernance de projet, projets d'infrastructure, projets publics, perspective de pratique, étude de cas multiple

ABSTRACT

The governance of major infrastructure projects is a subject of importance in project management, as it has been studied for many decades. Yet, many of those projects still have poor performance records. At the theoretical level, most studies conducted on the subject have mobilized either economic, contingency-based or institutional perspectives. However, to this day we still don't know much about how actors translate and apply governance frameworks in practice. This doctoral research aims to investigate how a governance framework for major public infrastructure projects is translated into practice.

In 2008, the Quebec Treasury Board (Canada) adopted a governance framework for major public infrastructure projects, inspired by the Norwegian and British models. Despite its adoption in 2008 and its revision in 2010, some reports have shown that further changes were required, leading the government to adopt a new law on public infrastructures in 2013, and to revise its governance framework in 2014. The research strategy is a multiple-case study (four cases, corresponding to four projects) within the Quebec government. Four major infrastructure projects currently in the front-end phase have been studied, according to maximum variation sampling (different contexts: health, culture and justice). Data collection has been based on a set of approaches including non-participant observation during project meetings, semi-structured interviews and a documentation analysis. The main analysis strategy consisted of using grounded theory. The thesis is structured around three articles.

The aim of Article 1 is to advance a conceptualization for governance frameworks for major public projects based on public administration literature. The governance of major public projects has been an important subject of inquiry in project management, as researchers have investigated governance frameworks for public projects as a tool to enhance performance. Yet, while performance is traditionally seen as improved efficiency, other aspects need consideration. Using phronetic and abductive theory building, this conceptual article investigates the relevance of a governance framework for major public projects along three dimensions: those of greater government efficiency, legitimacy and accountability. The main contribution of this article is to enrich existing theory on the governance of major public projects.

Article 2 investigates the process of translation, from an institutionalized governance framework to its implementation in practice. This qualitative research is based on a case study of one public infrastructure project in the health sector in Quebec, Canada.

Through non-participant observation and interviews, the planning phase of the project as it unfolds is presented. The process of translation is presented, from the ostensive, institutionalized governance framework, to appropriation into performative practices, which resulted in twelve specific practices: four 'structuring' practices at the institutional level, five 'normalizing' practices at the organizational level and three 'facilitating' practices at the project level. The main contribution of this article is to enrich our understanding of the governance of major public infrastructure projects with process- and practice-based theories.

The aim of Article 3 is to advance a conceptualization for governance-as-practice based on current developing streams of practice studies—strategy-as-practice and project-as-practice. Whereas project governance has gained recognition as an important object of inquiry, what is actually done by different actors having to manage those projects has been studied much less. This paper presents a qualitative research based on a multiple-case study of four major public infrastructure projects in Quebec, Canada. The results show how projects performative practices were enacted against the ostensive ones, uncovering a case of multilevel project governing.

The main contribution of this doctoral research is to develop a better understanding of project governance (governance-as-practice). This perspective from practice complements existing knowledge in the area, as most studies have focused on the formal, institutionalized governance framework, and not on how the actors translate it and put it into actual application.

Keywords: Project governance, infrastructure projects, public projects, practice perspective, multiple-case study

INTRODUCTION

Today, large infrastructure projects constitute one of the most important sectors of development in the world. Between 2013 and 2030, the estimates for infrastructure spending (mainly delivered as large-scale projects) are about US\$ 3.4 trillion per year (The McKinsey Global Institute (2013), cited in Flyvbjerg, 2014, p. 8). At a global level, megaprojects (defined as projects of US\$1 billion or more) are increasingly used for delivering a wide range of goods and services, and their scale tend to increase as well (Flyvbjerg, 2017). The governance of projects has been studied more extensively as a specific object of inquiry since the year 2000 (Ahola *et al.*, 2014). The governance of large infrastructure projects is a subject of importance in project management, as there have been several seminal studies revealing the mechanisms and complexities of such complex and costly undertakings (c.f. Ahola *et al.*, 2014). Even if the subject has been studied for some time, still to this day the performance of those projects is unsatisfactory: the wrong projects are selected, the costs are underestimated and the benefits are overestimated (Flyvbjerg, 2014).

In order to strengthen their ability to manage and control large infrastructure projects, some governments have adopted a governance framework, defined as “an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose” (Klakegg *et al.*, 2008, p. s30). The explicit objectives of these governance frameworks are to habilitate decision-makers to take better-informed decisions in the front-end phase (by having accurate definition of needs, options and cost estimations), and to define the process by which the project is to be managed, with the designation of imputable actors (Christensen, 2011; Williams *et al.*, 2009). Yet, preliminary inquiries into the improvement in

project performance by having such governance frameworks in place is somewhat inconclusive (Committee of Public Accounts, 2012; Samset and Volden, 2013; SECOR-KPMG, 2012). Whereas project governance has gained recognition as an important object of inquiry, what is actually done by the different actors having to manage those projects has been studied much less (Williams and Samset, 2010).

In Quebec, the Secrétariat du Conseil du trésor (SCT) adopted in 2008 a governance framework for major public infrastructure projects, inspired by the Norwegian and British models. The management of large public infrastructure projects is an important issue in Quebec, with investments estimated at \$ 9.1 billion per year for the next 10 years, of which 70% will be delivered as major projects (Secrétariat du Conseil du trésor, 2017). This governance framework was revised in 2010, and again in 2014, to reflect organizational changes and learning which occurred through its enactment into projects. At its origin, the Quebec governance framework, adopted in 2008, had as a main objective to rigorously frame infrastructure projects, especially in the front-end and planning phases, in order to prevent overspending, delays, and to responsibly manage public funds (Secrétariat du Conseil du trésor, 2008). Despite its adoption in 2008 and its revision in 2010, a report by the Auditor General of Quebec in 2011 and another independent report in 2012 concluded that further changes were required to improve the planning and management of individual infrastructure projects (SECOR-KPMG, 2012; Vérificateur général du Québec, 2011). The government responded to these reports by adopting a new law on public infrastructure in 2013, and by revising the governance framework in 2014, which in turn had impacts on the way major infrastructure projects would be governed and managed (Secrétariat du Conseil du trésor, 2013, 2014).

Project management is an inter-disciplinary field of study which has expanded substantially in the past decades (Söderlund, 2011; Bredillet *et al.*, 2008). By looking

specifically at major public infrastructure projects, it is suggested that so far, most of the existent literature on infrastructure projects have mobilized either economic, contingency-based or institutional perspectives (e.g. Miller and Lessard, 2000). Yet, several other theoretical perspectives are increasingly being mobilized in project management, and could contribute to opening the theoretical perspectives of research concerning major infrastructure projects.

Despite its social and academic importance, the translation of a governance framework for major public infrastructure projects is a subject on which there has been relatively little research (Williams *et al.*, 2010). This research helps to understand how a governance framework is translated into practice, and how actors make sense of the institutionalized framework by enacting it. This research gap is quite important to tackle, as the level of investments put into major projects is quite high, and the overall performance of these projects is still deficient (Flyvbjerg, 2011). Thus, the proposed research question: How is a governance framework for public infrastructure projects translated into practice?

As relatively little research has been done in this regard, the overall goal of the research is heuristic: it aims to identify the variables, assumptions and causal mechanisms involved (George and Bennett, 2005). This exploratory study is qualitative, as part of the interpretativist and constructivist paradigm (Corbin and Strauss, 1990; Guba and Lincoln, 2005). In fact, the inductive approach and grounded theory are privileged to collect field elements that enable a better understanding of phenomena which can be used to develop theories in a subsequent phase (Glaser and Strauss, 1967). The research method retained is a multiple-case study (Yin, 2009) of major public infrastructure projects in Quebec. Here were the initial objectives of this theoretical development: (1) To understand the socio-political and administrative context for major public projects in Quebec (Canada), as well as the history related to the adoption of the governance framework and the objectives targeted by the

government; (2) From the institutionalized governance framework, to understand how the various actors (both collectively and individually) make sense of this framework; (3) To understand how those actors translate and enact this governance framework; and (4) To understand how the governance framework is implemented by the various actors and its impact on project performance.

Two theoretical perspectives are combined to study the governance of major public infrastructure projects: (1) the process approach (Pettigrew 1997) and (2) the practice perspective (Nicolini, 2012). This theoretical hybridization allows the exploration of processes and practices of project governance. Furthermore, the focus is on practices performed collectively, thus opening the black box of the micro-processes of the 'institutionalized,' macro-governance framework. Those two theoretical perspectives are epistemologically compatible, because they put emphasis on actors in order to understand a macro-phenomenon through the micro-level (Coleman, 1986). It has to be emphasized that most of the new theoretical development in organization theory is made by hybridization of existing theories (Boxenbaum and Rouleau, 2011). Moreover, the theoretical perspectives selected for this doctoral research are becoming more important in the field of project management, as insights from social sciences are expanding project management research (Alderman and Ivory, 2011; Floricel *et al.*, 2014).

The research strategy is a multiple-case study in the Quebec government (Yin, 2009). The context is the socio-political context of Quebec, and there are four cases, each being a major infrastructure project having to comply with the Quebec governance framework for public infrastructure projects. The strategy for data collection included a preliminary phase (a pilot) in Quebec in 2014 to test the conceptual framework and the upstream analysis of public data. Field research was conducted between September 2015 and June 2016. For the doctoral fieldwork, four projects in different

settings have been selected and compared, according to maximum variation sampling (Patton, 2002). This allowed us seeing how the governance framework is applied in various situations, what common patterns emerge and what are the significant distinctions. Important criteria were that the projects chosen be in the front-end phase at the time of the fieldwork, and that projects be comparable in size and in the type of funding. The context and the ministry promoting the project are different for the selected projects.

Data collection has been based on a set of approaches whose main components are non-participant observation in project meetings and semi-structured interviews. Gathered data cover both real-time and retrospective time. In total, we have conducted 44 interviews, and attended to 21 meetings for 77 hours of non-participant observation. A documentation analysis completes data collection.

Data collected has been transcribed and coded using qualitative data analysis software. The main analysis strategy consisted of using grounded theory, starting with a flexible frame and revising it according to the insights generated by collected data (O'Reilly *et al.*, 2012). Starting from our conceptual framework, initially coded the interviews, and revised the coding as well as our framework in an iterative cycle (Charmaz, 2006). From a focus coding on main themes addresses (called first order concepts in Gioia *et al.*, 2013), we moved to an axial coding (second order themes in Gioia *et al.*, 2013; O'Reilly *et al.*, 2012). Other analysis procedures included temporal bracketing of the governance framework, and a systematic analysis of various governmental documents. Chosen data analysis strategies (grounded theory, temporal bracketing and systematic analysis) are high in accuracy and somewhat limited in simplicity and generality, even though the transferability could be important (Langley, 1999).

Results are presented along three articles, each addressing a subquestion of the main research question (How is a governance framework for public infrastructure projects translated into practice?):

- 1- Why is a governance framework for major public infrastructure projects interesting for a government?
- 2- How does the translation process unfold from an institutionalized governance framework into public infrastructure projects?
- 3- How is project governance made into project governing?

This doctoral research proposes a qualitative study to investigate the governance of projects as it is actually done by actors (governance-as-practice), which will increase knowledge in the field as most studies up to now have focused on the formal, institutionalized governance framework. At the practical level, this research will approach possible solutions to maximize the benefits in terms of optimizing public finances, transparency and ethics.

This thesis is structured in six chapters. Chapter I presents a literature review, composed of sections on governance framework, infrastructure projects and theoretical bases. Chapter II presents the methodological approach, including the epistemological stance, the research design and a description of the case study setting. Chapter III, IV and V are the thesis results; each chapter is a thesis article. Chapter VI discusses the thesis results coherently, presenting an integrative conceptual framework along with main contribution and limitation of this study.

CHAPTER I

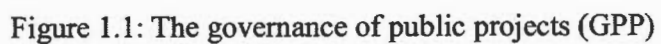
LITERATURE REVIEW

This section is structured in three parts. The first part introduces the concept of governance framework for public projects, and the ontological contours which are used to define it in this research. The second part reviews the literature on infrastructure projects, according to the main theoretical perspectives, highlighting their contributions. The third part presents the research question, the theoretical bases that are mobilized in this research, along with an integrative conceptual framework.

1.1 Governance Framework

This section undertakes the definition of the ontological contours¹ of the object of inquiry for this doctoral research, namely, the governance of public projects. In order to do so, a reconstruction of the evolution of three interrelated fields is proposed: those of governance, of project management and of public administration. Through a socio-historical perspective, the evolution of those three fields is outlined, so to grasp past and current developments in this stream of research. The argument is structured according to the Venn diagram shown in Figure 1. First, section 1.1.1.1 develops the concept of Governance, and its two interfaces of Public Governance and Project Governance. Then, section 1.1.1.2 elaborates on Project Management. Section 1.1.1.3 presents briefly the field of Public Administration, and its interface with project management: Public Projects.

¹ While the epistemological stance of this research is developed in Section 2.1, here we present the ontological contours of the governance of public projects, explaining what it is (what it includes) and what it is not (what it excludes), according to the literature review.



1.1.1 The Governance of Public Projects: Ontological Contours

1.1.1.1 Governance

Governance is a term that has many meanings and that can be applied to many levels: international, national, organizational, project, etc. The concept is not new and has evolved over time, as it is derived from the Latin word “gubernare,” meaning “to steer,” and as a function originated from policy research in political science but has now outgrown this area substantially (Müller, 2011)². While Pollitt and Hupe (2011) warn that the concept of governance is now used as a ‘magic concept’ because it is broad, normatively charged and lay claim to universal application,³ in a restricted sense it could be seen as covering “the complex process of steering multiple coupled firms and agencies” (Klakegg *et al.*, 2008, p. s27). Klakegg *et al.* (2008, p. s28) define governance as “the use of institutions, structures of authority and even collaboration to allocate resources and coordinate or control activity in society or the economy.” Governance is not only broad in its ontological application, yet, it also offers several levels of analysis. According to Mazouz (2014, p. 19), those levels of analysis could be declined from a broader view into a micro one in those terms: the institutional level, the organizational level, the managerial level consisting of overarching frameworks, and the managerial level consisting of management tools. We will come back to those levels of analysis as they are rooted in our initial conceptual framework for this doctoral thesis (see Section 1.3.3). Generally speaking, governance refers most notably to corporate governance. After a short review of this concept, the two notions of public governance and project governance are tackled.

² According to Pierre and Peters (2000), the French have been using the term ‘gouvernance’ since the 14th century.

Pierre, J. and Peters, B.G. (2000). *Governance, Politics and the State*. Macmillan Publishers Limited.

³ A quick search in a journal database proposes about 56 different journals having “governance” in the title, plus about 5 French journals that contain “gouvernance” in the title.

The concept of corporate governance has been - and is still - widely used and studied. Corporate governance as a specific object of inquiry has been greatly debated since early in the 20th century, with the emergence of mass industrialization and the orthodox movement associated mainly with Taylor and Fayol (Girard, 2012). More specifically, it has emerged with the rise of a new social actor in the economic landscape: the manager, having to work in the interests of the shareholder (*ibid.*). A widely used definition comes from OECD (2004, p. 11):

Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.

While this is a contemporary definition of governance, its meaning has evolved over the last century. As organizations grew in size and importance, many questions surfaced concerning the governing of those organizations. One of the most comprehensive studies of the evolution of corporate governance is offered by Girard (2012)⁴. Through a thorough literature review, Girard (2012) summarizes the important periods of the 20th century and traces the associated issues that have come up in the evolution of the concept of corporate governance. From this synthesized work, some parallels can be made with the development of management periods identified in Déry (2010). Thus, the period of foundation could be related to the work of two of the most influential precursors on governance: Berle and Means (1932) and Dodd (1932)⁵. From the beginning, governance has been tackled from a politico-economic perspective, which explains why many contributions to the debate have

⁴ Other comprehensive syntheses on the subject include Clarke (2004) and Türke (2008). The later uses a categorization for the different perspectives using the structure-oriented view, the actor-oriented view and synthetic views.

Clarke, T. (2004). *Theories of Corporate Governance: The Philosophical Foundations of Corporate Governance*. Routledge.

Türke, R.-E. (2008). *Governance: Systemic Foundation and Framework*. Zurich: Springer.

⁵ Berle and Means (1932) adopted an economic and juridical perspective on governance, stating that the separation of property from control resulted in the concentration of the economic power to a minority, while Dodd (1932) responded to them that an enterprise has a social responsibility and thus, must consider more than just serving the interests of shareholders (Girard 2012).

been and still are deeply economic. The period of expansion for corporate governance could be related to the managerialism work of Hayek (1960) and Marris and Muller (1980), while the period of reformulation could be associated with neoliberalism and the uprise of the agency theory⁶, shifting from a strictly politico-economic stance towards organizational economics, along with the development of technical tools (such as remuneration tools for managers). Thus, the concept is now in a period of refoundation since about the beginning of the 21st century. The main thesis advanced by Girard (2012) is that the foundational work by Berle and Means (1932) and Dodd (1932) reaches far beyond the simple separation of property and control of the enterprise associated with economic and juridical issues, and touches on broader political and social issues. Girard (2012) acknowledges that even though the economic perspective (more specifically the agency theory) has dominated the work associated with governance over the last decades, the refoundation period now allows to widen the perspectives adopted to include political and social issues again. After many decades of strong economic influence, governance is now much broader than having to deal with the relationship between managers and shareholders: it has extended to include many other stakeholders, and is now studied from other theoretical perspectives, most notably sociology and organization theory.

Public Governance (interface of Governance and Public Administration)

Thus, as an ongoing tension has developed between economic and juridical issues related to corporate governance on one side, and political and social issues on the other, on the field of politics the concept of governance has also taken quite a different turn over the last decades. Paralleling the debate on corporate governance, the questions asked are primarily regarding the duality between citizens (the

⁶ More specifically, Girard (2012) points to the work of Easterbrook and Fischel (1991) and Fama and Jensen (1983)

Easterbrook, F.H. and Fischel, D.R. (1991). *The Economic Structure of Corporate Law*. Cambridge, MA: Harvard University Press.

Fama, E.F. and Jensen, M.C. (1983). Separation of Ownership and Control. *The Journal of Law and Economics*, 26(2), 301-325.

“owners” of the state) and managers (elected politicians and civil servants). The initial form of public governance was associated with bureaucracy, with Max Weber (1946, 2012) as one of the most influential author on that subject. In the 1980s, as neoliberalism allowed the market to emerge as a dominant form of governance (Williamson, 1975), the movement had repercussions in the public sector, with massive privatizations under the New Public Management (NPM)⁷ (Aucoin, 1990). So much so, that contemporary authors have acknowledged the transformation of public governance, giving less latitude to public organizations and more to others, as networks rise and demand other configurations of power and governance (Kettl, 2002). More drastically, Peters and Pierre (1998) suggested to rethink public administration as the importance of networks, partnerships and markets, leading the way to a growing body of literature related to NPM characterized as ‘governance without government’. However drastic, this is in line with other influential works in public governance (i.e. Rhodes, 1996; Stoker, 1998).

Nevertheless, a new movement emerged in the turn of the new century to counterbalance the predominant role of networks and private partners in public governance. This school of thought is the New Public Service (NPS), which extended through the New Public Administration (NPA), asserting that the core of the public administration was democratic citizenship (Denhardt and Denhardt, 2000). The NPS school of thought, even though still marginal, has gained supporters in the last decade, and a new trend seems to have emerged from this, the New Public Governance (NPG) (Osborne, 2010). According to Osborne (2010, p. 9), NPG is “both a product and a response to the increasingly complex, plural and fragmented nature of public policy implementation and service delivery in the twenty-first

⁷ This has led to dangerous generalizations of a universal “one best way”, according to Argyriades (2006). A democratic governance has to be tailored to the country’s political and institutional culture and needs, according to him.

Argyriades, D. (2006). Good governance, professionalism, ethics and responsibility. *International Review of Administrative Sciences*, 72(2), 155-170.

century”. It posits a pluralist state, and is rooted within institutional and network theory (*ibid.*).

Within public governance, a concept that has been developed in the 1970s by Michel Foucault is governmentality. While Foucault’s heritage is rich, deep and extensive, his specific contribution into public administration has been to shed light on power micro-practices and government instruments (Arellano-Gault *et al.*, 2013). Foucault defines governmentality as the “ensemble formed by the institutions, procedures, analyses ... which has; as its principal form of knowledge political economy, and as its essential technical means apparatuses of security” (Foucault, 1991, p. 102, cited in Arellano-Gault *et al.*, 2013, p. 157). For Alaktif and Callens (2009), the distinction between governmentality and governance is that the former is an administrative and bureaucratic approach. Yet, an edited book on Michel Foucault’s heritage goes much further: the authors claim that governmentality is an action system focusing on actions and instruments rather than on larger political theory, and that it has allowed to bring closer the fields of political sciences and management (Hatchuel *et al.*, 2005). Being in line with the New Public Governance, the concept of governmentality⁸ “highlights the need to understand state action as decentralized and fragmented, but nevertheless as a fundamental locus of power” (Arellano-Gault *et al.*, 2013, p. 158). Then, the related concept of project governance has also evolved over time, in the specific field of project management.

Project Governance (interface of Governance and Project Management)

There has been an expanding discussion about project governance in project management research over the last decades, although the definition of this concept and its main origins remain ambiguous (Ahola *et al.*, 2014). Along with the development of project management as a field of study came the governance school

⁸ Some research within project management also uses governmentality as a central concept, e.g. Müller *et al.* (2015).

of thought, which “aims to analyse why projects exist and define the appropriate governing mechanisms of projects as a particular kind of administrative problem and complex transaction” (Söderlund, 2011, p. 163). According to Bredillet *et al.* (2008), the major influences of the governance school use an economic approach, where the project is seen as a legal entity. It first developed in the 1970s, along with contract management using transaction costs and agency theory (*ibid.*). The first references in the governance school discuss problems of contracting and governance in the construction industry (Söderlund, 2011). Contract management is still predominant in the literature of major infrastructure projects, as it will be discussed further. Yet, the governance school has extended over the years, from temporary organizations in the mid-1990s, to governance of projects in strategic alliances, in complex consortia and networks in the late 1990s (*ibid.*). Even if many studies have been conducted in that area from the 1970s on, the concept of project governance has only recently become an issue of importance in the project management community and literature (Miller and Hobbs, 2005). A basic definition comes from Müller (2009, p. 4), which clearly states that project governance is embedded in corporate governance:

Governance, as it applies to projects and project management, coexists within the corporate governance framework. It comprises the value system, responsibilities, processes and policies that allow projects to achieve organizational objectives and foster implementation that is in the best interest of all stakeholders, internal and external, and the corporation itself.

A comprehensive study on project governance produced by Ahola *et al.* (2014) classify the main articles on project governance in two categories: those where project governance is seen as external to any specific project and those where project governance is seen as internal to a specific project.⁹ After reviewing the main origins on project governance and on governance, the authors conclude that one potential contribution to the development of project management literature is the general

⁹ Interestingly, the authors note that there is very little overlap between the sources cited by those two categories on project governance literature.

governance literature focusing on the role of powerful stakeholders such as governments.

A conceptual model of project governance has been developed by Bekker (2013), building on the three levels of project management as presented by Morris (2013): (1) the technical level, (2) the strategic level, (3) the institutional level. Bekker (2013) proposes a model with three schools of thought in project governance: the single-firm governance school (relating to levels 1 and 2); the multi-firm governance school (relating to levels 1 and 2); and the large capital governance school (covering levels 2 and 3 and the macro environment). Another conceptual model of project governance is proposed by Winch (2014), where governance is associated with the interface between project owners and the projects, thus linking permanent to temporary organizations. In addition, a conceptualization of project governance is related in Narayanan and DeFillippi (2012, p.42) where it is seen as incorporating five elements: stage gate approval process, stakeholder representation, formal roles and responsibilities, quality assurance, and contracts and sign-offs.

Even though the concept of governance is multifaceted, complex, and most often refers to corporate governance, it is nonetheless important to distinguish two interrelated notions: those of public governance and project governance. Whereas at its origin, governance was more an ongoing discussion between economics and law, it has enlarged to include over the past decades a more sociological view reflecting the plurality of actors and stakeholders. Public governance, on the other side, has its origin in politics and has adopted an economic perspective since the rise of the NPM movement in the 1980s. Project governance, although younger as a concept than the two others, is grounded in project management, in an economic perspective, but has extended over the past decades to encompass the complexity of networks and the plurality of actors. Project governance is embedded in the larger field of project management, which is briefly reviewed next.

1.1.1.2 Project Management

Project management is a relatively young discipline. Project management research originated from operations research and management science, back in the early 1950s (Söderlund, 2011). According to Söderlund (2011), there are now seven schools of thought¹⁰, which have developed over the years and enriched the discipline, as project management benefited from progress in research in many areas of management and adopted ideas developed in other management disciplines (Bredillet *et al.*, 2008)¹¹. It is possible to associate the birth of project management to the orthodox movement in management. In the 1950s, the optimization school characterized the majority of the thinking and research in project management, reflecting an early concern for the underlying value of efficiency, with planning as a main tool.¹² Although the oldest, this school of thought has remained very influential in project management.¹³ However, over the last two decades, project management research has improved substantially in quality and rigour (Turner, 2010), rapidly expanding as a subfield of management and organization studies (Söderlund and Tell, 2011). Thus, the variety found in project studies lends support to theoretical pluralism and to the interdisciplinarity of the field (Geraldini and Söderlund, In Press).

As project management research developed as a subfield of management studies some decades after, we would argue, in line with the development periods of management presented in Déry (2010), that project management has been in

¹⁰ Those seven schools of thought are not uniformly accepted among project management scholars, yet, they provide a comprehensive overview of the different streams and their evolution.

¹¹ Those schools of thought are the following, ranked by order of appearance from the oldest (optimization school, around 1950) to the most recent schools (around 1990): Optimization School, Factor School, Contingency School, Behaviour School, Governance School, Relationship School and Decision School (Söderlund 2011).

¹² According to Bredillet *et al.* (2008, p.5): “The main premise of this school is to define the objectives of the project, break the project into smaller components, ensure careful planning scheduling, estimating, and execution of project tasks, and strive for cost and time efficiency throughout the project to achieve the optimum outcome. This school is very Taylorian in its approach.”

¹³ Söderlund (2011) qualifies these contributions as advocating an analytic view and affirms that writers typically adopt a prescriptive and normative stance rather than a descriptive one.

reformulation since the beginning of the century, and is soon to enter the period of refoundation. There have been inquiries about the epistemological foundations of project management over the past decade (Smyth and Morris, 2007). As a counterpart to this expanding pluralism, Smyth and Morris (2007) state that while it is generally acknowledged that a unified theory of the management of projects does not exist, research methodologies tend to overlook this.¹⁴ For their part, Bredillet *et al.* (2008, p. 2) argued that “project management has now grown into a mature academic discipline of some diversity and complexity”, even though they recognized that as a field it does not receive full recognition from the rest of the academic management community as a valuable academic subject in management.¹⁵ Thus, after several years of reformulation, project management is soon entering the period of refoundation. Several important contributions are opening the theoretical perspectives of the field, arguing for renewed approaches including theories from social sciences (activity theory, actor-network theory and structuration theory among other), and other theories from strategic management research and the analysis of power relations (Aubry *et al.*, 2012; Drouin *et al.*, 2013; Floricel *et al.*, 2014). Yet, as project management extended from a technical discipline to a multidisciplinary one, the refoundation has still to be defined in accordance with the reformulation of the discipline that has taken place in the last years. Next, an overview of public administration is presented.

¹⁴ However marginal, Koskela and Howell (2002, p.293) have argued that “an explicit theory is the crucial and most important issue for the future of the project management profession”

Koskela, L. and Howell, G. (2002). *The underlying theory of project management is obsolete*. PMI Research Conference, Actes du colloque, 2002, Seattle WA.

¹⁵ According to them, part of the problem is because in the early days of the discipline, research was driven by an agenda set by practitioners. Even today, the preponderance of project management for practitioners is hard to miss. For example, the *Project Management Institute* (PMI) - the world's leading professional association of project management, having more than 700,000 members worldwide - has developed several standards in project management for which it runs certification programs. The *Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, first published in 1996 in an attempt to document and standardize project management practices, is now one of the most recognized project management standard internationally. Despite a growing and authoritative professionalization of the field, scholars do not take the *PMBOK® Guide* as a theoretical orientation for their work (Winch 2006).

Project Management Institute (PMI). (2013). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. (5th ed.). Newtown Square (PA): Project Management Institute.

1.1.1.3 Public Administration

Before embarking on the quest of relating how the study of public projects evolved over time, a broader debate has to be put forward, that between public administration and politics, which has shaped the last century. Then, a discussion of public projects, and more specifically of public-private partnerships (PPP), will be situated in this larger public trend.

Woodrow Wilson is often associated with the birth of the study of public administration in the United-States (Rutgers, 1997). His essay is famous notably for bringing about the classic dichotomy between public administration and politics: “The field of public administration is a field of business. It is removed from the hurry and strife of politics” (Wilson, 1887, 2012, p. 22). Thus, the first decades of the 20th century mostly treated the study of public administration indistinctively from the study of private industrialization that was taking place at that time. This period, named “Orthodoxy”, has generated many thinkers who have been mostly influential: most notably Frederick Taylor (1912, 2012), Luther Gulick (1937, 2012) and Max Weber (1946, 2012). Though each author had a distinct discourse, the underlying theme of “Scientific Management” has promoted the division of work, through specialization, in order to improve organizational efficiency. Thus, efficiency was already at that time a central concern, and the administrator’s main responsibility was to insure the coordination of the units of specialization through POSDCORB (planning, organizing, staffing, directing, co-ordinating, reporting and budgeting) (Gulick, 1937, 2012).

The Neo-classical school of thought emerged as a questioning of this Scientific Management. On the one hand, some argued that management had much to do with human relations, and that strictly scientism was thus misleading (Barnard, 1938, 1968). On the other hand, others argued that pure rationality is an ideal rather than a

reality, and thus that the dichotomy between facts and values presented in Scientific Management was false (Simon, 1945, 1997).

Around the same period arose the New Public Administration (NPA) with Waldo and his *Administrative State* (Waldo, 1948). The democratic principles were reintegrated at the core of the study of public administration, and the orthodox dichotomy between politics and public administration refuted. Only classical views of efficiency as a central concern for public administration seem to have been acknowledged: “there is an area of explicit doubt and scepticism about all of these tenets except the first: that true democracy and true efficiency are reconcilable” (*ibid*, p.141). Waldo has been mostly influential in North America for his ideas that have inspired many others.

In the 1980s and 1990s emerged a new trend, the New Public Management (NPM), as a countercurrent of the NPA. The dichotomy between the politics and public administration came back, even sharper than before. What was more to that was the presumption that private management was better than public administration, and thus the public had to learn from private “best practices”. This school of thought developed mostly from practitioners and politicians, having few supporters among scholars (Aucoin, 1990; National Performance Review, 1993, 2012). Thus, NPM is essentially a philosophy of *generic management* that sees the public-private dichotomy as essentially obsolete (Peters and Pierre, 1998). Hood (1991) associates the rise of NPM with four other administrative megatrends: the reversal of government growth, the shift toward privatization, the development of automation and the development of a more international agenda. This school of thought has been mostly influential for many countries, including the UK, Australia, New Zealand, and Canada (Brown-John, 1996; Hood, 1991). Even today, although many are questioning the legitimacy of NPM’s principles (Levy, 2010), it is still predominant in many governments (Andrews *et al.*, 2011).

Finally, the last school of thought is the New Public Service (NPS), which extended through the NPA movement, asserting that the core of the public administration was democratic citizenship (Denhardt and Denhardt, 2000). The government thus has to serve the public interest and respond to public values (Bozeman, 2007). Thus, the concept of democracy is reemphasized over efficiency, although this latter is redefined rather than rejected: “Values such as efficiency and productivity should not be lost, but should be placed in the larger context of democracy, community, and the public interest” (Denhardt and Denhardt, 2000, p. 557). Thus, an ongoing tension between public administration and politics has shaped the last century. The neoliberalism of the 1980s took precedence in governments with the rise of the NPM movement. As the issues of private and public management surfaced, along with governance concerns, more emphasis developed around the questions of contract management and partnerships. Public projects are discussed from a general stand, then PPPs more specifically.

Public Projects (interface of Public Administration and Project Management)

Given the importance of the debate between neoliberalism and the importance of public administration and public values, it is quite astonishing to realize how few studies have been conducted specifically on public projects¹⁶. This seems like an underdeveloped area in the project management literature, especially since it has been acknowledged for a long time that projects are context specific (Engwall, 2003). How are public projects different from private ones? What are the main challenges and constraints that the public context brings to the management of projects? How does the public context affect the management of projects and project success? Those questions do not seem to have been investigated with much interest so far. One of the most important research on the question has been conducted by Baker *et al.* (1983).

¹⁶ Some studies have investigated public projects, for example as a setting or a context (e.g. Latour, B. (1993). *Aramis ou l'amour des techniques*. Paris: Éditions La Découverte), yet, specific theorization on public projects seems scarce so far.

Their research was funded by the National Aeronautics and Space Administration (NASA), which is notorious for being one of the highest-performing federal agencies (Walker *et al.*, 2011). They introduce their research as such: “How do public sector projects differ from private sector projects? Most people have definite preconceptions about the two” (Baker *et al.*, 1983, p. 686). They suggest that the main preconception is that private projects are much more efficient and effective than public ones, but conclude that this is misleading¹⁷. However, this conclusion can be questioned, as recent research has not been consistent on this (e.g. Besner and Hobbs, 2013; Flyvbjerg, 2013). Therefore, more research would be needed to understand the fundamental differences that exist in the public and private sectors, although it seems nonetheless widely recognized as a given in the field that there is, indeed, a distinction between the two contexts (Arnaboldi *et al.*, 2004; Crawford and Helm, 2009). Project management practitioners’ literature also supports this distinction. Two of the most notable examples come from the *Project Management Institute* (PMI) (2006; Wirick, 2009)¹⁸. Nevertheless, these publications remain targeted at practitioners, and the implicit allusion that public project management is different than private project management seems widely accepted, despite very little empirical evidence on this subject. Paradoxically, as little as there has been research specifically targeted at public projects, there has been a proliferation of studies and writings on Public-Private Partnerships (PPP).

While public projects have been understudied and underrepresented so far, public infrastructure projects have been widely studied as a subgroup of the major corpus of

¹⁷ The authors conclude that: “In general, the comparisons derived from the research of public sector projects and private sector projects do not support many of our preconception regarding public sector projects. For example, the study revealed no significant difference between private sector projects and public sector projects with respect to cost and schedule overrun. It is not only possible, but also very common, to attain high levels of perceived success on public sector projects.” (Baker *et al.*, 1983, p.698)

¹⁸ PMI introduces the *Government Extension to the PMBOK* as an industry-specific extension and states that “it provides information on managing projects within the unique environment of the public sector” (p.ix).

construction projects, through research on PPP.¹⁹ This stream of research began in the 1980s, with the emergence of NPM, privatization and new forms of contractual arrangements, and expanded ever since. Although most of the literature covers traditional perspectives such as economics (agency theory and transaction costs), contract management, success factors, and risk management, there has been a new trend lately towards a reformulation of the problem. Researches on PPP now embrace wider theoretical perspectives, related to complexity, network of actors, stakeholders, environmental and social impacts, etc. (Hafsi, 2009; Van Marrewijk *et al.*, 2008). While prolific and mostly related to economics, the core of the concept of PPP is deeply embedded in the political view, reflecting the tensions that have continued since the rise of NPM between public administration and politics. From this perspective, the main issues that PPP raise are about the public administration capability to administer contracts and supervise the private partner, and its expertise. From a political perspective, PPP raise concerns over the legitimacy and integrity of the political process, for a thorough cost-benefits analysis of the project from the start to a rigorous process of contract definition, allocation and control (Greve and Hodge, 2010; Romzek, 2006). Even though PPP represent complex arrangements blurring the lines between public and private, it remains that most of the time the owner is public, hence reinforcing the need to take this subject into account from a political and a public administration stance.

By reviewing the evolution of theories on governance, on public administration and on project management, we ventured to delimit the ontological and theoretical contours of the governance of public projects in order to confine our specific object of inquiry. The three fields have greatly evolved over the last century: governance, from an original tension between economics, law and sociology; public administration has struggled between politics and privatization through New Public

¹⁹ Not all PPP are projects; some might cover contracts for operational services over a specified amount of time. However, many PPP are related to major infrastructure projects.

Management; and project management started with an emphasis on optimization, later to be extended so to offer different theoretical perspectives over the years. Thus, the three fields have embraced pluralism as they developed, enriching the broader field of social sciences.

1.1.2 The Governance of Public Projects: Governance Framework for Public Projects

Having situated the governance of public projects in the larger fields named above, the second part of this section investigates this specific object of inquiry in two ways. First, it is noteworthy to highlight that in this research, the governance of public projects will be referred to as the governance framework for public projects²⁰. Thus, a definition of this central concept is provided. Second, the governance framework for public projects is positioned into the project life-cycle as predominantly in the front-end phase.

1.1.2.1 Definition of the Concept

In an extensive study on governance frameworks sponsored by the *Project Management Institute*, Klakegg *et al.* (2009) discussed at length the distinctions between regimes, frameworks, and systems. They raised several terms coming from international literature on megaprojects: “governance regime” (Miller and Hobbs, 2005); “institutional arrangements and regulatory regimes” (Flyvbjerg *et al.*, 2002) and “institutional frameworks” (Miller and Lessard, 2000) (*ibid.*). As their analysis covers an extensive literature review into the broad concept of governance, and offers a synthesis presenting the relationship between the concepts of systems, frameworks, and regimes, we adopt their definition of a governance framework as “an organized structure established as authoritative within the institution, comprising processes and

²⁰ While the governance of public projects is wider and more encompassing than the governance framework of public projects, we choose to focus on the latter for enhanced comprehensibility and concreteness.

rules established to ensure projects meet their purpose” (Klakegg *et al.*, 2009, p.60). While it is certainly not the only definition possible,²¹ and referring to this specific one certainly has some limitation, it nonetheless provides some clarification of what a governance framework might be, varying depending on the context and being embedded in institutions.

Coming back to the levels of analysis for governance presented earlier from Mazouz (2014, p. 19) - the institutional level, the organizational level, the managerial level consisting of overarching frameworks, and the managerial level consisting of management tools - we posit that a governance framework is mainly associated with the managerial level consisting of overarching frameworks (see Figure 1.2 for a visual representation). Yet, a governance framework for public projects could encompass elements from the other levels of analysis as well. A governance framework is institutionalized, it has implicit values attached to it, coming from the governmental and societal cultures. It is also targeted at specific organizations, which must adapt and structure themselves and their services accordingly. And finally, in order to apply this governance framework, specific management tools must be developed, learned and used, more specifically at the ‘micro’ level.

Some countries have adopted governance frameworks for public projects in the last decade or so, with as a main objective to “secure successful investments” by focusing predominantly on the front-end phase of the project (Christensen, 2009, p.11). For example, Williams *et al.* (2010)²² have investigated the governance frameworks for

²¹ This definition has been a starting point for this research. We come back to it in Section 6.2.1.

²² Those researchers and colleagues from their research center contributed greatly to the theorization of the governance framework for public infrastructure projects, for example: Samset, K., Berg, P. and Klakegg, O.J. (2006) Front end Governance of Major Public Projects. EURAM 2006 Conference, Oslo; Klakegg *et al.* (2008); Klakegg, O.J. and Haavaldsen, T. (2011). Governance of major public investment projects: in pursuit of relevance and sustainability. *International Journal of Managing Projects in Business*, 4(1), 157-167; Klakegg *et al.* (2009); Christensen (2011).

public projects in Norway²³ and in the UK²⁴, comparing them and their characteristics. The province of Quebec (Canada), has also adopted a governance framework for public infrastructure projects in 2008²⁵. While to our knowledge, this specific governance framework has not yet been investigated by researchers, it constitutes the specific object of inquiry for this doctoral research. While a governance framework usually covers the whole project life-cycle, its main emphasis is usually on the front-end phase, where decisions taken are of crucial importance and have the biggest impact.

1.1.2.2 Front-end Management

As an introduction to front-end management, we come back to the three levels of Morris mentioned above (Morris, 2013). Originally, project management was mostly focusing on the execution of a project - the level 1, the technical core - so that the phases of the project life-cycle of design, build and commission would be realized within the planned budget, on time and within scope (*ibid.*). The level 2, which Morris refers to as the strategic envelope or the management of projects, includes the front-end phase of the project, with the concept and feasibility before the next phases of design, build and commission. As it is presented by Morris (2013, p.118):

Work at Level 2 recognises the relationship between the project and various stakeholders' strategies (not least the sponsor's). The importance of getting the

²³ The Norwegian governance framework for public projects, called the "State Project Model", was adopted in 2000, after some unfortunate experience related to large public investments projects in the past (large cost overruns, delays and limited economic benefits). Samset and Volden (2013)

²⁴ The British governance framework for public projects, called the "integrated assurance and approval plan", was adopted in 2001, under the Office of Government Commerce (OGC), an independent office of HM Treasury.

Ghershon, P. (1999, August 14, 2008). *Review of civil procurement in central government*. December 16, 2013, http://www.doeni.gov.uk/review_of_civil_procurement_in_central_government.pdf

Smith, P. (2011, January 31, 2011). *UK Government procurement part 2: The History of OGC – was it all worthwhile?* December 16, 2013, <http://spendmatters.co.uk/history-ogc-all-worthwhile-public-procurement-benefit/>

²⁵ The origin and evolution of this governance framework is presented in Section 2.3 - Methodological Approach, and the current version of the framework is presented in Article 2 (Chapter IV, Section 4.4).

front-end right is a major part of the strategic level. There is a strong concern for value and effectiveness.

Lastly, the level 3, called the institutional context, embeds the project within its environment, internal to its organization and external to it (*ibid.*).

Previous research has emphasized the need to improve the management of major projects through a rigorous front-end management (e.g. Morris and Hough, 1987; Miller and Lessard, 2000²⁶; Flyvbjerg, 2014). The front-end decision-making phase in projects is of crucial importance and increasingly recognized as such, in order to select projects with the most potential benefits versus the lowest estimated costs (Samset and Volden, 2015; Williams and Samset, 2010; Williams *et al.*, 2009). Williams and Samset (2010, p. 39) define the front-end phase as “all activities from the time the idea is conceived, until the final decision to finance the project is made”. They argue that even though the front-end phase is determinant for the success of a project, research and theoretical developments focusing explicitly on this phase rather than on the planning and execution phase have been scarcer and somehow insufficient considering the importance of this topic (*ibid.*).

As we have presented it, a governance framework focuses predominantly on the front-end phase of projects. The explicit objectives are to habilitate decision-makers to take better, informed decisions in the front-end phase (by having accurate definition of needs, options and cost estimations for a major project), and to define the process by which the project is to be managed, with the designation of imputable actors (Christensen, 2011; Williams *et al.*, 2009). So far, we have broadly explored governance, venturing to position the governance of public projects yet more

²⁶ Miller and Lessard (2000, p.112) found that projects which displayed good performance usually had “messy or stormy front-end processes and were often characterized by high shaping costs”, leading them to suggest stretching the front-end phase in order to allow time and decision-making to better shape the project.

specifically into a governance framework for public projects. The next section reviews an equally imposing body of literature, consisting of infrastructure projects.

1.2 Infrastructure Projects

Since the birth of project management in the 1950s, large engineering and infrastructure²⁷ construction projects have been a continuous and important object of inquiry, first with military projects, then extending to the construction of buildings, transportation and power systems (Morris, 2013). This section reviews some of the most influential literature on major infrastructure projects²⁸. Although project management is now extending its interdisciplinarity to include various theoretical perspectives²⁹, it is argued that the main theoretical perspectives mobilized mainly relate to economic, contingency-based and institutional perspectives³⁰.

1.2.1 Economic Perspective

²⁷ The Oxford dictionary defines infrastructure as “the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise” (online). In this increasingly connected world, infrastructure is seen as a way to overcome geography and distances so that “the great space shrinker, and power, wealth and status increasingly belong to those who know how to shrink space, or know how to benefit from space being shrunk” (Flyvbjerg *et al.*, 2003, p.2).

²⁸ This analysis is based on selected work, not on a systematic review. This approach obviously has some limits, yet should be adequate to illustrate the mobilization of the different theoretical perspectives as argued in this section.

²⁹ A good overview of the multiple perspectives mobilized in the study of megaprojects is presented in the book recently edited by Bent Flyvbjerg (2014): *Megaproject Planning And Management: Essential Readings*. UK: Edward Elgar. The voluminous book includes 70 articles and book chapters dating from 1951 to 2012 from various contributors in the field. The readings are organized in two volumes and several sections, which are relevant to understand the current issues and plural views in this stream of research. Those sections are: Vol 1 – The History of Megaprojects, Project Post-mortems, Front-end Management, Governance and Institutions; Vol 2 – Stakeholder Management, Finance, Delivery, Social and Environmental Impacts, Innovation, and Case Studies.

³⁰ The categorization provided with regards to the theoretical perspectives has to be interpreted with caution, it has some inherent limitations. While categorization was a valuable tool for the analysis of influential work on major infrastructure projects, it has to be viewed as flexible and subjective to interpretation. Many studies summarized here overlapped in some categories, yet, we decided on the main category according to the dominant perspective of the work as we understood it. The thesis proposal included a detailed appendix with a summary table of those work.

This section presents the economic theoretical perspective and its main representations in major infrastructure project literature. Large infrastructure projects have been studied for decades now, since the birth of project management in the 1950s with the optimization school, but more importantly from the 1970s with the governance school of project management (Bredillet *et al.*, 2008). According to Bredillet *et al.* (2008), major influences of the governance school use an economic approach, where the project is seen as a legal entity. It first developed in the 1970s, along with contract management using transaction costs and agency theory, evolving in the 1990s to study complex governance networks (*ibid.*). The first references in the governance school discussed problems of contracting and governance in the construction industry (Söderlund, 2011). Ahola *et al.* (2014)'s findings also suggest that project governance significantly draws from the transaction costs economics literature. While economic perspectives are broad and have been used to analyse many subjects related to projects (costs-benefits analysis and planning, forecasting, decision-making, etc.), two influent economic approaches are reviewed here. It is suggested that agency theory and transaction cost theory have been and are still very influential in infrastructure project literature (Söderlund, 2011), most notably for contract management and risk management.

1.2.1.1 Agency Theory

Agency theory emerged as a distinctive economic approach to the analysis of organizations in the 1980s, best characterized by three elements: a contractual perspective on organizational relationships, a focus on hierarchical control, and formal analysis via principal-agent models (Moe, 1984). An agency relationship is defined as one where one party (the principal) delegates work to another (the agent) (Eisenhardt, 1989a). Agency theory is concerned with resolving two problems, the first when there are conflicting goals between the principal and the agents and the second is risk sharing of contractual arrangements depending on risk aversion of principal and agent (*ibid.*). The unit of analysis commonly used is the contract

governing the relationship (*ibid.*). The principal-agent relationship is affected by two problems and occurs when there is a difference in the actors' self-interest: the adverse selection problem, created by asymmetric information, and the moral hazard problem, when agents can act opportunistically (Bredillet *et al.*, 2008). Thus, the essence of the principal's problem is the design of an incentive structure that promotes their own interests, coupled with monitoring systems (Moe, 1984).

In an article attempting to provide some answers as to why construction projects tend to be over budget and over time, Flyvbjerg *et al.* (2009) suggest some reasons for the forecasting errors. They grouped these in three categories: delusions or honest mistakes; deceptions or strategic manipulation of information or processes; or bad luck (*ibid.*). While delusion is more related to underestimation caused by predictions using the inside view, deception: "accounts for flawed planning in decision making in terms of politics and agency issues" (Flyvbjerg *et al.*, 2009, p. 175). As a large infrastructure project is often characterized by multi-tier, various levels of principal-agent relationships, they present the conditions that make strategic deception more likely within each relationship: the difference in the actors' self-interest, the presence of asymmetric information, the presence of different risk preferences, different time horizons, or diffuse or asymmetric accountability (*ibid.*). In many studies on large infrastructure projects, agency theory assumptions are implicit: as uncertainty is high in a project, information provides power and thus there is a need to develop proper incentives to enhance decision-making processes and accountability. However, an obvious limit to the use of this theory is the complexity of the system involving numerous principal-agent relationships, which are not always easy to reveal accurately and rationally.

1.2.1.2 Transaction Costs Theory

Both agency theory and transaction costs theory share their origins in economics, yet, the latter focuses more on understanding the drivers of transaction costs (Winch, 2001). Building on the original framework presented by Williamson in 1975, Winch (2001) argues that the transaction governance framework consists of three elements: contingency factors, behavioural factors and the context in which the transaction is embedded. The transaction is positioned along three axes on the model, each representing a contingency factor: frequency, uncertainty and asset specificity (*ibid.*). By looking at the microanalytical governance level of transaction costs relative to the process of governance at the project level, Winch (2001) proposes a conceptual framework to facilitate the analysis of construction project governance. Dahlman (1979) identifies three broad categories of transaction costs, while emphasizing that all represent resources losses due to a lack of information: search and information costs; bargaining and decision costs; and policing and enforcement costs. Alternatively, Orr *et al.* (2011) present three types of costs associated with global projects: direct costs, coordination costs and institutional costs.

In major infrastructure projects literature, the most notable areas where implicit assumptions of transaction costs economics are used are in contract management and in risk management. Although both areas are much broader than that, in essence contract management is the optimal allocation of risks; and risk management is the reduction of uncertainty and related costs (Esty, 2014).

Representations in infrastructure project literature: contract management

In large infrastructure projects, the type of contractual arrangements is central to the governance of the project, making it an essential mechanism to foster success. Contract management implies defining the terms of the scope for a project, specific performance measurement, various roles and responsibilities, and a valid estimation

for the budget required. A central question relating to contractual arrangements between public and private parties arose in the 1980s and generated an influential stream of research on PPP as a subgroup of construction projects. As it has been introduced in the section about public projects above, most of this voluminous corpus covers traditional perspectives such as economics (agency theory and transaction costs), contract management, success factors, and risk management. Yet, there has been a new trend lately to extend theoretical perspectives, so that now research on PPP might relate to complexity, network of actors, stakeholders, environmental and social impacts, etc. (Hafsi, 2009; Van Marrewijk *et al.*, 2008). This abundant corpus deeply influenced by economics is not least rooted in a political perspective, reflecting the tensions between the public / private debate on the never-ending quest to efficiency.

Representations in infrastructure project literature: risk management

Large infrastructure projects are characterized by high levels of uncertainty and risks (Miller and Hobbs, 2005). Understanding risks and strategizing about ways to cope are necessary mechanisms of governance to prevent projects from failure (Miller and Lessard, 2000). A risk can be defined as “an event or condition that may occur, and whose occurrence, if it does take place, has a harmful or negative effect that can adversely affect the prospects of achieving a desired goal” (Aritua *et al.*, 2011, p. 303). Brealey *et al.* (2000, p. 337) highlight that the allocation of risk is one of the most important aspects of the management of large projects: “The allocation of risk [...] is viewed by investment bankers and lawyers involved in project financing as *the* central consideration in securing financing” (emphasis in original). Based on the IMEC research program³¹, Miller and Lessard (2001) identified three broad categories of risks in large infrastructure projects: completion risks (which include technical, construction and operational risks), market-related risks (which include

³¹ This influent research program was launched in Montreal in 1995, and included the benchmark of sixty projects at an international scale to identify best practices (Miller and Lessard, 2000).

demand, financial and supply risks) and institutional risks (which include regulatory, social acceptability and sovereign risks). Miller and Hobbs (2005, p. 43) found that: “Governments reneging on commitments, slowly materializing or insufficient markets, and social and political challenges to legitimacy were among the most important sources of risk.” Flyvbjerg *et al.* (2003) stress that while risks cannot be eliminated, managing those risks is a critical issue for project success. They suggest that feasibility studies and risks analysis should be carried out together early while defining the concept of a large infrastructure project, along with designing incentives to improve transparency and accuracy of information (*ibid.*). Although contract and risk management are multifaceted topics that could be elaborated much further, it has been argued that they both have strong roots within agency theory and transaction cost economics. Turning back to the use of the economic theoretical perspective in large infrastructure projects research, a brief review suggests some strengths and weaknesses of this approach.

Criticism and main contribution of the economic theoretical perspective

The economic theoretical perspective has been mostly criticized for the simplistic view of methodological individualism for explaining complex organizations (Rouleau, 2007). Moreover, a pure rationality does not exist, thus the early development of decision-making theories emphasizing ‘bounded rationality’ (Simon, 1945, 1997) and other cognitive approaches (Winch and Maytorena, 2011).

While the use of this theory has been predominant in the past, shaping the development of project management and of large infrastructure projects research, it has been blended over the years with many other theoretical perspectives, allowing theoretical bricolage to answer the specific needs of this complex field of inquiry (Boxenbaum and Rouleau, 2011). By emphasizing the need for accountability, accurate estimations, risk management and contract management, the economic perspective has certainly made a distinct and foundational contribution to the field.

However, a major infrastructure project is complex by definition, and simple economic theories such as agency theory (which implies a principal and an agent) have shown their limitations in explaining complex situation (Rouleau, 2007). Accordingly, recent studies tackle important questions such as networks, complexity and innovation, multiple stakeholders, environmental, political and social issues, but more has to be made in that direction (Flyvbjerg, 2014). Next, the contingency-based theoretical perspective is presented, along with its representation in major infrastructure projects.

1.2.2 Contingency-Based Perspective

Contingency theories have emerged in organization studies from 1950s to 1970s (Rouleau, 2007). The basic assumption is that all organizations differ and have to adapt, that no formal structure is superior than another, it all depends on the context and on the environment which pose constraints (*ibid.*). As Donaldson (2001, p. 1) has put it: “the essence of the contingency theory paradigm is that organizational effectiveness results from fitting characteristics of the organization, such as its structure, to contingencies that reflect the situation of the organization.” According to him, the three main contingencies studied and which influenced contingency theories are the environment, the organizational size, and strategy (*ibid.*). For Donaldson (2001), who is a strong advocate of this perspective, two leading and contrasting contingency theories are organic and bureaucracy theories. While he sees ‘configuralism’ (having few different configurations, (e.g. Mintzberg, 1979) as a variant of contingency theories, he contends that this theoretical perspective is still much alive (including the newer brand of neo-contingency research) and offers several further research opportunities (*ibid.*).

In project management, contingency school has developed in the 1990s and recognizes that every project is different, and that the way to manage it will depend on the project needs and on its fit within the organizational context (Bredillet *et al.*,

2008). Significant work in that field developed project typology and project categorization, and highlighted the role of uncertainty, complexity and embeddedness of project organizations (Bredillet *et al.*, 2008; Söderlund, 2011). Smyth and Morris (2007) argued that the epistemology of projects is context-specific and located in open-systems, so that research methods have to be selected accordingly. Grabher and Ibert (2011) claim that a contextual view of projects has gained momentum, and yet, that this has rarely been employed for the analysis of megaprojects. With regards to project-based organizations, Scott (2012) states that two theories are dominant: contingency-based approaches and resource-based approaches.

The contingency-based perspective has generated new insights for project-based learning (Grabher and Ibert, 2011). By emphasizing the internal attributes and capabilities of projects and organizations to explain heterogeneity in performance, a stream of research has emerged using the resource-based view, knowledge management and dynamic capabilities (Brady and Davies, 2004; Davies and Brady, 2000; Drouin and Jugdev, 2014; Lindkvist, 2011; Pemsal *et al.*, 2013). Although the origin of this approach is based on Penrosian economics and the evolutionary theory of the firm (Rouleau, 2007), it has evolved as an approach in strategic management (Barney and Hesterley, 2006). Scott (2012) refers to dynamic capabilities as the ‘neo-contingency perspective.’

Lastly, contingency theorists have had much interest in power relations in organizations (Rouleau, 2007). Political analysis and coalition theory have emphasized it further, however both have roots in the contingency perspective (*ibid.*). Whereas decision-making in economic theories is based on rationality, in the contingency perspective it is based on structure, resources and influence. Uncertainty in projects affects decision-making, along with the plurality of actors and interests at stake, so much so that political factors are often more important than rational ones for decisions concerning megaprojects (Flyvbjerg, 2014; Winch, 2006). Next are

presented some specific studies that have been carried in infrastructure projects using this perspective.

Representations in infrastructure project literature

One important research using contingency theory has been undertaken by Engwall (2003). By doing a qualitative study of two major projects and doing a first round of analysis by looking only at the projects, and a second round where historical and contextual factors are analyzed, Engwall (2003) concludes that the second analysis is much richer and more accurate. Thus, contextual thinking has become more important in project management research over the years, but it could be developed even more. According to Williams and Samset (2010, p. 46): “there is a need for further research into how different organizational forms and cultures with different project complexities and domains operate in all of these stages and the correlations between them.”

An influential study is the IMEC research program on large engineering projects, introduced above. While predominantly using the economic-rational perspective, this study has contingency-based assumptions, as explained by Scott (2011, p. 5):

The contingency perspective underlies the sophisticated analysis of Miller and Lessard (2000), who view large engineering projects as governance arrangements devised by sponsors and leading partners to align or reconcile the divergent interest of contractors, operators, clients, and investors within a framework imposed by communities and regulators.

The study’s findings emphasized the importance of project sponsors, front-end ‘shaping’, flexibility and institutional arrangements (laws, regulations and practices) for project success. The main function of institutional arrangements was to help anchor projects by stabilizing the long-term, offering flexibility to face turbulence and enhancing projects legitimacy. Yet, institutional arrangements are often incomplete and require to be reshaped to accommodate projects needs (Miller and Lessard, 2000). As Miller and Lessard (2000, p. 17) put it: “projects are thus shapers

of new institutional frameworks and breakers of old ones.” They also clearly state that: “a contingent perspective needs to be cultivated” (Miller and Lessard, 2000, p. 73).

An interesting study representing ‘configuralism’ for temporary multi-organizations (TMO) has been carried out by Lizarralde *et al.* (2011). By analyzing 27 construction projects, the authors conclude that two contingency factors have a strong influence on the structuring of the TMO: (1) the internal structure of the client organization, (2) the informal groups or teams within organizations (*ibid.*). Another publication by the first author using the same dataset found four variants of institutional configuration of the client: the user-initiated TMO, the occupant-initiated TMO, the strategy-initiated TMO, and the external operator-influenced TMO (Lizarralde and Djemel, 2010). The main contributions of those studies are to focus on the dynamic characteristics of formal and informal structures of TMO, on stakeholders and procurement in order to understand differences in projects processes and outcomes (Lizarralde *et al.*, 2011a; Lizarralde *et al.*, 2011b). Next, the contingency-based perspective is reviewed for its contributions to large infrastructure projects.

Criticism and main contribution of the contingency-based theoretical perspective

From an organization study point of view, the contingency perspective is still very much alive today, in research and teaching, and it contributes greatly to the understanding of organizations (Rouleau, 2007). While this theoretical perspective is quite authoritative within organization theories, it has been challenged by several other theories, most importantly by the institutional perspective (Donaldson, 2001). Another important stream of research, focusing more on actors and power relations, have criticized the reductionist and deterministic approach of contingency theories, limiting or disregarding the possibility of action by various humans forging an organization (Crozier and Friedberg, 1977).

In project management, important contributions are to bring to the fore the embeddedness and ‘fit’ of projects in their context, and to highlight the importance of learning. However, this learning has to happen even though each project is unique and depends on its context. Projects do share similarities, by being political, involving a plurality of stakeholders, thus needing legitimacy, performance measurement and competent people to manage them. As Morris introduced the three levels (technical, strategic and institutional), he also associated those levels to research waves, and we would now be entering the third wave of project management research (Morris *et al.*, 2011). Narayanan and DeFillippi (2012, p. 24) assert that this is an important shift calling for a more macro perspective:

An important theoretic perspective informing third wave project management is the contingency perspective, namely the notion that the effectiveness of specific project management practices depends upon their appropriateness to the specific conditions of the macro organisational, strategic and environmental context in which projects are managed.

The next theoretical perspective presented is in line with this macro context and has developed as a prolongation of the contingency perspective (Rouleau, 2007): the institutional perspective.

1.2.3 Institutional Perspective

Institutional approaches for the study of organizations have originally emerged around 1950s, with the work of bureaucracy sociologists, and have been renewed in the 1980s and 1990s, gaining much influence in past decades (Rouleau, 2007). Contrarily to the old institutionalism, the emphasis is now on institutionalization of institutions, which adopt rules and procedures so as to increase their legitimacy and their chances of survival (*ibid.*). Reed (2006) categorizes new institutional theory in the meta-narrative interpretative framework of justice, with the major problematic being participation. Reed (2006, p. 33) explains that new institutionalism: “re-vivify the conception of the organization as an institutionalized structure of power and

authority over and above the localized micro-practices of organizational members.” This view has been criticized for a lack of voluntarism implied by those deterministic structures (Tolbert and Zucker, 1996). Influential themes and authors of new institutionalism include isomorphism of institutions (Powell and DiMaggio, 1991), legitimacy of institutions (Brummer, 1991; Meyer and Rowan, 1977), institutional fields (Bourdieu, 1993), and general theorization (Scott, 1995; Tolbert and Zucker, 1996). Nonetheless, neo-institutional theories are now mostly used and have been ‘renewed’, especially since other theoretical perspectives have been merged and have hybridized this theory (Rouleau, 2007).

In project management research, this theoretical perspective is still emergent. Referring again at the three levels of project management presented by Morris (2013, p. 224) (1-technical, 2-strategic, 3-institutional), he admits that the institutional level has been less investigated by project management scholars:

All this may seem a world away from the reality of many project managers working at Levels 1 and 2, and in truth it probably is. Much of the work at Level 3 will be carried out by senior managers and specialist experts - lawyers, financiers, public relations people, corporate affairs types. Theoretically very little has been written about it.

Morris (2013) recognizes the importance of all three levels for the study of project management. It is somehow intriguing, however, to notice how underdeveloped his discussion of the subject is, as he only dedicated twelve pages out of his three hundred pages book on the institutional level, most of it introducing project management offices and project management maturity. Nevertheless, some scholars have recently ventured into this theoretical perspective. Bresnen and Marshall (2011) mobilize institutional logics to study institutional processes and changes leading to the development of collaboration and partnerships in the United Kingdom. Dille and Söderlund have investigated inter-institutional projects, timing norms and temporal fit/misfit (2011); and critical incidents within different organizational fields (2013). Pemsel and Söderlund (2014) studied the integration and disintegration of logics and

normative orders with a process perspective, highlighting the pressure of conflicting institutional demands. Some important work has also been conducted more precisely on major infrastructure projects.

Representations in infrastructure project literature

Recently, Scott (2012) has argued for the use of institution-based approaches to complement previous ones (according to him, those are contingency- and resource-based perspectives) to study the complexity of global construction projects. By considering the three pillars of institutions: regulative, normative and cultural-cognitive elements, Scott (2012) claims that this perspective augments previous ones in which the conception of institutions was rather limited, being mainly concerned with the first pillar, relating to governmental and regulatory systems. This view embraces a more political approach to the study of major infrastructure projects, with growing concerns over legitimacy and integrity of political processes and institutions (Scott *et al.*, 2011). As presented by Scott (2011, p. 59): “an institutional approach focuses on its legitimacy - its social acceptability and creditability.”

One of the most important contributions in the field of major infrastructure project studies, described as a classic by Pollack *et al.* (In Press), is the book *Megaprojects and Risk: An Anatomy of Ambition* (Flyvbjerg *et al.*, 2003). Although the economic-rational theoretical perspective is the main underlined, it could also be argued that Flyvbjerg *et al.* (2003) are precursors of the institutional perspective applied to the analysis of infrastructure projects. Their empirical evidence is mostly based on three in-depth case studies of megaprojects that form part of the Trans-European Transport Network, supplemented by material from a number of other major projects. They identified weaknesses of the conventional approach to megaproject development (deficient justification of needs, cost overrun, overestimation of project benefits, change of project scope, biased decision-making process) and argued how those weaknesses could be overcome by emphasizing risk, institutional issues and

accountability (*ibid*). As they state: “the problem appears to be related to issues of power and to require countervailing power and institutional change for its solution” (Flyvbjerg *et al.*, 2003, p. 45). They highlight three institutional issues: lack of involvement of stakeholders and the general public; lack of identification of public interest’s objectives; and lack of clearly defined roles which brings about conflicts of interest for governments (*ibid*). Thus, they propose the implementation of policies for dealing with mega infrastructure projects, by legislating project development by explicit formulation of regulatory regime. However, by focusing almost exclusively on regulatory issues, it could be argued, in line with Scott (2011), that this conceptualization of institutions is rather underdeveloped.

To date, the work of Scott and his colleagues from the Collaboratory for Research on Global Projects (CRGP) of Stanford University seems to be the main endeavour to study infrastructure projects using an institutional perspective (Scott *et al.*, 2011). This compilation of research from various scholars underlines the influence of organizational fields and institutional logics, and of specific actors (individuals or collective actors – organizations), in order to focus both on the macro and the micro levels. This dual nature of projects is reflected as they operate both in a global and in a local institutional environment. This collective work is cross-disciplinary, yet much influenced by a sociological approach, and contributes to an enlarged understanding of the role that culture and politics play in global projects.

Criticism and main contribution of the institutional theoretical perspective

The institutional perspective has a lot of potential for further development (Dille and Söderlund, 2011; Morris, 2013). As institutional theories are so diverse and predominant in organization studies, they can contribute significantly to theory development in project management (Logue, 2014). However, caution is required as institutional perspectives could be viewed as pervasive and shallow:

it does not become very clear what really is gained by collapsing all kinds of different forms of knowledge or ignorance into the term institutional. Lumping all sorts of knowledge regarding legislation, technical solutions, or work practices together as institutional may instead hamper important insights. (Ahrne, 2014, p. 116)

It nonetheless allows for the development of a much broader level of analysis than traditional studies using economic perspectives, most importantly with the consideration of political implications of major infrastructure projects.

To sum up, project management is an inter-disciplinary field of study which has expanded substantially in the past decades. By looking specifically at major infrastructure projects, it has been argued that the main theoretical perspectives mobilized are the economic, the contingency-based and the institutional perspectives. Yet, several other theoretical perspectives, emergent, are increasingly being mobilized in project management, and could contribute to widen theoretical perspectives of research concerning major infrastructure projects. For example, in a critical essay stating that projects are inherently political and that the concept of power is often disregarded by researchers in construction projects, Clegg and Kreiner (2013) convincingly claim that other interpretations are possible to study project management, extending conventional ones. Renewed approaches include theories from social sciences such as the actor-network theory (Aubry, 2011; Floricel *et al.*, 2014; Pollack *et al.*, 2013), the practice perspective (Blomquist *et al.*, 2010; Cicmil *et al.*, 2006; Hällgren and Söderholm, 2011), and other theories from strategic management research (Drouin and Jugdev, 2014; Drouin *et al.*, 2013).

Even though major infrastructure projects have been studied for decades now, they continue to be highly problematic in terms of performance (Flyvbjerg, 2011). As Flyvbjerg (2014, p. 8) recently stated: “never has systematic and valid knowledge about megaprojects therefore been more important to inform policy, practice, and public debate in this highly costly area of business and government.” As Söderlund

(2011) has argued, embracing theoretical pluralism in project management research might contribute to a better understanding and a more comprehensive view of projects.

1.3 The Theoretical Bases

Following the broad overview of the literature on governance and on infrastructure projects, this section presents the research question, based on the theoretical problem. Then, mobilized theoretical bases are described, and finally an initial conceptual framework is provided. This conceptual framework, presented in Figure 1.2 at the end of this chapter, has guided the choice of the theoretical bases exposed hereafter.

1.3.1 Statement of Research Question

As we have seen so far, infrastructure projects are a subject of importance within project management, as practitioners and researchers tend to find ways to improve the overall performance and comprehension of those complex undertakings, which are still insufficient considering investments made at a global level, both from public and private sources (Flyvbjerg, 2014).

Previous research has led to theoretical development of project governance, mainly through a rigorous front-end shaping by project sponsors and other stakeholders. As some governments have adopted a governance framework for their public projects in order to improve their success and societal value while reducing associated costs, preliminary inquiries into the improvement in project performance by having such governance frameworks in place is somewhat inconsistent (Committee of Public Accounts, 2012; Samset and Volden, 2013; SECOR-KPMG, 2012). Whereas project governance has been studied since the 1970s (Bredillet *et al.*, 2008), what is actually done by different actors having to manage those projects has been studied much less (Williams and Samset, 2010). So far, existent literature on infrastructure projects is

based on three influential perspectives: the economic, the contingency-based and the institutional perspectives.

Major infrastructure projects are complex, and thus provide a rich object of inquiry for researchers. It is indeed possible to analyse projects from various different perspectives and angles, which all contribute differently and significantly to the understanding of a problem. While supporting the idea that theoretical pluralism and interdisciplinarity apply to the study of large infrastructure projects, it has been argued that some theoretical perspectives have been more influent than others, still emergent. Yet, those other theoretical perspectives (such as the critical, the sociological or the practice perspectives) are growing in importance, as it will be outlined here. We propose that the mobilization of those theoretical perspectives (mainly the actor-network theory (ANT) and the practice perspective) to the study of the governance of major public infrastructure projects might generate important insights and thus contribute significantly to the enrichment of our knowledge.

So far, we know that governments have adopted, or institutionalized, governance framework to manage their public infrastructure projects, especially in the front-end phase. Yet, to this day, research has not seemed to investigate the way actors translate (or apply) those governance frameworks into practice. This doctoral research is aimed at tackling this overall research question: How is a governance framework for public infrastructure projects translated into practice?

In order to do so, some theoretical bases used for the conceptual framework are presented here. Starting within theoretical bases, the process approach is first considered (Section 1.3.2.1). Then, ANT and translation studies are reviewed from a theoretical lens (Section 1.3.2.2), and some empirical studies mobilizing those theories are examined. The last section (1.3.2.3) addresses practice-based studies, their theoretical and methodological implications, with the review of some empirical

studies that have mobilized this view. The conclusion brings further considerations into the hybridization of those theories and mobilization for this doctoral study. Then, the initial conceptual framework is presented in section 1.3.3.

1.3.2 Theoretical Bases

The actor-network theory (ANT) and practice-based studies are theoretical perspectives expanding in organization studies (Rouleau, 2007). ANT is mainly a way of studying associations between actors, while the practice-based view is a broad concept which is far from being a unified theory (Nicolini, 2012). Both theoretical streams are quite distinct, yet, they do share epistemological compatibility³² and have been hybridized in a number of studies (e.g. Teulier and Rouleau, 2013³³; Denis *et al.*, 2011; Morris and Lancaster, 2006; Ahrens and Chapman, 2007). As today, most of new theoretical development in organization theory is made by hybridizing existing theories (Boxenbaum and Rouleau, 2011), it becomes important to understand the basic tenets of those theoretical traditions and their evolution. But taking a step back, we first introduce the process approach to the study of organizational phenomena.

³² The epistemological posture of this research is presented in the methodological approach, see Section 2.1.

³³ The study conducted by Teulier and Rouleau (2013) is an illustration of possibilities to mobilize perspectives of sensemaking, translation and practice-based studies. It aimed at understanding how middle managers make sense of change when involved in interorganizational collaborations. Teulier and Rouleau (2013, p.309) propose “a multiple and differentiated view of translation and explore how translation is done in practice.” Based on discursive practices and on the Weickian notion of sensemaking and sensegiving, they examine the two following questions: how are the translation spaces in which middle managers make sense of change at the interorganizational level related to one another and how do they evolve over time? Which editing practices do middle managers use in these translation spaces? (*ibid*, p.315).

1.3.2.1 The Process Approach

Process data are gaining recognition and usage within organization theory (Hernes and Maitlis, 2010; Langley *et al.*, 2013)³⁴. Nicolini (2012) argues that in the last three decades, there has been a radical shift in the academic community, as the object of inquiry has shifted from organizations as entities, to organizations as theoretical discourses, to the study of organizing as a social process. Pettigrew (1997, p. 338) defines a process as “a sequence of individual and collective events, actions, and activities unfolding over time in context.” Langley and Tsoukas (2010, p. 2) also adopt this view, by highlighting the centrality of time, and posing questions about “temporally evolving phenomena”.

Pettigrew (1997) asserted that the leading assumption of process thinking is that social reality is not a steady state, but rather a dynamic process. This is reflected in Langley *et al.* (2013), where it is explained that process ontology is mainly about change and becoming. Thus, the process approach is about “thinking about organizations that are not as ‘things made’ but as processes ‘in the making’” (Langley and Tsoukas, 2010, p. 1).

From a methodological point of view, process studies mostly rely on longitudinal data, rich and varied (Langley *et al.*, 2013). Langley *et al.* (2013, p. 7) develop this point further, as process studies being:

[r]esearch capable of developing fine-grained understanding of processes at the micro level requires this kind of prolonged and deep engagement, combined with attention to reflexivity, analytical rigor, and peer review, to ensure credibility and trustworthiness.

³⁴ This journal article is the introduction to the Special issue in the *Academy of Management Journal* on process studies, based on an annual International Symposium on Process Organization Studies, led by influential scholars.

Pettigrew (1997, p. 340) characterizes the processual research by these five guiding assumptions³⁵: (1) embeddedness, studying processes across a number of levels of analysis; (2) temporal interconnectedness, studying processes in past, present and future time; (3) a role in explanation for context and action; (4) a search for holistic rather than linear explanations of process; and (5) a need to link process analysis to the location and explanation of outcomes. Similarly, Langley (1999, p. 692) defines process data as being difficult to analyze and manipulate, and suggests they have the following characteristics: (1) they deal mainly with sequences of 'events'; (2) they often involve multiple levels and units of analysis with blurred boundaries; (3) their temporal embeddedness varies; (4) they tend to be eclectic. In order to make sense of those process data, Langley (1999) proposes several strategies: the narrative strategy, the quantification strategy, the alternate templates strategy, the grounded theory strategy, the visual mapping strategy, the temporal bracketing strategy and the synthetic strategy. Although each of those strategies provide various levels of accuracy, simplicity and generality, they have to be used according to research objectives and the kind of data available (*ibid.*).

The process approach is broad and inclusive of many sociological theoretical perspectives, as long as they adopt the underlying ontology of reality as processes. Namely, ANT and the practice perspective are contained within the process approach. As Langley and Tsoukas (2010, p. 9) put it:

Perspectives drawing on post-rationalist philosophies, social constructivism, discourse and narrative theory, practice theory, actor-network theory, path-dependence theory, complexity science, Austrian economics, socio-cultural, discursive, and ecological psychology, activity theory, business history, ethnomethodology, and symbolic interaction are examples of a process orientation to the study of organizational phenomena that treats them not as *faits*

³⁵ Alternatively, Pentland (1999) proposed that process theory should include those five features: (1) a clear sequence of beginning, middle, and end in time, (2) focal actors who may play the protagonists or antagonists, (3) an identifiable voice reflecting some actor's viewpoint, (4) an evaluative frame of reference of what is right or wrong, appropriate or inappropriate, and (5) other indicators of context over time and place. (Pentland (1999), cited in Langley *et al.*, 2013, p.9)

accomplis but as (re)created through interacting agents embedded in sociomaterial practices, whose actions are mediated by institutional, linguistic, and objectual artifacts.

Indeed, some researchers have developed links between the process approach and ANT (e.g. Hernes, 2010³⁶); and between the process approach and the practice perspective (e.g. Shotter, 2010; Hällgren and Söderholm, 2011). Thus, we now turn briefly to highlight some conceptual links between the process approach, ANT and the practice perspective.

Process and ANT

Pierson (2004) outlined that there are different types of processes, regarding the time horizon of cause (from short to long) and the time horizon of outcome (from short to long). As it will be outlined in the next section, ANT studies associations, yet does not use the specific lens of ‘micro’ versus ‘macro’. Traditionally, translation studies, an institutional variant of ANT (briefly exposed in the next section), study mainly long-term processes in order to understand organizational change through time. This translation does not only happen from a top-down, organizational perspective as proposed by Hällgren and Söderholm (2011), but rather is generated by individual actors at the micro level as presented by Czarniawska and Sevón (1996, p. 7): “the two worlds coexist in a causal loop: macro actors establish the constraints for micro-actors, whereas micro-actors change the macro-scene only by their aggregate action.” Here, we come back to Langley (1999)’s characteristics of process data presented above: specifically, that they often involve multiple levels and units of analysis with blurred boundaries and that their temporal embeddedness varies. Regarding ANT and translation studies, those multiple levels coexist (macro-micro) and the temporal embeddedness varies from the short term (being close to the practice approach, for example with the study of a translation event from one actor in a specific time) to the

³⁶ This author claims that most importantly, ANT works from an ontology of becoming, yet that it could benefit from process studies to develop the concept of sense-making even further.

long term (for example, studying organizational change over time). While translation studies definitely have a longer-term perspective, ANT nonetheless can be mobilized to understand a short-term process (or micro-process) and a small-scale translation.

Process and Practice

Gherardi and Perrotta (2013) highlight that the epistemology of practice is an epistemology of becoming. They explain that “practice or organization are not treated as separate entities or accomplished event, but as enactments, as unfolding processes³⁷” (*ibid*, p.253). Accordingly, Nicolini (2012, p. 11) argues that focusing more on organizing as a social process “has created a fertile ground for practice theories especially due to their capacity to provide a processual view of organizational matters”. Supporting Nicolini’s assertion that practice theories are able to generate a processual view, Gherardi (2012) claims that practices can be studied either as containers of activities and competences, as processes, or as results of stabilization.

Yet in a contrasting view, Hällgren and Söderholm (2011) compare the practice approach to the process approach, stating that they apply somewhat differently. They associate the process approach to the Scandinavian School of project management (somewhat close to translation studies, also called Scandinavian institutionalism), which has emerged in the mid 1990s. Even if both perspectives share similarities, Hällgren and Söderholm (2011, p. 502) make a clear distinction between them, stating that “the difference lies mainly in the purpose of the study” - namely that practices focus more on the micro-level and process more on change from an organizational level. This distinction is somewhat useful, and comes back to

³⁷ Those unfolding processes can in turn be “understood as an ‘intelligent life in between in that it oscillates between complexification and simplification, de- and re-construction, de- and re-territorialization” (Clegg *et al.* (2005), cited in Gherardi and Perrotta, 2013).

differences between multiple levels of analysis, the various temporal embeddedness of studied phenomena, and their blurred boundaries.

Even though the process approach is broad and encompasses many different theoretical perspectives—and that ANT and the practice perspective are unique in their respects—here we adopt the view that ANT and the practice are both subsets of the process approach and that they are epistemologically and ontologically compatible. Before turning to those two theoretical perspectives, an important sub-theme in process studies has to be emphasized here: materiality.

Materiality

The third volume of a series on *Perspectives on Process Organization Studies*, linked to the influent Symposium on Process Organization Studies, is dedicated to materiality in process studies, and entitled: *How Matter Matters: Objects, Artifacts, and Materiality in Organization Studies* (Carlile *et al.*, 2013). This edited book by leading scholars confirms the growing enthusiasm for this subject, which has been somehow neglected in the past (*ibid.*). While the sociological view has focused predominantly on individuals, having relegated things to the “villain role as humanism’s other” (Olsen, 2013, p. 176), a renewed interest into sociomateriality has emerged in past decades. Carlisle *et al.* (2013) argue that so far, sociomateriality has been mostly addressed from two angles: the performativity of matter and the entanglement between social and the material aspects of human life.

Yet, materiality is also very present both in ANT and the practice perspective. Olsen (2013, p. 178) sustains that “more than any other program, science studies and ANT have contributed to the rehabilitation of things in the social sciences”. By considering both humans and non-humans as part of the same actor network, ANT thus promotes things to being significant constituents (as actants). Moreover, Hernes (2010, p. 164) proposes that “ANT’s potential as a theory of organization lies primarily in its focus

on how material and human actors connect into durable wholes.” From a practice perspective, the seminal work by Orlikowski and Scott (2008) on information technologies has associated sociomateriality with the ‘practice turn’ in social theory (Jones, 2013). Developing this connection, Bjørkeng *et al.* (2009) suggest that there are three essential mechanisms in becoming a practice: authoring boundaries (according to practice legitimacy), negotiating competencies and adapting materiality. After an overview of the process approach, and having discussed that process data can apply both to ANT and to the practice perspective, those two important theoretical perspectives are presented next. We now turn to ANT.

1.3.2.2 Actor-Network Theory

This section presents the actor-network theory (ANT) as a theoretical perspective and some of its important features. After a review of it and one of its important variant - translation studies, an overview of some empirical research in management and project management mobilizing those perspectives is undertaken.

ANT has emerged in the 1980s as a continuity from strategic analysis (Rouleau, 2007). It is categorized as a contemporary and political approach, which introduces a pluralist representation of organizations, considers organized action, and proposes inductive methods to understand behaviours (*ibid.*). Basically, ANT is a constructivist approach and a method for studying associations (Akrich *et al.*, 2006; Latour, 2005). According to Latour (2005, p. 147), its main tenet is: “that actors themselves make everything, including their own frames, their own theories, their own contexts, their own metaphysics, even their own ontologies”. Callon and Latour have developed from the 1980s onwards a sociology of translation (also called ANT), which have been developed mainly from anthropology of sciences and techniques (Vinck, 2007).

An important book edited by Akrich, Callon and Latour brings together the founding texts of this sociology of translation (Akrich *et al.*, 2006). Some important themes and concepts developed include (1) translation, both as a process and as a result; (2) chains of translation, translation centres and critical junctions; (3) the role of materiality as actant, as boundary objects for translation; and (4) negotiations and controversies. It is also relevant to highlight that narratives and descriptions are very important for ANT, as they tend to reveal those chains of translation as they are constructed and de-constructed by the actants (both humans and non-humans).

The seminal work of Latour (2005) describes ANT even further. His aim was to “redefine the notion of social by going back to its original meaning and making it able to trace connections again” (*ibid*, p.1). For Latour, this tracing of associations is the unit of analysis, and he postulates that “there is no society, no social realm, and no social ties, *but there exist translations between mediators that may generate traceable associations*” (Latour, 2005, p. 108, emphasis in original). The first part of his book maps out the controversies about the social, and five sources of uncertainties are presented in order to feed off those controversies: (1) the nature of groups, which are never fixed and thus cannot be studied on their own, rather, it is the making and un-making that is to be studied, which leave many traces in the process; (2) the nature of actions and agency: an ‘actor’ may in fact be an individual or a network, since action is in fact dislocated; (3) the nature of objects, which have agency, too: extending the notion of the word ‘social’ means that in order to trace association, anything that does modify a state of affairs by making a difference is an actor, be it a person, a network, or an object; (4) the nature of facts: what differentiates between a fact and a concern? According to ANT, the difference is in the making, and thus must be studied accordingly; (5) the writing of research accounts, which are also mediators.

The second part of Latour (2005)’s book explains how to render associations traceable again and proposes to ‘flatten’ the landscape of the social by performing

three main moves. The first move is to localize the global – “of realizing that there is no ‘global’, but only a chain of connected localities” (Czarniawska, 2006, p. 1555). It commands that the researcher recognizes that what is ‘global’ is actually many connected times and places. The second move is to redistribute the local. A local interaction is “the assemblage of all the other local interactions distributed elsewhere in time and space” (Latour, 2005, p. 194). This symmetric operation is important because neither the global nor the local have a concrete existence. Rather, it is the ‘connectors’ that are important and that have to be put to the foreground. Thus, an actor-network is “what is made to act by a large star-shaped web of mediators flowing in and out of it. It is made to exist by its many ties: attachments are first, actors are second” (Latour, 2005, p. 217). Lastly, the third move is to connect sites, “now conceived as actors-networks – and to investigate the stabilization of the social” (Gubert, 2007, p. 606). The global is made of many connected times and places, and the local is a product of many connected times and places. What are the connectors, and how are these sites connected? What makes those connections stable? Only by observing those three moves can the researcher grasp the “topography of the social” (Latour, 2005, p. 165).

Those three moves are thus an answer to trace associations and translations, yet it moves away from a conventional classification of the micro- the meso- and the macro-: “the solution explored by ANT [...] has nothing to do with offering still another compromise between micro and macro, actor and system – and even less with pushing the swing so forcefully that it circles through some dialectic circles” (Latour, 2005, p. 170). For Latour (2005, p. 185), “scale is the actor’s own achievement”, and thus it does not pertain to the researcher to define the level of analysis.

Translation and ANT

Translation as seen in this theoretical perspective is a fundamental concept. Most importantly, it is a constructed and ongoing process, a movement into space and into time connecting actants, from one context to another (Michaud, 2011). Callon (1986, p. 19) defined translation as “the mechanism by which the social and natural worlds progressively take form.” Or, as Lindberg and Czarniawska (2006, p. 295) put it: “translation can be regarded as the mechanism whereby connecting is achieved.” Yet, another definition provided by Akrich *et al.* (2006, p. 243, our translation) is that “to translate is to describe, to organize a world populated by actants”. Callon (1986), studying the building of actor networks through scallop fisheries, has described this process of translation as: problematisation, intersement, enrolment and mobilization. It is a construction until a stabilisation is achieved.

Although ANT has emerged in the 1980s and mainly comes from French researchers (Callon, Latour, Akrich), there has been quite a diffusion of this theoretical approach, and it is expanding in organization studies (Rouleau, 2007). However, as Latour (2005) clearly stipulates that ANT is a method for studying associations, then, is it to be used as a theoretical perspective for one’s research or is it considered in the methodological section? I would tend to think that it is more of a theoretical perspective, yet, there are clearly some implications for the methodology used. Next, a variant of ANT is presented, which is quite in line with longer-term process data, aiming to understand organizational change over time: translation studies.

Translation Studies

Translation studies, also known as ‘Scandinavian institutionalism’, have been developed since the mid-1990s, as an hybridization from new institutional theory and ANT (Czarniawska, 2008; Lindberg and Czarniawska, 2006). While new institutional theories focused predominantly on deterministic structures minimizing human agency, according to Czarniawska (2008, p. 769) those theories “result from the

misuse of the term ‘institution’; in Latin that means a human, intentional act of creating and enacting some type of collective practice.”

The term ‘Scandinavian institutionalism’ refers to authors from Scandinavia (Denmark, Norway, and Sweden) writing under the influence of Richard W. Scott, James G. March and John W. Meyer (Czarniawska, 2008). These authors adopt the main tenets of new institutionalism, yet address the issue of change in a different way (Czarniawska and Sevón, 1996). Having a strong interest in the ‘practice of organizing’, Scandinavian organization theorists conceptualize social order as the construction and deconstruction of institutions (institutionalization and deinstitutionalization) (Czarniawska, 2008). In order to do this, institutional theorists have turned to ANT for inspiration (Czarniawska and Sevón, 1996). By focusing on local translations and micro-studies of institutionalism, “the constructivist version of institution theory permitted the Scandinavians to continue their tradition of organization studies, consisting of fieldwork with the processual focus” (Czarniawska, 2008, p. 772). This hybridized version of institutional theory with ANT is quite interesting, as it allows exploring the ambiguities of change through the constitution of networks and local translations. Furthermore, this focus on micro and on individual actors to shape long-term organizational change reinforces the predominance of agency over structure. After having reviewed ANT and one of its variant, translation studies, some researches that have mobilized those theories are presented next.

Representations in management literature

While the literature using the label “network analysis” applies to many studies mobilizing various theories and concepts, we can perceive an important distinction: those studies which treat the network as an object of study to tackle the growing complexity of organizational life (e.g. Kilduff *et al.*, 2008; Müller-Seitz and Sydow, 2012; Zaheer and Bell, 2005); and those which used the network (inspired by ANT)

as a method to study other objects. For example, Pipan and Czarniawska (2010) studied how management accounting was translated into local contexts in three local sites in the public Italian administration. Bruni (2005) used an ethnographic method to shadow software and clinical records and shed light on non-human networks. Morris and Lancaster (2006) studied how actors translate broad ideas from very different industry contexts into their own workplace practices. In a study about change management and boundary-shaking practices, Balogun *et al.* (2005) highlight the specific place of individual agency and the centrality of interest and power relations.

In the narrower field of project management, ANT is gaining notoriety as well (Drouin *et al.*, 2013). One of the precursors is Blackburn (2002), who drew from ANT to show how project management processes act as allies, enabling the project manager to interest and enrol team members and stakeholders. By mobilizing ANT, Aubry (2011) asks how project management networks interface with the organization's hierarchy. By taking the status report deliverable of a project as a 'concept of boundaries' object, it is used to link knowledge sharing between the project network and the organization hierarchy (*ibid.*). Linde and Linderöth (2006) use an ANT perspective on IT projects to highlight that projects are considered as ongoing translations of the project's vision, generating conflicts and realignment among actors. Pollack *et al.* (2013) also mobilize ANT to study how a project management information system is implemented in three public sector agencies.

While those studies are mostly exploratory, as ANT is better suited for theory building rather than testing (Pollack *et al.*, 2013), those are a starting point for the exploration of ANT in the field of project management. After all, those theoretical perspectives share natural proximity with projects when conceived as organic networks of actors with multiple interests and power. The next theoretical perspective presented is the practice-based view.

1.3.2.3 The Practice Perspective

Rouleau (2007) situates the practice perspective in a new stream in organization theories, along with discursive theories. Far from being dominant in organization theories, those new approaches nevertheless contribute significantly to a renewed conception of the organization by exploring new avenues which include analysis of interactions, conversations and interpretations (*ibid.*). According to Nicolini (2012, pp. 1-2), “the notion of practice has become, in fact, increasingly popular among work and organizational scholars and, in recent years, we have witnessed a dramatic growth in analyses utilizing terms such as practice, praxis, interaction, activity, performativity, and performance.”

Nicolini (2012)’s book offers an overview of practice theory rather complete and comprehensive, by introducing six theories of practice³⁸. As he carefully exposes that “there is no such thing as a unified practice theory” (*ibid.* p.8), he also stipulates that each theory has its own definition of practice, thus, he does not start his book with a definition of what practice is³⁹. However, some definitions could be quite useful at this point, so we introduce the one by Schatzki *et al.* (2001), whose work has much influenced the practice-based perspective. Thus, practices can be defined as “embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” (Schatzki *et al.*, 2001, p. 11). For Whittington (2006, p. 619), whose work in Strategy as Practice research has been quite influential,

³⁸ Corradi *et al.* (2010) also argue that practice-based studies are far from a unified bandwagon, but rather parcelling out. They classify practice-based studies according to seven labels: (1) Practice-based standpoint, (2) Work-based learning and practice-based learning, (3) Practice ‘as what people do’, (4) Practice lens and practice-oriented research, (5) Knowing in practice, (6) Practice-based perspective, and (7) Practice-based approaches.

Corradi, G., Gherardi, S. and Verzelloni, L. (2010). Through the practice lens: Where is the bandwagon of practice-based studies heading? *Management Learning*, 41(3), 265-283.

³⁹ As Nicolini (2012, p.9) explains: “Practice theories are fundamentally ontological projects in the sense that they attempt to provide a new vocabulary to describe the world and to populate the world with specific ‘units of analysis’; that is, practices. How these units are defined, however, is internal to each of the theories, and choosing one of them would thus amount to reducing the richness provided by the different approaches.”

practices are “shared routines of behaviour, including traditions, norms and procedures for thinking, acting and using ‘things’, this last in the broadest sense”. He contrasts this term with the Greek word *praxis*, which refers to “actual activity, what people do in practice” (*ibid.*).

Nicolini (2012) explains that the practice-based view is distinctive from other traditional theories in that it: (1) emphasizes the processual and recurrent accomplishments of practice; (2) forces us to rethink the role of agents and individuals; (3) foregrounds the importance of the body and objects in social affairs; (4) sheds new light on the nature of knowledge and discourse; and (5) reaffirms the centrality of interests and power in everything we do. The six theoretical approaches of practice identified by Nicolini (2012, p. 11) do not all embrace the ‘practice’ label, yet all have the “capacity to provide a processual view of organizational matters and to foreground the central role of mundane activities.” Those theoretical approaches are: (1) praxeology (i.e. Giddens, Bourdieu); (2) practice as tradition and community (i.e. Lave and Wenger); (3) practice as activity (i.e. Vygotsky, Engeström); (4) practice as accomplishment (ethno-methodology i.e. Garfinkel); (5) practice as the House of the Social (i.e. Schatzki); and (6) discourse and practice (i.e. Sacks, Foucault, Fairclough). In his concluding chapter, Nicolini (2012) proposes to bring it all together using those theories as part of a toolkit to study and represent practice at work.

Gherardi (2012), whose authoritative book *How to Conduct a Practice-Based Study?* offers interesting methodological insights, agrees that while there is no such thing as a unified theory of practice, this approach first arose in social sciences, and more specifically within organizational learning and sociology of practice. She presents that “practices constitute a mode of ordering the flow of organizational relations” (Gherardi, 2012, p. 2), and elaborates:

Practice [...] may be assumed as an empirical unit of analysis in order to study how, within a practice, people reach a practical agreement starting from heterogenous understandings and modes of cooperation with the material world (*ibid*, p.202).

Gherardi (2012) pays much attention to the concepts of working practices, which are collectively enacted, and knowing-in-practice as situated activities. She highlights eight themes which are central to the study of practices: technology as material practice, reading a scene, reproducing the normal order, structures of participation, construction of the workplace, the development of competence, authoritative knowledge and design for change (Gherardi, 2012). Along with the lines of ANT, Gherardi (2012, p. 77) emphasizes that practices are sociomaterial and temporal, with agency being distributed between humans and non-humans, and asserts that the theories of practice “locate the source of significant patterns in how conduct is enacted, performed or produced”. Referring explicitly to ANT and the work of Latour, Gherardi (2012, p. 87) states that “we can examine how the translation process creates the link between human and non-human actors, and the connections among past, present and future.”

An important point regarding practice-based studies has to be made concerning the macro versus the micro perspective. Drawing from the analysis of Whittington (2006), Hällgren and Söderholm (2011, p. 506) present that “while much practice research focuses on the micro level of practices, practices are not limited to the micro level: they exist on both a meso and a macro level.” Gherardi (2012, p. 173) re-emphasizes this point, which also resonates with Czarniawska and Sevón (1996)’s macro-micro causal loop introduced above:

Considering the institutional environment and the institutional forces surrounding a texture of practices enables us to better link the micro-analysis of practising with the macro-analysis of the circuits of practice reproduction and the power effects generated by practising.

Somehow distinctively, in a line of argument similar to Latour (2005)’s ‘localizing the global’ and ‘redistributing the local’, Nicolini (2012) suggests to zoom in on

practice, and then to zoom out by trailing practices and their connections (mainly through ANT and sociology of translation).

Lastly, some challenges concerning the use of practice-based views have been highlighted. Hällgren and Söderholm (2011) focus on the pattern challenge (observations of a particular issue to more general conclusions) and the relevance challenge (usefulness or implications of research out of a domain of knowledge). Gherardi (2012, p. 160) talks of the problem of the opacity of practices: “[i]n methodological terms, the problems are how to conduct the data gathering; how to interpret the data collected; and how to report and represent practices, for what audience and for what purpose.”

Translation and practice

Translation as used in the practice perspective is somewhat different in scale than in ANT. In this sense, it refers rather to a micro-translation, or micro-practice. For example, Rouleau (2005) has studied micro-practices of strategic sensemaking and sense-giving among middle managers, and found four main micro-practices: translating the orientation, overcoding the strategy, disciplining the client, and justifying the change. Gherardi and Perrotta (2013, p. 255) rightfully note that: “practice-based theorizing has developed a vocabulary made up of verbs: learning, organizing, belonging, understanding, translating, and knowing”. Teulier and Rouleau (2013, p. 314) propose an hybridation of those theories, acknowledging that “translation studies have under-examined the way translation is done in practice.” Having reviewed the practice perspective and some of its main tenets, next some studies that have mobilized it are presented.

Representations in management literature

Some influential illustrations of practice-based studies conducted in the general field of management are presented here. First, two significant outgrowths are presented:

Strategy as Practice and institutional work. Lastly, some studies conducted more specifically in project management are reviewed.

Strategy as Practice

Strategy as Practice has developed as an alternative view of the general trend of strategy in organization studies, which has come to view strategy as inherent of an organization, without consideration about how it is applied and developed by actors once the strategic plan is adopted at corporate level (Johnson *et al.*, 2007). Thus, strategy as practice re-institutes the significance of what managers are actually doing⁴⁰. Accordingly, it requires a more micro level of understanding, and a consideration of multiple theoretical lenses to make sense of those complex phenomena (*ibid.*). Johnson *et al.* (2007) identify four main theoretical resources for strategy as practice research: situated learning, sensemaking and organizational routines, institutionalist perspectives, and ANT. Emerging as early as in the end of the 1990s, Strategy as Practice has since then established itself as an important stream involving many researchers from social sciences⁴¹ (Golsorkhi *et al.*, 2010; Johnson *et al.*, 2007).

Institutional work

Institutional theory is an enormous corpus within organization theory, and today it has many different streams.⁴² The 'old' institutionalism emerged in the 1940s with the

⁴⁰ One early seminal reference attempting to answer that question is the work of Henry Mitzberg (1979). *The Structuring of Organizations: A Synthesis of the Research*. Englewood Cliffs, NJ: Prentice-Hall.

⁴¹ In their preface, Johnson *et al.* (2007) mention that at the time of writing, the www.strategy-as-practice.org list has about a thousand participants and that this stream of research is well alive and represented at European Group for Organizational Studies, the British Academy of Management and the Strategic Management Society. Moreover, research monographs, publications and special issues on this topic are becoming more frequent.

⁴² While reviewing the literature on institutionalism is outside of the scope of this literature review, institutional work as a specific stream of practice-based studies is considered here.

work of bureaucracy sociologists, of which Selznick⁴³ has been mostly influential (Rouleau, 2007). The underlying reason for the development of this theoretical perspective was a denunciation of the rationality movement so prominent at this time (*ibid.*). The ‘new’ institutionalism has been revived in the 1980s and gained much in influence from the 1990s onward (Powell and DiMaggio, 1991). Contrarily to the old institutionalism, the emphasis was then on the institutionalization of institutions, which adopt rules and procedures so as to increase their legitimacy and their chances of survival (Rouleau, 2007)⁴⁴. Nonetheless, in the last decade new institutional theories have been renewed – thus the ‘neo-institutionalism’ – especially since other theoretical perspectives have been merged and have hybridized this theory. Institutional work is one of them, which has emerged out of an hybridation with the practice perspective (Lawrence *et al.*, 2011; Nicolini, 2012).

Institutional work has shifted the focus from those traditional concerns of institutions and structure to understanding how action affects institutions (Lawrence *et al.*, 2009). As explained by Lawrence *et al.* (2011, p. 56): “The study of institutional work focuses on situated practices of actors reflexively engaged with the institutions that surround (penetrate) them.” One important area of research within that perspective has developed around the concept of the institutional entrepreneur (de Holan and Phillips, 2002; Tracey *et al.*, 2011). Interestingly, Boxenbaum and Pedersen (2009) argue that Scandinavian institutionalism (translation studies as it has been described previously) is a case of institutional work. Building on this view, Lawrence *et al.* (2011, p. 55) propose that research on institutional work might “capitalize on and extend Scandinavian research on sensemaking and translation.”

⁴³ Selznick, Gouldner and Crozier, among others, worked towards demonstrating that the individual had limited room for manoeuvre, that one has to conform and adjust to social and organizational structures (Rouleau, 2007).

⁴⁴ Critics of this theoretical perspective have highlighted that new institutionalism tends to be rather static in its analysis and minimizes the impact of organizational change (Rouleau 2007).

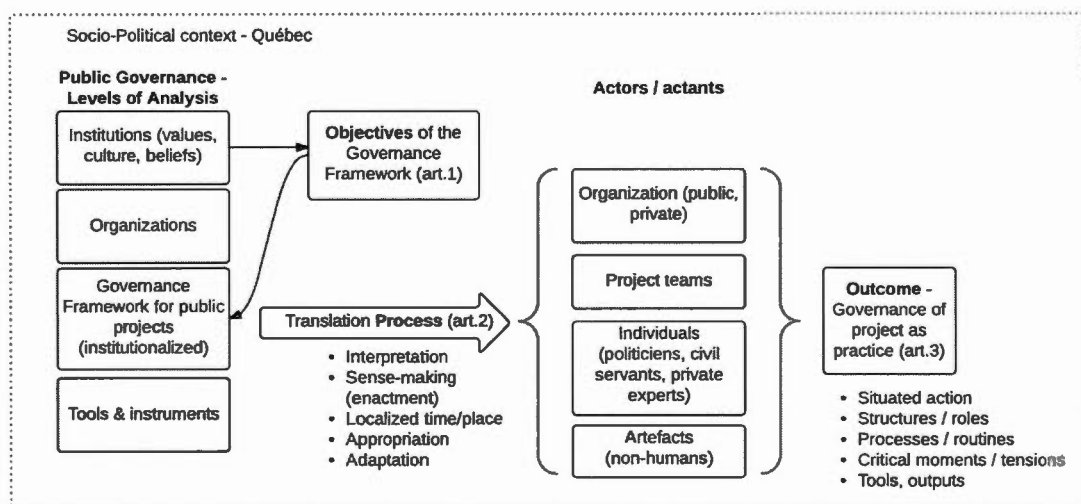
Turning now more specifically to the field of project management, some scholars have recently adopted the practice turn and have introduced ‘project-as-practice’ (Blomquist *et al.*, 2010; Hällgren and Söderholm, 2011). Although still underdeveloped, those approaches are rapidly expanding (Florice *et al.*, 2014). Cicmil and Hodgson (2006) questioned the normative and rational underpinnings of project management and invited researchers to use other, more critical approaches, including the practice perspective. Similarly, a UK-based research network - Rethinking Project Management - “highlighted the growing critiques of project management theory and the need for new research in relation to the developing practice.” (Winter *et al.*, 2006, p. 638).

As a result, hybridations of various theories with the practice perspective have fostered in project management: process and sensemaking (Winter *et al.*, 2006); Aristotelian ethical and practical philosophy (Bredillet *et al.*, 2014); multiple logics systems (Thomas *et al.*, 2012); the structuration perspective (O’Laocha, 2014; Sydow, 2006); project governance (O’Leary, 2012); enactment (Hällgren, 2014); political analysis and decision-making (Andersen *et al.*, 2010); and institutional logics (Bresnen and Marshall, 2011). Those studies are a broad overview of some empirical and theoretical investigations that have been undertaken in the field of management, and more specifically in project management. Applications are wide and possibilities are vast to explore this perspective even further. Having exposed the main features of the practice perspective and some empirical contributions to it, the next step is to present the initial conceptual framework used in this doctoral research, integrating the main concepts presented in the literature review.⁴⁵

1.3.3 The Initial Conceptual Framework

⁴⁵ While this conceptual framework has been presented in the thesis proposal, we have subsequently revised it, see Section 6.1.

So far, we have reviewed literature about some important work on governance, on infrastructure projects, and on theoretical perspectives of the process approach, ANT and the practice perspective. We have defined ontological contours of the research, and present here in Figure 1.2 the initial and integrative conceptual framework, which is processual. It has been developed in order to answer the research question: How is a governance framework for public infrastructure projects translated into practice? The main concepts and relationships are presented here. First, the levels of public governance are presented in section 1.3.3.1, within the broader socio-political context. Second, starting from the governance framework for public projects (as it has been defined in section 1.1.2), the process of translation is presented in section 1.3.3.2.



Adapted from Mazouz 2014, p.19

Figure 1.2: The initial conceptual framework for the doctoral research

1.3.3.1 Levels of Public Governance

As a practice is situated, it is important to anchor this study within its social, economic and political context. This specific doctoral research investigates the

governance framework for public infrastructure projects of Quebec (Canada). Here, culture is important to consider, both from a social, an institutional and an organizational perspective. While this subject has not been developed so far, it will be elaborated in the next section on methods (see Section 2.3).

The different levels of public governance are based on Mazouz (2014, p. 19)⁴⁶. We have adapted the model to our needs⁴⁷ and integrated the four levels of analysis into our conceptual framework. Those levels are: (1) institutions; (2) organizations; (3) the governance framework for public projects; and (4) tools and instruments. Institutions encompass overall values, culture and beliefs. From this level, the objectives of the governance framework are defined and thus the ‘institutionalization’ of it. The translation process will mostly apply at the level of the governance framework. Yet, as the focus of this study, according to the practice perspective, will investigate the translation process mostly from a micro angle, tools and instruments used will be an important concern.

In public administration, tools and instruments have been a significant object of inquiry. This is anchored in Foucault’s notion of governmentality introduced earlier, which emphasize micro-practices and instruments of governments (Hatchuel *et al.*, 2005). A tool (or instrument) of government is characterized as a constituent of an actor network and has important effects as a mediator and artefact (Lascoumes and Le Galès, 2004). Lascoumes (2004) argues that an instrument conveys an implicit political gesture, and he suggests that the main types of instruments are: legislation and regulation; economic; conventional and incentive; information and communication; and norms and standards (or best practices). Having a strong connection between those instruments and practice is essential, yet this connection

⁴⁶ This model of public governance has been presented in the section on governance (Section 1.1).

⁴⁷ Mainly, by specifying that the managerial level consisting of overarching frameworks as applied to this study relates to the specific governance framework for public projects.

has not been much studied so far. For example, the Institute for Government in the UK published in 2015 a report about social programs where they identified five ‘disconnects’ between policy and practice, resulting in important discrepancies between the aim of those policies and concrete results (Randall and Hughes, 2015).

1.3.3.2 Process of Translation

The process of translation from the institutionalized governance framework to the outcome (governance-as-practice) by various actors is schematized in Figure 1.2, represented by the arrow. As translation has been defined both from an ANT perspective and a practice perspective, here we refer mostly to the practice definition of this concept, being rather a micro-translation or micro-practice.

Still, another way of conceptualizing translation has not been presented yet, and refers to absorptive capacity (Deschesnes *et al.*, 2013; Deschesnes *et al.*, 2014). Based on a multi-site, longitudinal case study, Deschesnes *et al.* (2014) investigated how a Canadian intervention based on a professional development model did or did not influence schools’ capacities to absorb a Healthy School approach into their operations. Based on the work of Zahra and George (2002), their initial model presented the concept of absorptive capacity as potential (acquisition and assimilation) and realized (as transformation and exploitation). Bresman (2013, p. 49) emphasizes the importance of absorptive capacity to the process of translation:

The descriptive account in the literature of this translation process is to a great extent rooted in the widely cited notion of absorptive capacity—the ability of a firm or a group to recognize the value of external knowledge and then apply it effectively (Cohen and Levinthal, 1990). Specifically, the theory suggests that absorptive capacity is a function of prior related experience.

The positioning of translation from a specific theoretical angle has proved challenging. Yet, those avenues have been explored and remained open to

reinterpretation as the fieldwork has progressed, as meaning emerged from data collected, in line with the grounded theory (elaborated in Chapter II, Section 2.2).

In this research, the translation process is studied according to the different actors and actants. Those are: the organizations involved (public and private), project teams, the individuals (politicians, civil servants and private experts), and artefacts (non-humans). According to the practice perspective, more emphasis is put on the study of micro actors (teams, individuals and artefacts), yet all levels are considered at this point. The general concept of translation is analyzed according to several dimensions. Here, we have suggested some possibilities mostly coming from the literature review (i.e. interpretation, sense-making, enactment, localized time/place, appropriation, adaptation). Yet, those were also subject to reinterpretation as the fieldwork was conducted.

Lastly, the outcome of the translation process is considered according to data collected during the fieldwork: governance-as-practice. Again, some possible dimensions are presented here, yet may vary depending on the iterative revision during and after the fieldwork. Those are: situated action, structures / roles, processes / routines, critical moments / tensions, and tools / outputs.

This concludes our section on theoretical bases. First, we have presented the statement of the research question, and proceeded to develop the process approach, ANT and the practice perspective. Then, an initial conceptual framework integrating the main concepts examined in the literature review has been proposed. So far, the theoretical field is vast and still offers numerous possibilities. This is in line with the grounded theory approach, which is used as a method to generate theory as data are collected. We have so far delimited a theoretical field that offers many options, yet we have considered compatible perspectives. Hybridation is important in social sciences to generate theory (Denis *et al.*, 2007), and so the fieldwork and subsequent

analysis will reveal which theoretical perspective prove the most useful to explain the phenomena studied. The next section presents the methodological approach.

CHAPTER II

METHODOLOGICAL APPROACH

This section tackles how we have investigated the research question, namely: How is a governance framework for public infrastructure projects translated into practice? First, the epistemological stance of the research is presented, then the detailed research design. The last part introduces the setting, with a discussion on the socio-political context of Quebec and a presentation of the current Quebec governance framework for public infrastructure projects.

2.1 Epistemological Stance

Research in social sciences implies taking an ontological⁴⁸ and an epistemological stand, and making it explicit is essential both for researchers and readers, who will have to make sense of the study and the findings. Chia (2013, p. 33) argues that paradigms are ‘selective modes of abstraction’, so that the knowledge produced is ultimately partial and incomplete, generating theory offering useful yet limited view of organizational life. Explicitly stating philosophical assumptions underpinning research methodologies is critical, especially in project management (*ibid.*). We have to work towards project management research that is “ontologically informed, epistemologically consistent and methodologically robust” (Chia, 2013, p. 37). This section explores the epistemological posture for this research. First, epistemology is

⁴⁸ The ontological contours of that research have been presented in Section 1.1 on Governance Framework (see Figure 1.1). Noël (2011) describes ontology as to how one defines reality.

introduced. Then, a constructivist approach is discussed, followed by a discussion on the epistemology of practice.

The Oxford dictionary defines epistemology as “the theory of knowledge, especially with regard to its methods, validity, and scope, and the distinction between justified belief and opinion” (online). Noël (2011) explains that epistemological reflections have to be about the nature of knowledge (what?), and on its development (how?) and on the value that we can put on this new knowledge. It is critical that the link between the ‘what’ and the ‘how’ of knowledge production be coherent in order to establish its value and credibility (*ibid.*). Methodology is the process which is inherent to a broader epistemological logic, and has to be developed accordingly (*ibid.*).

Epistemology and the production of knowledge have a long history in social sciences. Fundamentally, since the origin of management theories as we know them, there have been epistemological tensions between two research programs: the transformation program and the comprehensive program (Déry, 2013). The transformation program generates two different projects: the praxeological (about rationalization) and the humanistic. The comprehensive program includes the ideographic project (about description), the nomothetic project (about explanation), and the philosophical project (about critical thinking) (Déry, 2013). Situating our research in those epistemological programs and projects, we state that it is mainly rooted in the comprehensive program and the nomothetic project (without the complete exclusion of the others).

Noël (2011) asserts that there are two main epistemological and methodological paradigms: the positivist nature and the constructivist nature. Positivist studies have been predominant in the past, mostly relying on quantitative data and hypothetical deduction. Constructivism has developed as an alternative to positivism and gained much influence in past decades, especially with the rise of postmodernism thinking (Déry, 2013). Its methodology is based predominantly on qualitative data, induction

and abduction (Noël, 2011). This doctoral research lies within the constructivism paradigm, thus, next we elaborate on this topic.

2.1.1. Constructivism

Unlike in physical sciences, there is no immutable truth in social sciences. George and Bennett (2005) underline that a constructivist approach to social sciences emerged because of the reflexivity of human agents. According to Le Moigne (1990), management sciences and artificial sciences (organizational engineering) contributed to the development of constructivist thought. The main foundations of constructivists epistemologies have been described by Le Moigne (1990) as being: representability of reality (subjectivity rather than objectivity); co-construction of reality; interactions between subject and object; induction and abduction rather than deduction; intelligent action - or reflexivity. Grand *et al.* (2010) present three central, yet distinct approaches to constructivist epistemologies: social construction, systemic constructivism, and constructivism. However, they argue that all constructivist programs share four fundamental concerns (*ibid*, p.63):

1. They challenge the predominance of unquestioned dichotomies in the social sciences, between micro and macro, or between situated activities and collective practices;
2. Agency is not automatically associated with particular entities ('individual', 'organization'), but must be studied as distributed and related in particular ways and in particular context;
3. The constructivist programs question a conception of 'reality' as something that is 'objectively given';
4. Therefore, the constructivist programs explicitly studied the status of 'knowledge', the relation to the 'world' or the status of scientific knowledge creation.

The main characteristics of constructivist approaches have been presented by Noël (2011) as: an ontology socially constructed and situational; an epistemology which cannot separate the observer (subject) from the observed (object); and a methodology varying in its methods, yet most often relating to a hermeneutical co-construction of knowledge between the researcher and participants.

From an ontological point of view in constructivism, Noël (2011) points out that there are many different realities, socially constructed and contextualized. Social practices are given primacy over individual agency and intention (Golsorkhi *et al.*, 2010). Chia (2013) contrasts two ontologies: the ontology of *being* and the ontology of *becoming*⁴⁹. An ontology of becoming assumes change, focuses on processes, micro practices and material relations rather than on individuals and organizations (*ibid.*). An ontology of becoming is also intimately associated with social constructionism (*ibid.*). As Chia (2013, p. 49) has put it:

Such a process philosophical viewpoint promotes a decentred and dispersive view of ‘the individual’ and ‘the organization’ as a fluxing concatenation of event-clusters and patterned relationships that resists clear identity, simple location and static representation.

George and Bennett (2005) outline that most social generalizations are necessarily contingent and time-bound, and that makes it difficult to develop predictive theories. For project management, the important implication is that “a project is both constructed and made sense of an individual’s social interactions in a specific context and over time” (Cicmil, cited in Edkins, 2014, p. 28).

From an epistemological point of view, the researcher cannot be separated from the research conducted, as he is also part of the social construction being deployed. The implications in project management are, according to Cicmil (*ibid.*), that:

projects and project outcomes are the result of ongoing structuring and sense-making among people who are different but have a shared goal [...] We cannot create or study project practice without being part of that practice the best we can.

Thus, a researcher needs to adopt a reflexive (or reflective) methodology, meaning that one has to be “interpreting one’s own interpretations, looking at one’s own perspectives from other perspectives, and turning a self-critical eye onto one’s own

⁴⁹ Chia (2013, p.52) notes that those two ontologies have different purposes: one seeks validity and legitimacy and the other practical expediency and effectiveness of outcome.

authority as interpreter and author” (Alvesson and Sköldbberg, 2000, p. vii). Alvesson and Sköldbberg (2000) have argued that it is ontology and epistemology, rather than methods, which determine good social sites. They propose a reflexive approach based on different levels of interpretation: (1) interaction with empirical material; (2) interpretation; (3) critical interpretation; (4) reflection on text production and language use. For Alvesson and Sköldbberg (2000), the higher the level, the more reflexive it is. Even though they recognize the value of data-oriented methods (they go on to develop grounded theory, ethnomethodology and inductive ethnography), they call researchers to go a little forward ahead and raise up to the level of interpretation and insight (hermeneutics) (*ibid.*). This call for reflexive research has also been sent in the project management community (e.g. Hodgson, 2006).

From a methodological point of view, a qualitative approach seems more appropriate for a constructivist perspective. The qualitative paradigm includes many divisions; Goetz and Mahoney (2012) group them in two big tents, each having their own subdivisions: qualitative research centrally concerned with causal inference, and qualitative research using various interpretive approaches. Alternatively, Guba and Lincoln (1994) have developed an argument about four paradigms in qualitative research: positivism, post positivism, critical theory, and constructivism. Guba and Lincoln (1994) assert that the methodology for constructivism mostly relates to hermeneutics and dialectics.

In their notorious study about the four paradigms of organization science, Burrell and Morgan (2000) situated hermeneutics into interpretive sociology, towards subjectivity (but less than phenomenology) as opposed to objectivism, and into social regulation (as opposed to radical change). Originally, hermeneutics was used for the interpretation of biblical texts (Alvesson and Sköldbberg, 2000). From the beginning, a main theme has been that a part has to be related to the whole in order to make sense of it (or interpret it). Accordingly, the hermeneutic circle has been developed: “the

part can only be understood from the whole and the whole only from the parts” (Alvesson and Sköldbberg, 2000, p. 53). Giddens has suggested the concept of double-hermeneutics: the interpretation of interpreting subjects (cited in Alvesson, 2000, p. 247). This double hermeneutics is quite aligned with a co-construction of knowledge between the researcher and participants. Yet, hermeneutics also imply a loop, from interpretation to re-interpretation. As Chia (2013, p. 35) describes this process of knowledge creation:

To re-search is to search again and again [...] Research is about re-thinking concepts, renewing observations, reliving experiences and re-enacting memories to discover ever-novel and lasting insights. [...] Research entails assiduously mining the rich seams of human experiences and creating knowledge through this process of retrospective sense-making and systematic conceptualization.

Having elaborated on the constructivist perspective, next we dwell on the epistemology of practice.

3.1.2 Epistemology of Practice

Aristotle has developed an extensive discussion about what he considered to be the three forms of knowledge: episteme, techne and phronesis (cited in Chia, 2009, p. 105). Whereas episteme is related to theoretical knowledge, techne and phronesis are associated with practical knowledge (*ibid.*). Flyvbjerg (2001, p. 57) characterized those three intellectual virtues as follow:

- Episteme Scientific knowledge. Universal, invariable, context independent. Based on general analytical rationality. The original concept is known today from the terms “epistemology” and “epistemic.”
- Techne Craft/ art. Pragmatic, variable, context-dependent. Oriented toward production. Based on practical instrumental rationality governed by a conscious goal. The original concept appears today in terms such as “technique,” “technical,” and “technology.”

- Phronesis Ethics. Deliberation about values with reference to praxis. Pragmatic, variable, context-dependent. Oriented toward action. Based on practical value-rationality. The original concept has no analogous contemporary term.

Phronetic Research

Flyvbjerg (2001) is a strong proponent of phronetic research in social sciences. He argues that there are two models for doing social sciences: epistemic social sciences (the natural science model); and phronetic social science (the reflexive model). Whereas the epistemic model is based on epistemic rationality to apply theories and laws empirically (in Praxis), the phronetic model is based on value rationality to study how they are applied in society (in Praxis). Flyvbjerg (2005) argues that we have to stop emulating natural sciences by trying to produce cumulative and predictive theory. Instead, Flyvbjerg (2005, p. 38) claims that researchers:

should promote social sciences that are strong where natural science is weak – that is, in reflexive analysis and deliberation about values and interests aimed at praxis, which are essential to social and economic development in society. We should promote value rationality over epistemic rationality, in order to arrive at social science that matters.

Flyvbjerg (2001, p. 60) posits that the fundamental questions for phronetic research are: (1) Where are we going? (2) Is this desirable? (3) What should be done? (4) Who gains and who loses; by which mechanisms of power?⁵⁰ He describes the phronetic researcher⁵¹ as embracing contextualism, situational ethics, interpretation⁵². Flyvbjerg

⁵⁰ Flyvbjerg (2001) explains that this question is not the point of departure, but he goes on to great lengths in his book into arguing why the power dimension should be added. In this sense, he refers to Foucault's work and state that Foucault is oriented toward phronesis, that his position relates mainly to praxis and contextualism.

⁵¹ In a later work, Flyvbjerg has detailed some methodological guidelines for conducting phronetic research. Those are: Focusing on Values; Placing Power at the Core of Analysis; Getting Close to Reality; Emphasizing Little Things; Looking at Practice Before Discourse; Studying Cases and Contexts; Asking 'How?'; Doing Narrative; Moving Beyond Agency and Structure; Dialoguing with a Polyphony of Voices. Flyvbjerg, B. (2006). Making Organization Research Matter: Power, Values, and Phronesis, in Stewart R. Clegg, C. H., Thomas B. Lawrence, and Walter R. Nord (dir.), *The Sage Handbook of Organization Studies* (Second Edition, p. 370-387). Thousand Oaks, CA: Sage.

(2001, p. 138) concludes that phronetic researchers: “deliberately seek out information for answering questions about what structural factors influence individual actions, how those actions are constructed, and their structural consequences.”

Phronetic research and Praxis

As it has been introduced in the section on theoretical bases, the practice-based perspective has generated definitions about two similar and interrelated concepts: practice and praxis. On the one hand, practices are what people engage with: they include institutional procedures, systems, tools and techniques; norms or scripted behaviour; episodes; ostensive routines (Johnson *et al.*, 2007). On the other hand, praxis is practice as what people do. Praxis relates to performative routines; to specific actions, done by specific people in a specific context; but it also relates to non-routinized behaviour in the synthesis of new behaviour (*ibid.*).

Praxis is action in its own end, which is purposive (in contrast with *techne*, which is purposeful action); it is also inseparable from the kind of person the actor has become (Chia and Holt, 2009). Rasche and Chia (2010) contrast a building and dwelling epistemology, associating the dwelling worldview with social practices. This worldview implies that actors are “non-deliberate, relationally constituted nexus of social activities”, that actions are “purposive practical coping” rather than purposeful, and consistency of action is assumed to be “ordered by a *modus operandi* - an internalized disposition” (Rasche and Chia, 2010, p. 39). Chia and Holt (2009) present that for Aristotle, praxis is directly related to *phronesis*. Yet, other researchers using practice perspectives are now embarking into the phronetic stream. For example, Blacker and Regan (2009) mobilized activity theory to study the reorganization of social services for vulnerable children and families using a ‘value

⁵² As regards validity, phronetic research is based on interpretation and is open for testing in relation to other interpretations and other research (Flyvbjerg 2001).

rational' approach to intervention. Gehman *et al.* (2013), doing a process study about the development of an honour code within a large business, proposed the concept of 'values practices'.

The epistemology of practice has brought about several critics underlying that describing what people do is not in fact real science, that practice needs a stronger critical view (Geiger, 2009). Gherardi (2009) has replied to those concerns arguing that practice-based studies do have critical power. She concludes her article stating that:

practice as epistemology articulates knowledge in and about organizing as practical accomplishment, rather than as a transcendental account of a decontextualized reality done by a genderless and disembodied researcher. (Gherardi, 2009, p. 124)

As it has been argued earlier, project management has recently embarked into the practice-based perspective. Before concluding this section, a quick overview of project management epistemology is provided.

Gauthier and Ika (2012) propose an explicit integrated ontological framework of project management research. Using historical lens, they identify four main worlds (or periods): (1) premodern social world — symbolism, tradition, and history; (2) modern social world — reason and knowledge; (3) postmodern social world — discourse and rhetoric; and (4) hypermodern social world-reflexivity. They argue that we are currently in the hypermodern social world (*ibid.*). From this perspective, a project is “a network of actors embedded in the social context and in constant transformation; it is a work in progress”; project management is a reflexive practice; and the project manager is a practitioner as a reflexive agent (*ibid.* p.12). They also position those worlds along two continuums. The hypermodern project management is situated very near the becoming ontology (as opposed to the being ontology), and closer to the virtualist ontology (as opposed to reality ontology) (Gauthier and Ika, 2012). According to Cicmil (cited in Edkins, 2014, p. 29), project management

researchers “should always state their assumptions, their perception of the world, in their research; create the model while trying to understand the practice, not before; and take broad inspiration from a variety of theories.” This is exactly the advice that I am trying to follow. So before going on to the methodological implications and approach, the next paragraph synthesizes as explicitly as possible the positioning that this doctoral researcher is aiming for.

This research is positioned within the broad comprehensive program; and has a constructivist nature. It has a dominant becoming ontology, rather than being ontology. This should be conceptualized as a position on a continuum rather than a either/or stance. Nothing is black or white, especially in management science, and still mainstream research emphasizes positivism, rationalism, and a being ontology. Coming back to the levels of reflexivity introduced by Alvesson and Sköldberg (2000), we have been working mostly with the first two levels of: (1) interaction with empirical material, and (2) interpretation. This research adopts an epistemology of practice, emphasizing value rationality in line with phronetic research. It could be related to the hypermodern world described by Gauthier and Ika (2012). The methodological implication following this positioning is that a qualitative and inductive methodology is used. This is elaborated in the next section.

2.2 Research Design

This section presents the research design which has been used in order to answer the research question. First, the overall research strategy is outlined, then the case study design is explained; data collection, and the analysis strategy are defined. Moreover, quality criteria and limitations for the chosen research design are outlined, and ethical concerns tackled.

2.2.1 Research Strategy

The research strategy is qualitative, heuristic, and based on case studies which have been purposefully sampled. Each of those elements are presented, followed by the overall schedule.

Even though quantitative and variable-oriented research is still predominant in the field of management and more broadly in social sciences, the qualitative approach has gained many supporters over last decades. Scholars have generated many debates over these different approaches. For example, King *et al.* (1995, p. 4) considered the differences of those approaches “stylistic”, being “methodologically and substantively unimportant”, as they argued that all good research must derive from a same underlying logic of inference. This premise has been greatly challenged. Goertz and Mahoney (2012, p. 1) even refuted this claim entirely, suggesting that “the quantitative-qualitative disputation in the social sciences is really a clash of cultures”. Similarly, Ragin (1997, p. 2) refers to those approaches as having different goals that are, however, not irreconcilable: “after all, there is no necessary wedge separating the goal of ‘inference’ – the key concern of quantitative approaches – from the goal of ‘representation’ a common concern of qualitative approaches”. Other researchers, such as Flyvbjerg (2001), have pleaded that not only there hasn’t been sufficient recognition of the contributions of qualitative approaches, but that those are the only ones well-suited to answer social science problems. However, a common stance for researchers in social sciences is to acknowledge that each approach has strengths and weaknesses, advocating for more interactions between the two to enhance and create more rigorous research (Brady and Collier, 2010). A new tendency is to combine both approaches in mixed-methods (Drouin *et al.*, 2013).

According to our research question (a “how” question, demanding complex and processual explanations), a qualitative study is more adapted as an overall research

strategy. Moreover, a case study seems the preferred method, as the focus is on a contemporary phenomenon within a real-life context (Yin, 2009). The design of the case study has to follow from the stated research objective (George and Bennett, 2005). George and Bennett (2005, p. 75) identify six kinds of theory building research objectives: (1) atheoretical/configurative idiographic – provide good description for further research; (2) disciplined configurative – established theory to explain a case; (3) heuristic – identify new variables, hypotheses, causal mechanisms and causal paths; (4) theory testing – assess the validity and scope conditions of theories; (5) plausibility probes – preliminary studies on untested theories; and (6) building block studies – components part of larger contingent generalizations and typological theories. Our specific research objective for this doctoral thesis is (3) heuristic.

As the research question is quite specific, relating to how a governance framework for public projects is translated into practice, the cases for study had to be purposefully sampled (Patton, 2002). The chosen site is within the Quebec government, which has a governance framework for public projects in place, and as we have access to it. First, a pilot study has been conducted in the summer of 2014⁵³, in order to test the initial question, conceptual framework and interview guide (Yin, 2009). Another objective for conducting this pilot study was to initiate contact within the governmental apparatus in order to start negotiating access for the fieldwork which would start in the Fall of 2015. From November 2014 to August 2015, several meetings, presentations, discussions, and authorizations have occurred so that the fieldwork could start without any further delay. The fieldwork has been conducted from September 2015 to June 2016. Following data collection and analysis, we have

⁵³ Three interviews with civil servants from three different organizations within the Quebec government have been conducted. This pilot study was initiated as a requirement for the course of Qualitative Methods followed at the time at HEC Montréal.

held some meetings with government representatives in order to validate our findings and share about them.

2.2.2 Case Study

The case-study approach is presented by George and Bennett (2005) as a subset of qualitative methods. It requires a detailed consideration of contextual factors, which brings a key challenge for theory development that does not distort the contextual character of the cases (Hall, 2003). George and Bennett (2005, p. 18) define case study methods “to include both within-case analysis of single cases and comparisons of a small number of cases”.

For our research, we opted for a multiple-case design (Yin, 2009). The general context for all cases is the socio-political context of Quebec⁵⁴. Four cases have been selected, each one being a public infrastructure project currently in the front-end phase. Thus, the unit of analysis is a project, which has to conform to the Quebec governance framework. One governmental organization is involved in all of those projects (this organization is our main access to fieldwork), yet all projects have very different contexts, concerns, and the actors involved (organizations, individuals) are all different. The cases have been proposed by our contact in the government according to projects availability and to our research objectives of this doctoral fieldwork. The sampling strategy for the cases has been made according to maximum variation sampling (Patton 2002). This allowed us seeing how the governance framework is translated in various situations, what common patterns emerge and what are the significant distinctions.

⁵⁴ See Section 2.3 for a discussion on the cultural context of Quebec and an outline of the current Quebec governance framework for major public infrastructure projects.

After discussions with our contact working in the governmental organization chosen for the fieldwork, here are the selection criteria for the four projects that have been retained:

- a public infrastructure project in the front-end phase at the time of the fieldwork;
- the project has to conform to the Quebec governance framework (so for which the initial cost estimation is over 50 million\$);
- projects should be representative of a variety of contexts and sectors (for maximum variation);
- projects should be comparable in size and in the type of funding (PPP or not) in order to limit the number of characteristics which will vary.

Why four cases? Our initial research design included two projects, then we aimed for one so that we could go deeper into the data and have rich thick descriptions. However, as we have negotiated with our contact organization, the decision was made to let me study more projects. Perhaps three or four, depending on what would be available, so that patterns could be found and so that emerging trends could be observed. According to Yin (2009), multiple case designs may be preferred over single case designs, as analytic benefits from having a few cases might be substantial. Thus, the cases have less depth and details than if it would have been just one, yet a major benefit was about mitigating risk in case one of those projects would have stopped for any given reason.

2.2.3 Data Collection

Data collection is based on a set of approaches including semi-structured interviews, non-participant observation, and a documentation analysis. Two different data sets have been collected: one for the first article (about the overall governance framework), and one for the second and third articles (about the process of translation and the outcome of governance-as-practice).

Article 1 - The Quebec governance framework

In order to answer our research question⁵⁵, a literature review and a documentation analysis have been performed. The three interviews conducted during the pilot study have generated contextual data which has been used, although implicitly, in this data set.

Articles 2 and 3 - The process of translation and governance as practice

Data collection for the four cases has been conducted in parallel, from September 2015 to June 2016. While Article 2 has treated one of the four projects extensively, Article 3 has compared all projects. Additionally, we have done 15 interviews, with politicians, civil servants and experts about the Quebec governance framework. We have also done a documentation analysis which has been considered for those two articles. Gathered data cover both real-time and retrospective time. In total, we have conducted 44 interviews, and attended to 21 meetings for 77 hours of non-participant observation.⁵⁶

In order to gain access to the fieldwork, we first initiated a contact with the project manager. During the first encounter with the project manager, we presented ourselves and the doctoral research, we gave the interview guide and various consent forms for ethical purpose (see Appendix A for the interview guide). We discussed about the project, the project schedule and its actors, and we made sure that everything was clear, that all questions and concerns were answered.

The first step in gathering data was to assist to meetings as a non-participant observer. Mostly, coordination meetings for the projects have been observed, but we did

⁵⁵ Defined as: Why is a governance framework for major public infrastructure projects interesting for a government?

⁵⁶ For more details about data collection and its use in each article, please refer to the methodological section of each article. Table 5.1, in Article 3 (Chapter V), summarizes all data collected for the doctoral research.

observe other types of meetings: project steering committees, validation committees, etc. The meetings have not been recorded, and we have attended to as many as we could, depending on the projects schedule and our access within each project team. This part of data collection was very important in order to observe practices and actors actively involved in the project. Although this research is not an ethnography *per se*, it definitely has an ethnographic orientation (Locke, 2011). A diary has been carefully maintained, as our observation notes have been one of the main data used for the analysis. As much as we could, ‘thick description’ was provided about the process of translation and the outcome of that process (governance-as-practice) (Brady and Collier, 2010, p. 180). We have adapted our note-taking according to an initial test and a revision in the first meetings, but as a point of departure, here is what Hufty (2007, p. 8) proposed as a way to observe governance processes: concerns, norms, actors, process. After each meeting, we completed and transcribed our notes; we also summarized the important points and what we had to dig in for in upcoming interviews.

After we attended to a few meetings, and we had familiarized ourselves with the projects, the actors and the context, we established a preliminary list of people to interview, mostly by a snowballing strategy (Patton, 2002). Most of them were project team members, from various organizations, public and private, who were actively involved in their project and who could provide deeper insights about the way practices were performed. This list has been validated with the project manager, and then we began interviewing. Other requests for interviews have been made directly and via our primary contact within government, especially for those regarding the Quebec governance framework. In total, forty-four interviews have been carried and transcribed, each being about one hour in duration.

Lastly, documentation relating to each project has been collected, along with other material artefacts that proved interesting for our research questions. These are official

documents (organizational documents or project documents), but also informal ones, emails, PowerPoint presentations, or any other trace of the process/the outcome. Those were consigned in a database with a short description of what that document is, who is involved with it and what the purpose is.

2.2.4 Analysis Strategy

The main analysis strategy used is the grounded theory (Corbin and Strauss, 1990; Glaser and Strauss, 1967). Although we started this research with an initial conceptual framework, as it was required in the doctoral program, we have left it open to revision, re-interpretation as gathered data revealed itself, and as we made sense of it. Iterations between the framework and gathered data have been occurring, especially in the first few weeks of the fieldwork (Patton, 2002)⁵⁷. This is an inductive strategy, meaning that “the important analysis dimensions will emerge from patterns found in the cases under study without presupposing in advance what those important dimensions will be” (*ibid*, p.56). This approach to theory development using discovery, flexibility and reflexivity has been encouraged by several influential researchers (Alvesson and Kärreman, 2007; Klag and Langley, 2013; Locke, 2011).

Once the data was collected and transcribed, we have coded using the software NVivo (see Appendix B for the coding structure). Along with grounded theory tradition, the first order analysis was performed with open-coding, creating initial categories (Gioia *et al.*, 2013). In a second order analysis, we have developed an axial coding, making relationships among those categories. Then, the data structure was developed with overarching, aggregate dimensions. Thus, the grounded theory model generated is processual and dynamic (Gioia *et al.*, 2013).

⁵⁷ The results of these iterations are discussed thoroughly in Chapter VI.

An important step for data analysis was to perform triangulation. Having collected data from multiple sources of evidence (non-participant observations, interviews, and documentation), it was important to corroborate the findings, ensuring the convergence of those multiple sources (Yin, 2009). Triangulation helps to build construct validity (*ibid.*).

Eisenhardt (1989b)'s method⁵⁸ for building theories from case study research is quite notorious. Although she herself defines this process as adopting a positivist view of research compared to the grounded theory approach, there is still interesting notions in this article, especially regarding analysis. Eisenhardt (1989b) proposes to start with an analysis of within-case data, to write detailed case study write-ups for each site in order to become intimately familiar with each one as a stand-alone entity and observe unique patterns within each case (explanation building). Then, a cross-case analysis is performed, comparing data from each case, underlying similarities, differences, and patterns (pattern matching). There, the idea is to go beyond initial impressions, to use different tools and lenses on data so that the best possible interpretation can come out of it. At this point, the conceptual leap requires creativity and involves a form of bricolage (Klag and Langley, 2013). Having presented the analysis strategy, we now discuss quality criteria for this research, along with limitations.

2.2.5 Quality Criteria and Limitation

The main analysis strategy chosen (grounded theory) is high in accuracy and somewhat limited in simplicity and generality, even though the transferability could be important (Langley, 1999). Quality criteria for this research and main limitations are presented succinctly here. The main references for this section are Patton (2002) and Yin (2009).

⁵⁸ This method consists of nine steps: getting started, selecting cases, crafting instruments and protocols, entering the field, analyzing data, shaping hypotheses, enfolding literature, and reaching closure.

Construct validity

The main strength of using a case study design is, according to Yin (2009), to build construct validity. Furthermore, the research is designed to have both within-case analysis and cross-case comparison, which is according to George and Bennett (2005) the strongest means to derive inference from case studies. The multiple case study and multiple sources of information also offer the advantage of triangulation, to test concepts that will ultimately be more robust than if it would have been with a single case (Eisenhardt, 1989b). By exploring the phenomenon of interest qualitatively, in a number of different settings, we have established some chains of evidence and some causal mechanisms, which enhance construct validity. Moreover, we had key informants validate our main results.

Credibility

For research credibility, the main tactics used have been explanation building and pattern matching. The research design is strong, as the reflexive collaboration of various governmental actors allowed working along the lines of an ‘engaged scholarship’ (Van de Ven, 2007). Regular peer debriefing has been conducted (mostly with governmental actors and my thesis supervisor), and a reflexive journal has been kept for higher accuracy, reflexivity and trustworthiness - including a daily schedule and logistics, a personal diary, and a methodological log (Lincoln and Guba, 1985). Moreover, the researcher’s proximity on the fieldwork has helped to get credible information. Rival explanations have been addressed in data analysis; a transparent account of the intellectual journey from data to theorization is provided⁵⁹. Lastly, the researcher’s credibility has to be taken into account (training, experience). I am familiar with the subject, the setting and the organization as I was working in project management consultancy before starting my doctoral studies. I already had a good

⁵⁹ Please refer to Chapter VI for the full account.

understanding of the problematic and a good idea of how to tackle this question. While I remained open to alternative answers, my previous experience and knowledge have helped to enhance the research credibility.

Transferability

Each individual case study has been thoroughly documented; emergent patterns from each case have been highlighted. Then, having four cases allowed seeing general trends, common patterns, similarities and differences. This proved invaluable for the public organization giving access to the fieldwork, as well as for the Quebec government, which is constantly seeking to enhance the governance framework since it has been adopted in 2008. The transferability is more important for the Quebec government and its major infrastructure projects than for other governments using their own governance framework, yet it might be very transferable as well and prove useful for them. Lastly, the theoretical findings regarding the process of translation and governance-as-practice are likely to be transferable to other types of settings, so transferability of the concepts is also aimed for.

Reliability

The main tactic for achieving reliability was to develop a case study database, along with a reflexive journal. The case study protocol (outlined in this methodological section) has been updated according to data collected on the fieldwork so that for each case we gathered information along the same concepts and dimensions. A coding structure has been developed and validated with our thesis supervisor. Additionally, regular validation meetings have been planned with our thesis supervisor, so that overall, the research and our findings' reliability are improved.

Limitation of study

As with any other studies, this research design has some limitation. Even if we have four cases, they are all embedded within the Quebec government, so there is a

limitation in representativeness. In that regard, a comparative study at an international level would have proved more representative, yet, it seemed too ambitious for a doctoral research. Moreover, cultural differences seemed too important to tackle within our limited timeframe to make international, cross-case comparisons.

The cases have been selected by the public organization giving access to the fieldwork (the number and the specific projects). Although we had several meetings and discussions about projects selection, and that they took our selection criteria into consideration, there is a potential case selection bias. Moreover, having to study four cases has certainly limited the depth for each case. The fieldwork has been conducted over a short period of time (ten months), which is a very short span in the life cycle of an infrastructure project, which might last several years. Additionally, getting access to some documentation, meetings and individuals have been limited.

Lastly, there are several potential biases that have to be acknowledged. More importantly, the researcher might have personal predispositions, unconscious and hidden. As a doctoral student, I work mostly by myself, although I validate every step with my supervisor. Working with a research team is definitely less limiting than doing research alone, yet one of the main purpose of a doctoral research is that the student develops skills to undertake a research project from the beginning to the end, by herself. I am still learning, and while I will do my best to analyze and interpret the data as best as I could, considering all possibilities and the best possible explanation, there could always be some other way to make sense of such a complex phenomenon.

2.2.6 Ethical Concerns

Ethical concerns are very important in any undertaken research. As required by the University of Quebec in Montreal, an ethical certificate has been requested, and obtained, for this research (see Appendix C). This ethical certificate recognizes that all means are taken to ensure the anonymity of informants and a secured data

keeping. Additionally, the researcher and her doctoral supervisor have signed a confidentiality agreement towards the government.

For each organization involved in the four projects chosen, a consent form has been signed. Additionally, at the beginning of the first project meeting, I have presented myself, our project, and made sure that everyone was comfortable with my note taking. Informants could, at any time, request that things be kept 'out of the record'. Before each individual interview, an individual consent form has been presented and signed. It was explained that interviews were recorded (unless the informant objected), but that at any time during the interview we could stop recording. It was also explained that the participation into this research project is voluntary and if they wanted to withdraw from it, they could do so at any time.

Because of its public nature, the public organization involved has agreed to make its name public, along with the specific context of the chosen projects. However, confidentiality of projects and respondents has been preserved.

The phenomenon of interest for this research is the translation process of the Quebec governance framework for major public infrastructure projects into practice. In order to study this process, four projects have been purposefully selected. Non-participant observation during meetings has been conducted, along with individual interviews with project members; relevant documentation has been collected. The analysis strategy included within-case and cross-case analysis, iterations between the conceptual framework, analysis and data collection — the grounded theory has been our main approach. Having a multiple-case design and multiple sources of information has not only helped to build robust construct validity, but it was also a strategy for mitigating risks. This exploratory study is qualitative, heuristic, and part of the interpretivist and constructivist paradigm (Corbin and Strauss, 1990). Because little research has been done in this specific area, the inductive approach has

been used to gather on the field elements that enable a better understanding of the phenomenon, which could be used to develop further theorization in a subsequent phase.

2.3 Case study

This section presents the setting of the case study. First, the cultural context of Quebec is presented, both social and political. Then, the Quebec governance framework for public infrastructure projects is presented.

2.3.1 Cultural Context

Taking the cultural context into account when doing a case study is fundamental, since the social and organizational contexts influence not only the action taking place, but also the interpretation that is made out of it. First, we discuss the importance of culture, defining the concept and some dimensions that have been used to characterize it. Then, we try to highlight some of the social and organizational aspects of the cultural context in Quebec, as this is where our case study is taking place.

The importance of culture

Defining the concept of culture is not an easy task, considering its vagueness and its elusive nature. Schein (1992, p. 1) defined⁶⁰ it as “a phenomenon that surrounds us all times, being constantly connected and created by our interactions with others.” This implies one of the critical aspects of culture: the idea that certain things in groups are shared or held in common (*ibid.*). Cultural studies have focused on culture from various perspectives - most notably social⁶¹, organizational, and group (d'Iribarne, 2009). Schein (1992, p. 12) defines the culture of a group⁶² as:

⁶⁰ Somewhat similarly, Hofstede *et al.* (2010) defined it as “the unwritten rules of the social game, or more formally the collective programming of the mind that distinguishes the members of one group or category of people from another.”

⁶¹ For example, d'Iribarne (2009) defines the main characteristic of French society as fear of servitude, and the American one as fear of loss of control over one's affairs. Some critics have highlighted that it

a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.

Schein (1992) introduced three levels of culture, the first one being the most visible and the third being the hardest to decipher: (1) artifacts – visible organizational structures and processes; (2) espoused values – strategies, goals, philosophies; and (3) basic underlying assumptions⁶³ – unconscious, taken for granted beliefs, perceptions, thoughts, and feelings.

Hofstede, one of the pioneers in cross-cultural management research (Dupuis, 2014), has developed a model that has been widely used in cultural studies which includes four dimensions: power distance, uncertainty avoidance, individualism, and masculinity (Hofstede *et al.*, 2010). According to Dupuis (2014), new approaches to cross-cultural management research now pay more attention to context (local, regional, national, etc.), consider the variability of individuals' perceptions, propose more qualitative methods and acknowledge the dynamism of culture.

Still, Gehman *et al.* (2013, p. 84) have recently argued that “cultural perspectives on values have undertheorized the processes whereby values come to be practiced in organizations.” In project management, and more specifically in the governance of large infrastructure projects, the importance of cultural practices is increasingly

might be oversimplistic to talk of one country as having one homogeneous culture (e.g. Dupuis, 2011). Anthropologist Ulf Hannertz has developed a definition of culture as being the organization of diversity to counteract this current (cited in Dupuis, 2011, p.13.)

⁶² According to Schein (1992), culture implies some level of structural stability in the group. In attempting to answer the question as whether an organization can have a global culture, his answer is to handle this question empirically.

⁶³ Those basic assumptions are defined as: 1.the nature of reality and truth; 2.the nature of time; 3.the nature of space; 4.the nature of human nature; 5.the nature of human activity; 6.the nature of human relationships. Schein (1992).

acknowledged⁶⁴. Van Marrewijk and Smits (2015) argue that research on governance has obscured the critical role of governance practices and the importance of seeing megaprojects as cultural phenomena. Conducting a one-year ethnographic study of the Panama Canal Expansion Megaproject, they identified five distinct cultural practices influencing its governance: ritualizing the bid winning ceremony, changing teams, struggling over governance structure, labelling national cultures, and labelling organizational cultures. Fabianski (2015) has developed a cultural perspective for the governance of complex projects. She presents a four-quadrant model in order to analyze organizational cultures' differences of several partners involved in a PPP in Istanbul, through each project phase as a dynamic process. This model, originally introduced by Douglas (1970) as the Grid-Group model, presents four distinct forms of organization: the hierarchies, the individualists, the egalitarians, and the isolated (Fabianski, 2015). We now turn from a general discussion about culture and its dimensions to the specific culture of Quebec, where our case study is located.

The social and political cultural context of Quebec

Dupuis is an anthropologist working at HEC Montréal who has studied the Quebec culture, especially in relation with the French culture. He has studied, among other subjects: the performance in Montréal multicultural organizations (Dupuis, 2011); French immigration in Quebec, finding that those relations might be problematic at times (Dupuis, 2012); and perceptions of individuals working abroad, being influenced by contextual elements (Dupuis, 2014). This latter study highlighted that overall, participants perceived Quebec firms to be efficient and less hierarchical than French firms, and that there might be a false cultural proximity between the two cultures (*ibid.*). View *et al.* (2012) have studied governance mechanisms of two large

⁶⁴ A recent book edited by anthropologist Van Marrewijk sheds light on governance practices, and on the importance of culture for the management of megaprojects.

Van Marrewijk, A. (ed.)(2015). *Inside Mega-projects: Understanding Cultural Practices in Project Management*. Copenhagen: Liber and Copenhagen Business School Press.

projects: one in Montréal and one in Lyon, highlighting the important influence of stakeholders in the process. Their study revealed that although public participation was welcomed and served mainly to satisfy democratic concerns, the influence of civil society was much less than the one of a plural 'urban elite', mostly the decision-makers of those projects (*ibid.*).

The social culture in Quebec is much influenced by our history, as we both share important characteristics from our French and British heritages. Rigaud *et al.* (2010) present the Quebec model of development in its historical and political context, using Amable (2005)'s theory of institutional complementarities. This theory allows embracing complex interactions between the economic and the social, and also shedding light on the specific cultural context of Quebec instead of treating a federation as a homogenous whole (Rigaud *et al.*, 2010). Generally speaking, the authors present that the Quebec model of development has been to reinforce political and administrative autonomy of the Quebec government. They also describe it as mixed, having multiple influences, mostly North American but also European (*ibid.*).

Mazouz *et al.* (2005) have compared the implementation of rationalization reforms in three provinces in Canada: Quebec, Ontario, and Alberta. The authors highlight that Quebec reforms have been smoother and more prone to negotiations with other civil society actors, less radical than in Anglophone provinces where neoliberal thinking has favoured important tax cuts and a drastic reduction of public services. In Quebec, where the government has historically been an important level for the francophone population, public services have been maintained; tax cuts have been modest (*ibid.*). Nonetheless, the Quebec government faces important pressures from the federal level in order to harmonize with the rest of Canada, which is more liberal and adopts mainly a market economy (Rigaud *et al.*, 2010).

At an international level, neoliberal thinking has gained much popularity since the 1980s with New Public Management. Although the global spread of this movement was presented as adopting isomorphic neoliberal values (notoriously by being promoted by OECD), in reality the countries that have adopted its thinking and implemented reforms have all followed different evolutionary paths (Hudon and Mazouz, 2014). Hudon and Mazouz (2014) suggest that those different results are due to heterogeneity of practices, and the inertia of bureaucratic organizational structures. They refer to Lascoumes (2004)'s approach⁶⁵ to govern by instruments in order to explain those differences. As an illustration, they explained two neoliberal, administrative reforms that have taken place in Quebec: the adoption, in 2000, of the 'law on public administration', and the 'State Reengineering' in 2003 (Hudon and Mazouz, 2014). Their analyse suggests that even though the ideological bases of those two reforms were similar, the administrative tools and instruments used have generated very different results in their implementation and lasting effects (*ibid.*). In addition, some instruments are also used in order to link the public and private domains: contractual arrangements, especially regarding PPPs, communication tools, etc. (Dubé *et al.*, 2009).

Since the adoption, in 2000, of the law on public administration, performance, accountability and management frameworks became institutional tools that have to be used by civil servants (Mazouz *et al.*, 2005). Facal and Mazouz (2013) argue that a twinning has to be made between institutional and instrumental approaches with the politico-administrative and managerial accountability. They describe politico-administrative accountability as having two categories of mechanisms: those internal (National assembly, parliamentary commission, Auditor General, etc.) and those external (judicial court, media, etc.) (*ibid.*). Generally speaking, internal mechanisms may be perceived as less efficient (for example a vast literature on audits highlights

⁶⁵ Lascoumes's approach has been briefly presented, see Section 1.3.3.

heavy scepticism about this control mechanism); while public scandals brought about by the media or other civil society actors have the effect of accelerating response and accountability about a situation (*ibid.*). In line with Hood (2011), they suggest that confusion in the system is created by the double role of the elected politician and the mandarin, each attempting to put the blame on the other, resulting in a blurred accountability (Facal and Mazouz, 2013). They plead for a prudent instrumentation of politico-administrative and managerial accountability which takes into account particular historical and cultural aspects of each governance system, putting a heavy emphasis on underlying values (*ibid.*).

Summarizing this discussion on culture, and more specifically on the Quebec cultural context, the important take-away is that culture matters. There is a social culture, based on history and contextual elements; there is a culture within the public administration; but then each public organization might have specific cultural characteristics; even project teams, composed of members from different organizations, public and private, might show some cultural particularities. As we went on the field to collect the data, we have been sensitive to those issues, to report on them as accurately as we could, and to make sense of the findings in the light of the cultural context.

2.3.2 The Quebec Governance Framework for Public Infrastructure Projects

The Quebec governance framework, adopted in 2008, had as a main objective to frame rigorously infrastructure projects, especially in the front-end and in the planning phases, in order to prevent overspending, delays, and to manage public funds responsibly (Secrétariat du Conseil du trésor, 2008). This governance framework was revised in 2010, and again in 2014, to reflect organizational changes and learning made by actors through its enactment into projects. Moreover, the investments made by the government in public infrastructures have been increasing over the years, reaching about 91 billion\$ planned for the period 2017-2027, making

it a matter of importance at the government level (Secrétariat du Conseil du trésor, 2017). All major infrastructure projects, defined as over 50 million\$, under provincial jurisdiction, have to comply with this governance framework.

The governance framework for public infrastructure projects is under the responsibility of the Quebec Treasury Board - Secrétariat du Conseil du trésor (SCT), which has to ensure that project documentation presented to the Council of Ministers for approbation comply with requirements. The current version of the Quebec framework is a legal document of 13 pages, adopted in February, 2014, and entitled '*Directive sur la gestion des projets majeurs d'infrastructure publique*' (Secrétariat du Conseil du trésor, 2014). This Directive is legally anchored by law (article 18), as the Law on public infrastructure (Secrétariat du Conseil du trésor, 2013) was adopted in October, 2013. The Directive is divided in several sections: objective, scope of application, instructions for applying the directive, project life-cycle, front-end of a project, management of a project, particular authorization from Council of Ministers, transitional and final provisions. Two appendixes are presented in the Directive: Appendix A presents some detailed instructions about the requirements for each required deliverable, and Appendix B presents the life-cycle of a project, including required deliverables and approbations. As we got along, we investigated the origins of this framework, and its translation into practice by project actors.

The next chapters present the results of this inquiry. Chapter III presents the first thesis article, based on an abductive, conceptual research design using a phronetic perspective. The question asked in this article is: why is a governance framework for public infrastructure projects relevant for a government? The findings, based on public administration and project governance literature, are articulated around three propositions, or dimensions: those of efficiency, legitimacy and accountability. Chapter IV follows, with the second thesis article, which investigates the process of translation of the governance framework into practice. By doing an in-depth analysis

of one case, being a major project in the planning phase in the health sector, the process of translation is unveiled, from a temporal perspective. The results are a set of twelve practices, performed at three different levels: the institutional, the organizational and the project level. Chapter V presents the third thesis article. From an inter-case analysis of the four major projects used as cases for this research, emerging patterns are confirmed. The practices are described, from their ostensive and performative sides. A proposition is suggested, along with a definition for the concept of 'governance-as-practice'. The aim of the following chapter, Chapter VI, is then to integrate the results of the three articles and discuss an integrative framework along with important contributions and emerging themes.

CHAPTER III

ARTICLE 1⁶⁶: The three dimensions of a governance framework for major public projects

3.1 Abstract

The aim of this article is to advance a conceptualization for governance frameworks for major public projects based on public administration literature. The governance of major public projects has been an important subject of inquiry in project management, as researchers have investigated governance frameworks for public projects as a tool to enhance performance. Yet, while performance is traditionally seen as improved efficiency, other aspects need consideration. Using phronetic and abductive theory building, this conceptual article investigates the relevance of a governance framework for major public projects along three dimensions: those of greater government efficiency, legitimacy and accountability. The main contribution of this article is to enrich existing theory on the governance of major public projects.

Keywords: Governance framework; Major public projects; Public administration; Project governance; Conceptual article

3.2 Introduction

Major projects (infrastructure, IT, military, etc.) are increasingly used for delivering a wide range of goods and services, and their scale tends to increase as well (Flyvbjerg, 2014). Yet, to this day the performance of those projects is unsatisfactory: the wrong projects are selected, the costs are underestimated and the benefits are overestimated (Flyvbjerg, 2014). Moreover, the anatomy of those major projects is shifting, with

⁶⁶ This article has been published. Brunet, Maude and Aubry, Monique (2016). The three dimensions of a governance framework for major public projects. *International Journal of Project Management*, 34(8), 1596-1607. DOI: <http://dx.doi.org/10.1016/j.ijproman.2016.09.004>

increasingly complex stakeholders and supply chain linkages, calling for enhanced academic scrutiny into this emerging organizational phenomenon (Scott *et al.*, 2011).

Governments are crucial stakeholders for several of those major projects, often as owner or initiator. Accordingly, they have to make political decisions in order to undertake those projects. As governments around the world have to cope with this shifting reality of undertaking more and bigger projects, it is important to understand the implications of organizing public sector projects. In this article, we adopt the view that there are indeed specificities related to the public sector, which must be acknowledged in the governance of major projects.

In the past decades, some governments, such as Norway and the United Kingdom, have adopted a governance framework to deal specifically with major public projects (Klakegg *et al.*, 2008). A governance framework for public projects is “an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose” (*ibid*, p.30). Confronted with poor project performance including large cost overruns, delays and limited economic benefits, those governments have implemented governance frameworks in order to improve project performance. For example, in Norway, a 1999 in-depth review of eleven public investment projects revealed combined cost overruns of 84% (Berg *et al.*, 1999, cited in Samset and Volden, 2013), whereas their latest report indicates that on average, 80% of projects now remain within approved budgets (Samset and Volden, 2013). Similarly, whereas in 2011 the UK National Audit Office reported that two-thirds of public sector projects were completed late, over budget or did not deliver the expected outcomes, the Major Projects Authority recently stated that the record of project delivery has improved to the point where approximately two thirds of projects are now expected to deliver on time and on budget. (Major Projects Authority, 2013; NAO, 2011).

With governments adopting such governance frameworks since the beginning of the 21st century, several researchers have been inquiring about their similarities, their differences and their impact on project performance (Christensen, 2011; Crawford and Helm, 2009; Klakegg *et al.*, 2009; Klakegg *et al.*, 2016; Williams *et al.*, 2010). At the same time, our current knowledge regarding governance frameworks could be enriched by looking beyond public projects at the larger field of public administration. Whereas performance is important to study with regard to the governance of major public projects, it is not enough to explain why governments adopt governance frameworks. We seek to open up the theoretical comprehension of a governance framework by offering a conceptualization encompassing three main dimensions, those of efficiency, legitimacy and accountability. Those dimensions are developed by reviewing influential literature and using an abductive method (Van de Ven, 2007). The aim of the article is to investigate the relevance of a governance framework for major public projects by suggesting three dimensions, articulated around three propositions.

As the field of public administration is rich and complex, it can certainly help to generate insights into the governance of major public projects. The main contribution of this article is to conceptually explore the theoretical relevance of governance frameworks for public projects by investigating the links between project management, project governance and public administration. While our assumptions for those propositions are limited to democratic governments, it is nonetheless important to acknowledge that other types of political regimes around the world might also benefit from enhanced governance of their public projects. Moreover, the theoretical basis underlined here is the initiation of a wider reflection that will benefit from further empirical testing.

This conceptual article is structured as follow: first, a literature review presents project management and its subfield of project governance, in which is embedded the

concept of a governance framework. Then, the research question is presented, followed by the methodology used to answer that question. Results are presented according to the three propositions put forward. A discussion of those results follows, outlining their relevance to the governance of public projects. Finally, the conclusion summarizes the main findings and contributions of this article, and highlights how these propositions could be tested empirically.

3.3 Literature review

This section reviews theoretical developments in project management, and its subfield of project governance. Then, the definition and characteristics of a governance framework for public projects are provided. Finally, outlining the lack of theorization specifically on governance frameworks for public projects, we posit the research question.

3.3.1 Project management

Project management is a relatively young discipline. Whereas project management research originated from operations research and management science back in the early 1950s (Söderlund, 2011), theoretical developments in the field only started to expand around the turn of the century (e.g. Turner, 2006a; Shenhar and Dvir, 2007). Researchers have proposed various schools of thought and theoretical categorization for the field (Bredillet *et al.*, 2008; Söderlund, 2011). The epistemological foundations of project management over the past decade have been addressed (Smyth and Morris, 2007). Thus, project management has benefited from progress in research in many areas of management and ideas developed in other management disciplines (Bredillet *et al.*, 2008). Several important contributions are opening the theoretical perspectives in the field, arguing for renewed approaches including theories from social sciences (activity theory, actor-network theory and structuration theory among other), and other theories from strategic management research and the analysis of

power relations (Aubry *et al.*, 2012; Drouin *et al.*, 2013; Floricel *et al.*, 2014). As project management research has improved substantially in quality and rigour (Turner, 2010), the variety found in the study of project management lends support to theoretical pluralism and to the interdisciplinarity of the field (Söderlund, 2011). Yet, as project management extended from a technical discipline to a multidisciplinary one, there is still work to do so as to theoretically anchor that field of study (Söderlund, 2011). One of its subsets, project governance, is presented next.

3.3.2 Project governance

The discussion about project governance in project management research has expanded over the last decades, although the definition of this concept and its main origins remain ambiguous (Ahola *et al.*, 2014). Along with the development of project management as a field of study came the governance school of thought, which “aims to analyse why projects exist and define the appropriate governing mechanisms of projects as a particular kind of administrative problem and complex transaction” (Söderlund, 2011, p.163). According to Bredillet *et al.* (2008), the major influences on the governance school use an economic approach, where the project is seen as a legal entity. It first developed in the 1970s, along with contract management using transaction costs and agency theory (*ibid.*). The first references in the governance school discuss problems of contracting and governance in the construction industry (Söderlund, 2011). Yet, the governance school has extended over the years, from the temporary organization in the mid-1990s, to the governance of projects in strategic alliances, in complex consortia and in networks in the late 1990s (*ibid.*). Although many studies have been conducted in that area since the 1970s, the concept of project governance has only recently become an issue of importance in the project management community and literature (Miller and Hobbs, 2005). A basic definition of project governance comes from Müller (2009, p. 4), which clearly states that it is embedded in corporate governance:

Governance, as it applies to projects and project management, coexists within the corporate governance framework. It comprises the value system, responsibilities, processes and policies that allow projects to achieve organizational objectives and foster implementation that is in the best interest of all stakeholders, internal and external, and the corporation itself.

A recent, comprehensive study on project governance produced by Ahola *et al.* (2014) groups the main articles on project governance into two categories: those where project governance is seen as external to any specific project and those where project governance is seen as internal to a specific project. After reviewing the main origins of project governance and the main origins of governance, the authors conclude that one potential contribution to the development of project management literature is the general governance literature focusing on the role of powerful stakeholders such as governments.

A conceptual model of project governance was developed by Bekker (2013), building on the three levels of project management as presented by Morris (2013): (1) the technical level, (2) the strategic level, and (3) the institutional level. Bekker (2013) proposes a model with three schools of thought in project governance: the single-firm governance school (relating to levels 1 and 2); the multi-firm governance school (relating to levels 1 and 2); and the large capital governance school (covering levels 2 and 3 and the macro environment). Another conceptual model of project governance is proposed by Winch (2014), where governance is associated with the interface between project owners and the projects, thus linking the permanent to the temporary organizations. In addition, a conceptualization of project governance is related in Narayanan and DeFillippi (2012) where it is seen as incorporating five elements: stage gate approval process, stakeholder representation, formal roles and responsibilities, quality assurance, and contracts and sign-offs.

Thus, project governance is grounded in project management and in an economic perspective, but has extended over the past decades to encompass the complexity of networks and the plurality of actors. One specific concept embedded in project governance is a governance framework for public projects.

3.3.3 Governance framework for public projects

This section presents the definition and characteristics of a governance framework for public projects. An extensive study on governance frameworks sponsored by the *Project Management Institute*, Klakegg *et al.* (2009) discusses at length the distinctions between regimes, frameworks, and systems. It raises several terms coming from international literature on megaprojects: “governance regime” (Miller and Hobbs, 2005); “institutional arrangements and regulatory regimes” (Flyvbjerg *et al.*, 2002) and “institutional frameworks” (Miller and Lessard, 2000) (*ibid.*). Because their analysis covers an extensive literature review into the broad concept of governance, and offers a synthesis presenting the relationship between the concepts of systems, frameworks, and regimes, we adopt their definition of a governance framework as “an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose” (Klakegg *et al.*, 2009, p.60). While referring to this specific definition certainly has some limitations, it nonetheless provides some clarification of what a governance framework might be, depending on the context and applied to institutions.

Some countries have adopted governance frameworks for public projects in the last decade or so (Klakegg *et al.*, 2016; Williams *et al.*, 2010). For example, Williams *et al.* (2010) have investigated the governance frameworks for public projects in Norway and in the UK, comparing them and their characteristics. While the main objective of a governance framework is to “secure successful investments” in a

democratic government mainly by focusing on the front-end phase of the project (Christensen, 2009, p.11), the main characteristics of a governance framework could be summarized as (Klakegg *et al.*, 2008; Samset *et al.*, 2006):

- a distinct set of milestones and decision gates that would apply to major public projects in all sectors of a government;
- secure political control with fundamental go/no-go decisions;
- an adequate analytical basis for decisions;
- the structure of the framework itself (explicitly stated ends/goals; users; framework elements; etc.); and
- the detailed governance elements (mostly concerning cost estimation and time planning).

While those characteristics are presented here, their interpretation and implementation may vary greatly from one government to another. Some governments have adopted governance frameworks with the explicit objectives of enabling decision-makers to make better informed decisions up front (by accurately defining needs, options and cost estimates for major projects), and defining the process whereby each project is to be managed, including designating the players who are to be held accountable (Christensen, 2011; Williams *et al.*, 2009). In his analysis of the Norwegian quality assurance scheme (a governance system covering the front end of projects), Christensen (2011) notes that designing such a system is much more of a political issue than a technical or financial one. As examples of improved project performance have shown in Norway and the United Kingdom, there is an assumption that introducing a governance framework will improve the outcomes of public infrastructure projects (Major Projects Authority, 2013; Samset and Volden, 2013). Yet, the theoretical aspects of having governments adopt different governance frameworks have so far not been investigated. A governance framework is a concept embedded within project governance, which is itself a subset of project management. But governance frameworks for public projects have been investigated for their

consequences on performance without much consideration of their theoretical anchoring within public administration.

3.3.4 Research question

As the existing literature on project governance has proved insufficient to understand the theoretical anchoring of governance frameworks for public projects, we ask the following research question: what is the relevance of a governance framework for major public projects? The next section presents the methodology used to answer this question.

3.4 Methodology

In order to answer the research question, this research takes an epistemic stance within phronetic research (Flyvbjerg, 2001). Phronetic research is based on value rationality to study how the theories and laws are applied in society (*ibid.*). Flyvbjerg (2005) advocates that researchers promote this reflexive research over epistemic social sciences based on the natural science model. Flyvbjerg (2001) posits that the fundamental questions for phronetic research are: (1) Where are we going? (2) Is this desirable? (3) What should be done? (4) Who gains and who loses; by which mechanisms of power? He described the phronetic researcher as embracing contextualism, situational ethics, and interpretation (*ibid.*).

Starting from those questions, we aim for theory development, as there has been relatively little theorization concerning major public projects with regards to the larger field of public administration. Alvesson and Kärreman (2007) suggest an approach that uses theory and imagination to open up for discovery. We use abduction, or hypothetical inference (Van de Ven, 2007), to propose a theoretical embeddedness of project governance frameworks within the larger field of public administration.

Whereas the concept of “good governance” has been largely scrutinized and decomposed in many principles or dimensions, the underlying values behind those principles are rarely questioned. For example, the OECD proposes international benchmarks on the principles of corporate governance and on the principles of corporate governance for state-owned enterprises (OECD, 2004, 2015). One of the most accepted set of good governance principles is that of the United Nations Development Program (Graham et al., 2003). Those principles are (1) Legitimacy and Voice, (2) Direction, (3) Performance, (4) Accountability and (5) Fairness (UNDP, 1997). In the public realm, Argyriades (2006) contends that there is no such thing as ‘one best way’. Institutional values and objectives are the drivers of what is considered as “good governance” (Mazouz, 2014). In project governance, “good governance” has also been the subject of inquiry for researchers (e.g. Abednego and Ogunlana, 2006; Ghosh *et al.*, 2013).

Based on a literature review covering selected influential works in the fields of public administration and project management, we use an abductive mode of inquiry for theory building (Van de Ven, 2007; Winch and Leiringer, 2015). Our method follows Stoker (1998), who has made five propositions to develop governance as theory. Based on the UNDP principles of good governance, we contend that a governance framework might be of value for a government, specifically in three regards: legitimacy, efficiency (encompassed within the principle of performance), and accountability. Those three dimensions have been selected as they parallel Bemelmans-Videc *et al.* (2011)’s basic threefold arrangement of public policy instruments: regulations / sticks (legitimacy), economic means / carrots (efficiency) and information / sermons (accountability). We advance three propositions, which are subsequently explained in the next section:

1- a governance framework for major public projects can lead to greater government efficiency;

2- a governance framework for major public projects can lead to greater government legitimacy; and

3- a governance framework for major public projects can lead to greater government accountability.

3.5 Results

3.5.1 Proposition 1 – A governance framework for major public projects can lead to greater government efficiency

Since the industrial revolution in the eighteenth century, efficiency has been a central concern both for public administrations and more generally for all organizations (Schacter, 2007). Although the concept of efficiency has greatly evolved, we refer here to the Oxford Dictionary definition of “achieving maximum productivity with minimum wasted effort or expense” (online). This section argues that it might be relevant for a government to adopt a governance framework for major public projects for enhanced efficiency. By delving into three influential schools of thought in public administration: Scientific Management, New Public Management and New Public Governance, it is argued that a governance framework for public projects can enhance efficiency by favouring analytical over political decision-making, by strengthened, centralized control and by improved governance.

3.5.1.1 Scientific Management

Woodrow Wilson is often associated with the birth of the study of public administration in the United-States (Rutgers, 1997). His essay is famous notably for bringing about the classic dichotomy between public administration and politics: “The field of public administration is a field of business. It is removed from the hurry and strife of politics” (Wilson, 1887, 2012, p.22). Thus, the first decades of the 20th century mostly made no distinction between the study of public administration and

the study of private industrialization that was taking place at that time. This period, named “Orthodoxy”, gave rise to many thinkers who have been most influential: most notably Frederick Taylor (1912, 2012), Luther Gulick (1937, 2012) and Max Weber (1946, 2012). Though each author had a distinct discourse, the underlying theme of “Scientific Management” promoted the division of work through specialization and bureaucratization, in order to improve organizational efficiency. Thus, efficiency was already at that time a central concern, and the administrator’s main responsibility was to ensure the coordination of the units of specialization through POSDCORB (planning, organizing, staffing, directing, co-ordinating, reporting and budgeting) (Gulick, 1937, 2012). As Woodrow Wilson stated, as early as 1887 in *The Study of Administration*: “It is the object of administrative study to discover what government can properly and successfully do, and, secondly, how it can do these proper things with the utmost possible efficiency and at the least possible cost...” (Wilson, 1887, 2012, p.16).

The birth of project management can be associated with the orthodox movement in public administration (Morris, 2013). In the 1950s, the optimization school characterized the majority of the thinking and research in project management, reflecting an early concern for the underlying value of efficiency. According to Bredillet *et al.* (2008), the optimization school is very Taylorian in its approach, as its main premise is to organize and plan the project in order to strive for efficiency. Although project management is now much more diverse and touches on many more dimensions, the historical core has always been to enhance control by breaking complex projects into more manageable tasks in order to deliver efficiently within budget, on time and scope. The stage-gate system, which is central to project management and a main characteristic of a governance framework, has been designed to enhance control over the process, by allowing the relevant stakeholders to assess the end of a phase of a project before giving the authorization to start the next phase (Morris, 2013). Not only does a governance framework for public projects allow

enhanced control, it also centralizes decisions at the political level, thus securing political control with fundamental go/no-go decisions (Christensen, 2011).

Lastly, Scientific Management puts a lot of emphasis on rationality. Saint-Simon, a precursor of Taylor and Fayol, has famously stated that the government of people would be replaced by the administration of things, implying that there would be no need for democracy, because administrators would be appointed on the basis of their professional competencies (Strachan, 1999). Scott and Davis (2007, p.35) highlight that control is central to rational systems, which refer to “the extent to which a series of actions is organized in such a way as to lead to predetermined goals with maximum efficiency.” Thus, politicians have to make decisions based on a rational, analytical basis. This is what a governance framework for public projects is intended to achieve, by emphasizing the professional quality of the premises and documents behind such decisions (Christensen, 2009).

However, such an idealized rationality was severely criticized in the second half of the last century. Two schools of thought emerged as counter-currents to this Scientific Management: the Neo-classical school and the Public Administration. Barnard (1938, 1968), a famous Neo-classical figure, argued that management had much to do with human relations, and that strict scientism was thus misleading. Another influential scholar of the Neo-classical school is Simon (1945, 1997), who argued that the dichotomy between facts and values presented in Scientific Management was false, introducing instead the concept of ‘bounded rationality’. It was around the same period that the Public Administration (PA) model arose, with Waldo and his *Administrative State* (Waldo, 1948). The democratic principles were reintegrated into the core of the study of public administration, and the orthodox dichotomy between politics and public administration was refuted (Raadschelders, 2008). The importance of the players and of the power relations between them have also been raised as important issues to nuance this idealized, orthodox view of rationality and efficiency

(Crozier, 1963). They will be touched upon in the next section, under Legitimacy (3.4.2). But for now, we remain with the same dominant view, and fast forward to the 1980s and 1990s with New Public Management.

3.5.1.2 New Public Management

The 1980s and 1990s saw the emergence of a new trend, the New Public Management (NPM), as a countercurrent to Public Administration. NPM emerged from two streams of ideas: the ‘new institutional economics’ and business-type ‘managerialism’ in the public sector in the tradition of Scientific Management (Hood, 1991). The dichotomy between politics and public administration returned, sharper than ever. That was because the value base of NPM is efficacy of competition and the marketplace, assuming that private-sector management is better than public-sector administration, and thus the public has to learn from the private-sector’s “best practices” (Christensen, 2009; Osborne, 2010). This school of thought developed mostly from practitioners and politicians, with few supporters among scholars (Aucoin, 1990; National Performance Review, 1993, 2012). Thus, NPM is essentially a philosophy of *generic management* that sees the public-private dichotomy as essentially obsolete (Peters and Pierre, 1998). Hood (1991) associates the rise of NPM with four other administrative megatrends: the reversal of government growth, the shift toward privatization, the development of automation, and the development of a more international agenda. This school of thought has been the most influential in many countries, including the UK, Australia, New Zealand, and Canada (Brown-John, 1996; Hood, 1991). Norway, which was reluctant at first, pursued a more radical NPM path from 2001-2005 (Christensen, 2009). Even today, although many are questioning the legitimacy of NPM’s principles (Levy, 2010), it is still predominant in many governments (Andrews *et al.*, 2011).

In light of the NPM, a governance framework for public projects could contribute to increased efficiency by ensuring that the projects' documentation required for approval at a decision gate is complete and includes: a clear definition of the need and the project objectives, measures of performance and control systems (to ensure compliance with project scope, schedule, resource, and budget, within defined contingencies, associated with Morris' level 1) (Morris, 2013). This is very well aligned with some of the doctrinal components of NPM presented by Hood (1991, pp.4-5), namely: "Explicit standards and measures of performance" and "Greater emphasis on output controls". In fact, Williams *et al.* (2010) argue that the whole framework is a control measure. Referring back to the dichotomy of politics and administration so entrenched in NPM, Williams *et al.* (2010, p.43) affirm that the intention behind the Norwegian governance framework was "to establish a system where politics and administration is well divided, with the interplay between these two sides well understood."

Yet, another feature of NPM can be more or less exploited in a governance framework: to use private consultants as experts to ensure quality of project documentation. The Norwegian governance framework is based on this premise, as the involvement of external, independent experts is seen as strengthening the control function (Christensen, 2011). Not only was this feature of the governance framework used for greater control, but it was also used to include private, 'neutral' expertise (Christensen, 2011). On the other side, the United Kingdom, which originally used many private consultants to review projects' documentation according to their governance framework, in the last decade decided to build internal capacity and to use internal, public reviewers (NAO, 2012). While two classical justifications for the doctrinal components of the NPM are to "gain efficiency advantages of use of contract or franchise arrangements inside as well as outside the public sector" and "rivalry as the key to lower costs and better standards" (Hood, 1991, p.5), caution has been raised concerning public contract management. One of the main issues

regarding efficiency is that public organizations need the expertise and capacity to monitor and assess the work provided by private ones (Goodsell, 2007; Winch *et al.*, 2012). After many decades of forceful domination, NPM is now slowly giving way to a new, emerging school of thought: the New Public Governance.

3.5.1.3 New Public Governance

Osborne (2010) qualified NPM as a 'transitory stage' between Public Administration and the New Public Governance (NPG), which according to him is "both a product and a response to the increasingly complex, plural and fragmented nature of public policy implementation and service delivery in the twenty-first century." (Osborne, 2010, p.9). While some refer to this school of thought as 'post-NPM', the idea is that the state has to rebuild a central capacity, as it is an important player at the centre of a complex network involving many different stakeholders (Christensen, 2009). Just as NPM had theoretical roots in institutional economics and managerialism, NPG is anchored in institutional and network theory (Osborne, 2010). Efficiency is still a central concern, yet, the state is seen as pluralist, and more emphasis is placed on negotiation, networks and relational contracts in order to collaborate across organizational boundaries (*ibid.*). Coming back to Morris' levels of project management, a governance framework for public projects aims to frame level 2, which represents the project's strategic envelope, by accentuating the front-end development and definition of the project as well as stakeholder management (Morris, 2013). In their comparative study of the Norwegian and the UK frameworks, Williams et al. (2010, p.49) concluded that: "All cases appeared to confirm the importance of a governance framework. It is clear that the complexity involved in the decision-making, technology and contracts means that a governance framework is particularly important, although it may be a challenge for quality assurance." Thus, a governance framework for public projects, in today's complexifying world, might be a useful tool for governments to improve the overall governance of their projects.

By looking at three influential schools of thought in public administration, we have proposed that a governance framework for major public projects can lead to greater government efficiency, since it makes it possible to base decisions on a more analytical (rational) basis, to centralize and strengthen control, and to improve the governance of projects by putting emphasis on the front-end phase of projects and stakeholder management. The next section explores the concept of legitimacy.

3.5.2 Proposition 2 – A governance framework for major public projects can lead to greater government legitimacy

Legitimacy is a wide concept that has been central both to political science and to public administration. In political science, legitimacy usually refers to “the degree to which a government’s procedures for making and enforcing laws are acceptable to the people” (UNPD, 1997, p.34). By looking at specific themes in three schools of thought: Public Administration, New Public Management and New Public Governance, it is suggested that a governance framework for public projects can enhance a government’s legitimacy. First, by insuring secure, centralized political decision-making, second by exerting a regulatory system based on an analytical process to limit individual power, and lastly, by enhancing the governments’ client capability.

3.5.2.1 Public Administration

Public Administration’s (PA) school of thought developed around the 1950s, as a reaction against Scientific Management, most notably with Waldo and his *Administrative State* (1948). PA’s theoretical roots lie in political science and public policy (Osborne, 2010). The democratic principles were reintegrated at the core of the study of public administration, and the orthodox dichotomy between politics and public administration refuted. Whereas in Scientific Management rationality was viewed as the source of legitimacy, in PA it was democracy itself: “the only thing

which can legitimize authority in a democratic society is democracy itself' (Waldo, 1948, p.103). Around the same time, Weber suggested that there were three types of legitimate authority: legal authority based on rational grounds, traditional authority and charismatic authority (Weber, 1947). In Weber's view, a bureaucracy refers to an administrative structure developed to answer the needs of the rational-legal mode of authority (Scott and Davis, 2007). While bureaucracy originally emanates from Scientific Management and the conventional view of concentration of units of production, in Public Administration it was seen as of central importance in a democracy, being a crucial part of government as a way to enhance efficiency (Rosenbloom and McCurdy, 2006).

Coming back to the interest of a governance framework for a government, it is suggested that it might enhance its legitimacy by providing a secure and centralized political decision-making process. As Christensen (2009, p.15) explains, a governance framework is: "meant to take back central political power over the decisions of major public projects and anchor it at the central level". In a report reviewing the performance of the Norwegian governance framework since its adoption in 2000, Samset and Volden (2013, p.11) highlight that "Policymakers are of course free to make the final choice of conceptual solutions, according to their own preferences. Data suggests however that in 2/3 of the cases, the government has followed the recommendations of the [private experts]." The governance framework, being 'a kind of structural innovation,' is a separate system not integrated into the government hierarchy (Christensen, 2009, p.26). One disadvantage of this framework, as it gives more central, political power, is resistance from other government units, ministries and agencies (*ibid.*). While in the 1950s bureaucracy and hierarchy were associated with efficiency, the growing importance of the recognition of various actors and power relations took over and bureaucracy as a tool for government efficiency became seriously doubted.

In an influential study of two public, bureaucratic organizations, French sociologist Crozier (1963) worked at understanding the bureaucratic characteristics and vices, as he considered that far from being efficient, they were rather debilitating. His theory highlighted the central importance of players and power relations in the origin of the bureaucratic phenomenon. He acknowledged that all individuals have some degree of power in their relation with others, mostly enhanced by unpredictability of behaviour (irrational behaviour to external players) and the control exerted (encouraging being indispensable and keeping information hidden) (*ibid.*). Thus, a dual system emerges, formal and informal, which generates inefficiency even if the structure was designed to reflect rationality (*ibid.*). In organization theory and political science, this became an important stream of research and theorizing, later known as 'strategic analysis' most notably with the book *Actors and Systems* by Crozier and Friedberg late in the 1970s (Crozier and Friedberg, 1977; Hardy, 1995). Crozier (1963) proposed that power relations have to be acknowledged and regulated in order to foster negotiation and communication; that cultural dimensions are important, being an important obstacle to any significant change; and that there is a need for bureaucratic structures to be reduced and flattened. This probably laid the ground for the development of the NPM philosophy.

3.5.2.2 New Public Management

With NPM reforms, bureaucratic structures have been severely attacked (National Performance Review, 1993, 2012). NPM tended to re-establish the primacy of representative government and managerial principles over bureaucracy (Aucoin, 1990). By valuing government downsizing and private expertise, NPM emphasized the need for contract management and horizontal integration. While a governance framework for public projects secures central political control, the system is anchored at the institutional level, thus, limiting the influence and power of individual politicians who usually stay for short periods (Christensen, 2009). Moreover,

legitimacy is to be gained by the quality of the projects' documentation required under the governance framework, whether it comes from private experts or civil servants. While from a political perspective, outsourcing to private firms raises concerns over the legitimacy and integrity of the political process (Romzek, 2006), the New Public Governance promotes a state with greater capability.

3.5.2.3 New Public Governance

New Public Governance emphasizes the pluralistic nature of the state, and the need for stakeholder management to address large, complex inter-organization networks (Osborne, 2010). With the recognition of the growing plurality of stakeholders, the question of legitimacy becomes more complex, as diverse stakeholders proffer alternative bases for legitimation (Scott *et al.*, 2011). Increasing complexity and diversity have put pressure on public organizations to soften original bureaucracies and to adopt new transversal modes of governance (Kettl, 2002). Yet, after some decades of government downsizing implying the loss of internal expertise, many political systems are now trying to re-build the state and create a more central governance capacity (Christensen, 2009). According to Moe (1984, p.476): "the best thing that could happen [...] is to have a first-class public sector, appropriately limited in size and functions, but fully capable of providing the legal, economic, and public goods infrastructure." In public projects, a government has to develop its client capability as owner, so that services are delivered according to its chosen strategy (Winch *et al.*, 2012). This is what a governance framework for public projects aims at. By promoting specialized attention and capacity structure within the government (Christensen, 2009), a governance framework reinforces the client capability of the government as owner of the public projects it undertakes.

By looking at three influential schools of thought in public administration, this section has argued that a governance framework for public projects enables greater

government legitimacy. First, it allows a secure, centralized political decision-making process; second, it limits individual power by being a regulatory system based on an analytical process; and third, it enhances client capability from the government. The next section tackles the question of accountability.

3.5.3 Proposition 3 – A governance framework for major public projects can lead to greater government accountability

This section argues that a government might be interested in adopting a governance framework for public projects for greater accountability. Accountability “involves concern for the legal, institutional, and procedural devices by which public servants may be held accountable or answerable for their actions” (Kernaghan, 1978, 2005, p.174). And yet, Kernaghan (*ibid.*) admits that it is becoming increasingly difficult to enforce, because of complex networks rendering it hard to single out specific individuals who have taken specific decisions that have had specific consequences. By looking at New Public Management, New Public Service and New Public Governance, it is argued that a governance framework for public projects can enhance accountability by offering a comprehensive process with clear definition of roles and expected outcomes, enhanced transparency and quality assessment of the projects’ documentation.

3.5.3.1 New Public Management

Accountability has not only become more difficult to enforce because of increased complexity, but also because of media scrutiny and the negativity bias. People appear to pay more attention to negative than to positive information, so politicians and public servants have developed strategies for avoiding blame (Hood, 2011). Hood (2011) exposes the various mechanisms and strategies for blame avoidance in the public sector for four sets of players (Top/Front-line/Middle level and Civil society): Presentational, Agency and Policy strategies. One example for public organizations is

to develop partnership structures in order to avoid blame through shared responsibility and organizational complexity (*ibid*). This resonates with Moe's concern that a 'third-party government' might lose much of its decision-making capacity to the private sector: "when a public function is assigned to a private entity, usually through a contract, there is an inevitable weakening in the lines of political accountability" (Moe, 1987, 2012, p.475). In 1990, Aucoin (1990) argued that there was a need for a new emphasis on organizational designs for public management, as public accountability was perhaps chief among issues which had yet to be fully addressed. In a famous article exposing the doctrinal components of NPM, Hood (1991) suggested two premises required for accountability: clear assignment of responsibility for action and clear statement of goals.

Accountability in the public administration is complex and difficult to tackle, and it might be even more so for complex public projects involving many organizations and many players. With the implementation of a governance framework for public projects, a government enhances accountability by providing a comprehensive process, with clear definition of roles and expected outcomes. In their investigation of the Norwegian and the UK governance frameworks, Williams *et al.* (2010) confirmed the importance of such a framework to support the complexity involved in decision-making, the technology and the contracts of major infrastructure projects. Turning now to the school of thought of New Public Service, accountability from a strictly managerial perspective is broadened to public accountability.

3.5.3.2 New Public Service

The school of thought of New Public Service (NPS) extended from Public Administration, asserting that the core of the public administration was democratic citizenship (Denhardt and Denhardt, 2000). The government thus has to serve the public interest and respond to public values (Bozeman, 2007). Thus, the concept of

democracy is reemphasized over efficiency, although this latter is redefined rather than rejected. NPS values greater public participation, improved public governance and enhanced transparency (Tait, 1997). With regard to public projects, Flyvbjerg *et al.* (2003) suggest that democracy and efficiency go along for successful decision-making. They propose four basic instruments of accountability to enhance decision-making: transparency, performance specifications, explicit formulation of regulatory regime, and the involvement of risk capital (*ibid.*). Of those, they state that “transparency is the main means of enforcing accountability on the public sector” (Flyvbjerg *et al.*, 2003, p.139).

A governance framework for public projects offers enhanced process transparency. For example, in Norway, since 2002 the Ministry of Finance has been funding an independent research centre, the Concept Research Program, which is based at the Norwegian University of Science and Technology (NTNU). Its mandate is primarily to collect data in order to study the performance of projects subjected to their governance framework, thus enhancing the overall transparency of the process (Samset and Volden, 2013). In the United Kingdom, the state’s governance framework has been subjected to various external organizations, from the National Audit Office to the House of Commons (Committee of Public Accounts, 2012; NAO, 2012). Yet, although some significant improvements have been made with the implementation of a governance framework, there is still room for improvement with greater public participation and scrutiny in the process, notably by giving the public full access to the projects’ documentation and reports (Christensen, 2009).

3.5.3.3 New Public Governance

The question of accountability is central in NPG, as it becomes more complex and multi-faced in a fragmented state (Osborne, 2010). Building on a legacy of the NPM and its emphasis on performance management and performance metrics, NPG

developed a culture of public performance evaluation (*ibid.*). Power (1997) refers to the growing influence of practices of evaluation and inspection as “the Audit explosion.” He argues that its institutional effect has been the “transformation of existing, and the emergence of new, formal institutions for monitoring” (Power, 2003). He also explains that there are two different but convergent bases for the audit explosion, the auditing of performance in the name of efficiency and quality assurance and assessment (*ibid.*). On the downside, the audit explosion has raised the concern of greater risks of an illusion of control (Tremblay and Malsh, 2012). On a positive note however, accountability coupled with organizational learning improves performance in the long-run (Greiling and Halachmi, 2013).

In public project management, delivering quality is essential for added value (Morris, 2013). Especially in the front-end phase of the project, it is crucial to “develop quality control and due diligence to establish just how reliable, or unreliable, the business case, cost-benefit analysis, and social and environmental impact assessment are for a given project, and to decide the implications of this for the project go-ahead” (Flyvbjerg, 2013, p.3). This is exactly what a governance framework for public projects aims to achieve, by assessing the quality of the projects’ documentation. The Norwegian governance framework is even named the ‘Quality Assurance Scheme’ and puts heavy emphasis on project reviews by external experts (Christensen, 2009). Samset and Volden (2013) recognize that the quality of conceptual appraisals has improved over time, along with the quality assurance reports. This reinforces the value of a governance framework to ensure the quality of project documentation, and also the importance of organizational learning in the process.

This section highlights the potential of a governance framework for public projects for enhanced accountability. By looking at New Public Management, New Public Service and New Public Governance, it has been argued that a governance framework allows for a clear definition of roles and outcomes, enhanced transparency and quality

assessment of projects' documentation. This concludes our main argument as to why a democratic government would adopt a governance framework for public projects. The next section presents a general discussion of those propositions and their relevance to the governance of public projects.

3.6 Discussion

In light of the results presented above, two main points are discussed here. First, we come back to the objective of the article and argue how the research question has been answered. Second, we discuss the results from a phronetic perspective.

3.6.1 Theoretical anchoring of governance frameworks for public projects

Whereas project governance has been relatively theoretically developed in the larger field of project management (Ahola *et al.*, 2014), the literature on public administration can deepen our theoretical understanding of project governance applied to governance frameworks for major public projects. The three propositions developed so far have been elaborated on important themes and schools of thought in public administration that have shaped the last century. Public administration as a field of study has always been struggling to define itself as distinct from politics and from private management. The neoliberalism of the 1980s took precedence in governments with the rise of the NPM movement (Hood, 1991). As the issues of private and public management surfaced, along with governance concerns, more emphasis developed around the questions of public governance, with the birth of New Public Governance (Osborne, 2010).

Public administration as a field can certainly enrich our current understanding of project governance, and more broadly the larger field of project management. Hybridization is now advocated for theory building (Boxenbaum and Rouleau, 2011), as well as pluralism to develop the field of project management (Söderlund, 2011). So

far, we have been building conceptual bridges between public administration and project governance, which is a first step in that direction. Project governance frameworks are tools which allow the operationalization of project governance (Lascoumes and Le Galès, 2004). Yet, we contend that the relevance of such a tool for a government is multifaceted and encompasses the three dimensions of efficiency, legitimacy and accountability. So far, project governance frameworks have been studied for their results on performance, while other important dimensions have been omitted (Klakegg *et al.*, 2016). This theorization is important to develop, not only for enhancing performance but within a larger perspective. This is in line with stakeholder theory (Eskerod *et al.*, 2015) and consideration of the wider social and environmental impacts of megaprojects (Molle and Floch, 2008).

3.6.2 Phronetic research applied to governance frameworks for public projects

As stated by Flyvbjerg (2001), phronetic research reflects the values and interests of various social groups. In project management research, contextual thinking has gained importance over the years, bringing to the fore the embeddedness and ‘fit’ of projects in their context and highlighting the importance of learning (Engwall, 2003; Morris, 2013). However, projects do share similarities, by being political (Clegg and Kreiner, 2013) and involving a plurality of stakeholders (Eskerod *et al.*, 2015). According to Winch (2001, p.799), a governance framework needs to be flexible, yet it is “limited by the institutional context within which it trades.” Thus, we adopted in this article the perspective that major public projects are embedded in their institutional framework, and this anchoring at the institutional level requires that cultural and political dimensions be taken into consideration.

Thus, the relevance of a governance framework for a government may vary according to its underlying values. The desirability of such a tool may vary with respect to the three dimensions put forward. As Bemelmans-Videc *et al.* (2011)’s public policy

instruments include regulations / sticks (legitimacy), economic means / carrots (efficiency) and information / sermons (accountability), the combination of those three aspects might be operationalized differently according to the government in place. This is important to keep in mind while doing research in public project governance, as contextualism, reflexivity and interpretation are important for the phronetic researcher.

Our results suggest that while few theoretical developments have attempted to link project governance to public administration, this initial abductive inquiry into theoretical building proved not only to be perceptible but also promising for future developments.

3.7 Conclusion

This initial theory building used abduction to highlight specific dimensions for which a governance framework for major public projects could be relevant. Our initial research question was: what is the relevance of a governance framework for major public projects? Using abductive reasoning, we suggested three propositions on the dimensions of efficiency, legitimacy and accountability. The main contribution of this article is twofold. First, some conceptual bridges between the interdisciplinary fields of public administration and project management are elaborated, anchoring the concept of a governance framework for public projects within public administration. Second, three propositions have been put forward that will be useful for further empirical research on the governance of major public projects. There are some inherent limitations with this theoretical discussion, as this abductive theory building has not been tested so far, and as we limited our analysis to a democratic government. Those three propositions will be validated in a subsequent step. One possibility that could generate rich empirical testing is critical discourse analysis (Mantere and Vaara, 2008; Vaara and Tienari, 2004). By analyzing the discourse of public administrators

and those involved in major public projects, and various documents related to the governance frameworks of major public projects, it would be possible to gain further insight into the justifications and interpretation of those players. By researching the underlying reasons as to why a governance framework is used, the players' interpretation could not only validate those propositions but also generate a refined comprehension of the phenomenon. The discursive perspective has proven quite relevant so far for social science research and has generated important contributions (e.g. Foucault, 1991; Gregory, 2014; Skelcher *et al*, 2005).

As we have discussed throughout this article, governments have to adapt to the increasing complexities and challenges brought forward by numerous major public projects. Based on the account of Moore and Hartley (2010), it could be argued that the adoption of a governance framework for public projects is by itself an innovation in governance. This article suggests that a government could find value in a governance framework for major public projects for enhanced efficiency, legitimacy and accountability. This conceptual article is the initiation of a wider academic investigation into public projects, their anchoring in the public sector and values, and will provide many more opportunities to enhance our knowledge of public project management.

3.8 References

- Abednego, M. P., and Ogunlana, S. O. (2006). Good project governance for proper risk allocation in public–private partnerships in Indonesia. *International Journal of Project Management*, 24, 622-634.
- Ahola, T., Ruuska, I., Artto, K., and Kujala, J. (2014). What is project governance and what are its origins? *International Journal of Project Management*, 32(8), 1321-1332.
- Alvesson, M., and Kärreman, D. (2007). Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32(4), 1265-1281. DOI: 10.5465/AMR.2007.26586822
- Andrews, R., Boyne, G. A., and Walker, R. M. (2011). Dimensions of publicness and organizational performance: A review of the evidence. *Journal of Public Administration Research and Theory*, 21(s3), i301-i319.
- Argyriades, D. (2006). Good governance, professionalism, ethics and responsibility. *International Review of Administrative Sciences*, 72(2), 155-170. DOI: 10.1177/0020852306064607
- Aubry, M., Sicotte, H., Drouin, N., Vidot-Delerue, H., and Besner, C. (2012). Organisational project management as a function within the organisation. *International Journal of Managing Projects in Business*, 5(2), 180-194.
- Aucoin, P. (1990). Administrative reform in public management: Paradigms, principles, paradoxes and pendulums. *Governance*, 3(2), 115-137.
- Barnard, C. I. (1938, 1968). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Bekker, M. (2013). Project governance: “Schools of thought”. *South African Journal of Economic and Management Sciences*, 17(Special Issue), 22-32.
- Bemelmans-Videc, M. L., Rist, R. C., and Vedung, E. O. (2011). *Carrots, sticks, and sermons: Policy instruments and their evaluation* (3rd ed.): Transaction Publishers.
- Boxenbaum, E., and Rouleau, L. (2011). New knowledge products as bricolage: Metaphors and scripts in organizational theory. *Academy of Management Review*, 36(2), 272-296.
- Bozeman, B. (2007). *Public values and public interest: Counterbalancing economic individualism*. Washington, DC: Georgetown University Press.
- Bredillet, C. N., Turner, J. R., and Anbari, F. T. (2008). Exploring research in project management: Nine schools of project management research. *Project Management Journal*, a series of six editorials between June 2007 and September 2008, 1-23.
- Brown-John, L. (1996). Review of 'the new public management: Canada in comparative perspective' by peter aucoin. *Canadian Journal of Political Science*, 29(3), 573-574.

- Christensen, T. (2009). *The Norwegian front-end governance regime of major public projects – a theoretically based analysis* (Vol. 23, pp. 1-74). Oslo, Norway: Concept Research Program.
- Christensen, T. (2011). The Norwegian front-end governance regime of major public projects. *International Journal of Managing Projects in Business*, 4(2), 218-239. DOI: <http://dx.doi.org/10.1108/17538371111120216>
- Clegg, S., and Kreiner, K. (2013). Power and politics in construction projects. In N. Drouin, Müller, Ralf, and Sankaran, Shankar (Ed.), *Novel approaches to organizational project management research: Translational and transformational* (pp. 268-293): Copenhagen Business School Press.
- Committee of Public Accounts. (2012). Assurance for major projects. House of Commons, London, UK.
- Crawford, L. H., and Helm, J. (2009). Government and governance: The value of project management in the public sector. *Project Management Journal*, 40(1), 73-87. DOI: 10.1002/pmj.20107
- Crozier, M. (1963). *Le phénomène bureaucratique*: Éditions du Seuil/Points #28-Civilisation.
- Crozier, M., and Friedberg, E. (1977). *L'acteur et le système : Les contraintes de l'action collective*. Paris: Éditions du Seuil.
- Denhardt, R. B., and Denhardt, J. V. (2000). The new public service: Serving rather than steering. *Public Administration Review*, 60(6), 549-559.
- Drouin, N., Müller, R., and Sankaran, S. (2013). *Novel approaches to organizational project management research: Translational and transformational*: Copenhagen Business School Press.
- Engwall, M. (2003). No project is an island: Linking projects to history and context. *Research Policy*, 32(5), 789-808.
- Eskerod, P., Huemann, M., and Savage, G. (2015). Project stakeholder management—past and present. *Project Management Journal*, 46(6), 6-14. DOI: 10.1002/pmj.21555
- Florice, S., Bonneau, C., Aubry, M., and Sergi, V. (2014). Extending project management research: Insights from social theories. *International Journal of Project Management*, 32(7), 1091-1107. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.02.008>
- Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*: Cambridge University Press.
- Flyvbjerg, B. (2005). Social science that matters. *Foresight Europe*(2), 38-42.
- Flyvbjerg, B. (2013). Quality control and due diligence in project management: Getting decisions right by taking the outside view. *International Journal of Project Management*, 31(5), 760-774. DOI: <http://dx.doi.org/10.1016/j.ijproman.2012.10.007>
- Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6-19.

- Flyvbjerg, B., Bruzelius, N., and Rothengatter, W. (2003). *Megaprojects and risk: An anatomy of ambition*. Cambridge, UK: Cambridge University Press.
- Flyvbjerg, B., Holm, M. S., and Buhl, S. (2002). Underestimating costs in public works projects: Error or lie? *Journal of the American Planning Association*, 68(3), 279-295.
- Foucault, M. (1991). Politics and the study of discourse. In C. G. G. Burchell, and P. Miller (Eds.), *The Foucault effect: Studies in governmentality: With two lectures by and an interview with Michel Foucault* (pp. 53-72). Chicago: University of Chicago Press.
- Ghosh, S., Kwak, Y. H., and Cheerla, A. K. (2013). Dimensions and codes of good project governance. Paper presented at the IRNOP, Oslo.
- Goodsell, C. T. (2007). Six normative principles for the contracting-out debate. *Administration and Society*, 38(6), 669-688.
- Graham, J., Amos, B., and Plumptre, T. (2003). Policy brief no.15: Principles for good governance in the 21st century (pp. 9): Institute On Governance.
- Gregory, R. (2014). Assessing 'good governance': 'Scientific' measurement and political discourse. *Policy Quarterly*, 10(1), 15-25.
- Greiling, D., and Halachmi, A. (2013). Accountability and organizational learning in the public sector. *Public Performance and Management Review*, 36(3), 380-406.
- Gulick, L. (1937, 2012). Notes on the theory of organizations. In *Classics of public administration*, 7th ed. (pp. 81-89). Boston, MA: Wadsworth.
- Hardy, C. (1995). *Power and politics in organizations*. Aldershot: Dartmouth Publishing Company.
- Hood, C. (1991). A public management for all seasons? *Public Administration*, 69(1), 3-19.
- Hood, C. (2011). *The blame game: Spin, bureaucracy, and self preservation in government*. Princeton, NJ: Princeton University Press.
- Kernaghan, K. (1978, 2005). Changing concepts of power and responsibility in the Canadian public service. In B. W. Carroll, D. Siegel, and M. Sproule-Jones (Eds.), *Classic readings in Canadian public administration* (pp. 166-181). Toronto, ON: Oxford University Press.
- Kettl, D. F. (2002). *The transformation of governance: Public administration for twenty-first century America*. Baltimore, Maryland: Johns Hopkins.
- Klakegg, O. J., Williams, T., and Magnussen, O. M. (2009). *Governance frameworks for public project development and estimation* (284p.). Newtown Square, PA, US: Project Management Institute.
- Klakegg, O. J., Williams, T., Magnussen, O. M., and Glasspool, H. (2008). Governance frameworks for public project development and estimation. *Project Management Journal*, 39, S27-S42.
- Klakegg, O. J., Williams, T., and Shiferaw, A. T. (2016). Taming the 'trolls': Major public projects in the making. *International Journal of Project Management*, 34(2), 282-296. DOI: <http://dx.doi.org/10.1016/j.ijproman.2015.03.008>

- Lascoumes, P., and Le Galès, P. (2004). L'action publique saisie par ses instruments. In P. Lascoumes and P. Le Galès (Eds.), *Gouverner par les instruments* (pp. 11-44). Paris: Presses de Sciences Po.
- Levy, R. (2010). New public management: End of an era? *Public Policy and Administration*, 25(2), 234-240.
- Major Projects Authority. (2013). Annual report. Cabinet Office, London, UK.
- Mantere, S., and Vaara, E. (2008). On the problem of participation in strategy: A critical discursive perspective. *Organization Science*, 19(2), 341-358.
- Mazouz, B. (2014). De l'analyse... À la mise en oeuvre des stratégies des organisations de l'état: "The dimension of publicness" In B. é. i. Mazouz and J.-M. p. Toulouse (Eds.), *La stratégie des organisations de l'état : Contexte d'analyse, paramètres de décision et gestion du changement* (pp. 13-35). Quebec: Presses de l'Université du Québec.
- Miller, R., and Hobbs, B. (2005). Governance regimes for large complex projects. *Project Management Journal*, 36(3), 42-50.
- Miller, R., and Lessard, D. (2000). *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. Massachusetts: Massachusetts Institute of Technology.
- Moe, R. C. (1987, 2012). Exploring the limits of privatization. In *Classics of public administration*, 7th ed. (pp. 469-478). Boston, MA: Wadsworth.
- Moe, T. M. (1984). The new economics of organization. *American Journal of Political Science*, 28(4), 739-777.
- Molle, F., and Floch, P. (2008). Megaprojects and social and environmental changes: The case of the thai "water grid". In B. Flyvbjerg (Ed.), *Megaproject planning and management: Essential readings*. UK: Edward Elgar.
- Moore, M., and Hartley, J. (2010). Innovations in governance. In S. P. Osborne (Ed.), *The new public governance?: Emerging perspectives on the theory and practice of public governance* (pp. 52-71). New York, NY: Routledge.
- Morris, P. W. G. (2013). *Reconstructing project management*: Wiley.
- Müller, R. (2009). Governance of project management *Project governance* (pp. 29-44): Gower Publishing.
- NAO. (2011). Guide: Initiating successful projects. National Audit Office, London, UK.
- NAO. (2012). Assurance for major projects. National Audit Office, London, UK.
- Narayanan, V. K., and DeFillippi, R. (2012). The influence of strategic context on project management systems: A senior management perspective. In T. M. Williams and K. Samset (Eds.), *Project governance: Getting investments right* (pp. 19-76): Palgrave Macmillan.
- National Performance Review. (1993, 2012). From red tape to results: Creating a government that works better and costs less. In Shafritz and Hyde (Ed.), *Classics of public administration*, 7th ed. (pp. 541-548). Boston, MA: Wadsworth.
- OECD. (2004). Principles of corporate governance (pp. 69). Paris.

- OECD. (2015). Guidelines on corporate governance of state-owned enterprises.
- Osborne, S. P. (2010). *The new public governance?: Emerging perspectives on the theory and practice of public governance* (S. P. e. Osborne Ed.). New York, NY: Routledge.
- Peters, B. G., and Pierre, J. (1998). Governance without government? Rethinking public administration. *Journal of Public Administration Research and Theory*, 8(2), 223-243.
- Power, M. (1997). *Audit society, the: Rituals of verification*: Oxford University Press.
- Power, M. (2003). Evaluating the audit explosion. *Law and Policy*, 25(3), 185-202.
DOI: 10.1111/j.1467-9930.2003.00147.x
- Raadschelders, J. C. N. (2008). Understanding government: Four intellectual traditions in the study of public administration. *Public Administration*, 86(4), 925-949. DOI: 10.1111/j.1467-9299.2008.00742.x
- Romzek, B. S. (2006). Business and government. In D. H. Rosenbloom and H. E. McCurdy (Eds.) (Eds.), *Revisiting Waldo's administrative state: Constancy and change in public administration* (pp. 151-178).
- Rosenbloom, D. H., and McCurdy, H. E. E. (2006). *Revisiting Waldo's administrative state: Constancy and change in public administration*. Washington, DC: Georgetown University Press.
- Rutgers, M. R. (1997). Beyond Woodrow Wilson: The identity of the study of public administration in historical perspective. *Administration and Society*, 29(3), 276-300.
- Samset, K., Berg, P., and Klakegg, O. J. (2006). Front end governance of major public projects. Paper presented at the EURAM 2006 Conference, Oslo.
- Samset, K., and Volden, G. H. (2013). Investing for impact: Lessons with the Norwegian state project model and the first investment projects (Vol. 36, pp. 1-53). Oslo, Norway: Concept Research Program.
- Schacter, H. L. (2007). Does Frederick Taylor's ghost still haunt the halls of government? A look at the concept of governmental efficiency in our time. *Public Administration Review*, 67(5), 800-810.
- Scott, W. R., and Davis, G. F. (2007). *Organizations and organizing: Rational, natural, and open system perspectives* (pp. 1-106). Upper Saddle River, NJ: Prentice-Hall.
- Scott, W. R., Levitt, R. E., and Orr, R. J. (2011). *Global projects: Institutional and political challenges*: Cambridge University Press.
- Shenhar, A. J., and Dvir, D. (2007). Project management research: The challenge and opportunity. *Project Management Journal*, 38(2), 93-99.
- Simon, H. A. (1945, 1997). *Administrative behavior* (4th ed.). New York, NY: Free Press.
- Skelcher, C., Mathur, N., and Smith, M. (2005). The public governance of collaborative spaces: Discourse, design and democracy. *Public Administration*, 83(3), 573-596. DOI: 10.1111/j.0033-3298.2005.00463.x

- Smyth, H. J., and Morris, P. W. G. (2007). An epistemological evaluation of project and project management research. *International Journal of Project Management*, 25(4), 423-436.
- Söderlund, J. (2011). Pluralism in project management: Navigating the crossroads of specialization and fragmentation. *International Journal of Management Reviews*, 13(2), 153-176.
- Stoker, G. (1998). Governance as theory: Five propositions. *International Social Science Journal*, 50(155), 17-28.
- Strachan, G. L. (1999). Saint-Simon and corporatism. Retrieved from <http://www.gwb.com.au/gwb/news/economic/060399.htm>, consulted 2014-11-03
- Tait, J. (1997). A strong foundation: Report of the task force on public service values and ethics (the summary). *Canadian Public Administration*, 40(1), 1-22.
- Taylor, F. W. (1912, 2012). Scientific management. In *Classics of public administration*, 7th ed. (pp. 37-39). Boston, MA: Wadsworth.
- Tremblay, M.-S., and Malsh, B. (2012). L'explosion de l'audit dans le secteur public : Le risque d'une illusion de contrôle. *Télescope : l'audit dans le secteur public*, 18(3), 1-7.
- Turner, J. R. (2006a). Editorial: Towards a theory of project management: The nature of the project. *International Journal of Project Management*, 24(1), 1-3.
- Turner, J. R. (2010). Evolution of project management research as evidenced by papers published in the international journal of project management. *International Journal of Project Management*, 28(1), 1-6.
- United Nations Development Programme. (1997). Governance for sustainable human development: A UNDP policy document. New York.
- Vaara, E., and Tienari, J. (2004). Critical discourse analysis as a methodology for international business studies *Handbook of qualitative research methods for international business* (pp. 342-359). Cheltenham: Edward Elgar.
- Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford, UK: Oxford University Press.
- Waldo, D. (1948). *The administrative state*. New York: The Ronald Press Company.
- Weber, M. (1946, 2012). Bureaucracy. In *Classics of public administration*, 7th ed. (pp. 44-49). Boston, MA: Wadsworth.
- Weber, M. (1947). The types of authority and imperative co-ordination *Theory of social and economic organization*. (pp. 324-366). New York: Free Press.
- Williams, T., Klakegg, O. J., Magnussen, O. M., and Glasspool, H. (2010). An investigation of governance frameworks for public projects in Norway and the UK. *International Journal of Project Management*, 28(1), 40-50. DOI: <http://dx.doi.org/10.1016/j.ijproman.2009.04.001>
- Williams, T., Samset, K., and Sunnevag, K. J. (2009). *Making essential choices with scant information: Front-end decision making in major projects*. Basingstoke: Palgrave Macmillan.

- Wilson, W. (1887, 2012). The study of public administration. In *Classics of public administration*, 7th ed. (pp. 16-28). Boston, MA: Wadsworth.
- Winch, G., and Leiringer, R. (2015). Owner project capabilities for infrastructure development: A review and development of the “strong owner” concept. *International Journal of Project Management*. DOI: <http://dx.doi.org/10.1016/j.ijproman.2015.02.002>
- Winch, G. M. (2001). Governing the project process: A conceptual framework. *Construction Management and Economics*, 19, 799-808.
- Winch, G. M. (2014). Three domains of project organising. *International Journal of Project Management*, 32, 721-731. DOI: <http://dx.doi.org/10.1016/j.ijproman.2013.10.012>
- Winch, G. M., Leiringer, R., and Lindström, M. (2012). Client capabilities: Towards a research programme for the public sector. Paper presented at the EURAM 2012 (European Academy of Management) Conference.

CHAPTER IV

ARTICLE 2⁶⁷: The governance of major public infrastructure projects: The process of translation

4.1 Abstract

This article investigates into the process of translation of an institutionalized governance framework as adapted to a major project in practice. Although infrastructure projects have been studied for decades, most studies have emphasized economic or contingency-based perspectives. Of those studies, some researchers have focused on governance frameworks for public infrastructure projects, and their impact for shaping the front-end phase of those projects. Yet, little is known about the way actors translate and enact those governance frameworks into practice. Understanding this translation process will lead to a better understanding of the overall performance of major infrastructure projects. This qualitative research is based on a case study of one public infrastructure project in the health sector in Quebec, Canada. Through non-participant observation and interviews, the planning phase of the project is presented as it unfolds. The process of translation is presented, from the ostensive, institutionalized governance framework, to appropriation into performative practices, which resulted in twelve specific practices: four 'structuring' practices at the institutional level, five 'normalizing' practices at the organizational level and three 'facilitating' practices at the project level. The main contribution of this article is to enrich our understanding of the governance of major public infrastructure projects with process- and practice-based theories.

Keywords: public projects, governance framework, infrastructure projects, translation, the practice perspective

⁶⁷ Brunet, Maude and Aubry, Monique. A former version of this article was submitted and accepted to a peer reviewed conference for presentation in the Summer, 2017: EURAM, SIG Project Organising, Special topic: Managing Major and Mega Projects: Opening up for new Research Eras, Glasgow, June 21-24, 2017. This article won the Emerald Publishing 'Best Paper Award' for this EURAM Special topic. A special issue is planned in International Journal of Managing Projects in Business; this paper has been submitted in August, 2017.

4.2 Introduction

Nowadays, major infrastructure projects constitute one of the most important sectors of development in the world. Between 2013 and 2030, the estimates for infrastructure spending (mainly delivered as large-scale projects) are about US\$ 3.4 trillion per year (The McKinsey Global Institute (2013), cited in Flyvbjerg, 2017, p. 5). At a global level, megaprojects (defined as projects of US\$1 billion or more) are increasingly used for delivering a wide range of goods and services, and their scale tend to increase as well (Flyvbjerg, 2017). The governance of projects has been studied more extensively as a specific object of inquiry since the year 2000 (Ahola *et al*, 2014). The governance of major infrastructure projects is a subject of importance in project management, as there have been several seminal studies revealing the mechanisms and complexities of such complex and costly undertakings (c.f. Ahola *et al.*, 2014). Even if the subject has been studied for some time, still to this day the performance of those projects is unsatisfactory: the wrong projects are selected, the costs are underestimated and the benefits are overestimated (Flyvbjerg, 2017).

In order to strengthen their ability to manage and control major infrastructure projects, some governments (most notably the United Kingdom and Norway) have adopted a governance framework, defined as “an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose” (Klakegg *et al*, 2008, p. s30). The explicit objectives of these governance frameworks are to habilitate decision-makers to take better-informed decisions in the front-end phase (by having accurate definition of needs, options and cost estimations), and to define the process by which the project is to be managed, with the designation of imputable actors (Christensen, 2011; Williams *et al*, 2009). Yet, preliminary inquiries into the improvement in project performance by having such governance frameworks in place is somewhat inconclusive (Committee of Public Accounts, 2012; Samset and Volden, 2013). Whereas project

governance has gained recognition as an important object of inquiry, what is actually done by the different actors having to manage those projects has been studied much less (Williams and Samset, 2010).

This research aims at understanding how a governance framework is translated into practice, and how the actors appropriate themselves to – and adapt – the institutionalized framework. This research gap is quite important to tackle, as the level of investments put into major projects is quite high, and the overall performance of these projects is still deficient (Flyvbjerg, 2011). Therefore, the research question addressed in this article is: How does the translation process unfold from an institutionalized governance framework into practice for a public infrastructure project?

This article presents partial results of a doctoral thesis inquiring about how a governance framework for public infrastructure projects is translated into practice. In the next section, the theoretical background of the process approach, translation and the practice perspective is exposed. Next, the methodological approach is presented, followed by the results. Then, the main results are discussed, and a conclusion opens up on contributions and avenues for carrying on with this research.

4.3 Theoretical background

Project management is an inter-disciplinary field of study which has expanded substantially in the past decades (Söderlund, 2011). By looking specifically at major public infrastructure projects, it is suggested that so far, most of the existent literature on infrastructure projects have mobilized either economic, contingency-based or institutional perspectives (e.g. Flyvbjerg, 2014a; Miller and Lessard, 2000). Yet, several other theoretical perspectives are increasingly being mobilized in project management, and could contribute to opening up theoretical perspectives of research concerning major infrastructure projects. We propose that mobilizing processual

theoretical perspectives to study the governance of major public infrastructure projects might generate important insights and thus contribute significantly to the enrichment of our current knowledge. More specifically, the translation process from an institutionalized governance framework into practice is studied in order to generate new understandings. This section is divided into a literature review covering the process approach, translation and the practice perspective.

4.3.1 The process approach

Process data are gaining recognition and usage within organization theory (Hernes, 2014; Langley *et al.*, 2013). Nicolini (2012) argues that in the last three decades, there has been a radical shift in the academic community, as the object of inquiry has shifted from organizations as entities, to organizations as theoretical discourses, to the study of organizing as a social process. Pettigrew (1997, p. 338) defines a process as “a sequence of individual and collective events, actions, and activities unfolding over time in context.” Langley and Tsoukas (2010, p. 2) also adopt this view, by highlighting the centrality of time, and posing questions about “temporally evolving phenomena.” The process approach is broad and inclusive of many sociological theoretical perspectives, as long as they adopt the underlying ontology of reality as processes (Rasche and Chia, 2010). Namely, the actor-network theory (ANT) and the practice perspective are contained within the process approach (Hernes, 2010; Shotter, 2010; Hällgren and Söderholm, 2011). Translation as a concept is important in both theoretical perspectives, yet it differs to some degree.

4.3.2 Translation

According to ANT, translation is a constructed and on-going process, a movement into space and into time connecting actants, from one context to another (Michaud, 2011). Callon (1986, p. 19) defined translation as “the mechanism by which the social and natural worlds progressively take form.” Or, as Lindberg and Czarniawska (2006, p. 295) put it: “translation can be regarded as the mechanism whereby connecting is

achieved.” Yet, another definition provided by Akrich *et al.* (2006, p. 243, our translation) is that “to translate is to describe, to organize a world populated by actants.” Callon (1986), studying the building of actor networks through scallop fisheries, has described this process of translation as: “problematisation, interressement, enrolment and mobilization”. It is a construction until a stabilization is achieved.

Translation as used in the practice perspective is somewhat different in scale than in ANT. In this sense, it refers rather to a micro-translation, or micro-practice. For example, Rouleau (2005) has studied micro-practices of strategically making sense and giving sense among middle managers, and found four main micro-practices: translating the orientation, overcoding the strategy, disciplining the client, and justifying the change. Gherardi and Perrotta (2013, p. 255) rightfully note that: “practice-based theorizing has developed a vocabulary made up of verbs: learning, organizing, belonging, understanding, translating, and knowing.” Teulier and Rouleau (2013, p. 314) propose a hybridization of those theories, acknowledging that “translation studies have under-examined the way translation is done in practice.”

4.3.3 The practice perspective

Rouleau (2007, p. 219) situates the practice perspective in a new stream in organization theories, along with discursive theories. Far from being dominant in organization theories, those new approaches nevertheless contribute significantly to a renewed conception of the organization by exploring new avenues which include the analysis of interactions, conversations and interpretations (*ibid.*). According to Nicolini (2012, pp. 1-2), “the notion of practice has become, in fact, increasingly popular among work and organizational scholars and, in recent years, we have witnessed a dramatic growth in analyses utilizing terms such as practice, praxis, interaction, activity, performativity, and performance.”

For Whittington (2006, p. 619), whose work in strategy-as-practice research has been quite influential, practices are “shared routines of behaviour, including traditions, norms and procedures for thinking, acting and using ‘things,’ this last in the broadest sense.” He contrasts this term with the Greek word *praxis*, which refers to “actual activity, what people do in practice” (*ibid.*). Johnson *et al.* (2007, p. 26) explain that practices can be understood as two distinct notions: as “what people engage with” and as “what people do.” On the one hand, they compare practices ‘as what people engage with’ to Feldman and Pentland’s (2003, p. 101) concept of ‘ostensive routines,’ which are “the ideal or schematic form of a routine ... the routine in principle.” On the other hand, Johnson *et al.* (2007, p. 27) relate practices ‘as what people do’ both to Whittington (2006)’s concept of *praxis* and to Feldman and Pentland’s (2003, p. 101) concept of ‘performative routines,’ which are “specific actions, by specific people, in specific places and times. It is the routine in practice.” Feldman and Orlikowski (2011, p. 1245) specify that the ostensive and performative aspects are not oppositional but mutually constitutive. Building on the theory of routines as practices (Feldman and Orlikowski, 2011), we use in this article the terms ‘ostensive practice’ and ‘performative practice’ to distinguish between practices as ‘what people engage with’ and as ‘what people do’ (Johnson *et al.*, 2007).

One of the most prominent streams of practice-based studies conducted in the general field of management being ‘strategy-as-practice’ (Vaara and Whittington, 2012), it is of interest to consider the many contributions of these research for further development of the recent practice turn in project management, namely ‘project-as-practice’ (Blomquist *et al.*, 2010; Hällgren and Söderholm, 2011). Strategy-as-practice has developed as an alternative view of the general trend of strategy in organization studies, which has come to view strategy as inherent of an organization, without consideration about how it is applied and developed by actors once the strategic plan is adopted at the corporate level (Johnson *et al.*, 2007). Thus, strategy-as-practice re-

institutes the significance of what managers are actually doing⁶⁸. Accordingly, it requires a more micro level of understanding, and the need to consider multiple theoretical lenses to make sense of those complex phenomena (*ibid.*). Johnson *et al.* (2007) identify four main theoretical resources for strategy-as-practice research: situated learning, sensemaking and organizational routines, institutionalist perspectives, and the actor network theory.

Along with the lines of ANT, Gherardi (2012, p. 77) emphasizes that practices are sociomaterial and temporal, with agency being distributed between humans and non-humans, and asserts that theories of practice “locate the source of significant patterns in how conduct is enacted, performed or produced.” Referring explicitly to ANT and the work of Latour, Gherardi (2012, p. 87) states that “we can examine how the translation process creates the link between human and non-human actors, and the connections among past, present and future.”

This research adopts those processual views. More specifically, this research relates to one of the perspective of practice-based studies, rooted within the sociology of work, as “exploration of the gap between what organizational rules prescribe and what people actually do in their situated working practices” (Gherardi 2012, p. 132). Despite its social and academic importance, the translation of a governance framework for major public infrastructure projects is a subject on which there has been relatively little research (Williams *et al.*, 2010). Having reviewed the process approach, the concept of translation and the practice perspective, we now turn to the methodological approach adopted for addressing this question.

⁶⁸ One early seminal reference attempting to answer that question is the work of Henry Mitzberg (1979). *The Structuring of Organizations: A Synthesis of the Research*. Englewood Cliffs, NJ: Prentice-Hall.

4.4 Methodological approach

As relatively little research has been done in this regard, the overall goal of the research is heuristic: it aims at identifying variables, assumptions and causal mechanisms involved (George and Bennett, 2005). This exploratory study is qualitative, as part of the interpretativist and constructivist paradigm (Corbin and Strauss, 1990; Guba and Lincoln, 2005). The inductive approach and grounded theory are privileged to collect field elements that enable a better understanding of phenomena, which can be used to develop theories in a subsequent phase (Corbin and Strauss, 2008).

The research strategy adopted for this paper is a case study of a public project managed by the Quebec government (Yin, 2009). The context is the socio-political context of Quebec (Canada), and the project selected is a major infrastructure project having to comply with the Quebec governance framework for public infrastructure projects (Secrétariat du Conseil du trésor, 2014). The project under study is about the construction of a new wing for an existing hospital in Quebec, Canada. At the time of the fieldwork, the project was in the planning phase. The total estimated costs are about \$155 million (CAD), and the scope encompasses an extension of the hospital that will provide new and improved services of four areas of medical specialization. To keep project's anonymity, a fictive name was given to it: project Multi-Poles (project MP). For this project, seven interviews have been carried with various team members, and eight meetings were observed for a total of 29 hours.

The strategy for data collection included a preliminary phase (a pilot) in 2014 to test the initial analysis of public data. Field research has been conducted from September 2015 to June 2016, and included retrospective data along with real-time observations. Data collection is based on a set of approaches whose main components are non-participant observation in project meetings and semi-structured interviews. Interviews

have been carried out with different project actors, until saturation (Yin, 2009). Additionally, 15 interviews were conducted more specifically on the Quebec governance framework (QGF), regarding its objectives, and its perceived performance of it to improve overall projects success. An analysis of documentation completes the data collection. Table 4.1 presents a summary of collected data.

Table 4.1: Data collected

	Number of interviews	Number of meetings observed / Number of hours	People interviewed
Quebec governance framework	15	-	Representatives from Secrétariat du Conseil du trésor (SCT), Société québécoise des infrastructures (SQI), and governance framework experts.
Project MP	7	8 / 29 hrs	SQI project manager, the person responsible for quality assurance at SQI, the hospital/Health Ministry project managers, the SCT analyst, an architect and the consultant who wrote the Business Case.
Total	22	8 / 29 hrs	

Data collected in interviews were transcribed and coded using the qualitative data analysis software NVivo. For observed meetings, detailed notes were taken and coded in the same software. The main analysis strategy consisted of using grounded theory, starting with a flexible frame and revising it according to insights generated by data collected (O'Reilly *et al.*, 2012). Starting from the conceptual framework of the doctoral thesis, we initially coded the interviews, and revised the coding as well as the framework in an iterative cycle (Charmaz, 2006). From a focus coding on main themes addresses (called first order concepts in Gioia *et al.*, 2013), we move to an axial coding (second order themes in Gioia *et al.*, 2013; O'Reilly *et al.*, 2012). The translation process is studied according to different actors and actants: organizations

involved (public and private), project teams, individuals (politicians, civil servants and private experts), and artefacts (non-humans). Other analysis procedures include temporal bracketing, and a systematic analysis of various governmental documents. The data analysis strategies chosen (grounded theory, temporal bracketing and systematic analysis) are high in accuracy and somewhat limited in simplicity and generality, even though the transferability could be important (Langley, 1999). This approach to theory development using discovery, flexibility and reflexivity has been encouraged by several influential researchers (Alvesson and Kärreman, 2007; Klag and Langley, 2013; Locke, 2011). Having explained the methodological approach to this study, results are presented in the next section.

4.5 Results

This section presents results from the study of project MP. To start with, the Quebec governance framework for public infrastructure projects — the institutionalized, ostensive practice — is briefly presented. Then, the initiating and planning phases of project MP are developed and illustrated with a timeline. Next, twelve practices that have been observed during the fieldwork are presented. And finally, it is exposed that the process of translation of the governance framework is multilevel, occurring at institutional, organizational and project levels.

4.5.1 The Quebec governance framework for public infrastructure projects

The Quebec governance framework (QGF), adopted in 2008, had as a main objective to frame rigorously infrastructure projects, especially in the front-end and in the planning phases, in order to prevent overspending, delays, and to manage responsibly public funds (Secrétariat du Conseil du trésor, 2008). This governance framework was revised in 2010, and again in 2014, to reflect organizational changes and learning made by actors through its enactment into projects. All major infrastructure projects, defined as over \$50 million (CAD) and under provincial jurisdiction, have to comply

with this governance framework⁶⁹. The current version of the QGF is a legal document of 13 pages, adopted in February 2014, and entitled '*Directive sur la gestion des projets majeurs d'infrastructure publique*' (Secrétariat du Conseil du trésor, 2014).

Basically, the QGF presents the project life cycle, main deliverables required at each phase and actors involved. Once the deliverable is completed during a specific project phase, it has to go through a gate: a decision-making point. If the project is accepted and goes through this gate, then the next deliverable has to be developed and approved before going through the next gate. This process, widely known in project management as the Stage-gate model, is used to manage projects, especially in the front-end and planning phases, as it allows decision-makers to pull out of a project at any of those gates without any major financial commitment (Project Management Institute (PMI), 2013). The QGF presents a project life cycle of five phases, of which the first three ones are of crucial importance: the front-end, the initiating phase, the planning phase, the executing and the closing phase. For the first three phases, important deliverables have to be presented to decision-makers (the Council of Ministers) before going through the gate and being officially approved in order to start the next project phase. Table 4.2 below summarizes main deliverables to be produced and approved for the first three phases⁷⁰, along with an overview of the content.

Table 4.2: QFG project phases, deliverables and overview of content (Secrétariat du Conseil du trésor, 2014, pp. 8-11)

⁶⁹ One exception is for road transportation projects, as the governance framework applies for projects over \$100 million (CAD).

⁷⁰ For the phases of executing and closing, project reports have to be given to the Quebec Treasury Board (SCT) twice a year for the execution phase, and once the project is closed for the final report. Additionally, if there is a modification to the project scope, schedule and costs above the planned estimates approved initially, the Minister promoting the project (the client) has to formally ask the Council of Ministers for approval of this modification.

Project phase and required deliverable	Overview of content
1-Front-end: Project Information Sheet (Fiche d'avant-projet)	1-Brief description of needs 2-Demonstration that an infrastructure solution is adequate to answer needs 2-Preliminary estimate of total project costs and envisioned financing strategy 3-Preliminary cost estimate for the production of DO
2-Initiating phase: Opportunity Case (DO, Dossier d'opportunité)	1-Needs analysis 2-Project specifications 3-Possible options and evaluation 4-Choice of the best long-term option, and justification 5-Annual investments allocation 6-Main economic and financial variables 7-Cost estimates for the production of DA 8-For PPP projects, qualitative and quantitative justifications 9-If an architectural/engineering competition is considered, the objective is presented, along with advantages/disadvantages, costs and modalities
3-Planning phase: Business Case (DA, Dossier d'affaires)	1-Project context (needs, specifications, selected option and justifications) 2-Project scope (work breakdown structure, functional and technical specifications and change management processes) 3-Costs estimates for the project, financing strategy and planned marginal budgetary impacts 4-Project schedule 5-Human resources (project team, roles and responsibilities) 6-Project governance structure 7-Stakeholder analysis 8-Risk analysis (for each risk, its probability and financial impact, along with mitigation measures) 9-Communications plan 10-Procurement strategies (according to selected delivery mode) 11-Project management plan 12-If an architectural/engineering competition was awarded, the results are presented

The main actors involved in the QGF are politicians and civil servants. Political actors are involved at two times. First, the Minister sponsoring a project has to approve all main deliverables before they are presented at the Council of Ministers: the Project Information Sheet, the Opportunity Case (Dossier d'opportunité – DO) and the Business Case (Dossier d'affaires – DA). Second, the Council of Ministers

approves those deliverables, before the project has authorization to start the execution phase and is provisioned. Public administration actors from several organizations are involved. A unit within Secrétariat du Conseil du trésor (SCT, Quebec Treasury Board Secretariat), 'Direction générale de la gouvernance des projets d'infrastructure,' is responsible for the governance framework, for its evolution and implementation. This unit also reviews internally projects' documentation, validates information and emits formal recommendations for the Council of Ministers before final approval⁷¹. The governmental project manager is Société québécoise des infrastructures (SQI).⁷² This organization was created in November 2013, and was the result of the merging of two previous organizations: Infrastructure Québec and Société immobilière du Québec. SQI is responsible for the production of projects' documentation, yet, a separate internal unit is also in charge of validating projects documents for quality assurance. Clients of a project are, most of the time, two-fold: the Ministry sponsoring the project (the paying client or the sponsor) and the local operator (the user).

4.5.2 Project MP's development: From the initial request to the end of the planning phase

A timeline of project MP is presented in Figure 1 below, positioning its development as well as specific practices as they took place. Unfolding the project process accordingly is a possible strategy for making sense of data collected (Langley, 1999). A narrative strategy complements this temporal bracketing in order to develop thick description of project episodes and practices. However, due to word constraints, the narrative elements are synthesized in this article.

⁷¹ The recommendations are first transmitted to the Treasury Board, a permanent committee of the Executive Council composed of 5 Ministers, and then to the Council of Ministers for approval.

⁷² SQI may also support the project manager in some instances. In those cases, its main role is to perform quality assurance of the main project deliverables. For transportation projects, the Ministry of Transport is directly involved with SCT.

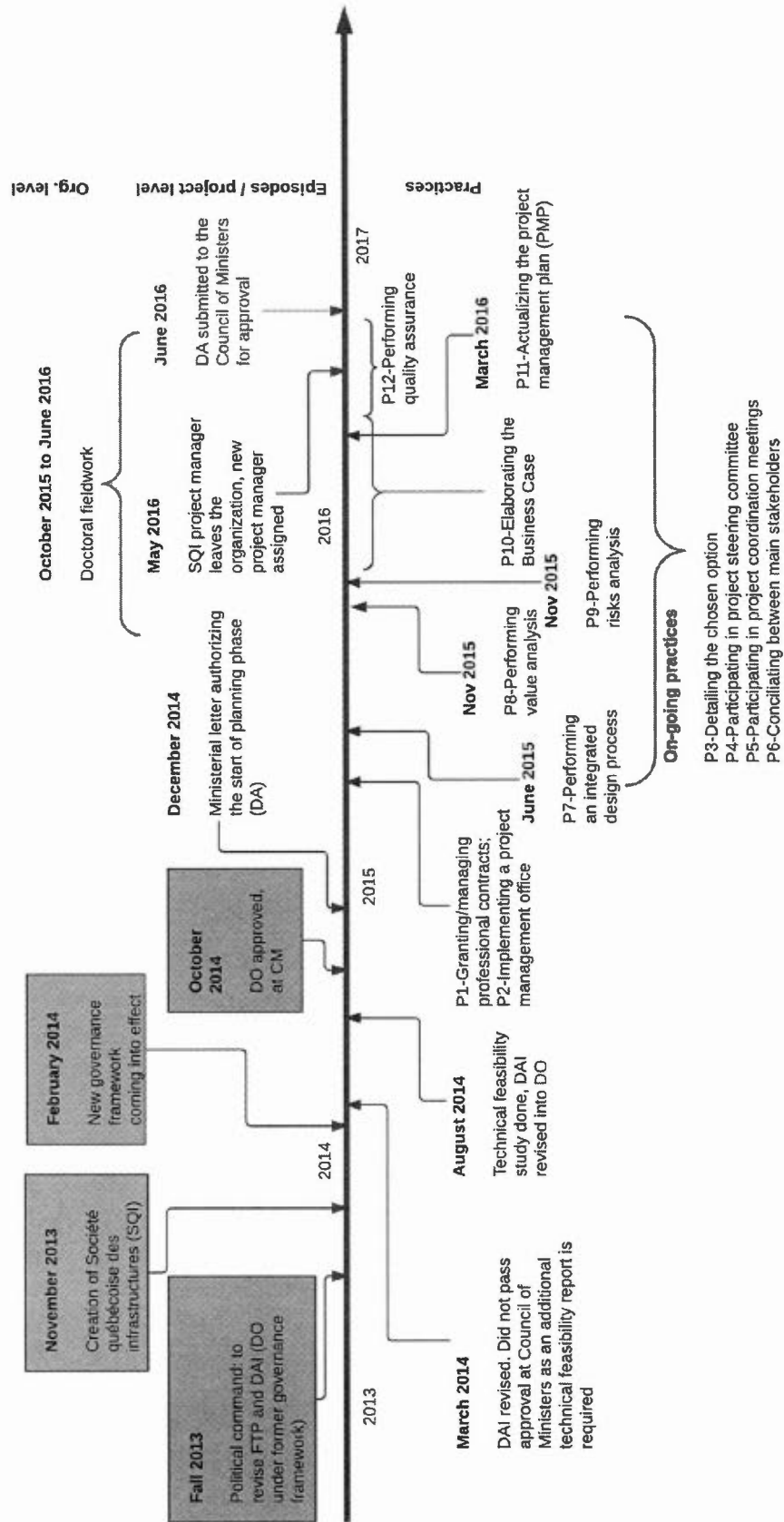


Figure 4.1: Timeline of project MP

According to the hospital representative interviewed, initial discussions about the need to expand specific medical services into a new constructed extension to the hospital were initiated around 2007. Originally, the project scope was much smaller, and it was included in the hospital Property Development Plan. Years of negotiation with the Ministry of Health assessing functional needs led to a substantial expansion of the scope, resulting in a formal political command in 2013. The Council of Ministers then requested that the functional and technical program (FTP) be revised and that an Initial Business Case (DAI, Dossier d’Affaires Initial) be produced. At the time, the framework in place requested a DAI in order to analyze needs and possible options for a specific project⁷³. The DAI was submitted to Secrétariat du Conseil du trésor (SCT) in March 2014. Yet, SCT analysts asked that an additional technical feasibility study be done and included into the analysis, regarding risks associated with earthquake-resistance. This technical study was conducted over the summer of 2014, as the project team revised the initial DAI to convert it into an Opportunity Case (DO, Dossier d’opportunité) in order to comply with the newly adopted governance framework. However, the impact was not substantial, as the two documents requested similar information. The DO was approved at the Council of Ministers in October 2014. Yet, the official ministerial letter authorizing the start of the planning phase came in December 2014.

Throughout the planning phase, from December 2014 to June 2016, a number of practices have been observed and positioned on the timeline. They are documented in the next section (see Table 4.3). A significant episode in the project was the departure of the SQI project manager from the organization, in May 2016. Another SQI project manager was assigned about two weeks before that, in order to facilitate the transition. Impacts were limited for the planning phase, as the Business Case, that had

⁷³ Although the new version of the QGF was implemented in February 2014, a transitional clause allowed for projects in development that the documentation under the former governance framework be submitted for approval before June 20, 2014.

been finalized at this stage, was undergoing quality assurance. In June 2016, the DA was submitted to the Council of Ministers for approval, in order to undertake the executing phase of the project.

4.5.3 The process of translation of the governance framework: Illustration through practices

For project MP, twelve different practices have been identified and are presented in Table 4.3. These are: P1-Granting/managing professional contracts, P2-Implementing a project management office, P3-Detailing the chosen option, P4-Participating in project steering committee, P5-Participating in project coordination meetings, P6-Conciliating between main stakeholders, P7-Performing an Integrated Design Process, P8-Performing value analysis, P9-Performing risks analysis, P10-Elaborating the Business Case (DA), P11-Elaborating and actualizing the project management plan (PMP), P12-Performing quality assurance (QA). The practices have been observed during the fieldwork and/or reported by actors during interviews. As those practices are positioned on the timeline (Figure 1), some were punctual, and others on-going. For each practice, Table 4.3 presents the practice as prescribed by the Quebec Governance Framework or other organizational rules; the appropriation of the practice by project members (illustrated by excerpts from interviews), and; the performative practice, as observed (situated action).

Table 4.3: Twelve observed practices

Practice	Organizational rules - As prescribed	As Required by	Translation (appropriation)	Performative practice (adaptation)
P1- Granting/managing professional contracts	A service agreement is established at the beginning of the project between SQI and the client ministry. Contracts by professionals (architects, engineers, etc.) are formalized at SQI according to government regulations (standard hourly rate for professionals).	SQI	No contract is awarded prior to authorizations: "On the other hand, it is certain that before the authorization is granted, it is not possible to issue tenders, it is not possible to go to no matter what part of execution, it is not possible to disburse in the end nothing, it is just the internal stuff, it goes as 'go as I push you', as it can be realized." Impression that there is little room for financial maneuver, that program changes are difficult to fund: "Because there, they recognized that there were program changes, undeniably. But any changes to the program should be the subject of additional funding from the ministry. [...] I understand that the minister, the deputy who is going to say: I am pleased to announce an investment of 50 million [...] he does not want to learn that the first 50 million is now to be 100 million, he does not want to do that [...] But at the same time, one must also be realistic, a cat is a cat, when you make a preliminary design, well, there is an artistic vagueness, we can not control everything, we will work for 2 or 3 years to reveal the prototype finally. You cannot imagine, even if you are competent, that you have measured everything, that you have conciliated everything, that you have coordinated everything, there is a small problem." Need for a major project to make full-time implementation worthwhile: "I would say frankly that's fine, but it's not as effective as I would have liked. Because the project is not big enough. You have to agree, a project office in reality is really interesting when everyone is around the table, but for that you have to have a large volume." ; "If we create this, the size of this project has to generate a sufficient fees so that someone like me can devote themselves to this project." Adaptation according to available resources: "Usually we are here, I try to be here 2 to 3 days / week, but it's also difficult because I have other projects, so I cannot always be here. I would like to say that having a common gathering place, close to the project, should always be a prerequisite [...] What we have developed now is a statutory calendar, that is, we know that on Tuesday for example, the electricity guy is there, so if you need to meet him, we'll see each other. You do not need to call him and tell him to bring his plans, he's going to be there. So this aspect works." Added value: "It is an added value I think [...] it creates a dynamic between the interveners who, like for BIM, favors the emergence of a project well controlled in all specialties, well orchestrated." ; "I know that they work for my project, so the dynamic is there, they need to talk to each other, they are face to face, we need to meet them, so I'm going, they're coming in. It's priceless, I'm sure it saved us a lot of time in our operations, so we were able to recover the 4 months, but we would not have had that, I do not think we would have been able."	Contracts are awarded at the beginning of the planning phase, once the ministerial letter of authorization has been received. A separate authorization is required from the client ministry of the project in the case of change orders and program changes. For this project, professional contracts were awarded early in 2015. Discussions on change orders and program changes took place during risk analysis, coordination meetings and at the project steering committees.
P2-Implementing a project management office (PMO)	No organizational rules for setting up a project office	Project	To facilitate the coordination of professionals and the consultation of medical groups, the project team decided to centralize the work at a PMO located on the hospital site for which offices have been rented since the beginning of 2015. During the planning phase about 30-50 people work there. The meeting room offers a place for meetings, a videoconference is available.	

Practice	Organizational rules - As prescribed	Required by	Translation (appropriation)	Performative practice (adaptations)
P3-Detailing the chosen option	The SCT directive requires that the business case presents, in detail, the best option. Similarly, the SQI macro-process consists of four iterative procedures under "Detailing the selected option": P6. Conduct / finalize required studies; P7. Manage risks; P8. Formalize the functional and technical content of the project; P9. Formalize project schedule and cost.	SCT	Organizational adaptation of the level of details of plans and specifications at SQI: "In fact there is nothing, in the directive itself there is nothing that is required. They do not require a compulsory advancement level to return. [...] So between the DO and the DA, and it becomes like a kind of prerogative of the SQI if you want. It's up to us to decide, because from the moment your DA crystallizes your budget of the project, you have to be at a fairly advanced level of comfort to close the envelopes. And what I see, and there is a lot of debate here internally, what I usually see on the majority of projects that I have is that usually we go to the end of the preliminaries to return for the DA."; "The SQI had set itself the objective of always evaluating projects on at least 100% preliminary plans and specifications, to have such a precision that, when attesting the case, one is able to be certain that the project will go well and that we will not be had at the budget level, because we know that after that going back is impossible." Adjustment of the level of details of plans and specifications according to project needs: "We managed to convince the management that in this case, given the precision that we were going to achieve, and we would emphasize preceding phases, the concept, preliminary plans and specifications, to evaluate the project at 66% and to be hanged with that figure. We will know in a few weeks if it worked, as the DA has been submitted [...] Now that the project is in the loop we cannot really back down, and in a few weeks when we get the 100% we're going to be able to confirm whether we were right or not. There will be small fluctuations, but I do not think it's catastrophic to the point where we're lost, so it's a project that should normally go through, except that it should not be the rule, in that case we wanted to take advantage of sequences, of windows."	This practice is at the heart of the planning phase and is the main input to the development of the business case. While formal documentation (SCT and SQI) focuses on project management parameters, project team members focus on project content (concept, preliminary drawings and specifications (PDS)). Architects lead the team to detail the chosen option (project content) and coordinate the different disciplines. The SQI project manager ensures that the overall process is respected, while project members of the SQI internal expertise support and question professionals. At the end of each stage (concept, preliminary plans and specifications 66%, preliminary plans and specifications 100%), a report is made by SQI resources, to which professionals must respond, in order to obtain approval to start the next step. For this project, the concept stage was finalized in November 2015, while the PDS at 66% were finalized before the DA was submitted in early 2016.
P4-Participating in project steering committee	The members of the project steering committee are defined in the service agreement between the client and SQI. This practice contributes to SQI procedures P5-Participate in decision-making and P10-Accountability.	SQI	Help decision-making: "The projects steering committees come up in projects post-mortems as a strong element in order to facilitate decision-making and aligning project actors. People felicitate us for having such structures in place." Role of the project manager to be the vector between the decision-makers (senior officials) and the project team: "When I see the project manager who plays a decisive role in the discussion at a steering committee, I think it is up to him to be the vector which makes the connection between the field, what happens, and major stakes."	The meetings are about every 3 months, plus others if necessary. The composition of the committee may vary according to the needs but is generally: the SQI project manager and his / her superiors, project managers (ministry and the organisation initiator of the project) and their superiors. A project progress report is usually submitted prior to the meeting. A videoconference is used because some participants are in different cities and locations. The purpose of these meetings is to help decision-making. This practice is important for governing the project, guiding and deciding on issues. Much of the conciliation between the parties takes place during these meetings, decisions are made and important issues are raised. For this project, steering committee meetings were held every month, in order to facilitate decision-making.

Practice	Organizational rules - As prescribed	Required by	Translation (appropriation)	Performative practice (adaptation)
P5-Participating in project coordination meetings	No formal rule, implicit in the SQ1 macro-process in the requirement of "Detailing the chosen option". SQ1 require that a project governance structure be established in the project management plan, including mechanisms such as project meetings, yet the project manager has some flexibility to adapt according to the project needs.	Project	Meetings of a technical and strategic nature: "For me the raison d'être of this meeting is the opportunity to have once every two weeks the organisation, the SQ1 and all the professionals around a table. This morning we talked about several technical points, it is true, we are at the beginning of a phase and there is a transition of project managers, but it is nevertheless a meeting where we speak of important issues." The content of the meetings is adapted to the needs of the project and the team: "There are other things that come together, it is certain that in the last few weeks, we have skipped a few because precisely when the bulk of the concept was frozen or crystallized, everybody had something else to deal with, there were meetings that were used for other things, to make adjustments, presentations, to ensure that everybody could ask questions, we had a little different interaction. Rather than coordinating the project, we allowed ourselves more, for example our Quebec team, to question what had been done, how, to make a kind of wrap-up of all this, and to make sure that everyone has the same understanding, it is often that which fails."	Coordination meetings have been established every two weeks for this project. The architect conducts these meetings, keeping track of technical issues, timelines and budgets. When strategic issues are raised, the project manager and the client follow up on them, bringing them to the project steering committee as required. Although the schedule was set every two weeks for these meetings, some were postponed, depending on the needs of the project. In addition, participants in these meetings varied as required.
P6-Conciliating between main stakeholders	No rule in this regard, implicit in the SQ1 macro-process in the requirement of "Detailing the chosen option".	Project	Different visions and expectations of the main stakeholders: "Everyone has their agendas and all this and it is not easy to manage. [...] We all have our vision." Impact on project deadlines and budget: "Sometimes there is a kind of [...] inconsistency between the organisation and the ministry, and it's mostly about standardization, and we're in between, and we say: if you do not tie it up, you're going to waste time, it's not going to be effective. [...] Professionals will delay, have to redo plans, they are there, it has an impact that they underestimate a little." Importance of exchange and communication: "[the project manager] has an open mind to discuss, what are your stakes, what are you accountable about? I'm trying to do that with everyone, but its good when you have a counterpart who has this opening and recognizes this need." ; "We have to keep this triangle very active so that at some point we do not feel that things are happening from left to right and we do not know about it."	This practice is essential in order to manage the project. Conciliation requires a lot of time and energy from the project manager, the project team and the steering committee. There is a lot of interpretation from all sides, a lot of additional information comes up during project planning, decisions are delayed or re-evaluated. Conciliating is a practice that is done on an ongoing basis, in steering committees, in coordination meetings, by e-mails and by phone calls.

Practice	Organizational rules - As prescribed	Required by	Translation (appropriation)	Performative practice (adaptation)
P7-Performing an Integrated Design Process (IDP)	New formal SQI procedure from 2015, to be carried out for all new projects.	SQI	Workshop at the beginning of the planning phase: "In 2015, when we started working, [...] we had IDP sessions with people from the University of Quebec, with the aim of doing some analysis, and with carts, to sort out the various issues, the issues we had. So we had this exercise this summer, in 2015, in IDP, to work and analyze all this [...] All professionals, all disciplines, SQI people, clinical people, we had clinical [and technical] representatives, I was there. There were several exercises, I could show you, we had a charter with the different carts." Could have been done more upstream: "It was constructive, but ideally this exercise could have been done much more upstream, as for me, we should have done this at the very beginning, when we prepare our PFT. In fact, when we did our PFT, we probably did the same type of exercise but without supervision, and it could have been improved. We may have done it late in the process but it's a good thing too."	This practice aims to foster active collaboration between all project stakeholders in order to optimize the quality of infrastructure requirements, concepts, plans and specifications. Applies both in the initial phase and in the planning phase. This integrated design process aims to optimize the collaboration and coordination of different expertise, to foster the development of a global vision of the project and information sharing. For this project, an IDP workshop was held during the planning phase in June 2015, led by an external resource to the project.
P8-Performing value analysis	Value analysis was mandatory during the planning phase with the previous version of the governance framework. However, since 2014, SCT does not formally require it, but it encourages the adoption of this practice. SQI requests that it be made for all projects over \$ 5 million and has developed an internal process: IT-GP 0.30.025. Analysis Valeur.	SQI	Allows optimizing the chosen solution: "To question ourselves on our solutions, to say we have taken the right solution, what are the other options of solution that one could make, which one is better or best. [...] Value analysis is quite important, this also we did with someone who coached us to do it, to question." Reconcile stakeholder expectations through a rational analysis: "[Stakeholders] found it difficult to question certain elements, for example, new standards." Integration of value analysis with plans, estimates and business case: "we integrated results of the value analysis, it was appended also, I think they have succeeded to optimize the project for about 4 millions. I think they have applied measures for about 2 million."	Value analysis for this project was conducted in November 2015 for two consecutive days, with a re-alignment of the strategy and objectives at the end of the first day. The workshop was facilitated by an external consultant and brought together all members of the team, including professionals. Various conceptual solutions were analyzed in order to optimize the project and its costs. Following the workshop, a report was delivered by the external consultant, which served as the basis for negotiating specific components of the project. The results of this workshop were incorporated into the business case, resulting in cost reductions.
P9-Performing risks analysis	Formal analysis is requested by SCT Directive and SQI macro-processes "Risk Analysis" and "Risk Management". Formal procedure and standardized SQI models.	SCT	Impression that risk analyzes must be very detailed: "there is a generalized fear, it will not be said, but we will look at a cost." Impression that financing individual measures is difficult: "We now associate a value, a budget envelope related to that, which is great. [...] But the difficulty of making the mesh between the revelation of a risk and getting funding that would make it more fluid to make the case, it does not make sense. [...] It's so complex that in the end we're going to find all sorts of ways to cut costs elsewhere. It's like, it's not called this process there. The idea is good, but it's not called."	During the implementation of the DO, a qualitative analysis is carried out with the project team (SQI and clients) and animated by internal resources specialized in risks. This analysis is revised and quantified during the development of the DA, with the same actors and mandated professionals. Results of the analysis are used to calculate risk reserves and are recorded in the project budget. They reflect the level of detail of the chosen option. The main risk categories studied: strategic risks, design and construction risks (change in scope), social risks, site and environmental risks, financial and legal risks. For this project, the risk analysis was held in a one-day workshop in November 2015.

Practice	Organizational rules - As prescribed	As Required by	Translation (appropriation)	Performative practice (adaptation)
P10-Elaborating the Business Case (BC)	Formally requested in SCT Directive for the planning phase. Required in the SQI macro-process in the planning phase P11-Complete the business case. Formal and standardized SQI model.	SCT	Structure of the BC according to the directive: "We have taken up the canvas that is associated with the directive, if you look at table of contents it exactly follows the table of contents that is suggested in the directive. We started from the data we had in the DO [...], and missing information was produced. In the BC, we add the project management plan, it is basically that." Collaborative practice: "Essentially we shared a little bit the task. [...] Most of the parts were ordered to different entities, different chapters, regardless of who was responsible. We made a revision so that the document is more fluid, so that there is a pen that is held from one end to the other, because it is a long one. In this specific case, because we had a resource shortage, because it is extremely cumbersome, [an external firm] has been mandated. He had knowledge, it was more technical, he does not really have a say on the content, we guide him, and they try to assemble this to make it happen. And to follow up on the issues as well."	All practices carried out during the planning phase lead to the development of the business case, which will be reviewed for quality and submitted for approval by the Council of Ministers. As much as possible, the business case is drafted internally at SQI by a dedicated resource (a strategic advisor), which is guided by the project manager. For this project, the drafting of the BC in the first quarter of 2016 was mandated externally, as internal resources were limited at that time, mobilized on other projects. The external consultant who wrote the BC had prior knowledge of the project, since he had also been mandated to draft the DO.
P11-Elaborating and actualizing the project management plan (PMP)	The PMP is formally requested in SCT Directive for the planning phase. Required in the SQI macro-process in the initial phase D5. Develop and implement the PMP, and the planning phase P4. Update the PMP and continue its implementation. A model is formal and standardized at SQI.	SCT	Distinction between the BC and the PMP: "In the project management plan, it is more processes, different plans you are going to state, according to the PMBOK method, the procurement plan, all the plans are there [...]. But the business case is a bit different from the DO, the first section is really to state project needs, whereas in the PMP we do not do that, the PMP is more operational, it is how we will manage the project [...]. The PMP will concentrate solely on the construction component, the design / construction component, whereas the business case will cover the whole of the project, including the operation of asset maintenance. [...] The PMP may have 75 pages, summarized a few pages in the business case, but is attached to it." Uncertainty about the usefulness of this plan: "Honestly I do not know how much it is really used or if it is just that the directive says you have to do a PMP."	This practice aims to assist the project manager in structuring and managing the project. According to SQI procedures, the PMP should be done at the beginning of the initial phase and approved by the project steering committee. For this project, the PMP was developed at the end of the planning phase as a requirement for the Business Case (to which it is appended) and not as a tool for structuring the project.

Practice	Organizational rules - As prescribed	Required by	Translation (appropriation)	Performative practice (adaptation)
P12-Performing quality assurance (QA)	SCT Directive requires that the business case be certified by SQI, OPTIP and the client Minister before being submitted to SCT for advice and to the Council of Ministers for approval. SQI requires a quality assurance process once the business case is completed and before attestation, as described in the macro-process: P12. Confirm the quality review.	SQI	The different roles of the DO / DA editors: "It is a different, more detached, more independent vision, which makes it possible, it is difficult. So people perceive themselves as the government watchdogs. If you start on this foot of war you will not go far, everyone, nobody gives you information and nobody talks to you, and there it is hell. One has to follow-up and helps the project team, often as it happened to me in a project: I saw it skid, and there I said to me it has no pace, it slips, it slips, I imposed a mitigation plan to what was happening, and they were able to put it back on the road. Sometimes you have to do something that prevents you from going into the wall." Advantage of upstream concertation: "But what we tell them, the message [of the SCT], is to say that you gain if you call us quickly, an upstream concertation, it is all the spirit of the exercise, of the directive, so that if there are problems, we can be able to flatten them, to settle them before the final versions. Otherwise, it obliges us to do analyzes, without being always negative, but putting down big drawbacks, and sometimes the minister is obliged to be summoned". "SCT told us, because we had, I had two meetings [...] They told us we had a very nice file, very well mounted. This is good. And when we had their comments, we had 38 questions. [...] Then, when we submit the file, all is attached, and that's why it's easier. I am less afraid for the next steps to go to approval at the Treasury Board than to have something where it has been submitted and we do not know what's going on with it, whether it's going to be good or not."	This practice is a new role for SQI since 2014, as before it was done by external reviewers. This practice is still being developed. It has an impact on internal capacity because some resources who wrote DO and DA were reassigned to quality assurance. However, organizational expertise increases as learning takes place. The objective is to involve quality assessors at the beginning of the process, before the DO or DA is completed. One-on-one meetings to present the project for preliminary validation are held, both internally at SQI and with SCT and clients. A roadmap has recently been developed to plan and monitor specific actions required for each project. For this project, the person in charge of the project at SQI had a good knowledge of the file as she was previously involved in the development of the DO. The DA quality assurance was carried out between April and May 2016, in order to obtain the necessary attestations. Two presentations were also made to SCT for initial validation.

From analyzing practices and government documentation, we observed an emerging multilevel process of translation, which is explained next.

4.5.4 The multilevel nature of the translation process: Institutional, organizational and project levels

Taking the twelve practices presented in Table 4.3, we analyzed them according to their origin, to the institutional actor who requested them. Figure 4.2 presents the process of translation as it occurred through time for project MP, separating practices by their origin of requirement, whether from the institutional, the organizational or the project levels.

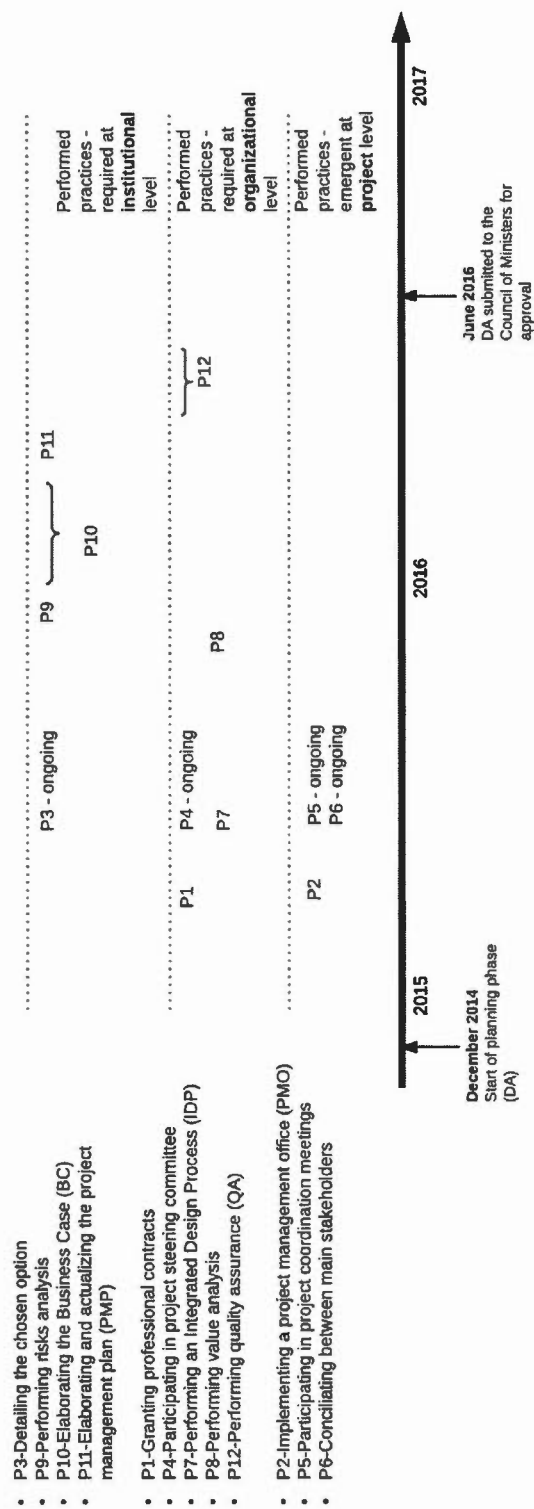


Figure 4.2: The process of translation for project MP

The QGF specifically requested four practices adopted for project MP, at the institutional, government-wide SCT level. Those are: P3-Detailing the chosen option, P9-Performing risks analysis, P10-Elaborating the Business Case (DA), P11-Elaborating and actualizing the project management plan (PMP). Moreover, a unit in charge of internal procedures and rules at SQI translated the overall QGF, and that resulted in formal SQI documentation complementing the governance framework: a macro-process, specific procedures, templates and tools to be used by project team members. Thus, five practices required by SQI were performed by the project team. These are: P1-Granting professional contracts, P4-Participating in project steering committee, P7-Performing an Integrated Design Process, P8-Performing value analysis, P12-Performing quality assurance (QA). This is a translation from the institutional level to the organization level at SQI, which the project team had to perform in addition to the translation of the QGF in order to produce the expected deliverables. Additionally, the project team performed three practices which emerged out of the project's needs rather than out of ostensive practices. These are: P2-Implementing a project management office, P5-Participating in project coordination meetings, P6-Conciliating between main stakeholders. In Figure 4.2, all practices are positioned on a timeline, allowing seeing a temporal dynamic of those practices. For the project and the organizational level, practices tend to occur early in the planning phase and keep on throughout the phase, whereas institutional practices are more scattered throughout the phase and last until the end.

This section presented the Quebec governance framework for public infrastructure projects, and the way it has been translated for project MP, through the process illustrated by the timeline and through the identification of twelve practices. Additionally, a multilevel process of translation, at institutional, organizational and at the project levels, has been introduced. The next section discusses those results in line with the relevant literature.

4.6 Discussion

This section touches upon two themes in order to discuss the main results. First, the process of translation is considered from a theoretical standpoint. Then, the emerging theme of organizational change is tackled.

4.6.1 The process of translation of the governance framework

The process of translation of the governance framework resulted for project MP in appropriation of ostensive practices through actors' perceptions and adaptation through performed practices. Twelve practices in the planning phase have been observed, and have been analyzed according to their level of requirement, resulting in three categories of practices, each assuming an overarching function: 'structuring' practices at the institutional level, 'normalizing' practices at the organizational level and 'facilitating' practices at the project level. According to Biesenthal and Wilden (2014), conceptualizations of project governance should adopt a multilevel nature. This implies a more political view on the process, by analyzing which actors are dominant in each stage, and how their needs and actions affect the process. Moreover, those three categories of practices appeared to have a dominant underlying objective, based on Brunet and Aubry's (2016) three dimensions of a governance framework for major public projects (legitimacy, accountability and efficiency). Although more research would be needed to confirm this emerging pattern, for now what we have observed is that an underlying, implicit objective could be associated with each level.

Structuring practices

Four practices resulted from requirements at the institutional level, from SCT directive: P3-Detailing the chosen option, P9-Performing risks analysis, P10-Elaborating the Business Case (DA), P11-Elaborating and actualizing the project management plan (PMP). Those practices refer to specific deliverables to be produced for the project Business Case (DA), for getting approval of the overall

project-planning phase. Those practices are asked from 'Direction générale de la gouvernance des projets d'infrastructure,' a unit within SCT, and permeate through all governmental layers so that project actors enacted them the way they perceived it was required. We suggest that legitimacy is the overarching function of those practices enacted at the institutional level, which allows shaping and structuring the project until approval of the phase.

Normalizing practices

Five practices have emerged out of SQI organizational needs and have been enacted into project MP: P1-Granting professional contracts, P4-Participating in project steering committee, P7-Performing an Integrated Design Process, P8-Performing value analysis, P12-Performing quality assurance (QA). Those practices are related to the recent developments of SQI as an organization having to normalize its projects practices, which is developing new roles of expertise, adding value to individual projects, and coordination between projects at the organizational level. We suggest that accountability is the overarching function of those practices enacted at the organizational level, as SQI new role is in line with recent institutional and organizational change that have occurred in recent years regarding public policy of major public infrastructure projects in Quebec.

Facilitating practices

Three practices were enacted out of project MP's specific needs: P2-Implementing a project management office, P5-Participating in project coordination meetings, P6-Conciliating between main stakeholders. Those practices emerged out of facilitating needs at the project level, are mostly related to coordination needs, and consider mostly human aspects. We suggest that efficiency is the overarching function of those practices enacted at the project level. Next, some considerations about organizational change are offered.

4.6.2 Organizational change

As it has been shown in section 4.5.1, the governance of major public projects in Quebec has been constantly evolving since 2008. The new governance framework, adopted in 2014, imposed modifications that had to be known and understood by project actors. Moreover, SQI, which was constituted in November 2013, has an enforced role in major public infrastructure projects, being the project manager and having to comply with the institutional governance framework. Yet, SQI resulted from the fusion of two previous organizations, and has been adapting to this new reality ever since. The mechanisms of managing a project have stayed more or less stable, yet projects are conducted in an environment which is in constant evolution and change. Notably, the emergence of performative practices in project MP and organizational practices from SQI reflects the undergoing adaptation and change.

Although attempting to study organizational change from a theoretical perspective is out of the scope of this research, the results nevertheless reflect this contextual reality. In line with process studies, change is the only reality, as stability does not exist *per se* (Hernes, 2014). As practices are not only limited to a micro-level but also exist on a meso and macro level (Gherardi, 2012), there would be rich possibilities to analyze the data collected from a change perspective. This resonates with Feldman and Pentland (2003)'s proposition to study endogenous change in organizational routines, in order to understand the dynamics between stability and adaptability. Change implies that actors adapt and learn, from their experience and that of others (Bresman, 2013). An organization's absorptive capacity is also important to consider in order for the requested change to be successful (Todorova and Durisin, 2007). Having discussed our preliminary results in line with theories and emerging themes, we now conclude with contributions and avenues for future research.

4.7 Conclusion

Since the birth of project management in the 1950s, major engineering and

infrastructure construction projects have been a continuous and important object of inquiry, first with military projects, then extending to the construction of buildings, transportation and power systems (Morris, 2013). The governance of projects has been studied for decades now (Ahola *et al.*, 2014). However, too often, the wrong projects are selected, the cost estimates are underestimated and the benefits of the project overestimated (Flyvbjerg, 2014b). This has led Flyvbjerg (2011) to propose the “iron law of megaprojects”: *Over budget, over time, over and over again.*

Project studies extended from a technical discipline to an inter-disciplinary one (Geraldi and Söderlund, In Press). Over the last two decades, project management research has improved substantially in quality and rigor (Turner, 2010), rapidly expanding as a subfield of management and organization studies (Söderlund, 2011). Thus, the variety found in the study of project management lends support to theoretical pluralism and to the inter-disciplinarity of the field (*ibid.*). As it has been argued, the theoretical perspectives of process studies, translation and the practice-based view are on their way to becoming more important in the field of project management, as insights from social sciences are expanding project management research (Florice *et al.*, 2014). Within project management, the study of major infrastructure projects has always been—and still is—a subject of importance (Flyvbjerg, 2017). The process of translation, from an ostensive practice to a performative practice as applied to the governance framework for public infrastructure projects, has not been investigated so far, to our knowledge. The theoretical field explored is vast and still offers numerous possibilities. This is in line with the grounded theory approach, which is used as a method to generate theory as the data is collected. Here, we advance one possible avenue for theorization, considering hybridization, which is important in social sciences to generate theory (Denis *et al.*, 2007).

In line with literature on the practice perspective, this research sheds light on the way project actors enact an institutional governance framework. The process of translation is exposed and specific practices are identified, allowing an understanding of distinctions between what is prescribed and what is actually done. This research aims to contribute to the emerging field of projects-as-practice (Cicmil *et al.*, 2006), by exploring the gap between what is prescribed in the Quebec governance framework and what people do in practice. As Sahlin-Andersson (2002, p. 22) argues: “we learn that in order to understand the outcome of a process, it is of value to learn about the process.” By mobilizing the practice perspective, it is possible to open the black box of the micro-process of the institutionalized, ostensive governance framework, and study its translation by actors.

For now, this case study presents data from only one project. The overarching doctoral research from which this article was produced included a multiple-case study of four major projects, all having to comply with the Quebec governance framework. Further inter-case analysis will prove useful in order to find patterns, differences, and time dynamics (Eisenhardt, 1989). This article proposes a single case qualitative study to investigate the governance of projects as it is actually done by actors (as it is translated from the institutionalized governance framework), which will increase knowledge in the field as most studies up to now have focused on the formal governance framework. At the practical level, this research will approach possible solutions to maximize the benefits in terms of optimizing public finances, transparency and ethics.

4.8 References

- Ahola, T., Ruuska, I., Artto, K., and Kujala, J. (2014). What is project governance and what are its origins? *International Journal of Project Management*, 32(8), 1321-1332.
- Akrich, M., Callon, M., and Latour, B. (2006). *Sociologie de la traduction : Textes fondateurs*. Paris: École des mines de Paris
- Alvesson, M., and Kärreman, D. (2007). Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32(4), 1265-1281. DOI: 10.5465/AMR.2007.26586822
- Biesenthal, C., and Wilden, R. (2014). Multi-level project governance: Trends and opportunities. *International Journal of Project Management*, 32(8), 1291-1308. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.06.005>
- Blomquist, T., Hällgren, M., Nilsson, A., and Söderholm, A. (2010). Project-as-practice: In search of project management research that matters. *Project Management Journal*, 41(1), 5-16. DOI: 10.1002/pmj.20141
- Bresman, H. (2013). Changing routines: A process model of vicarious group learning in pharmaceutical R&D. *Academy of Management Journal*, 56(1), 35-61. DOI: 10.5465/amj.2010.0725
- Brunet, M., and Aubry, M. (2016). The three dimensions of a governance framework for major public projects. *International Journal of Project Management*, 34(8), 1596-1607. DOI: <http://dx.doi.org/10.1016/j.ijproman.2016.09.004>
- Callon, M. (1986). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Briec bay. In J. Law (Ed.), *Power, action and belief: A new sociology of knowledge?* (pp. 196-223). London: Routledge.
- Charmaz, C. (2006). Coding in grounded theory practice *Constructing grounded theory* (pp. 42-71). Thousand Oaks: Sage Publications.
- Christensen, T. (2011). The Norwegian front-end governance regime of major public projects. *International Journal of Managing Projects in Business*, 4(2), 218-239. DOI: <http://dx.doi.org/10.1108/17538371111120216>
- Cicmil, S., Williams, T., Thomas, J., and Hodgson, D. (2006). Rethinking project management: Researching the actuality of projects. *International Journal of Project Management*, 24(8), 675-686. DOI: <http://dx.doi.org/10.1016/j.ijproman.2006.08.006>
- Committee of Public Accounts. (2012). Assurance for major projects. House of Commons, London, UK.
- Corbin, J., and Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13(1), 3-21.
- Corbin, J. M., and Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, Calif.: Sage Publications.
- Denis, J.-L., Langley, A., and Rouleau, L. (2007). Strategizing in pluralistic contexts: Rethinking theoretical frames. *Human Relations*, 60(1), 179-215.

- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Feldman, M. S., and Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization Science*, 22(5), 1240-1253.
- Feldman, M. S., and Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48, 94-118.
- Florice, S., Bonneau, C., Aubry, M., and Sergi, V. (2014). Extending project management research: Insights from social theories. *International Journal of Project Management*, 32(7), 1091-1107. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.02.008>
- Flyvbjerg, B. (2011). Over budget, over time, over and over again: Managing major projects. In J. K. P. Peter W. G. Morris, and Jonas Söderlund (Eds.), *The Oxford handbook of project management* (pp. 321-344). Oxford: Oxford University Press.
- Flyvbjerg, B. (2014a). *Megaproject planning and management: Essential readings* (B. Flyvbjerg Ed.). UK: Edward Elgar.
- Flyvbjerg, B. (2014b). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6-19.
- Flyvbjerg, B. (2017). *The Oxford Handbook of Megaproject Management*. Oxford University Press, Oxford.
- Geraldi, J., and Söderlund, J. (In Press). Project studies: What it is, where it is going. *International Journal of Project Management*. DOI: <https://doi.org/10.1016/j.ijproman.2017.06.004>
- George, A. L., and Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge, MA: The MIT Press.
- Gherardi, S. (2012). *How to conduct a practice-based study: Problems and methods*. Edward Elgar.
- Gherardi, S., and Perrotta, M. (2013). Doing by inventing the way of doing: Formativeness as the linkage of meaning and matter. In P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 227-259). Oxford: Oxford University Press.
- Gioia, D. A., Corley, K. G., and Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31. DOI: 10.1177/1094428112452151
- Guba, E. G., and Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions, and emerging confluences. In Lincoln (Ed.), *Handbook of qualitative research* (3rd ed., pp. 191-216). London: Sage.
- Hällgren, M., and Söderholm, A. (2011). Projects-as-practice. New approach, new insights. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management* (pp. 500-518). New York: Oxford University Press.

- Hernes, T. (2010). Actor-network theory, Callon's scallops, and process-based organization studies. In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 161-184). Oxford: Oxford University Press.
- Hernes, T. (2014). *A process theory of organization*. Oxford (UK): Oxford University Press.
- Johnson, G., Langley, A., Melin, L., and Whittington (eds.), R. (2007). *Strategy as practice: Research directions and resources*. Cambridge: Cambridge University Press.
- Klag, M., and Langley, A. (2013). Approaching the conceptual leap in qualitative research. *International Journal of Management Reviews*, 15(2), 149-166. DOI: 10.1111/j.1468-2370.2012.00349.x
- Klakegg, O. J., Williams, T., Magnussen, O. M., and Glasspool, H. (2008). Governance frameworks for public project development and estimation. *Project Management Journal*, 39, S27-S42.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691-710.
- Langley, A., Smallman, C., Tsoukas, H., and Van De Ven, A. H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal*, 56(1), 1-13. DOI: 10.5465/amj.2013.4001
- Langley, A., and Tsoukas, H. (2010). Introducing "perspectives on process organization studies." In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 1-26). Oxford: Oxford University Press.
- Lindberg, K., and Czarniawska, B. (2006). Knotting the action net, or organizing between organizations. *Scandinavian Journal of Management*, 22(4), 292-306. DOI: <http://dx.doi.org/10.1016/j.scaman.2006.09.001>
- Locke, K. (2011). Field research practice in management and organization studies: Reclaiming its tradition of discovery. *Academy of Management Annals*, 5(1), 613-652. DOI: 10.1080/19416520.2011.593319
- Michaud, V. (2011). Proposition pour l'étude des tensions dans le mouvement, la sociomatérialité et le paradoxe. *Communiquer*(5). DOI: 10.4000/communiquer.425
- Miller, R., and Lessard, D. (2000). *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. Massachusetts: Massachusetts Institute of Technology.
- Morris, P. W. G. (2013). *Reconstructing project management*: Wiley.
- Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford: Oxford University Press.
- NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2015.
- O'Reilly, K., Paper, D., and Marx, S. (2012). Demystifying grounded theory for business research. *Organizational Research Methods*, 15(2), 247-262. DOI: 10.1177/1094428111434559

- Pettigrew, A. M. (1997). What is a processual analysis? *Scandinavian Journal of Management*, 13(4), 337-348. DOI: [http://dx.doi.org/10.1016/S0956-5221\(97\)00020-1](http://dx.doi.org/10.1016/S0956-5221(97)00020-1)
- Project Management Institute (PMI). (2013). *A guide to the project management body of knowledge* (PMBOK® guide) (5th ed.). Newtown Square (PA): Project Management Institute.
- Rasche, A., and Chia, R. (2010). Epistemological alternatives for researching strategy-as-practice: Building and dwelling worldviews. In D. Golsorkhi, L. Rouleau, D. Seidl, and E. Vaara (Eds.), *Cambridge handbook of strategy as practice* (pp. 34-46). Cambridge, UK: Cambridge University Press.
- Rouleau, L. (2005). Micro-practices of strategic sensemaking and sensegiving: How middle managers interpret and sell change every day. *Journal of Management Studies*, 42(7), 1413-1441. DOI: 10.1111/j.1467-6486.2005.00549.x
- Rouleau, L. (2007). *Théories des organisations : Approches classiques, contemporaines et de l'avant-garde*. Québec: Presses de l'Université du Québec.
- Sahlin-Andersson, K., and Söderholm, A. (2002). The Scandinavian school of project studies. In Liber (Ed.), *Beyond project management: New perspectives on the temporary-permanent dilemma* (pp. 11-24). Stockholm.
- Samset, K., and Volden, G. H. (2013). Investing for impact: Lessons with the Norwegian state project model and the first investment projects (Vol. 36, pp. 1-53). Oslo, Norway: Concept Research Program.
- Secrétariat du Conseil du trésor. (2008). *Politique-cadre sur la gouvernance des grands projets d'infrastructure publique*. Québec, Canada.
- Secrétariat du Conseil du trésor. (2014). *Directive sur la gestion des projets majeurs d'infrastructure publique*. Québec, Canada.
- Shotter, J. (2010). Adopting a process orientation ... In practice: Chiasmic relations, language, and embodiment in a living world. In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 70-101). Oxford: Oxford University Press.
- Söderlund, J. (2011). Pluralism in project management: Navigating the crossroads of specialization and fragmentation. *International Journal of Management Reviews*, 13(2), 153-176.
- Teulier, R., and Rouleau, L. (2013). Middle managers' sensemaking and interorganizational change initiation: Translation spaces and editing practices. *Journal of Change Management*, 13(3), 308-337.
- Todorova, G., and Durisin, B. (2007). Absorptive capacity: Valuing a reconceptualization. *Academy of Management Review*, 32(3), 774-786. DOI: 10.5465/AMR.2007.25275513
- Turner, J. R. (2010). Evolution of project management research as evidenced by papers published in the international journal of project management. *International Journal of Project Management*, 28(1), 1-6.

- Vaara, E., and Whittington, R. (2012). Strategy-as-practice: Taking social practices seriously. *The Academy of Management Annals*, 6(1), 285-336. DOI: 10.1080/19416520.2012.672039
- Whittington, R. (2006). Completing the practice turn in strategy research. *Organization Studies*, 27(5), 613-634.
- Williams, T., Klakegg, O. J., Magnussen, O. M., and Glasspool, H. (2010). An investigation of governance frameworks for public projects in Norway and the UK. *International Journal of Project Management*, 28(1), 40-50. DOI: <http://dx.doi.org/10.1016/j.ijproman.2009.04.001>
- Williams, T., and Samset, K. (2010). Issues in front-/end decision-making on projects. *Project Management Journal*, 41(2), 38-49.
- Williams, T., Samset, K., and Sunnevag, K. J. (2009). *Making essential choices with scant information: Front-end decision making in major projects*. Basingstoke: Palgrave Macmillan.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Newbury Park, CA: Sage.

CHAPTER V

ARTICLE 3⁷⁴: Governance-as-practice for major public infrastructure projects: A case of multilevel project governing

5.1 Abstract

The aim of this article is to advance a conceptualization for governance-as-practice based on current developing streams of processual and practice studies — strategy-as-practice and project-as-practice. Whereas project governance has gained recognition as an important object of inquiry, what is actually done by different actors having to manage those projects has been studied much less. This article presents a qualitative research based on a multiple-case study of four major public infrastructure projects in Quebec, Canada. Considering the role of material artefacts in this process, along with organizational change, the results show how projects performative practices were enacted against the ostensive ones, uncovering a process of multilevel project governing. The main contributions are: 1) to unfold the knowledge articulation process of an institutional project governance framework, as it is translated into projects, and 2) to understand and document governmental practices in order to reflect on them and gain deeper insights about project governance.

Keywords: project governance, public infrastructure projects, governance-as-practice, multilevel project governing, multiple-case study

5.2 Introduction

As a subfield of project management, project governance has been gaining increased attention over the last decades (Ahola *et al.*, 2014). In the editorial from *International Journal of Project Management*'s special issue on 'Governing projects under

⁷⁴ An initial draft of this article was submitted and accepted to a peer reviewed conference for presentation in the Summer, 2017. EGOS, Sub-theme 58: Projects, Organizations and Institutions, Copenhagen, July 6-8, 2017.

complexity: theory and practice in project management', Pitsis *et al.* (2014) argue that the subfield of project governance has the potential to become a mainstream domain of research, theory and practice. While project governance is still difficult to conceptualize, there is a growing corpus of research on this question, both in project management literature and in general management literature (Biesenthal and Wilden, 2014). Biesenthal and Wilden (2014) have systematically reviewed existing research on project governance, and they found that the most widely used theories are either economic theories (agency theory, transaction costs, resource dependency theory) or behavioral theories (stakeholder theory and stewardship theory). However, there have been few attempts to understand project governance from a practice perspective (e.g. Bjørkeng *et al.*, 2009; Pitsis *et al.*, 2014). Mobilizing processual and practice theoretical perspectives to complement current theories of project governance is important to tackle, in order to consider the dynamics of this process and the interplay between institutional policies and projects – the way they influence and shape one another. It is hoped that the concept of “governance-as-practice” proposed in this article will contribute to the field of project management, but more largely to organizational theory, in line with the argumentation of Pitsis *et al.* (2014).

Over the past decades, the practice turn in social sciences has been gaining influence and recognition (Schatzki *et al.*, 2001). The practice perspective, composed of many streams and being far from a ‘unified theory’, has been contributing significantly to a renewed conception of the organization by emphasizing a processual view of organizational matters (Nicolini, 2012). This paper builds on a research project seeking to understand the governance of major public infrastructure projects from a practice perspective. A multiple case study of four major public infrastructure projects in Québec, Canada, was conducted in order to unveil how a governance framework is translated into practice, from its institutional form to its enactment by project actors. This research gap is quite important to tackle, as the level of investments put into major projects is quite high, and the overall performance of these projects is still

deficient (Flyvbjerg, 2014). In line with the call for papers from *International Journal of Project Management*'s special issue on 'Projects, Organizations and Institutions', this paper seeks to address the embeddedness of projects into wider organizational and institutional contexts, and the interfaces between projects and organizations, and between projects and institutions. Thus, the specific research question is the following: How is project governance made into project governing? The following sections present the theoretical background, the methodological approach, the findings, a discussion of those along with main contributions.

5.3 Theoretical background

This section briefly presents the practice perspective, along with some specific streams that are mobilized in this study: strategy-as-practice and project-as-practice.

5.3.1 The practice perspective

Although there is no such thing as a unified theory of practice, Gherardi (2012, p.2) presents that "practices constitute a mode of ordering the flow of organizational relations". She further elaborates:

Practice [...] may be assumed as an empirical unit of analysis in order to study how, within a practice, people reach a practical agreement starting from heterogenous understandings and modes of cooperation with the material world (*ibid*, p.202).

In this theoretical perspective, social practices are given primacy over individual agency and intention (Golsorkhi *et al.*, p.7). Chia (2013, p.47) contrasts two ontologies: the ontology of *being* and the ontology of *becoming*, the former being closely associated with the practice perspective. An ontology of becoming assumes change, focuses on processes, micro practices and material relations rather than on individuals and organizations (*ibid.*). An ontology of becoming is also intimately associated with social constructionism (*ibid.*). As Chia (2013, p.49) put it:

Such a process philosophical viewpoint promotes a decentred and dispersive view of 'the individual' and 'the organization' as a fluxing concatenation of event-clusters and patterned relationships that resists clear identity, simple

location and static representation.

Thus, working practices are sociomaterial, temporal, collectively enacted, with distributed agency (Gherardi, 2012). Building on the theory of routines as practices (Feldman and Orlikowski, 2011), in this article the terms ‘ostensive practice’ and ‘performative practice’ are used to distinguish between practices as ‘what people engage with’ and as ‘what people do’ (Johnson *et al.*, 2007). In line with Gherardi (2012)’s methodological insights, we have focused on the translation process of an institutionalized artefact into practice, from ostensive practices to performative ones (reference taken out for review). For each project practice related to project governing, its level of enactment was evaluated, which correlates with a collective appropriation by project actors, a re-embedding in a localized time and space (Leonardi and Barley 2010).

According to Langley (1999), process data often involve multiple levels and units of analysis with blurred boundaries and varying temporal embeddedness. Johnson *et al.* (2007) have argued for developing a research agenda which covers not only actors’ practices from a micro perspective, but also organizational actions and institutional field practices (respectively meso and macro perspectives). While Hällgren and Söderholm (2011) recognize that much practice research focuses on the micro level of practices, it is important to consider the multilevel nature of practices. Here is how Gherardi (2012, p.173) emphasized this point: “Considering the institutional environment and the institutional forces surrounding a texture of practices enables us to better link the micro-analysis of practicing with the macro-analysis of the circuits of practice reproduction and the power effects generated by practicing.” Next, two streams of practice theories are presented. First, strategy-as-practice, and second, projects-as-practice.

5.3.2 Strategy-as-practice

One of the most influential illustrations of practice-based studies conducted in the general field of management is strategy-as-practice, which re-institutes the significance of what managers are actually doing (Johnson *et al.*, 2007). Emerging as early as in the end of the 1990s, strategy-as-practice has since then established itself as an important stream involving many researchers from social sciences (*ibid*, Golsorkhi *et al.*, 2010). As argued by Whittington (2006), traditionally, strategy was conceived and studied as something organizations *had*, rather than something people *do*. Not only are strategy-as-practice researchers concerned with what people engaged in strategizing actually do, but they seek to address the interfaces between what is going on from a micro-perspective to wider organizational and institutional phenomena (Johnson *et al.*, 2007). This focus on practices bridges notions of agency and structure while considering the role of material artefacts in enabling and constraining them (Golsorkhi *et al.*, 2010). As such, strategy-as-practice researchers have proposed an extended research agenda seeking to study more deeply relationships between activities, organizations, and institutions, both from a content and a process perspective (Johnson *et al.*, 2007). This theoretical stream is quite closely connected to institutional work, which emerged out of an hybridation of institutional theories with the practice perspective (Lawrence *et al.*, 2011; Nicolini, 2012). As the practice turn is becoming increasingly recognised as generating new theoretical insights in social sciences, strategy-as-practice has inspired other emerging streams of organizational studies: institutional work, leadership-as-practice, and projects-as-practice, among others (Vaara and Whittington, 2012). The former is briefly presented in the next section.

5.3.3 Projects-as-practice

In the field of project management, some scholars have recently adopted the practice turn and have introduced 'project-as-practice' (Bjørkeng *et al.*, 2009; Blomquist *et*

al., 2010; Hällgren and Söderholm, 2011). Although still underdeveloped, those approaches are rapidly expanding (Florice *et al.*, 2014). Cicmil and Hodgson (2006) questioned the normative and rational underpinnings of project management and invited researchers to use other, more critical approaches, including the practice perspective. Similarly, a UK-based research network - Rethinking Project Management - “highlighted the growing critiques of project management theory and the need for new research in relation to the developing practice.” (Winter *et al.*, 2006, p.638).

According to Biesenthal and Wilden (2014), project governance is a construct which’s nature remains unclear, due to multiple definitions found in the literature. Yet, they consider that key project governance definitions share the view that “project governance is primarily concerned with aligning project objectives with an overarching organizational strategy, and that it is necessary to create stakeholder benefits across different organizational levels” (Biesenthal and Wilden, 2014, p.1294). Consequently, conceptualizations of project governance should reflect this multilevel nature, from the project level, the PMO level, and the organizational level (*ibid.*). However, the institutional level should be added to that in order to encompass the others (Miller and Lessard, 2000; Peter and Geraldi, 2011). This resonates with Sydow *et al.* (2004, p.1477)’s call to “account (often simultaneously) for the issues of embeddedness and knowledge/learning in a multi-level and processual perspective”. In line with an epistemology of practice as dwelling, Chia (2013, p.48) poses that “the study of the process of ‘organizing’ therefore replaces the study of ‘organizations’.” Building on this, some researchers are now investigating the field of project governance from a practice perspective, in the form of ‘project governing’ (Foss *et al.*, 2010; Pitsis *et al.*, 2014; Sanderson, 2012). As project governance as a concept might extend beyond project management (Biesenthal and Wilden, 2014), this paper develops the concept of ‘governance-as-practice’ which, applied to major

public infrastructure projects, refers to multilevel project governing. In order to do so, the next section reviews the methodological approach taken.

5.4 Methodological approach

The research strategy is qualitative, heuristic, and based on case studies which have been purposefully sampled, according to maximum variation sampling (Patton, 2002). The overall aim of the explorative study was to address the process of translation of a governance framework for public infrastructure projects into practice. Following an in-depth case analysis of one project (reference taken out for review), a multi-case study has been undertaken in order to unveil how a specific governance framework is translated in various situations, what common patterns emerge and what are the significant distinctions. The number of cases has been decided between the researchers and fieldwork representatives. At first, a single-case, in-depth study was proposed by the researchers, but it was convincingly argued by fieldwork representatives that studying three or four cases applied to different contexts could generate more robust findings that could prove transferable to other projects. The multiple case study also offers the advantage of triangulation, to test concepts that are ultimately be more reliable than the single case (Eisenhardt, 1989).

The general context for all cases is the socio-political context of Québec (Canada). Four cases have been selected, each one being a major public infrastructure project - defined as over \$50 million (CAD) - currently in the front-end phase (Williams and Samset, 2010). Two projects are in the initiating phase, one initiated by a museum, under the Ministry of Culture and Communication, and one initiated by a courthouse, under the Ministry of Justice. The two other projects are in the planning phase, and are both hospital extensions, both under the Ministry of Health and Social Services. Thus, the unit of analysis is the project, which has to conform to the Quebec governance framework (QGF). This institutional framework, adopted in 2008, was

revised in 2010, and again in 2014. The *Secrétariat du Conseil du trésor* (SCT, Quebec Treasury Board), is responsible for the updates of this framework, which has been formalized in 2014 as a legal document entitled: '*Directive sur la gestion des projets majeurs d'infrastructure publique*' (Secrétariat du Conseil du trésor, 2014). The QGF presents a stage-gate model, a project life-cycle of five phases, of which the first three ones have to go through a decision-making point by the Council of Ministers.⁷⁵ The governmental project manager is *Société québécoise des infrastructures* (SQI)⁷⁶. This organization was created in November 2013, and resulted in the fusion of two previous organizations. SQI is responsible for the production of projects' documentation, yet, a separate internal unit is also in charge of validating projects documents for quality assurance. The main deliverable to be developed in the initiating phase for approval by the Council of Ministers is an Opportunity Case (DO, *Dossier d'opportunité*), and a Business Case (DA, *Dossier d'affaires*) in the planning phase. Clients of a project are, most of the time, threefold: the Council of Ministers (the paying client), the Ministry sponsoring the project and the operator of the infrastructure (the user).

The strategy for data collection included a pilot project in 2014 to test the conceptual framework and the initial analysis of public data. This initial conceptual framework was inductive, as the researchers involved had some previous and intuitive knowledge of the overall phenomenon. It was however subsequently revised and improved to reflect accurately the research findings. Field research has been conducted from September 2015 to June 2016. Data collection is based on a set of

⁷⁵ Of those three phases, only the second (initiating) and the third (planning) are covered by this research, as the front-end phase has not been investigated. However, this crucial phase is at the heart of the governance framework, as it allows developing a thorough understanding of the societal need for a public infrastructure project in order to be approved and undertaken to the next step.

⁷⁶ SQI may also support the project manager in some instances, in those cases, its role includes performing quality assurance of the main project deliverables. Also, projects under the Ministry of Transport (*Ministère des Transports, de la Mobilité durable et de l'Électrification des transports*) are not within the mandate of SQI.

approaches: non-participant observation in project meetings, semi-structured interviews and a documentation analysis. Interviews have been carried out with different project actors, following the snowball strategy, starting with project managers and then with the main team members involved in the projects, until saturation (Patton, 2002; Yin, 2009). Additionally, other interviews have been conducted specifically on the Quebec governance framework (QGF), regarding its objectives, and the perceived performance of it to improve overall projects success. Table 5.1 presents a summary of collected data.

Table 5.1: Data collected for the research

	Number of interviews	Number of meetings observed / Number of hours	People interviewed
QGF	15	-	Governance framework experts: representatives from Secrétariat du conseil du trésor (SCT), Société québécoise des infrastructures (SQI), and other external experts (academics and consultants).
Project 1	7	8 / 29h	SQI project manager, the responsible of quality assurance at SQI, the hospital/Health Ministry project managers, the SCT analyst, an architect and the consultant who wrote the Business Case.
Project 2	7	7 / 31,5h	SQI project managers (2) and manager, the hospital/Health Ministry project managers, the SCT analyst, an architect.
Project 3	9	5 / 15,5h	SQI project manager, the strategic advisor at SQI, the Ministry of Justice project manager and business analyst, the Ministry of Public Security/Director of Criminal and Penal Prosecutions project managers, the SCT analyst.
Project 4	6	1 / 1h	SQI project managers (2), the responsible of quality assurance at SQI, the museum/Ministry of Culture project

			managers, the SCT analyst.
Total	44	21 / 77h	

Data collected were transcribed and coded using qualitative data analysis software NVivo. The main analysis strategy consisted of using the grounded theory, starting with a flexible frame and revising it according to insights generated by data collected (O'Reilly *et al.*, 2012). Starting from the conceptual framework of the doctoral thesis, we initially coded the interviews, and revised the coding as well as the framework in an iterative cycle (Charmaz, 2006). From a focus coding on main themes addressed – the practices in our study (called first order concepts in Gioia *et al.*, 2013), we move to an axial coding – the three levels of requirement being institutional, organizational and project level (second order themes in Gioia *et al.*, 2013; O'Reilly *et al.*, 2012). In order to do so, one of the four projects (Project 1⁷⁷) was used to develop an initial, in-depth analysis⁷⁸ (reference taken out for review). Other analysis procedures included temporal bracketing and a systematic analysis of various governmental documents (Langley, 1999). This case-study analysis allowed unfolding the process of translation of the QGF, from the institutional framework into the project, as various actors made sense of the ostensive practice (through appropriation) and enacted it as a performative practice. From this detailed intra-case analysis, a set of twelve practices have been observed, which we classified in three different categories: (1) 'structuring' practices — required in the governance framework at the institutional level; (2) 'normalizing' practices — required at the organizational level; and (3) 'facilitating' practices — performed at the project level.

⁷⁷ This project was selected as it presented the most complete set of practices, and it was fairly easy to represent them on a timeline. Thus, how practices are numbered in the results section (P1, P2, ...) is approximately the chronological order observed with reference to this practice in Project 1. For the other projects, establishing a temporal order proved more confused, as several practices were recurring/ongoing. No comparisons are offered in the regard of temporality in the inter-case analysis, though it would be interesting to explore this avenue further.

⁷⁸ The preliminary results of this article were presented to a SQI representative and to a research conference. Following those initial validations, some iterations were made and contributed to enrich the results and discussion.

Following this in-depth case study, the three other projects were each analyzed separately. For each project, a timeline was established, along with a summary of the main episodes and practices which had occurred. An inter-case study followed in order to validate the main patterns encountered about the multilevel nature of this process of translation (Eisenhardt, 1989). The analysis was done iteratively, bringing partial and preliminary results which were presented and generated subsequent analysis. An intermediary meta-matrix was established (Miles and Huberman, 1994), which listed all practices along with the way they were translated (in the initiating phase and in the planning phase): from the artefact (institutional or organizational), to the ostensive practice, and then to the performative practice⁷⁹. Because of words constraints, we had to synthesize data further, thus we elaborated a synoptic matrix which is presented below (Table 5.4). In order to illustrate clearly how we have evaluated the level of enactment of those practices into projects, table 5.2 below presents one example for the practice: P5-Participating in project coordination meetings.

Table 5.2: Example of evaluation for the enactment of a practice

Project	Evaluation	Justification
1	++	Coordination meetings have been established every two weeks for this project. Some were postponed, depending on the needs of the project. In addition, participants in these meetings varied as required. According to respondents, several key project members were so busy on other projects that they missed important meetings, furthermore, other project members were in different localizations so a visioconference was used.
2	++	According to the PMP, project coordination ('statutory') meetings occur on a monthly basis. The meeting planned on Oct 27 2015 was cancelled as professionals had to finish their report for PPS 75%. The objective of Nov 10 2015, meeting was to plan the completion of PPS 100%. The Nov 24 and Dec 8 2015 meetings were cancelled. On Dec 8-9 2015, an estimation meeting was held to consolidate project costs.

⁷⁹ This meta-matrix was again submitted to a SQI representative for validation, along with the integrated timeline of the four projects, the projects summaries and the initial findings. A presentation to project management academics (professors and students) was also held at that time in order to present preliminary results and the conceptual framework.

3	+	During the time of the fieldwork, several meetings occurred with the project team. Specific objectives were to be attained: a stakeholder analysis workshop, a workshop to determine possible options, two risk analysis workshops and a conference meeting to organize the validation meeting at SCT. However, there was no proposed calendar or coordination meetings planned.
4	+++	During the revision of the DO until August 2015, team meetings were held every week, on Wednesday afternoons. According to a respondent, this was a good initiative from the project manager to set up those mandatory meetings, as things did not progress well until there was a strong commitment from all team members to revise this project and coordinate all efforts.

We unfortunately lose some thickness in the data collected, yet, making sense of it was facilitated. The conceptualization of ‘governance-as-practice’, as illustrated in Figure 5.1, was also revised at that point. The projects timeline was put aside as their analysis were inconclusive and brought no additional value to the reader; the main points were instead incorporated in Table 5.3.

According to George and Bennett (2005), a research which is designed to have both within-case analysis and cross-case comparison is the strongest means to derive inference from case studies. Chosen data analysis strategies (grounded theory, temporal bracketing and systematic analysis) are high in accuracy and somewhat limited in simplicity and generality, even though the transferability could be important (Langley, 1999). This approach to theory development using discovery, flexibility and reflexivity has been encouraged by several influential researchers (Alvesson and Kärreman, 2007; Klag and Langley, 2013; Locke, 2011). Having explained the methodological approach to this study, the results are presented in the next section.

5.5 Main findings

As it was explained in the section above, the findings result from an inter-case study of four projects. First, the main characteristics and key episodes of the projects are presented, followed by the ostensive practices. Then, the performative practices as enacted in the projects are synthesized and discussed.

5.5.1 The projects

The four projects constituting the four cases, all based in Québec (Canada), are summarized here. The objective of Project 1 is to expand three specific medical services into a new constructed extension of an existing hospital. Project 2 aims to replace temporary structures in a hospital that were set up to treat patients with kidney failure into a permanent installation for hemodialysis. The objective of Project 3 is to renovate and expand a decaying law court in a small municipality in Québec. Project 4 aims to renovate a museum located in a very busy location of a large city in Québec. All are defined as major public infrastructure projects: project 1 total budgeted costs are about \$150 million (CAD), and the three other projects are smaller in scope - approximately \$50 million (CAD) each. Table 5.3 below lists the main characteristics and key episodes of the four cases.

Table 5.3: Main characteristics and key episodes of the four cases

	Sector of the infrastructure project	Phase of the project	Key episodes
Project 1	Health	Planning	Fall, 2013 Political command: to revise the functional and technical program and DAI (DO under former governance framework) March, 2014 DAI revised. Did not pass approval at Council of Ministers (CM) as an additional technical feasibility report is required Aug, 2014 Technical feasibility study done, DAI revised into DO Oct, 2014 DO approved, at CM Dec, 2014 Ministerial letter authorizing the start of planning phase (DA) June, 2016 DA submitted to CM for approval
Project 2	Health	Planning	Sept, 2014 Political command: to undertake DA, no DO requested as this project is "urgent" April, 2016 Initial planned date for DA submission to CM for approval (June, 2015)

			Aug, 2016 Revised date for DA submission to CM for approval (June, 2016)
Project 3	Justice	Initiating	Aug, 2014 Start of DO with SQI team April, 2016 New PM affected to this project June, 2016 Planned date for DO submission to CM for approval (Aug, 2015) Dec, 2016 Revised date for DO submission to CM for approval (May, 2016)
Project 4	Culture	Initiating	2013 Project Information Sheet approved, start of DAI June, 2014 SCT validation meeting, DAI/DO needs major revisions August, 2015 SQI project manager affected to another project (promotion) Dec, 2015 Planned date for DO submission to CM for approval (June, 2015) May, 2016 Official announcement of federal funding for this project Sept, 2016 Revised date for DO submission to CM for approval (May, 2016)

During the time of the fieldwork, all four projects have lost their project manager for various reasons (one being the long duration of those projects); yet, not all projects seem to have suffered from that, as transitions and replacements were carefully managed by SQI. While project 1 delivered the Business Case in time, the three other projects had some delays to deliver - from about four to nine months. The main issues of those projects as raised by respondents, along with impacts on their governance is discussed in section 5.1 below. Next are discussed the ostensive practices related to those four projects.

5.5.2 Ostensive practices

The results of the multiple case analysis show a confirmation of patterns observed from a detailed, in-depth analysis of project 1 which was done previously⁸⁰ (taken out

⁸⁰ This first, in-depth analysis uncovered twelve practices. In this comparative case study, another

for review). The multilevel nature of the practices is present for all cases, as they all have to conform to the QGF. Thus, for projects in the initiating and in the planning phases, three categories of practices apply: (1) ‘structuring’ practices — required in the governance framework at the institutional level; (2) ‘normalizing’ practices — required at the organizational level; and (3) ‘facilitating’ (or enabling) practices — performed at the project level. Table 5.4 presents, grouped in those categories, the ostensive practices at the initiating and planning phases. This table was developed according to various artefacts, government documents, rules, templates, etc., and the common understanding of ‘what people engage with’ (Johnson *et al.*, 2007).

Table 5.4: Ostensive practices

practice was added: P13-Performing stakeholder analysis, as it is quite central in the initiating phase.

Practice	Initiating phase	Planning phase
P3.1-Determine options and define chosen option (Initiating) P3.2-Detailing the chosen option (planning)	This practice is the main input to the opportunity case. According to the client's needs, possible options have to be evaluated, and the chosen (recommended) option is defined. A Functional and Technical Program (FTP) is produced, delivery mode is determined, risks are analyzed, and the project schedule and cost are established.	This practice is the main input to the business case and leads to the formalization of project schedule and cost. Architects lead the team to detail the chosen option and coordinate the different disciplines. The SQJ project manager ensures that the overall process is respected, while project members of the SQJ internal expertise support and question professionals. At the end of each stage (concept, PPS 66% or 75%, PPS 100%), a report is made by SQJ resources, to which professionals must respond. The level of development of those plans varies depending on the project complexity and risks level; it is decided by the steering committee. The quantitative risk analysis is updated and developed; similar to the initiating phase. Mandated professionals and internal SQJ expertise team member usually participate in workshops.
P9-Performing risks analysis	Risks workshops are carried out with the project team (SQJ, and clients) and animated by SQJ resources specialized in risks. A first workshop aims to qualitatively assess, for each option, risks and their potential effects. Then, a second workshop is held to quantitatively analyze the chosen option. Results of the analysis are used to calculate risk reserves and are recorded in the project budget. They reflect the level of detail of the chosen option. The main risk categories studied: strategic risks, design and construction risks (change in scope), social risks, site and environmental risks, financial and legal risks.	All practices carried out during the planning phase lead to the development of the business case (Dossier d'affaires, DA). Similar to the practice as performed during the initiating phase.
P10.1-Elaborating the Opportunity Case (DO) (Initiating) P10.2-Elaborating the Business Case (DA) (planning) P11.2-Actualizing the project management plan (PMP) (planning)	All practices carried out during the initiating phase lead to the development of the opportunity case (Dossier d'opportunité, DO), which will be reviewed for quality and submitted for approval by the Council of Ministers. As much as possible, the DO is drafted internally at SQJ by a dedicated resource (a strategic advisor), which is guided by the project manager. (see 11.1-Elaborating the PMP)	This practice aims to assist the project manager in structuring, managing and facilitating the project. According to SQJ procedures, the PMP should be updated at the beginning of the planning phase and approved by the project steering committee.
P13-Performing stakeholder analysis	A stakeholder analysis is performed with the project team, animated by internal resources from SQJ. For each evaluated option, stakeholders are identified along with their potential influence. For the chosen option, stakeholders have to be identified, along with their interests and potential risks for the project.	The stakeholder analysis for the chosen option is updated (stakeholders register, PMP), and the client is responsible for developing the communication plan.
P1-Granting/managing contracts	A service agreement is established at the beginning of the project between SQJ and the client ministry. Other contracts might be awarded if needed, depending on the project needs and available internal SQJ resources.	Professional contracts (architects, engineers, etc.) are awarded at the beginning of the planning phase. They are formalized at SQJ according to government regulations. A separate authorization is required from the client ministry of the project in the case of change orders and program changes.

Practice	Initiating phase	Planning phase
P4-Participating in project steering committee	The members of the project steering committee are defined in the service agreement between the client and SQJ. In the SQJ initiating phase procedure, it is stated that a steering committee must be formed when the governance structure is defined and that the committee has to meet during the development of the DO.	The meetings are about every 3 months, plus others if necessary. The composition of the committee may vary according to the needs but is generally: the SQJ project manager and his / her superiors, project managers (ministry and the organisation initiator of the project) and their superiors. A project progress report is usually submitted prior to the meeting, and a videoconference is widely used.
P7-Performing an Integrated Design Process (IDP)	This practice aims to foster active collaboration between all project stakeholders in order to optimize the quality of infrastructure requirements, concepts, plans, specifications.	Similar to the initiating phase.
P8-Performing value analysis	SQJ requests that a value analysis be made when elaborating FTP for all projects over \$ 5 million, either in a progressing way via an IDP (recommended by SQJ) or by workshops.	Value analysis has to be done when the concept is elaborated, or, at the latest, at PPS 50%. The objective is to explore and analyze various conceptual solutions in order to optimize the project quality/response to needs, and its costs. The results of this analysis (report and cost reduction) are integrated to the business case.
P11.1-Elaborating the PMP (initiating)	This practice aims to assist the project manager in structuring, managing and facilitating the project. According to SQJ procedures, the PMP should be done at the beginning of the initial phase and approved by the project steering committee.	(see 11.2-Actualizing the PMP)
P12-Performing quality assurance (QA)	SCT Directive requires that the opportunity case be certified by SQJ, the organisation initiator of the project and the client Minister before submitting to SCT for formal advice and to the Council of Ministers for approval. SQJ requires a quality assurance process before attestation, including 39 steps, for a duration of about three months. The objective of this practice is to involve quality assessors at the beginning of the process, before the DO is completed. The project manager organizes punctual meetings to present the project for preliminary validation, both internally at SQJ and with SCT and clients.	Similar to the initiating phase.
P2-Implementing a project management office (PMO)	No organizational rules for setting up a PMO. Unlikely to happen in the initiating phase, as resources are usually working part-time on a specific project.	No organizational rules for setting up a PMO. As for most projects, resources are usually working part-time, setting up a PMO requires a very large scope and dedicated resources to be considered of value for the project team.
P5-Participating in project coordination meetings	SQJ require that a project governance structure be established in the project management plan, including mechanisms such as project meetings (it is suggested to be once every other week or every week when needed), yet the project manager has some flexibility to adapt according to the project needs.	Similar to the initiating phase. The architect conducts these meetings, keeping track of technical issues, timelines and budgets. When strategic issues are raised, the project manager and the client follow up on them, bringing them to the project steering committee as required.
P6-Conciliating between main stakeholders	No formal rule in this regard, implicit in the PMP in the section "Project governance structure". Conciliating is a practice that is done on an ongoing basis, in project steering committee meetings, in coordination meetings, by e-mails, videoconference and by phone calls.	Similar to the initiating phase.

Overall, the practices required at the initiating and planning phases are similar; most of the time the planning phase will develop further the practice started at the initiating phase. The number of the practices (P1, P2, ...) is approximately the chronological order observed with reference to this practice in project 1⁸¹. When a practice was in essence the same, yet needed a separate title for initiating and planning, we have detailed accordingly (P3.1/P3.2, P10.1/P10.2 and P11.1/P11.2). Then, we categorized the practices in three categories according to the level at which they were required, as stated by material artefacts (the governance framework, or *Directive*, at the institutional level, and the organizational rules and frameworks at the organizational level). Overall, there is only one practice that is required at a different level at the initiating phase: P11.1-Elaborating the Project Management Plan (PMP). This practice is an organizational requirement at the initiating phase, while it becomes an institutional requirement in the planning phase (P11.2-Actualizing the PMP).

Structuring practices

Five practices are listed as institutional requirements: P3.1/3.2 (Determine options and define chosen option / Detailing the chosen option); P9-Performing risks analysis; P10.1/10.2 (Elaborating the Opportunity Case (DO) / Elaborating the Business Case (DA)); P11.2-Actualizing the project management plan (PMP) (planning phase); P13-Performing stakeholder analysis. P3.1/3.2 is quite substantial; we could refer to it as a 'meta-practice', especially in the planning phase, as there are important outputs related to establishing the project schedule and costs⁸². P9 is also a very important practice, as the output is quantified as a risk reserve which is included

⁸¹ As explained in the methods section, it proved more complicated to analyse the practices from a chronological order in the other projects, thus, a multiple case temporal analysis is out of scope of this research, although some insights are offered.

⁸² Arguably, establishing the project schedule and establishing the project costs could be labelled as practices. Yet, we chose to include them implicitly within practice 3.1/3.2, as the specific processes and activities related have not been observed during the fieldwork. One exception is an 'estimation meeting' which was held for Project 2, but we included this meeting within practice P5-participating in coordination meetings.

in the project budget. P10.1/10.2 is the ultimate deliverable to be attested and authorized by the Council of Ministers – it includes all project documentation.

Normalizing practices

Six practices are listed as SQI organizational requirements: P1-Granting/managing contracts; P4-Participating in project steering committee; P7-Performing an Integrated Design Process (IDP); P8-Performing value analysis; P11.1-Elaborating the PMP (initiating phase); P12-Performing quality assurance (QA). For P1, depending on the delivery method considered for the chosen option, requests for proposals and contracts other than for professionals might be awarded in the planning phase (most notably for construction management, design-build, turnkey or PPP methods). The purpose of P4 is to help decision-making. Participating in project steering committee is important for governing the project, guiding and deciding on issues. Much of the conciliation between the parties takes place during these meetings, decisions are made and important issues are raised. For P7, a formal procedure has been introduced at SQI in 2015 for all new projects of \$50 million (CAD) and over. P8 was mandatory during the planning phase with the previous version of the Quebec governance framework. However, since 2014, SCT does not formally require it, but it encourages the adoption of this practice, which is required at the organizational level, according to SQI documentation. P12 is a new practice for SQI since 2014, as before quality assurance was done by external reviewers hired by SCT. This practice was still being developed at the time of the fieldwork. However, organizational expertise increases as learning takes place.

Facilitating practices

Three emerging practices have been identified at the project level, for which no official documentation required explicitly that they be enacted: P2-Implementing a project management office (PMO); P5-Participating in project coordination meetings (although SQI requires that a project governance structure be established in the

project management plan, including mechanisms such as project meetings, the project manager has some flexibility to adapt those according to the project needs); P6-Conciliating between main stakeholder. As we can see from this list, those practices are related to the human-side or ‘soft skills’, central in behavioral and relationship schools of project management (Söderlund, 2011). The enactment of those practices has been outlined as an important success factor in several studies (e.g. Cooke-Davies, 2002; Chan, 2004). Having reviewed the practices from their ostensive side, we now turn to their performative side, as it has been observed in the four projects.

5.5.3 Performative practices as enacted in the projects

For the four projects under study, we have evaluated the level of enactment of the ostensive practices in the project teams, as ‘what people do’ (Johnson *et al.*, 2007). This evaluation (strong, medium, low, or non-existent) is the researchers’ view, based on a qualitative meta-matrix describing in more details how those ostensive practices were deployed in the projects (Miles and Huberman, 1994), see table 5.2 above for an illustrative example. If a practice scores as ‘medium’ or ‘low’, it does not mean that the requirement (institutional or organizational) is not met; rather, it means that the socio-materiality of this practice (team gatherings, workshops, the social co-construction of the project, the level of embeddedness of the practice in the project team, etc.) is ‘medium’ or ‘low’ (Gherardi, 2012). Again, those exploratory findings are based on the data collected, observed during the fieldwork and triangulated with participants’ interviews. When we could not directly observe the enactment of practices, we inferred the evaluation based on interviews⁸³. Table 5.5 presents, grouped in the same categories (structuring, normalizing and facilitating practices), the evaluation of the enactment of performative practices for the four projects.

Table 5.5: Performative practices as enacted in the projects

⁸³ When no data were available for a specific practice in a project, we explicitly said so: (N/A).

		Structuring' Practices					Normalizing' Practices						Facilitating' Practices					
		P3.1-Determine options and define chosen option	P3.2-Detailing the chosen option	P9-Performing risks analysis	P10.1-Elaborating the Opportunity Case (DO)	P10.2-Elaborating the Business Case (DA)	P11.2-Actualizing the project management plan (PMP)	P13-Performing stakeholder analysis	P1-Granting/managing contracts	P4-Participating in project steering committee	P7-Performing an Integrated Design Process (IDP)	P8-Performing value analysis	P11.1-Elaborating the PMP (Initiating)	P12-Performing quality assurance (QA)	P2-Implementing a project management office (PMO)	P5-Participating in project coordination meetings	P6-Conciliating between main stakeholders	
Planning	Project 1	++	++	++	++	++	+	(+)	++	++	(+)	+		++	++	+	++	
	Project 2	++	++	++	+	+	+	(+)	++	++	(+)	++		+	.	+	+	
Initiating	Project 3	++	++	+	+	+		+	N/A	N/A	N/A	N/A	+	+	.	+	++	
	Project 4	+	+	N/A	(++)			N/A	N/A	(+++)	N/A	N/A	+	++	.	++	++	
Legend:		Strong enactment of the practice in project team							No enactment of this practice in project team							Level of enactment inferred by the researchers based on interviews (no direct observation)		
	++	Medium enactment of the practice in project team							No data available on this practice									
	+	Low enactment of the practice in project team							This practice is required/enacted at another level									

From this table, several general findings become apparent. Although we have to be cautious not to generalize those results, as the context and the people within each project are unique, there is nonetheless interesting patterns and differences that are worth exploring further. A first evidence is that for the two projects in the planning phase, the overall level of enactment of those practices is stronger than for the starting projects⁸⁴. However, how and whether the enactment of practices affects the governance of a project is still a relevant question - some insights are offered in section 5.6.1 below. For now, we focus on results relating to the specific practices and categories.

Structuring practices

Overall, structuring practices are quite strongly enacted, more so in the planning phase. While the other practices within that category are more focused on project management parameters, in P3.1/3.2, project team members focus on project content (the functional and technical program/ the concept, preliminary plans and specifications). Yet, the level of detail to be attained in those plans needs to find balance (including the number of options to be analyzed at initiating), as project schedule and costs are elaborated out of this practice. Similarly, for P9, risks workshops are held with great care, as the result is a quantification of risk reserves to be included in the project budget. The elaboration of DO/DA (P10.1/10.2) is done in parallel with the development of the project content or product (P3.1/3.2), increasingly internally by strategic advisors in charge of writing those strategic, all-encompassing documents, but also externally. DA for project 1 was mandated externally; the other DA seemed to be more work for resources involved and a complex undertaking which caused additional delays, as no DO had been done in that urgent project. In P11.2, the project management plan (PMP) is lowly enacted for

⁸⁴ It also appears that data was not available or missing for many practices as performed for project 4. The project was in stand-by at the time of the fieldwork. We attended one project meeting and interviewed six key team members, thus providing a partial view of this project.

projects 1 and 2, as it was being implemented at SQI at the time of the fieldwork. Some team members seemed a little confused about differentiating this practice from elaborating the DA (P10.2), to which it is appended. In project 1, the PMP was done by the project manager just before DA was completed. For project 2, the PMP was produced quite early by the project manager and then sent to the main stakeholders, who returned their comments several months later, which were subsequently included. Lastly, for P13, there was a low enactment of stakeholder analysis in the planning phase, no workshops were specifically held on that, only previous documents were updated. A specific stakeholder analysis workshop was held for project 3, yet it seemed laborious as some participants were not familiar with this practice. P13 still needs to be more strongly enacted, especially since there is a big emphasis in the QGF on the importance of managing stakeholders, and on accounting for the social acceptability of the project.

Normalizing practices

Overall, normalizing practices are quite strongly enacted in the planning phase, but much less so for the two starting projects. For P1, it is quite normal, when the resources are found internally at SQI for initiating a project, there is no need to grant or manage external contracts. P4 is also quite strongly enacted in the projects, even though no data were available for project 3 at the time of the fieldwork. P7 is a recent initiative introduced by SQI in 2015, so its enactment has been limited in the projects studied. There was one workshop held for project 1, led by external consultants, and for project 2, a respondent (SQI project management expert) mentioned that the elaboration of PPS was “very optimal” as it depends on the individuals. P8 is also quite strongly enacted at the planning phase, with corresponding workshops held for the two projects animated by mandated professionals. Projects in the initiating phase did not enact P7 nor P8, and as far as the project management plan (PMP) is requested in P11.1, the enactment of it was quite low. Again, these were all practices being implemented at SQI at the time of the fieldwork. For P12, this important

practice was enacted at medium level for three out of the four projects, as this newly established practice caused some confusion. Few people had undertaken this internal quality assurance process. For project 1, the strategic advisor who had been involved in the project from the start had just transferred in the quality assurance team, so this allowed a strong enactment of this practice. In conclusion, it is to be emphasized that SQI is quite a young organization, having been created in November 2013, so the results show that there is still change, procedures established, for which people have to adapt to in order to enact those in their projects.

Facilitating practices

Overall, the human related practices were quite strongly enacted in projects, except for P2, as only one project has implemented a project management office (PMO). At the time of the fieldwork, SQI was considering normalizing this practice for major projects but it was still being done on an individual basic according to project teams. Respondents agreed that a PMO had a positive impact on the project and facilitated coordination among professionals and the consultation of medical groups. For P5, there was some issues in the enactment as some important resources were not systematically attending coordination meetings (project 1), as some meetings were postponed or cancelled (project 2), or as no coordination meeting were planned in addition to specific workshops (project 3). For P6, the enactment was quite strong for all projects, with some levels of complexity for project 1 and 3. In project 2, conciliating has happened on an ongoing basis, yet, it has been difficult, with some conflicts which were not promptly resolved, impacting the project regarding some important issues. To sum up, here is a quote from a SQI project manager attesting how central facilitating practices need to be: "It is a coordinating and planning effort, with the participation of numerous stakeholders. Both internally and externally. So, we have to deploy a massive coordination effort, to lead all those people to deliver." Having reviewed results from the ostensive and the performative sides of practices, we now discuss those findings.

5.6 Discussion

This section elaborates on three aspects of project governance. First, the relationship between the enactment of practices and their impact on governing is tackled. Second, we explore the link between socio-materiality of the governance framework and project governing. Thirdly, we propose a conceptualization of ‘governance-as-practice’.

5.6.1 The enactment of practices and project governing

Overall, the results tend to suggest that there is a link between the enactment of practices and project governing. How the enactment of practices influence project governing and address specific project issues is a question that would need more empirical investigation. Yet, for now we advance the following proposition: *the enactment of practices, especially the ‘facilitating’, emerging ones at the project level, have a positive influence on project governing.*

Project 1 team is the one who enacted more strongly the most practices; the DA was delivered on time, and, according to us, their project governance was well-executed and had positive impacts. Project 2 team also enacted quite strongly many practices, yet less than for project 1. They had some difficulties to coordinate/conciliate between the different stakeholders, also given that this urgent project had by-passed the initiating phase, this resulted in some delays. As projects 1 and 2 were both in the planning phase, there were already professionals working full time on those projects, which might explain why more practices were more strongly enacted than for the projects in the initiating phase. Moreover, projects 1 and 2 were in the health sector, while the two others were in other sectors. The health context is quite specific, bringing more complexity overall according to many respondents; also, there have been important changes in this sector regarding project management over the last years, Project 3 underwent a complex course of actions at the time of the fieldwork,

lacking vision and framing. There has been less practices enacted less strongly in this project; there was no project steering committee in place, and few coordination meetings. Project 4, although harder to assess for us, seems to have been properly governed from an internal perspective, but as the official announcement of federal funding came in May 2016, this impacted the project initial schedule.

Thus, having in place an active and efficient project steering committee (P4), coordination meetings (P5) and proactively conciliating between main stakeholders (P6) seem to favor project governing, and enhance project governance. The close coordination of project team members and mobilisation around project objectives might not address larger issues such as political ones (Flyvbjerg, 2014), yet having a commitment from the main stakeholders to deliver on time and on budget is a first step in the good direction. After all, many project issues seem to have more to do with human aspects than with technical or economic ones. For example, here are some main issues as raised by respondents of all projects: the impacts of organizational change, role confusion, human resources mobility, the number of stakeholders involved, decision-making, lack of coordination and burdensome administrative processes. Enacting practices with all team members might help to get through difficult issues more easily. This is in line with Touati *et al.* (2015, p.19)'s results: "distributed governance process, implemented in the context of the development of collaboration practices between levels of care in the management of diabetes (case 1), contributed to the emergence of a better adaptation." Next, we come back to the link between institutional artefacts and project governing.

5.6.2 Socio-materiality of the governance framework and project governing

A governance framework is an institutionalized artefact, which is an actant in itself, as people have to comply with it – it is 'structuring' in the case of project governance. Yet, using a contingency perspective, one could ask whether using the same structuring artefact for all projects, knowing that each bears a unique context, is

appropriate. Some argue that flexibility is needed in order to navigate through all those formal and informal requirements, but to what extent should it be brought? Some research has been conducted specifically on this matter (e.g. Miller and Lessard, 2000), but our research allows a broad understanding which could be used to begin a reflection on this important point. Some have questioned the role of artefacts while hoping for patterns of action (Pentland and Feldman, 2008). Hales and Tidd (2009) have argued that what is most fundamental, over artefacts, is the representation of artefacts made by actors (their ostensive and performative sides). Learning how to make sense of a governance framework along with institutional and organizational change is also an important dimension, as highlighted by this project manager “the *Directive*, we learn how to dissect it, we learn to live with a new process that we did not know. Arguably in all that, there are adaptations that we make”.

From a sociomaterial point of view, we have seen governance in action, from a micro-perspective, and our results highlighted that fine grained, mundane practices are constitutive of project governance, much more so than is usually conceived in the literature (e.g. Too and Weaver, 2014). A question that came up during the course of this study was whether we were really witnessing project governance or only the management of those projects. After all, “governance is not management and the functions must be separated” (*ibid.*, p.1387). So, what are the fundamental distinctions between project management and project governance, and the links between them? In fact, there is no clear line between project management and project governance, as this blurred zone is typical of empirical processual analysis as presented in Langley (1999). By studying the enactment of practices in a project, we observed the way the institutional governance framework was translated into practice, but we also witnessed project management in action. This micro perspective on activities is important to understand project governance, which cannot strictly happen at a “higher-level structure”; it has to be translated by actors and enacted into

projects.

Müller *et al.* (2015) have made a distinction between ‘project governance’ (governance of individual projects), ‘governance of projects’ (governance of groups of projects, such as portfolio), and ‘governmentality’ (the way to govern). In line with Foucault’s concept of ‘governmentality’ and its interpretation by a group of scholars that it is an action system focusing on action and instruments (Hatchuel *et al.*, 2005), it is therefore useful to consider state action as decentralized and fragmented, but also as a ‘fundamental locus of power’ (Arellano-Gault *et al.*, 2013, p.158). While public instruments and tools are broad categories (a policy such as a governance framework being one of them), the use of several of them as seen and described in the governing practices uncovered in this research allows for a certain auto-regulation and control of project actors. By putting in place several mechanisms and controls for project governing, decision-making is made more visible, especially when accountability is enforced. This is in line with Müller *et al.* (2017)’s conclusion that more governance mechanisms correlate with higher success. However, decentralization and pluralism might generate less desirable outcomes, especially when there is a lack of leadership, when resources are scarce or when the temporal horizon of a project is too long (Denis *et al.*, 2011). By studying practices at a micro-level, we were able to understand more about the way instruments and tools were used in major public projects in Quebec. Next, we develop a conceptualization based on how the Quebec governance framework is translated into practice.

5.6.3 Governance-as-practice

Building on the theoretical background of the practice perspective, we propose a definition of ‘governance-as-practice’ and a visual representation based on our multiple-case analysis. First and foremost, it has to be emphasized that our conceptualization is based on the specific context of Quebec (Canada), as the institutional framework has been translated into practice. As Johnson *et al.* (2007,

p.36) have explained: “Social and economic contexts are not outside, but totally internalized in everything that happens. In this sense, although some might resist these terms, the practice perspective both looks more deeply into the micro-activity inside organizational process and attends more seriously to the macro-context outside process.” We agree with those authors that the study of practices from a micro-perspective is more powerful when contextualized and related to other levels - such as organizational and institutional – from a theoretical perspective (*ibid.*). Also, as suggested by Langley *et al.* (2013), representing processes visually and their dynamics is often an essential part of communicating theorizations; we have thus been attempting to respond to this call. Building on Johnson *et al.* (2007, p.7)’s definition of Strategy as Practice, we propose the following definition for ‘governance-as-practice’: a concern with what people do in relation to project governance and how this is influenced by and influences their organizational and institutional context. Here, agency has been examined as a distributed phenomenon. Thus, Figure 5.1 presents our conceptualization of ‘governance-as-practice’ for major public infrastructure projects.

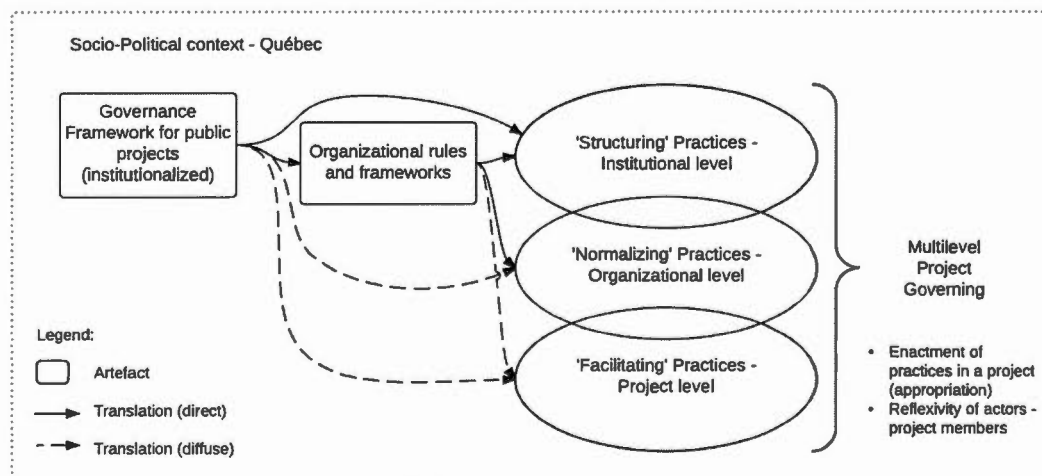


Figure 5.1: The process of project governing for major public infrastructure projects

The point of departure is the institutional QGF, the artefact that has to be complied with. The translation process of this governance framework by project teams into practice is direct in the case of structuring practices, and more diffuse in the case of normalizing and facilitating practices, as those are enacted within a project in order to respond to objectives and imperatives. Yet, there is also a double process of translation, as the QGF is translated into organizational artefacts which provide more details and guidance to project team members: a ‘macro-process’, rules and frameworks. This organizational artefact is then translated into practice by team members, directly in the case of structuring and normalizing practices, and in a more diffuse way in the case of facilitating practices. Thus, there is a double, and direct, translation from the artefacts to the enactment of structuring practices, which are directly required in the institutionalized QGF but also at the organizational level. As this has been illustrated by a respondent (SQI project manager): “The command that we have received, it is via the *Directive* [the QGF], so it is our main reference. The other document [the macro-process and other tools and methods] is more detailed, so we refer to it as we progress in the project life-cycle, in order to understand what is next. I think that those two documents are complementary, they do not serve the same purpose”. Normalizing practices are more influenced by organizational rules, yet they indirectly respond to institutional requirements. Facilitating practices are emergent at the project level, enacted so that the project team can better respond to both organizational and institutional requirements. Governance-as-practice is therefore an ongoing, iterative process, and the outcome is multilevel project governing. The interplay of the enactment of practices at multiple layers has a dynamic dimension which is fuelled through the reflexivity of project actors. As suggested by Jarzabkowski and Wolf (2014), their study of ‘practical coping’ can be conceived as a process with a dynamic dimension, as a continuum of ‘structured emergence’, from ‘deliberate’ coping to ‘emergent’ coping. Similarly, we argue that project governing is a continuum to which practices are enacted at different levels: more structured at the institutional and more emergent at the project level. This conceptualization is in line

with Biesenthal and Wilden (2014)'s call to account for the multi-level nature of governance and characterize it across different organizational layers. There is still much to be uncovered in the interplay between those layers. As suggested by Wright and Nishii (2007), it is the linkages between the different processes that provide avenues for exploring relevant issues in order to develop theoretical understanding. The exploration of multilevel relationships is one avenue proposed by Mathieu and Chen (2011) to advance further the multilevel paradigm in management research. For now, we now turn to our conclusion.

5.7 Conclusion

This research aimed to study how project governance was made into project governing. Based on processual and practice perspectives, the main theoretical contributions are 1) to make a proposition about the influence of the enactment of practices on project governing, and 2) to propose a conceptualization for 'governance-as-practice' which attests the importance of socio-materiality of artefacts and practices. Through an exploratory, qualitative multiple-case study, we investigated how project governing was enacted by actors, as the institutional project governance framework was translated into projects. The results of the Quebec governance framework translated into four major public infrastructure projects are presented and thoroughly discussed. The enactment of practices is a multilevel process which impacts on three levels of analysis: the project, the organizational and the institutional. The process of project governing is conceived as dynamic and multileveled. Given that the enactment of practices at each of those levels plays a different but complementary role, studying their linkages along with their temporality is an interesting avenue for future research. Another avenue is to uncover linkages between the enactment of practices, organizational learning and change, which might ultimately impact institutionalized tools (Lawrence *et al.*, 2011). For governmental actors and people involved in major infrastructure projects, the main contribution of this research is to understand and document current practices in order to reflect on

them and gain deeper insights about project governance. The research design could be replicated to other countries, in order to study whether these results are generalizable for other governments and governance frameworks.

There are some inherent limits to this study. The first one concerns the generalization of the results. While it is confined to the Quebec government and institutional framework, the multiple-case strengthens the validity of the results as applied in this context. Also, we had a limited access to the fieldwork in terms of time, access to project meetings and documentation – given that those major projects have a project-life cycle of many years. Lastly, we have based our evaluation of the enactment of practices on our assessment. Thus, people's perceptions and interpretations have not been a focus of this study, and again this avenue would be promising for future research. We hope that studying 'governance-as-practice' will increase knowledge in the field and beyond, as most studies up to now have focused on the formal, institutionalized governance framework.

5.8 References

- Ahola, T., Ruuska, I., Artto, K., and Kujala, J. (2014). What is project governance and what are its origins? *International Journal of Project Management*, 32(8), 1321-1332.
- Alvesson, M., and Kärreman, D. (2007). Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32(4), 1265-1281. DOI: 10.5465/AMR.2007.26586822
- Arellano-Gault, D., Demortain, D., Rouillard, C., and Thoenig, J.-C. (2013). Bringing public organization and organizing back in. *Organization Studies*, 34(2 Special Issue), 145-167.
- Biesenthal, C., and Wilden, R. (2014). Multi-level project governance: Trends and opportunities. *International Journal of Project Management*, 32(8), 1291-1308. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.06.005>
- Bjørkeng, K., Clegg, S., and Pitsis, T. (2009). Becoming (a) practice. *Management Learning*, 40(2), 145-159. DOI: 10.1177/1350507608101226
- Blomquist, T., Hällgren, M., Nilsson, A., and Söderholm, A. (2010). Project-as-practice: In search of project management research that matters. *Project Management Journal*, 41(1), 5-16. DOI: 10.1002/pmj.20141
- Brunet, M., and Aubry, M. (2017, June 21-24, 2017). The governance of major public infrastructure projects: The process of translation. Paper presented at the EURAM, SIG Project Organising, Special topic: Managing Major and Mega Projects: Opening up for new Research Eras.
- Chan, A. P. C., Scott, D., and Chan, A. P. L. (2004). Factors affecting the success of a construction project. *Journal of Construction Engineering and Management*, 130(1), 153-155. DOI: 10.1061/(ASCE)0733-9364(2004)130:1(153)
- Charmaz, C. (2006). Coding in grounded theory practice *Constructing grounded theory* (pp. p.42-71). Thousand Oaks: Sage Publications.
- Chia, R. (2013). Paradigms and perspectives in organizational project management research: Implications for knowledge-creation. In N. Drouin, R. Müller, and S. Shankar (Eds.), *Novel approaches to organizational project management research: Translational and transformational* (pp. 33-55). Copenhagen: Copenhagen Business Press.
- Cicmil, S., and Hodgson, D. (2006). New possibilities for project management theory: A critical engagement. *Project Management Journal*, 37(3), 111-122.
- Cooke-Davies, T. (2002). The “real” success factors on projects. *International Journal of Project Management*, 20, 185-190.
- Denis, J.-L., Dompierre, G., Langley, A., and Rouleau, L. (2011). Escalating indecision: Between reification and strategic ambiguity. *Organization Science*, 22(1), 225-244.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.

- Feldman, M. S., and Orlikowski, W. J. (2011). Theorizing practice and practicing theory. *Organization Science*, 22(5), 1240-1253.
- Florice, S., Bonneau, C., Aubry, M., and Sergi, V. (2014). Extending project management research: Insights from social theories. *International Journal of Project Management*, 32(7), 1091-1107. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.02.008>
- Flyvbjerg, B. (2011). Over budget, over time, over and over again: Managing major projects. In J. K. P. Peter W. G. Morris, and Jonas Söderlund (Ed.), *The Oxford handbook of project management* (pp. p321-344). Oxford: Oxford University Press.
- Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6-19.
- Foss, N. J., Husted, K., and Michailova, S. (2010). Governing knowledge sharing in organizations: Levels of analysis, governance mechanisms, and research directions. *Journal of Management Studies*, 47(3), 455-482. DOI: 10.1111/j.1467-6486.2009.00870.x
- George, A. L., and Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge, MA: The MIT Press.
- Gherardi, S. (2012). *How to conduct a practice-based study: Problems and methods*: Edward Elgar.
- Gioia, D. A., Corley, K. G., and Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31. DOI: 10.1177/1094428112452151
- Golsorkhi, D., Rouleau, L., Seidl, D., and Vaara, E. (2010). *Cambridge handbook of strategy as practice*. Cambridge: Cambridge University Press.
- Hales, M., and Tidd, J. (2009). The practice of routines and representations in design and development. *Industrial and Corporate Change*, 18(4), 551-574
- Hällgren, M., and Söderholm, A. (2011). Projects-as-practice. New approach, new insights. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management* (pp. 500-518). New York: Oxford University Press.
- Hatchuel, A., Pezet, E., Starkey, K., and Lenay (eds.), O. (2005). *Gouvernement, organisation et gestion : L'héritage de Michel Foucault*. Québec: Presses de l'Université Laval.
- Jarzabkowski, P., and Wolf, C. (2014). The role of practical coping in strategy making. *Academy of Management Annual Meeting Proceedings*, 1332-1337. DOI: 10.5465/AMBPP.2014.259
- Johnson, G., Langley, A., Melin, L., and Whittington (eds.), R. (2007). *Strategy as practice: Research directions and resources*. Cambridge: Cambridge University Press.
- Klag, M., and Langley, A. (2013). Approaching the conceptual leap in qualitative research. *International Journal of Management Reviews*, 15(2), 149-166. DOI: 10.1111/j.1468-2370.2012.00349.x

- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691-710.
- Langley, A., Smallman, C., Tsoukas, H., and Van De Ven, A. H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal*, 56(1), 1-13.
- Lawrence, T. B., Suddaby, R., and Leca, B. (2011). Institutional work: Refocusing institutional studies of organization. *Journal of Management Inquiry*, 20(1), 52-58.
- Leonardi, P. M., and Barley, S. R. (2010). What's under construction here? Social action, materiality, and power in constructivist studies of technology and organizing. *Academy of Management Annals*, 4(1), 1-51. DOI: 10.1080/19416521003654160
- Locke, K. (2011). Field research practice in management and organization studies: Reclaiming its tradition of discovery. *Academy of Management Annals*, 5(1), 613-652. DOI: 10.1080/19416520.2011.593319
- Mathieu, J. E., and Chen, G. (2011). The etiology of the multilevel paradigm in management research. *Journal of Management*, 37(2), 610-641. DOI: 10.1177/0149206310364663
- Miles, M. B., and Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Newbury Park, CA: Sage.
- Miller, R., and Lessard, D. (2000). *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. Massachusetts: Massachusetts Institute of Technology.
- Morris, P. W. G., Pinto, J. K., and Söderlund, J. (2011). *The Oxford handbook of project management*. New York: Oxford University Press.
- Müller, R., Pemsel, S., and Shao, J. (2015). Organizational enablers for project governance and governmentality in project-based organizations. *International Journal of Project Management*, 33(4), 839-851.
- Müller, R., Zhai, L., and Wang, A. (2017). Governance and governmentality in projects: Profiles and relationships with success. *International Journal of Project Management*, 35(3), 378-392.
- Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford: Oxford University Press.
- NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2015.
- O'Reilly, K., Paper, D., and Marx, S. (2012). Demystifying grounded theory for business research. *Organizational Research Methods*, 15(2), 247-262. DOI: 10.1177/1094428111434559
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks: SAGE Publications.
- Pentland, B. T., and Feldman, M. S. (2008). Designing routines: On the folly of designing artifacts, while hoping for patterns of action. *Information and Organization*, 18(4), 235-250.

- Pitsis, T. S., Sankaran, S., Gudergan, S., and Clegg, S. R. (2014). Governing projects under complexity: Theory and practice in project management. *International Journal of Project Management*, 32(8), 1285-1290. DOI: <http://dx.doi.org/10.1016/j.ijproman.2014.09.001>
- Sanderson, J. (2012). Risk, uncertainty and governance in megaprojects: A critical discussion of alternative explanations. *International Journal of Project Management*, 30(4), 432-443. DOI: <http://dx.doi.org/10.1016/j.ijproman.2011.11.002>
- Schatzki, T. R., Knorr-Cetina, K., and von Savigny, E. (2001). *The practice turn in contemporary theory*: Routledge.
- Secrétariat du Conseil du trésor. (2014). Directive sur la gestion des projets majeurs d'infrastructure publique. Québec, Canada.
- Söderlund, J. (2011). Pluralism in project management: Navigating the crossroads of specialization and fragmentation. *International Journal of Management Reviews*, 13(2), 153-176.
- Sydow, J., Lindkvist, L., and DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge: Editorial. *Organisation Studies*, 25, 1475-1489.
- Too, E. G., and Weaver, P. (2014). The management of project management: A conceptual framework for project governance. *International Journal of Project Management*, 32(8), 1382-1394.
- Touati, N., Maillet, L., Paquette, M.-A., Denis, J.-L., and Rodríguez, C. (2015). Understanding multilevel governance processes: The case of the Québec healthcare system. Paper presented at the International Conference on Public Policy, Milan.
- Vaara, E., and Whittington, R. (2012). Strategy-as-practice: Taking social practices seriously. *The Academy of Management Annals*, 6(1), 285-336. DOI: [10.1080/19416520.2012.672039](http://dx.doi.org/10.1080/19416520.2012.672039)
- Whittington, R. (2006). Completing the practice turn in strategy research. *Organization Studies*, 27(5), 613-634.
- Williams, T., and Samset, K. (2010). Issues in front-/end decision-making on projects. *Project Management Journal*, 41(2), 38-49.
- Winter, M., Smith, C., Morris, P. W. G., and Cicmil, S. (2006). Directions for future research in project management: The main findings of a UK government funded research network. *International Journal of Project Management*, 24, 638-649.
- Wright, P. M., and Nishii, L. H. (2007). Strategic HRM and organizational behavior: Integrating multiple levels of analysis. (Working Paper 07 – 03). Cornell University.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Newbury Park, CA: Sage.

CHAPTER VI

DISCUSSION

This section tackles several important topics which have been brought forward and considered thoroughly in this thesis. First, based on the results presented in previous chapters, we propose a revised conceptual framework, or integrative framework, as it ties up all articles, offering a global, all-encompassing view of thesis results. Second, we come back to the literature review and put forward the main theoretical contributions of the thesis. Third, we address several themes and dimensions which emerged from the fieldwork, bringing partial results which have not been presented in the articles but that could be explored further in future research. And finally, a point is made on limitations, exploring possible generalization of results and avenues for future research.

6.1 Integrative Framework

As the initial conceptual framework has been introduced in Section 1.3.3, now we revisit it, in line with results generated from the fieldwork, as presented in the three articles. The study of project governance from a processual and a practice perspective has been quite limited so far in the literature. Yet, those perspectives complement other mainstream perspectives on governance, that is: economic, political, juridical and social. The initial conceptual framework was developed based on the literature review in order to answer this overall research question: How is a governance framework for public infrastructure projects translated into practice? The conceptual framework was subsequently revised in order to reflect the emergence of patterns and processes, in accordance with the grounded theory. Figure 6.1 presents the revised, integrative conceptual framework. Then, the main points regarding this integrative framework are put forward.

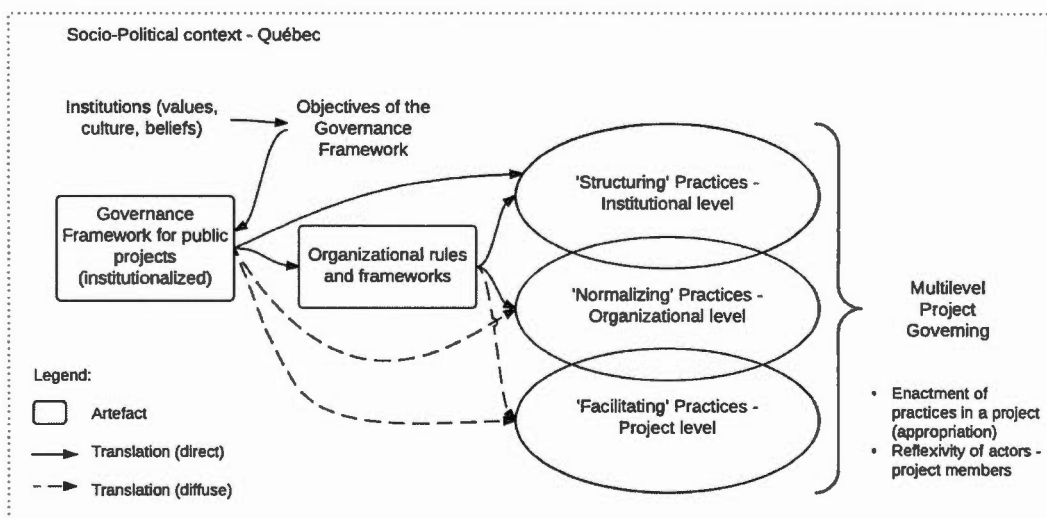


Figure 6.1: The integrative framework for the doctoral research

Overall, this conceptualization responds to the global research question, as applied to the socio-political context of Quebec (Canada). As each thesis article posed a subquestion relating more specifically to one aspect of that encompassing research question, these are discussed accordingly.

6.1.1 From institutions to an institutionalized governance framework (Article 1)

The first article explored the origins of the governance framework for public infrastructure projects — the input in the translation process. The related research question to explore this question was: why is a governance framework for major public infrastructure projects interesting for a government? Whereas the initial framework started with public governance levels as presented in Mazouz (2014), the revised framework was simplified, focusing explicitly on the translation process, from institutions (including values, culture and beliefs) to the governance framework objectives, and from the objectives to the institutionalized governance framework (the artefact). The multilevel nature of this process is still apparent in the revised

framework; however, it stands more in the outcomes (with the three levels of practices observed depending on the level at which it is required). As it was highlighted in Article 1, the implicit values of institutions are to be investigated properly, in line with Flyvbjerg (2001)'s phronetic research. Based on public administration and project governance literature, we proposed that the main objectives of a governance framework are to enable:

- 1- greater government efficiency;
- 2- greater government legitimacy; and
- 3- greater government accountability.

Although more empirical research would be needed to investigate the links between those objectives and how this is translated into governance frameworks (artefacts) and enacted by project actors, this conceptual paper proposes objectives that apply to government at a larger scale, considering not only efficiency and economic objectives as it is most often used in the literature, but also legitimacy and accountability. Interestingly, Sanderson and Winch (2017) have used our conceptualization to classify the six papers presented in their Special Issue on 'Public policy and projects'. According to them, all of those papers contribute to the thematic dimension of accountability; five out of six contribute to the dimension of efficiency and only three of those contribute to the dimension of legitimacy. Next, we embark on explaining the process of translation itself, from the artefact (the institutional governance framework) to its enactment in practice in a project.

6.1.2 The process of translation (Article 2)

The second article posed the following question: how does the translation process unfold from an institutionalized governance framework into public infrastructure projects? As such, governance-as-practice is explored as a process. Whereas the initial conceptual framework identified that this translation process was to be carefully investigated, our revised framework traces carefully the translations which occurred in our cases study. A single case study analysis performed in Article 2

allowed uncovering those translations, based on a project timeline, on-site observations and interviews. The appropriation of artefacts by project actors led to a direct translation in the case of structuring practices (doubled by organizational artefacts). For normalizing practices, the institutional artefact's translation turned out to be more diffuse, whereas organizational artefacts were directly translated. For facilitating practices, both translation processes of artefacts (institutional and organizational) were diffuse. The main contributions of Article 2 were thus to uncover translation processes, and to generate a categorization of main practices enacted in three categories: structuring practices (at the institutional level), normalizing practices (at the organizational level) and facilitating practices (at the project level). From an exploration of the process itself, we then turned to the outcome as such: multilevel project governing.

6.1.3 Governance-as-practice (Article 3)

The third article posed the following question: how is project governance made into project governing? First, it has to be emphasized that a multiple-case analysis was undertaken with four projects in order to confirm patterns which had emerged from the in-depth analysis of one of those projects. Whereas a comparison based on time did not prove conclusive, the overall practices categorization stood strong, with some minor adjustments and nuances being brought, most notably with regards to projects phases (initiating or planning). We advanced the following definition for governance-as-practice: a concern with what people do in relation to project governance and how this is influenced by and influences their organizational and institutional context. As practices are constitutive of project governance, it was proposed that: the enactment of practices, especially the 'facilitating', emerging ones at the project level, have a positive influence on project governing. Although more research would be needed to test this proposition, the outcome of the process of translation — multilevel project governing, — certainly has much potential for further exploration. Project actors enact practices with reflexivity in order to govern a project, many simultaneously, at

different levels, depending on requirements. Again, this embeddedness of practices at multiple levels is quite specific to the socio-political context of Quebec, but it would be interesting to consider applying this conceptual framework to other countries also (more on that in Section 6.3). Having presented the thesis integrative framework, we now highlight the main theoretical contributions.

6.2 Theoretical contributions of the thesis

This section comes back to theories, emphasizing key contributions of our thesis. As such, the literature review presented in Chapter I allowed developing the initial conceptual framework (Section 1.3.3). We have decided to leave it untouched for the final version of the thesis, as this allows seeing the intellectual development which occurred throughout this research project. Here, we come back to several important theoretical themes and discuss how this thesis mobilized and contributed to each. In line with Greenwood and Miller (2010), we believe that combining multiple theoretical perspectives is a relevant approach in order to study the complexity of project governance. First, we come back to the governance of public projects, and its multilevel nature. Second, we discuss implications of the process and the practice approaches to the study of infrastructure projects. Third, we highlight the role of materiality in this research.

6.2.1 Multilevel governance of public projects

Section 1.1 of the literature review introduced the ontological contours of the governance of public projects. By reviewing three large bodies of literature, those of governance, project management and public administration, along with their interfaces, we came to define more precisely a governance framework for public projects. The definition we had retained was the following, from Klakegg *et al.* (2009, p. 60): “an organized structure established as authoritative within the institution, comprising processes and rules established to ensure projects meet their purpose.” As such, this definition refers to the governance of projects as ‘it should

be', as this 'organized structure established as authoritative' is described in the institutional artefact which is the governance framework. By studying public project governance throughout this research project, its multi-level nature revealed itself quite forcefully. Intuitively, we had already pictured this multilevel nature, as we can see in our initial conceptual framework (Figure 1.2). Yet, our results show that the multilevel nature of project governance is intrinsic to its process of translation, and also to its outcome. First, we come back to the concept of governmentality which was introduced in Section 1.1.1. Second, we discuss the macro-micro divide.

6.2.1.1 Governmentality

Before embarking into governmentality itself, it is legitimate at this point to come back to central terms used in this thesis. A question that came up during the course of this study was whether we were really witnessing project governance or only the management of those projects. After all, "governance is not management and the functions must be separated" (Too and Weaver, 2014). So, what are the fundamental distinctions between project management and project governance, and the links between them? We have argued in the literature review that project management was a large field of study, and that project governance was a portion of it. Biesenthal and Walden (2014) argued that project governance as a central concept could extend far beyond project management, and that studying its multilevel nature was a way to go forward. They introduce their research with these two definitions:

"Project management is mainly concerned with the operational control and execution of daily work at the project level (Turner, 2009), whereas project governance represents a higher-level structure; defining processes and structures to govern multiple projects and to manage strategic objectives (Nielsen, 2010)." (Biesenthal and Wilden, 2014, p. 1291)

Yet, there is no clear line between project management and project governance, as this blurred zone is typical of empirical processual analysis as presented in Langley (1999). By studying the enactment of practices in a project, we observed the way the institutional governance framework was translated into practice, but we also

witnessed project management in action. This micro perspective on activities (which we will come back to shortly) is important to understand project governance, which cannot strictly happen at a “higher-level structure”; it has to be translated by actors and enacted into projects.

In their study on ‘Organizational enablers for project governance and governmentality in project-based organizations’, Müller *et al.* (2015) distinguished between ‘project governance’ (governance of individual projects), ‘governance of projects’ (governance of groups of projects, such as portfolio), and ‘governmentality’ (the way to govern)⁸⁵. In line with Foucault’s concept of ‘governmentality’⁸⁶ and its interpretation by a group of scholars that it is an action system focusing on action and instruments (Hatchuel *et al.*, 2005), it is therefore useful to consider state action as decentralized and fragmented, but also as a ‘fundamental locus of power’ (Arellano-Gault *et al.*, 2013, p. 158). While public instruments and tools are broad categories (a policy such as a governance framework being one of them), the use of several of them as seen and described in the governing practices uncovered in this research allows for a certain auto-regulation and control of project actors. By putting in place several mechanisms and controls for project governing, decision-making is made more visible, especially when accountability is enforced. This is in line with Müller *et al.* (2017)’s conclusion that more governance mechanisms correlate with higher success. However, decentralization and pluralism might generate less desirable outcomes, especially when there is a lack of leadership, when resources are scarce or when the temporal horizon of a project is too long (Denis *et al.*, 2011). In an OECD’s

⁸⁵ Using an institutional perspective, they proposed that organizational enablers (OEs) are based on the three pillars of institutions (regulative, normative and cultural-cognitive). Their results show that “OEs for project governance and governance of projects fall predominantly into the category of regulative and normative pillars, whereas OEs for governmentality belong mainly to the cultural-cognitive pillar” (Müller *et al.*, 2015, p.839).

⁸⁶ Foucault defines governmentality as the “ensemble formed by the institutions, procedures, analyses ... which has; as its principal form of knowledge political economy, and as its essential technical means apparatuses of security” (Foucault, 1991, p. 102, cited in Arellano-Gault *et al.*, 2013, p.157).

paper, Charbit (2011, p. 13) argues that “multi-level governance is always required for managing public policies in a decentralised context.” She nevertheless highlights an ‘accountability’ and a ‘capacity’ challenge, as several gaps⁸⁷ might hinder coordination and overall efficiency. In order to bridge those gaps, the author refers to some instruments and country examples (*ibid.*). By studying practices at a micro-level, we were able to understand more about the way instruments and tools were used in major public projects in Quebec. Next, we come back to this micro perspective that we have adopted in our research, and put it in perspective along the macro-micro divide and the institutional perspective.

6.2.1.2 Macro-micro divide

Whereas the literature review positioned the institutionalist perspective as being more ‘macro’ in essence, it has been argued that the subfield of institutional work focuses more on micro-activities done by actors (Lawrence *et al.*, 2009). In Article 3, we have mobilized institutional work in order to explain our results and the concept of governance-as-practice. Yet, along with the lines of ANT, we argue for a conceptualization which goes over a classic distinction between macro, meso and micro levels, as an holistic view of practices helps understanding them better. Our results are in line with Johnson *et al.* (2007, p. 36)’s conception that: “the practice perspective both looks more deeply into the micro-activity inside organizational process and attends more seriously to the macro-context outside process.” Acknowledging the multilevel nature of governance and its deep roots within institutional theory, some scholars have argued for a renewed conceptualization integrating those levels (Ezzamel and Reed, 2008; Lundin *et al.*, 2015). More largely in social sciences, there is a trend to go over this classic divide in order to generate more knowledge about interactions and interfaces of multiple levels. In the editorial of the Journal of Management Special Issue on ‘Bridging Micro and Macro

⁸⁷ Those gaps are categorized as: information; capacity, finding, policy, administrative, objective and accountability gaps (Charbit, 2011).

Domains', Aguinis *et al.* (2011) argue that bridging those is one of the most critical challenges faced by management scholars; that a greater integration of management research has not only the potential to bridge the micro–macro gap but also the science–practice gap. According to Mathieu and Chen (2011), the multilevel paradigm in management research is coherent and well entrenched in management research, even though some challenges remain. As stated by Bisenthal and Wilden (2014, p. 1294): “It is therefore important to account for the multi-level nature of [project-based organizations] and briefly outline the characteristics of governance across different organizational layers.” We agree with this statement, as each organizational layer, its involvement with governing practices and its interface between the other levels is important to unravel. We now turn to discuss the process and practice perspectives on projects.

6.2.2 Process and Practice Perspectives on Projects

As it has been argued in the literature review (see Section 1.2), infrastructure projects have been mostly studied using economic, contingency-based and institutional perspectives (Williams, 2005). As such, mobilizing the process and the practice perspectives to study infrastructure projects has generated fruitful theoretical contributions in this research project; this section aims at highlighting the main ones. First, we come back to the process approach and translation, then to the practice perspective.

6.2.2.1 The process approach

As it has been established in Section 1.3, from our point of view, the process approach encompasses both ANT and the practice perspective, as they both share epistemological compatibility, and an ontological understanding of reality as dynamic, unfolding and changing processes. As Bakker *et al.* (2016, p. 1714) introduced in *Organization Studies*’ Special Issue on ‘Temporary Organizing: Promises, Processes, Problems’, temporary organizing (projects) is: “an emergent and

important process, organizational form, and theoretical perspective that warrants systematic research attention.” Our main contribution to this field is the development of a processual perspective on project governance, namely in the formulation of ‘multilevel project governing’ as the outcome of the process of translation (see Article 3), where ‘governing’ refers to an ongoing process rather than being fixed in the term ‘governance’ (Chia, 2013). But also, as Bakker *et al.* (2016, p. 1714) have called for developing methodological tools in order to study empirically temporary organizing, they listed the following as being the most relevant methodological advances: comparative case studies, process studies, advanced multilevel modeling, and mixed-methods research designs. Our methodological approach combined the first three advances cited above, and we believe that it is quite an important contribution as well.

Although our treatment of time was developed quite extensively in the in-depth study of one project (Article 2), we could not generate insightful results when we compared our results from the four projects, so this is an unresolved question for further studies. We have, however, unravelled the process of translation quite explicitly, and this constitutes another forceful contribution.

As it has been presented, a translation process might have a long-term perspective, implying organizational change and an evolution of practices (Carlile, 2004). This has not been the focus of our research, as we were interested in translation in practice, as applied at a micro-level in projects (Rouleau, 2005). Thus, we have focused on understanding how the institutional governance framework was translated into practice. As such, our exploratory study generated insightful results on the translation process which have been discussed thoroughly (see Article 2). However, studying the process of translation over time, in order to understand the evolution of those practices, and the way their enactment might create a feedback loop in order to develop reflexivity, organizational learning and change, is an interesting avenue for

further research (see Section 6.3.2). Before we turn to the practice perspective, a point has to be made concerning our mobilization of ANT in this research. Although our literature review covered quite extensively this theoretical perspective (see Section 1.3.2.2), we have moved away from it in the course of the study. Still, we highlight in Section 6.2.3 below that our sensitivity to material artefacts as actants was predominant over the course of the study. By focalizing on practices over actants, an implicit limitation of our study was to minimize the importance of actors' perceptions and interpretations.

6.2.2.2 The practice perspective

We believe that our main theoretical orientation and contribution of this thesis are with regards to the practice perspective, with the development of the concept of 'governance-as-practice' (see Article 3). As presented by Golsorkhi *et al.* (2010, p. 1): "practice has emerged as a key concept for understanding central questions about how agency and structure, and individual action and institutions are linked in social systems, cultures and organizations." This is in line with our theoretical and empirical inquiry. From a methodological point of view, Golsorkhi *et al.* (2010, p. 3) claim that: "the practice approach breaks with methodological individualism by emphasizing that activities need to be understood as enabled or constrained by the prevailing practices in the field in question". Again, this reflects quite accurately the way we have conducted this research. We have adopted a micro-perspective on project governance, observing how practices were enacted into projects. By bringing project governance down to the level of human beings interacting in observable situations, it bridges notions of agency and structure through the translation, enactment and appropriation of a governance framework into different project teams (Langley, 2010). Moreover, adopting a 'dwelling worldview' allows studying project governance from its periphery rather than from its center, as actors develop "a phronetic awareness of the local context" (Rasche and Chia, 2010, p. 42), which ties back to our integrative framework.

The study of routines from a practice perspective has been blooming over the last decade, most notably since the seminal work of Feldman and Pentland (2003). However, few distinctions have been found in the literature as to distinctions between a 'routine' and a 'practice', most authors interchanging one term over the other, in acknowledgement that they both have mutually constitutive ostensive and performative aspects (e.g. Johnson *et al.*, 2007)⁸⁸. Whereas 'routines' are getting more attention from project management scholars (Addyman, 2016), it is nonetheless paradoxical to conceive of a 'routine' in a temporary and dynamic endeavour such as a project. So, we have chosen to refer instead to a 'practice', distinguishing between an 'ostensive practice' and a 'performative practice', although both sides are mutually constitutive, for sake of clarity (versus the classic distinction of 'practice' to refer to the ostensive and 'praxis' to refer to the performative, see Whittington (2006)). Another scholar has proposed to go over routines to study projects, as routines might constitute a continuum from being very stable to a 'creative project' (Obstfeld, 2012). Obstfeld (2012) conceptualizes instead action trajectories for organizational action, with an 'ostensive trajectory' combined with a 'performative trajectory'. While 'routines' might prove interesting to study projects, we have instead adapted an important distinction (ostensive/performative) and translated it into the core of the practice perspective. It might be provocative to do so, but we believe that this is a rather original contribution. Next, we underline how our thesis, adopting a practice perspective, contributes to an enriched conceptualization of project governance.

Project governance has been studied mostly from rational, economic perspectives. As such, governance frameworks used in different countries and contexts have been

⁸⁸ Feldman *et al.* (2016, p.506) establish that "routine dynamics is based in the idea that routines not only connect inputs with outputs, but also that, as practices, they emerge through their own enactment and in relation to other practices".

Feldman, M. S., Pentland, B. T., D'Adderio, L., and Nathalie, L. (2016). Beyond routines as things: Introduction to the special issue on routine dynamics. *Organization Science*, 27(3), 505-513.

investigated (Williams *et al.*, 2010). Yet, a missing link was to study how a governance framework is performed, translated within a project context. This resonates with Johnson *et al.* (2007), who claim that the challenge for future Strategy as Practice research is to understand more about how routines are actually performed; they also highlight the underuse of in-vivo observations as source of data. Indeed, our use of in-vivo meeting observations proved to be the richest source for our study. Moreover, our results have highlighted several distinctions of the translation of the governance framework between project phases (initiating and planning), accentuating the need to focus more attention on the project life-cycle and especially the front-end (Flyvbjerg, 2014; Morris *et al.*, 2006). Before turning to materiality, we come back to the specific practices that have emerged out of our results.

With regards to project governance, it is relevant to ask how the observed practices (both the ostensive and the performative) enable project governing, allowing project team members addressing potential and actual project issues (Flyvbjerg, 2014). Are actual practices performed the way they were intended by institutional actors? If not, what would be the 'intended' practices according to the governance framework? From an institutional and organizational point of view, what would be the required practices? Are there 'missing'⁸⁹ practices, 'deviant' practices (Pinto, 2014), some more effective than others? Should some of those practices be classified as 'facilitating' rather than 'structuring'⁹⁰? Are those practices contributing to project performance, and to the overall performance of the governance framework in order to attain its objectives (greater legitimacy, accountability and efficiency) (Shiferaw and Klakegg, 2012)? If those questions were punctually raised by participants, who expected clear answers from us, we have decided from the start that this concept of

⁸⁹ It has been argued that while we did not observe directly specific practices regarding project costs and schedule, those were implicit in the 'meta-practice' P3.1-3.2 Defining/Detailing the chosen option.

⁹⁰ Some people have asked, for example, why P.11.1/P11.2 Elaborating/Actualizing the Project Management Plan has not been considered a 'facilitating practice', as it is usually conceived in the normative literature on project management. Well, it is because we have not witnessed its use as such in the fieldwork, as people did not use it for facilitation purpose.

‘performance’ was not ours to evaluate and thus left it out of the scope of this research. Nonetheless, those questions raise very important concerns, and future research avenues should focus more explicitly on performance (Langley, 2010). Whereas some hints are offered below (see Section 6.3), we have chosen to stay away from normative advices, leaving it to the fieldwork to reveal emergent patterns, and to actors to be reflexive about their actions and interpretations.

As research in project management has opened up to emergent theoretical perspectives (Cicmil *et al.*, 2006), the practice perspective is well alive in our field (e.g. Hällgren and Lindahl, 2017; Lappi and Aaltonen, 2017). As Johnson *et al.* (2007, p. 214) highlighted: “the study of activities – the study of the micro – is the more powerful when it is related to other levels, be they organizational or institutional, and to the theoretical debates associated with those levels” – and we believe that our research has contributed towards that objective. However, we had a preponderant sensitivity towards the context, towards governmental and project actors who contributed to this research project, acknowledging their practical knowledge and reflexivity (Golsorkhi *et al.*, 2010). As doing practice-based research in the public sector proves challenging but is needed for future research (*ibid.*), our endeavour reinforces bridging theoretical development with practical contributions (Jarzabkowski and Whittington, 2008). The last section reviewed for theoretical contributions of the thesis has to do with materiality and project governance.

6.2.3 Materiality and project governance

By studying specifically the Quebec governance framework for major infrastructure projects, our research contributes to theoretical development on materiality and project governance. A governance framework is an institutionalized artefact, which is an actant in itself, as people have to comply with it - it is ‘structuring’ in the case of project governance. Yet, using a contingency perspective, one could ask whether using the same structuring artefact for all projects, knowing that each bears a unique

context, is appropriate. Some argue that flexibility is needed in order to navigate through all those formal and informal requirements, but to what extent should it be brought? Again, some research has been conducted specifically on this matter (Miller and Lessard, 2000), but our research allows a broad understanding which could be used to begin a reflection on this important point. Also, some have questioned the role of artefacts while hoping for patterns of action (Pentland and Feldman, 2008). Hales and Tidd (2009) have argued that what is most fundamental, over artefacts, is the representation of artefacts made by actors (their ostensive and performative sides).

From a sociomaterial point of view, we have seen governance in action, from a micro-perspective, and our results highlighted that fine grained, mundane practices are constitutive of project governance, much more so than is usually conceived in the literature (e.g. Too and Weaver, 2014). Coming back to ANT, we suggest that a project by itself is a powerful actant, constituted of an actor-network (Latour, 2005). Some are more political than others, bearing more public visibility; some have inherent constraints from the start, as path-dependency theory shows (Aaltonen *et al.*, 2017). Some projects can mobilize critical resources (such as human resources) more easily than others, according to their prioritization by political and public administration actors. Whereas we have argued that governing practices allowed for a certain auto-regulation and control of project actors, it is interesting to bring forward the “self-organizing project” (de Blois *et al.*, 2016). To what extent is a project ‘auto-governing’ itself? This would be an important question to put forward, especially as project leadership is distributed among all project actors, as human resources turnover is quite high in the public administration and might be detrimental to project success. This is our moderate contribution to ANT, yet we believe that it is a rich avenue for future research. We now turn to discuss emerging themes of our results.

6.3 Emerging themes

Having reviewed the main theoretical contributions of the thesis, we now address two themes which emerged from the fieldwork. As data collected for our research is deep and rich, it is regrettable that we could not use more of it. Yet, it is far from being a waste, as we have learned through this and will eventually dig deeper in some of those avenues. For now, we want to highlight two main avenues that we believe have much potential to be explored further. First, we address organizational and institutional change, along with learning. Second, we venture into the theme of project actors.

6.3.1 Organizational and institutional change

The context of our case study has been evolving rapidly in the last decade, with the adoption of a first version of the Quebec governance framework in 2008, a revision in 2010 and another one in 2014. Not only has the governance framework been evolving, but the organizational structures as well. As we have been witnessing this long-term evolution almost from the start, we have been very sensitive from the start of this research project to this dimension. However, a decision was taken to focus on the live enactment of practices, in order to study the translation of the governance framework into projects. Yet, we believe that studying organizational/institutional change is one of the most fertile avenues for further investigation. Whereas other governance frameworks have been rather static since their adoption (Williams *et al.*, 2010), in Quebec, there have been several evolutions, based on a changing contextual and political reality and on learning. Our results reflect this change, as it bears opportunities as well as issues (see Discussion in Article 2). It would be interesting to adopt a translation studies perspective on this empirical data, considering evolution through time, and the role of actors and learning in shaping further development of the governance framework (Czarniawska and Sevón, 1996). Moreover, Golsorkhi *et al.* (2010) highlight that change is a level to study links between micro and macro (e.g. Foss *et al.*, 2010).

Coming back to our integrative framework (Figure 6.1), we have the intuition that from the outcome of the translation process (the multilevel project governing), a feedback loop could link it back to the governance framework as artefact, as learning made by actors have initiated former revisions (this feedback loop could also come back to institutional values and objectives). More research would be needed to confirm this process. However, there is some literature pointing to the link between agency and structure, most notably with structuration theory (Giddens, 1984). Even though projects are temporary endeavours, they are embedded within their context; thus, making learning through projects not only desirable but occurring (Sydow *et al.*, 2004). Structures are ‘enacted’ by users (Orlikowski, 2000), shaped by social dynamics (Jarzabkowski, 2008). Jarzabkowski (2004) has studied recursive and adaptive practices using a multilevel framework. Aroles and McLean (2016) have examined how organizational stability and change emerge through dynamic enactments of routines. Similarly, Obstfeld (2012) has studied adaptive practices through action trajectories. Not only is the enactment of practices effective to shape structures; the role of actors as reflexive and learning is essential for this process to happen (Crawford *et al.*, 2006). Whereas change might also have impact on human resources, as people have to learn and adapt, individual skills and knowledge are to be recognized, along with positive impacts of community of practices for knowledge sharing (Langley, 2010). As illustrated by a quote from a SQI project manager: “The directive, we learn how to dissect it, we learn to live with a new process that we did not know. Necessarily in all that, there are adaptations that we make, there are things that we perform well, other things that still need to be improved.” The last emerging theme tackles project actors.

6.3.2 Project actors

As it has been argued, our study focused predominantly on practices as socially enacted, and thus, perceptions and individual actions have not been highlighted in the results. There is much potential here to bring to the fore the role of individual actors,

their perceptions and contributions to a project. Söderlund *et al.* (2008) identified three mechanisms for the co-creation of project competence: relating, reflecting and routinizing. Considering human competencies and experience is essential in major infrastructure project teams, but also stability and learning. As stated by Flyvbjerg (2014, p. 9): “Often, projects are led by planners and managers without deep domain experience who keep changing throughout the long project cycles that apply to megaprojects, leaving leadership weak.” Politicians and civil servants have a high turnover rate, which is detrimental to long-term, infrastructure projects (The Residential and Civil Construction Alliance of Ontario, 2016). Proper incentives could be given to key actors to stay in a project team, especially when their project is highly prioritized. Some actors might have predominant roles for some practices, or groups of practices at different organizational levels. Our data highlight the issue of high turnover rates of key human resources – some respondents have identified it as ‘one of the most critical shortcomings’.

Another area where further research could be conducted is considering power relations, especially in major project context where leadership is diffuse and the project is ‘self-organizing’ (Crozier and Friedberg, 1977; Denis *et al.*, 2012). After all, a major infrastructure project can be conceived as a nexus of power (Johnston and Clegg, 2012). As decision-making involves multiple stakeholders with conflicting interests, what is the influence of political actors compared to administrators, and contractual firms? In this line of inquiry, Boonstra *et al.* (2017) have studied tension awareness of stakeholders from a duality perspective. Hietajärvi *et al.* (2017) studied integration mechanisms in infrastructure projects, from formal governance to organizational and relational arrangements. While we have not ventured in those themes, our fieldwork revealed their potential for further development. For now, we turn to main limitation of our research and future avenues.

6.4 Limits and avenues for research

In this section, we synthesize the main limits and avenues for research. As this thesis discussion has extensively explored both of those points, here we aim at summarizing key features.

Inherent to our project methodology and unit of analysis (a practice) is the limitation on the consideration of individual actor's perceptions and role in project governing. Jarzabkowski and Spee (2009) developed a framework for future direction of the field of Strategy as Practice which could be inspiring for further development of projects-as-practice, or more specifically for governance-as-practice. They proposed a typology of research based on the level of praxis (micro-meso-macro), and on the type of practitioner (individual actor, aggregate actor, extra-organizational actor). Also, project issues have come up during our fieldwork, yet we conducted little empirical investigation and theorization on those, as they were not the focal point of our research. However, it would be interesting to see how projects issues impact or how they are caused by project governance. Moreover, we have not embarked on the concept of performance; this alone could be the subject of a whole new thesis.

Time and temporality, which are central themes within project management, could be mobilized further. Longitudinal data would be especially rich to study large infrastructure projects, as they occur over a long period of time. While our research was mainly concerned with the front-end and the planning phases, we agree with Williams *et al.* (2010, p. 46) that: "there is a need for further research into how different organizational forms and cultures with different project complexities and domains operate in all of these stages and the correlations between them."

When we consider possible generalization of our results, we have to be cautious. Our multiple case analysis reveals more internal validity than if it would have been for a

single case study, yet, we stayed within the socio-political context of Quebec. There is a tension between generic project management and project uniqueness, and the specific culture is important to understand (Crawford and Pollack, 2007). However, given that there is an international undertaking in the comparative study of governance frameworks among different countries, it would be quite fascinating to develop a research program aiming at uncovering how people enact those frameworks at a larger scale (Samset *et al.*, 2016). It would also be quite interesting to investigate other governance frameworks in Canada or other provinces, and their translation into projects. This resonates with Seidl and Whittington (2014)'s call for 'taller and flatter ontologies': "we argue for progress in strategy-as-practice research through more effective linking of 'local' strategizing activity with 'larger' social phenomena." Again, as project management scholars aiming at developing a field of practice-based studies, we have much to gain by learning from strategy-as-practice scholars who have developed their field quite extensively over the past decade. Project management is crucial in society, for economic and sustainable development. We, as project management scholars, have to bear in mind our role in this by doing research which is useful and practical.

CONCLUSION

Since the birth of project management in the 1950s, large engineering and infrastructure construction projects have been a continuous and important object of inquiry, first with military projects, then extending to the construction of buildings, transportation and power systems (Morris, 2013). The governance of projects has been studied for decades now (Ahola *et al.*, 2014). However, too often, the wrong projects are selected, costs are underestimated and projects' benefits overestimated (Flyvbjerg, 2014). This has led Flyvbjerg (2011) to propose the "iron law of megaprojects": *Over budget, over time, over and over again.*

Project management is a young discipline within management science, and extended from a technical discipline to a multidisciplinary one. Over the last two decades, project management research has improved substantially in quality and rigour (Turner, 2010), rapidly expanding as a subfield of management and organization studies (Söderlund, 2011). Thus, the variety found in the study of project management lends support to theoretical pluralism and to the interdisciplinarity of the field (*ibid.*). As it has been argued, the theoretical perspectives of process studies and the practice-based view are on their way of becoming more important in the field of project management, as insights from social sciences are expanding into project management research (Florice *et al.*, 2014). Within project management, the study of large infrastructure projects has always been and is still a subject of importance (Flyvbjerg, 2017). In order to study large infrastructure projects, many of the research conducted have mobilized various theoretical perspectives, such as economic, contingency-based and institutional ones. Yet, as those can help to uncover and explain many facets of this phenomenon, other theoretical perspectives can

complement our current knowledge to address issues of complexity, social acceptability and practices of project governance. Such theoretical perspectives, namely the process approach, and the practice perspective, allow to develop a broader comprehension of project governance, as on-going and unfolding within project teams.

The point of departure for this doctoral research is the Quebec governance framework for major infrastructure projects, which was adopted in 2008 in order to frame rigorously infrastructure projects, especially in the front-end and in the planning phases. This doctoral research investigated how the Quebec governance framework for major infrastructure projects is translated into practice, by qualitatively studying four major public infrastructure projects. As Sahlin-Andersson (2002, p. 22) argues: “we learn that in order to understand the outcome of a process, it is of value to learn about the process.” By mobilizing process studies and the practice perspective, it is possible to open the black box of micro-processes of the ‘institutionalized,’ macro-governance framework.

The methodological approach for this exploratory research included a multiple-case study of four large infrastructure projects which have to comply to the institutional governance framework, all managed by the designated project manager. From September 2015 to June 2016, 44 interviews were conducted with project team members of those projects and various experts on the Quebec governance framework; 21 project meetings were observed for a total of 77 hours; and many documents were analysed, project documents along with other governmental ones. From a methodological point of view, our stance has been to remain open to discoveries on the field. The grounded theory approach was well suited for our needs and derives from our constructivist epistemological stance. Various dimensions have been suggested in this thesis, yet they have evolved according to collected data and

interpretations we make out of it. Similarly, the various theoretical perspectives explored in this thesis are not a definite answer, but rather a point of departure.

The results of this thesis are structured around three articles. The first article, based on literature on public administration and project governance, investigated the question of the relevance of a governance framework for a government. Using a phronetic and abductive stance, we proposed that a governance framework has three main objectives: to enable greater government legitimacy, accountability and efficiency. While more research would be needed to empirically verify those propositions, this is a first attempt to anchor a governance framework in a larger perspective than conceived traditionally, that is with a focus on the dimension of efficiency.

The second article investigated the process of translation, from an institutional governance framework to its enactment by the project teams. With an in-depth case study of one of the projects, the process is uncovered from a temporal perspective, and main practices performed are discussed for their ostensive and performative sides. Twelve different practices were labelled, and grouped within three categories: the structuring practices, translated from requirements of the institutional governance framework; the normalizing practices, translated from requirements of the organizational level; and the facilitating practices, which emerged mostly from the project level in order to enable coordination of project team and conciliation of the main stakeholders.

The third article builds on an inter-case analysis of the four projects studied. The research question posed is: how is project governance made into project governing? A first result is that the patterns found for the in-depth study of one project are confirmed within the other projects, with some nuances depending on whether the project was in the initiating or the planning phase at the time of the study. Thus,

ostensive practices are presented, along with an evaluation of the performative practices based on the level of collective enactment. A proposition is made, that facilitating practices have a positive influence on project governing. Also, the concept of governance-as-practice is proposed in order to complement our previous knowledge on project governance.

The main contributions of the thesis are thoroughly discussed in a chapter following the three articles, along with the main limitations. Governance-as-practice as a concept allows bringing to the fore the enactment of practices for complying with an institutional framework. Thus, project governance as a concept evolves towards a multi-level to include a broader organisational and even institutional stance. In line with theoretical pluralism found in project studies, this new dimension can complement the previous conceptualization of project governance, by bringing a processual and practice perspective.

The main limits of this study are summarized here:

- The focus of this study has been project governance practices as observed within project team. Thus, the interpretation of actors has not been accounted for, this could be brought forward in a subsequent research;
- The observations were made on a limited timeframe when considering that large infrastructure projects unfold for many years, and not all phases of the governance framework have been covered, as only the initiating and planning phases were tackled;
- The evolution of the governance framework has not been a focus in this study, yet, organizational and institutional changes emerged as an important dimension which could also be brought forward in a subsequent study, aiming at historical and longitudinal considerations;

- This study is based on a contextual socio-political context of the province of Quebec, thus limiting the generalizability of the results to other governments. Yet, the research method could be replicated to other contexts, governments and countries.

The main practical contribution for governmental actors and project team members is to understand how the Quebec governance framework is enacted into practice, what practices are performed and how they are performed. Project governing is a dynamic process, multi-level, performed by various actors in a coordinated and decentralised way in order to respond to the institutional requirements. As governmental actors have shown much reflexivity and collaboration with the researchers of this study, this allows for further collaboration in order to explore how things could be improved, how we can learn from those results. There is much potential to uncover further the dialectics between the governance framework and project governing practices, in line with the type of emancipatory research as presented by Geraldi and Söderlund (In Press).

Finally, a point has to be made concerning the subject, which must satisfy the two criteria of “posing a question that is ‘important’ in the real world” and “making a specific contribution to an identifiable scholarly literature” (King et al., 1995). The governance of public infrastructure projects is without any doubt of capital importance in the real world, and the governance of public projects in Quebec even so.

APPENDIX A

INTERVIEW GUIDE

La gouvernance des grands projets d'infrastructure publique

Note : Entre quarante et quatre-vingt entrevues seront conduites à l'aide de ce questionnaire. Ces entrevues seront semi-dirigées ; en ce sens, ce questionnaire est à titre indicatif et les questions pourront varier selon les réponses des répondants et l'orientation globale de l'entrevue. Ce guide d'entrevue couvre deux sections, qui seront ciblées selon le répondant :

- A- Le cadre de gouvernance actuellement en place au gouvernement (optionnelle selon le niveau de connaissance du sujet par le répondant, principalement pour les hauts fonctionnaires et politiciens)
- B- La mise en application du cadre de gouvernance dans les grands projets d'infrastructure publique (pour tous les répondants)

A- Le cadre de gouvernance actuellement en place au gouvernement

L'objectif de cette section est de retracer l'évolution historique du cadre de gouvernance en place au gouvernement pour les grands projets d'infrastructure publique et de comprendre l'objectif de cette démarche.

Pour le Québec, il est à noter que les cadres norvégiens et britanniques ont à l'origine inspiré le cadre de gouvernance du Québec qui a évolué ainsi depuis son adoption⁹¹ :

Version 1, 2008 : Politique-cadre sur la gouvernance des grands projets d'infrastructure publique, Secrétariat du Conseil du trésor

Version 2, 2010 : Politique-cadre sur la gouvernance des grands projets d'infrastructure publique, Secrétariat du Conseil du trésor

Version 3, 2014 : Directive sur la gestion des projets majeurs d'infrastructure publique, Secrétariat du Conseil du trésor

⁹¹ Les questions de cette section ont été largement inspirées de l'article par Klakegg *et al.*, 'Governance Frameworks for Public Project Development and Estimation', *Project Management Journal*, 39 (2008), S27-S42.

Processus de développement

1. Quels étaient selon vous les motifs pour adopter un cadre de gouvernance pour les projets à l'origine ?
 - a. Et pour initier les révisions (si applicable) ?
2. Quel est l'objectif du cadre de gouvernance ?
 - a. Cet objectif a-t-il changé/évolué au fil du temps ?
3. Qui sont les principaux acteurs impliqués dans le processus de développement du cadre de gouvernance ?
 - a. Quel est votre rôle spécifique ?
4. Quel est le processus assurant la mise à jour du cadre de gouvernance ?

Le cadre de gouvernance

Note : Le focus de cette section est sur la version actuelle du cadre de gouvernance (au Québec, la Directive – V3, depuis 2014).

5. Selon vous, quels sont les principes de gouvernance intégrés au cadre ? S'il vous plaît les décrire en vos mots en quoi ils consistent.
(Des éléments de réponse sont suggérés à titre indicatif, vous pouvez en couvrir certains dans votre réponse ou en apporter d'autres)
 - a. Processus décisionnel versus administratif
 - b. Règles de conduite
 - c. Différentiation des projets basée sur la complexité / mécanismes pour réduire la complexité
 - d. Mode de réalisation des projets (PPP ou autre)
 - e. Gestion des risques
 - f. Structure de gouvernance pour le projet
 - g. Possibilités de modifications afin de répondre aux turbulences de l'environnement
6. Quels éléments spécifiques du cadre ont été modifiés depuis la version précédente ?
 - a. De quelle façon ?

7. Comment ces changements ont été communiqués pour l'ensemble des acteurs impliqués dans ces grands projets ?
 - a. Par qui ?
8. De votre point de vue, quelles sont les forces du cadre de gouvernance actuel ?
 - a. Quels points seraient à améliorer ?
 - b. Qu'en est-il du cadre actuel par rapport à la version antérieure ?
9. De votre point de vue, si un élément du cadre devrait être modifié ou amélioré, quel serait-il ?
 - a. De quelle façon ?
10. Y a-t-il d'autres points d'intérêt concernant le cadre de gouvernance actuel et son évolution qui vous semblent importants à évoquer ?

B- La mise en application du cadre de gouvernance dans les grands projets d'infrastructure publique

L'objectif de cette section est de comprendre comment le cadre de gouvernance est mis en application dans des projets spécifiques, comment la gouvernance est traduite en pratique par les acteurs des projets.⁹²

- 1- Quel est votre rôle individuel dans les grands projets d'infrastructure publique ?
 - a. Sur quels projets spécifiques travaillez-vous ?
 - b. Depuis quand êtes-vous impliqués ?
- 2- Comment décririez-vous le cadre de gouvernance des grands projets d'infrastructure ?
 - a. Selon votre expérience du cadre de gouvernance, quels sont les points forts ?
 - b. Quels sont les points à améliorer ?
- 3- Comment décririez-vous l'adéquation entre le cadre de gouvernance

⁹² NOTE pour les répondants ayant couvert la section A, commencer à la question #6

des grands projets d'infrastructure publique et la structure de gouvernance de votre projet ? De votre organisation ?

4- De votre point de vue, si un élément du cadre devrait être modifié ou amélioré, quel serait-il ?

a. De quelle façon ?

5- Si vous avez connu des versions antérieures du cadre de gouvernance actuellement en place :

a. Comment avez-vous vécu la transition ? Quelles informations vous ont été communiquées à cet effet, par qui et à quel moment ?

b. Comment résumez-vous les principaux changements de la version actuelle comparativement à la version antérieure ?

Pour les questions suivantes, svp répondre selon un projet spécifique dans lequel vous êtes impliqué personnellement.

6- Pouvez-vous me décrire ce projet, son statut actuel (phase en cours), les organisations et individus impliqués ?

7- Dans la pratique, pouvez-vous me décrire comment ce grand projet d'infrastructure publique est géré dans votre organisation, du début à la fin ?

a. Quels processus sont mis en place ?

b. Qui sont les acteurs impliqués ?

c. Quels outils de communication sont utilisés ?

d. Quels mécanismes sont mis en place ? (Rencontres, validations, décisions, etc.)

8- Avez-vous constaté des difficultés spécifiques pour la mise en application du cadre de gouvernance dans les projets ? Svp donner des exemples.

9- Comment avez-vous adapté le cadre pour les besoins spécifiques de ce projet ? Svp donner des exemples.

10- Avez-vous constaté des différences spécifiques entre le cadre de gouvernance tel que défini et la façon dont les grands projets sont gérés en

pratique ?

11- Selon vous, quels sont les points forts concernant la gestion des grands projets d'infrastructure dans votre organisation ?

a. Quels seraient les points à améliorer ?

12- De votre point de vue, si un élément concernant la gestion des grands projets d'infrastructure de votre organisation devait être modifié ou amélioré, quel serait-il ?

b. De quelle façon ?

13- Y a-t-il d'autres points d'intérêt concernant la gestion des grands projets d'infrastructure publique qui vous semblent importants à évoquer ?

.

APPENDIX B

CODING STRUCTURE

Nom	Sources	Référen...		
● Apprentissage	4	10	● Projet 1 - contexte	8 35
● Artefacts	21	51	● Projet 2 - contexte	9 50
● Autorisations	1	1	● Projet 3 - contexte	10 53
● BIM	7	7	● Projet 4 - contexte	6 80
▼ ● Changement	1	1	● Projet autre en exemple	12 34
● Changement en santé	13	23	● Projets santé vs autres	12 31
● Politique-cadre à Direc...	21	49	● SCT - rôle	17 34
● Réorganisations	21	51	● SQL - rôle	23 53
● Résistance	3	3	● SQL - structure	7 13
▼ ● Directive	0	0		
● Directive - artefact	9	17		
▶ ● Directive - objectifs	19	43		
● Directive - processus	20	46		
▼ ● Enjeux	1	1		
● Confusion de rôles	9	11		
● Enjeux de projets	25	89		
● Enjeux RH	20	42		
● Manque de stabilité	4	5		
● Vision court terme	5	5		
● Exploitation infra	5	7		
● Mode de réalisation	18	43		
● P-Analyse de la valeur	11	15		
● P-Analyse PP	8	9		
● P-Analyse risques	15	22		
● P-Assurance qualité	28	73		
● P-BdP	4	5		
● P-Comité de coordination	7	9		
● P-Comité directeur des p...	7	10		
● P-Conciliation	26	74		
● P-Contrats	10	28		
● P-Détail de l'option choisie	18	41		
● P-Élaboration DA	20	71		
● P-Élaboration DO	18	60		
● P-PCI	3	5		
● P-PGP	9	13		
● PQI	6	7		

APPENDIX C

ETHICAL CERTIFICATE

ESG UQAM

École des sciences de la gestion
Université du Québec à Montréal

No du certificat : 20-07-15-01

CERTIFICAT D'ÉTHIQUE

Le comité d'éthique de la recherche pour les étudiants de l'ESG a examiné le protocole de recherche suivant et le juge conforme aux pratiques habituelles ainsi qu'aux normes établies par le Cadre normatif pour l'éthique de la recherche avec des êtres humains de l'UQAM (juin 2012).

Protocole de recherche

Nom de l'étudiant(e) : MAUDE BRUNET (BRUM27558202)
Programme d'études : 3451 - DOCTORAT EN ADMINISTRATION
Directrice/Directeur de recherche : MONIQUE AUBRY
Co-direction (s'il y a lieu)
Titre du protocole de recherche : LA GOUVERNANCE DES GRANDS PROJETS D'INFRASTRUCTURE PUBLIQUE

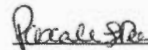
Modalités d'application

Les modifications importantes pouvant être apportées au protocole de recherche en cours de réalisation doivent être transmises au comité¹.

Tout événement ou renseignement pouvant affecter l'intégrité ou l'éthicité de la recherche doit être communiqué au comité.

Toute suspension ou cessation du protocole (temporaire ou définitive) doit être communiquée au comité dans les meilleurs délais.

Le présent certificat d'éthique est valide jusqu'au **20 JUILLET 2016**. Selon les normes de l'Université en vigueur, un suivi annuel est minimalement exigé pour maintenir la validité de la présente approbation éthique. Le rapport d'avancement de projet (renouvellement annuel ou fin de projet) est requis pour le : **20 JUILLET 2016**.



Pascale Denis
Présidente
CERPE ESG UQAM
Professeur

20 JUILLET 2015

Date d'émission

¹ Modifications apportées aux objectifs du projet et à ses étapes de réalisation, au choix des groupes de participants et à la façon de les recruter et aux formulaires de consentement. Les modifications incluent les risques de préjudices non-prévus pour les participants, les précautions mises en place pour les minimiser, les changements au niveau de la protection accordée aux participants en termes d'anonymat et de confidentialité ainsi que les changements au niveau de l'équipe (ajout ou retrait de membres).

REFERENCES

- Aaltonen, K., Ahola, T., and Artto, K. (2017). Something old, something new: Path dependence and path creation during the early stage of a project. *International Journal of Project Management*, 35(5), 749-762.
- Addyman, S. (2016). *Temporary organising: Time and routine in transition*. Paper presented at the EGOS, Naples, Italy.
- Aguinis, H., Boyd, B. K., Pierce, C. A., and Short, J. C. (2011). Walking new avenues in management research methods and theories: Bridging micro and macro domains. *Journal of Management*, 37(2), 395-403.
- Ahola, T., Ruuska, I., Artto, K., and Kujala, J. (2014). What is project governance and what are its origins? *International Journal of Project Management*, 32(8), 1321-1332.
- Ahrens, T., and Chapman, C. S. (2007). Management accounting as practice. *Accounting, Organizations and Society*, 32(1-2), 1-27.
- Ahrne, G. (2014). Book review: Global projects: Institutional and political challenges. *Contemporary Sociology: A Journal of Reviews*, 43(1), 115-117.
- Akrich, M., Callon, M., and Latour, B. (2006). *Sociologie de la traduction : Textes fondateurs*. Paris: École des mines de Paris
- Alaktif, J., and Callens, S. (2009). La gouvernance, ou la qualité des pouvoirs. In S. Callens and D. Uzunidis (Eds.), *Gouvernance: Exercices de pouvoir* (pp. 15-30). Paris: L'Harmattan.
- Alderman, N., and Ivory, C. (2011). Translation and convergence in projects: An organizational perspective on project success. *Project Management Journal*, 42(5), 17-30. DOI: 10.1002/pmj.20261
- Alvesson, M., and Kärreman, D. (2007). Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32(4), 1265-1281.
- Alvesson, M., and Sköldberg, K. (2000). *Reflexive methodology: New vistas for qualitative research*: SAGE Publications.

- Andersen, E. S., Söderlund, J., and Vaagaasar, A. L. (2010). Projects and politics: Exploring the duality between action and politics in complex projects. *International Journal of Management and Decision Making*, 11(2), 121-139.
- Andrews, R., Boyne, G. A., and Walker, R. M. (2011). Dimensions of publicness and organizational performance: A review of the evidence. *Journal of Public Administration Research and Theory*, 21(s3), i301-i319.
- Arellano-Gault, D., Demortain, D., Rouillard, C., and Thoenig, J.-C. (2013). Bringing public organization and organizing back in. *Organization Studies*, 34(2 Special Issue), 145-167.
- Aritua, B., Smith, N. J., and Bower, D. (2011). What risks are common to or amplified in programmes: Evidence from uk public sector infrastructure schemes. *International Journal of Project Management*, 29(3), 303-312.
- Arnaboldi, M., Azzone, G., and Savoldelli, A. (2004). Managing a public sector project: The case of the italian treasury ministry. *International Journal of Project Management*, 22(3), 213-223.
- Aroles, J., and McLean, C. (2016). Rethinking stability and change in the study of organizational routines: Difference and repetition in a newspaper-printing factory. *Organization Science*, 27(3), 535-550.
- Aubry, M. (2011). The social reality of organisational project management at the interface between networks and hierarchy. *International Journal of Managing Projects in Business*, 4(3), 436-456.
- Aubry, M., Sicotte, H., Drouin, N., Vidot-Delerue, H., and Besner, C. (2012). Organisational project management as a function within the organisation. *International Journal of Managing Projects in Business*, 5(2), 180-194.
- Aucoin, P. (1990). Administrative reform in public management: Paradigms, principles, paradoxes and pendulums. *Governance*, 3(2), 115-137.
- Baker, B. N., Fisher, D., and Murphy, D. C. (1983). Project management in the public sector: Success and failure patterns compared to private sector projects. In E. D. I. C. W. R. King (Ed.), *Project management handbook* (pp. 686-699). New York (NY): Van Nostrand Reinhold.
- Bakker, R. M., DeFillippi, R. J., Schwab, A., and Sydow, J. (2016). Temporary organizing: Promises, processes, problems. *Organization Studies*, 37(12), 1703-1719.

- Balogun, J., Gleadle, P., Hope-Hailey, V., and Willmott, H. (2005). Managing change across boundaries: Boundary-shaking practices. *British Journal of Management*, 16(4), 261-278.
- Barnard, C. I. (1938, 1968). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Barney, J. B., and Hesterley, W. (2006). Organizational economics: Understanding the relations between organizations and economic analysis *Handbook of organization studies* (pp. 111-148). London: Sage.
- Bekker, M. (2013). Project governance: "Schools of thought". *South African Journal of Economic and Management Sciences*, 17(Special Issue), 22-32.
- Berle, A. A., and Means, G. G. C. (1932). *The modern corporation and private property*. New York: Macmillan.
- Besner, C., and Hobbs, B. (2013). Contextualized project management practice: A cluster analysis of practices and best practices. *Project Management Journal*, 44(1), 17-34.
- Biesenthal, C., and Wilden, R. (2014). Multi-level project governance: Trends and opportunities. *International Journal of Project Management*, 32(8), 1291-1308.
- Bjørkeng, K., Clegg, S., and Pitsis, T. (2009). Becoming (a) practice. *Management Learning*, 40(2), 145-159.
- Blackburn, S. (2002). The project manager and the project-network. *International Journal of Project Management*, 20(3), 199-204.
- Blackler, F., and Regan, S. (2009). Intentionality, agency, change: Practice theory and management. *Management Learning*, 40(2), 161-176.
- Blomquist, T., Hällgren, M., Nilsson, A., and Söderholm, A. (2010). Project-as-practice: In search of project management research that matters. *Project Management Journal*, 41(1), 5-16.
- Boonstra, A., van Offenbeek, M. A. G., and Vos, J. F. J. (2017). Tension awareness of stakeholders in large technology projects: A duality perspective. *Project Management Journal*, 48(1), 19-36.

- Bourdieu, P. (1993). *The field of cultural production*. Cambridge, UK: Polity Press.
- Boxenbaum, E., and Rouleau, L. (2011). New knowledge products as bricolage: Metaphors and scripts in organizational theory. *Academy of Management Review*, 36(2), 272-296.
- Boxenbaum, E., and Strandgaard Pedersen, J. (2009). Scandinavian institutionalism - a case of institutional work. In T. B. Lawrence, R. Suddaby, and B. Leca (Eds.), *Institutional work: Actors and agency in institutional studies of organizations* (pp. 178-204): Cambridge University Press.
- Bozeman, B. (2007). *Public values and public interest: Counterbalancing economic individualism*. Washington, DC: Georgetown University Press.
- Brady, H. E., and Collier, D. (2010). *Rethinking social inquiry: Diverse tools, shared standards* (2 ed.). Lanham, Md: Rowman and Littlefield.
- Brady, T., and Davies, A. (2004). Building project capabilities: From exploratory to exploitative learning. *Organization Studies*, 25(9), 1601-1621.
- Brealey, R., Cooper, I., and Habib, M. (2000). The financing of large engineering projects. In R. Miller and D. Lessard (Eds.), *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. Massachusetts: Massachusetts Institute of Technology.
- Bredillet, C. N., Turner, J. R., and Anbari, F. T. (2008). Exploring research in project management: Nine schools of project management research. *Project Management Journal, a series of six editorials between June 2007 and September 2008*, 1-23.
- Bredillet, C. N., Tywoniak, S., and Dwivedula, R. (2014). *Reconnecting theory and practice in a pluralistic organizing context: Issues and Aristotelian considerations*. Paper presented at the EURAM, Valence.
- Bresman, H. (2013). Changing routines: A process model of vicarious group learning in pharmaceutical R&D. *Academy of Management Journal*, 56(1), 35-61.
- Bresnen, M., and Marshall, N. (2011). Projects and partnerships: Institutional processes and emergent practices. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management* (pp. 154-174). New York: Oxford University Press.

- Brown-John, L. (1996). Review of 'the new public management: Canada in comparative perspective' by Peter Aucoin. *Canadian Journal of Political Science*, 29(3), 573-574.
- Brummer, J. J. (1991). Theories of institutional legitimacy *Corporate responsibility and legitimacy: An interdisciplinary analysis* (pp. 73-97). New York: Greenwood Press.
- Bruni, A. (2005). Shadowing software and clinical records: On the ethnography of non-humans and heterogeneous contexts. *Organization*, 12(3), 357-378.
- Burrell, G., and Morgan, G. (2000). Two dimensions: Four paradigms *Talking about organization science* (pp. 107-122). London: Sage Publications.
- Callon, M. (1986). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of st brieuc bay. In J. Law (Ed.), *Power, action and belief: A new sociology of knowledge?* (pp. 196-223). London: Routledge.
- Carlile, P. R. (2004). Transferring, translating, and transforming: An integrative framework for managing knowledge across boundaries. *Organization Science*, 15(5), 555-568.
- Carlile, P. R., Nicolini, D., Langley, A., and Tsoukas (eds.), H. (2013). *How matter matters: Objects, artifacts, and materiality in organization studies*. Oxford: Oxford University Press.
- Carlile, P. R., Nicolini, D., Langley, A., and Tsoukas, H. (2013). How matter matters: Objects, artifacts, and materiality in organization studies: Introducing the third volume of "perspectives on organization studies". In P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 1-16). Oxford: Oxford University Press.
- Charbit, C. (2011). Governance of public policies in decentralized contexts. The multilevel approach. *OECD Regional development working papers*. OECD Publishing.
- Charmaz, C. (2006). Coding in grounded theory practice *Constructing grounded theory* (pp. p.42-71). Thousand Oaks: Sage Publications.
- Chia, R. (2013). Paradigms and perspectives in organizational project management research: Implications for knowledge-creation. In N. Drouin, R. Müller, and S. Shankar (Eds.), *Novel approaches to organizational project management*

- research: Translational and transformational* (pp. 33-55). Copenhagen: Copenhagen Business Press.
- Chia, R., and Holt, R. (2009). *Strategy without design: The silent efficacy of indirect action*. Cambridge: Cambridge University Press.
- Christensen, T. (2009). The Norwegian front-end governance regime of major public projects – a theoretically based analysis (Vol. 23, pp. 1-74). Oslo, Norway: Concept Research Program.
- Christensen, T. (2011). The Norwegian front-end governance regime of major public projects. *International Journal of Managing Projects in Business*, 4(2), 218-239.
- Cicmil, S., and Hodgson, D. (2006). New possibilities for project management theory: A critical engagement. *Project Management Journal*, 37(3), 111-122.
- Cicmil, S., Williams, T., Thomas, J., and Hodgson, D. (2006). Rethinking project management: Researching the actuality of projects. *International Journal of Project Management*, 24(8), 675-686.
- Clegg, S., and Kreiner, K. (2013). Power and politics in construction projects. In N. Drouin, Müller, Ralf, and Sankaran, Shankar (Ed.), *Novel approaches to organizational project management research: Translational and transformational* (pp. 268-293): Copenhagen Business School Press.
- Coleman, J. S. (1986). Social theory, social research, and a theory of action. *American Journal of Sociology*, 91(6), 1309-1335.
- Committee of Public Accounts. (2012). Assurance for major projects. House of Commons, London, UK.
- Corbin, J., and Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13(1), 3-21.
- Crawford, L., Morris, P., Thomas, J., and Winter, M. (2006). Practitioner development: From trained technicians to reflective practitioners. *International Journal of Project Management*, 24, 722-733.
- Crawford, L., and Pollack, J. (2007). How generic are project management knowledge and practice? *Project Management Journal*, 38(1), 87-96.

- Crawford, L. H., and Helm, J. (2009). Government and governance: The value of project management in the public sector. *Project Management Journal*, 40(1), 73-87.
- Crozier, M., and Friedberg, E. (1977). *L'acteur et le système : Les contraintes de l'action collective*. Paris: Éditions du Seuil.
- Czarniawska, B. (2006). Book review: Bruno Latour: Reassembling the social: An introduction to actor-network theory. *Organization Studies*, 27(10), 1553-1557.
- Czarniawska, B. (2008). How to misuse institutions and get away with it: Some reflections on institutional theory(ies). In R. Greenwood, C. Oliver, R. Suddaby, and K. Sahlin-Andersson (Eds.), *The sage handbook of organizational institutionalism* (pp. p.769-782): SAGE Publications.
- Czarniawska, B., and Sevón, G. (1996). *Translating organizational change*: Walter de Gruyter.
- d'Iribarne, P. (2009). La force des cultures. *Le Débat*, 157(5), 111-123.
- Dahlman, C. J. (1979). The problem of externality. *Journal of Law and Economics*, 22(1), 141-162.
- Davies, A., and Brady, T. (2000). Organisational capabilities and learning in complex product systems: Towards repeatable solutions. *Research Policy*, 29, 931-953.
- de Blois, M., Lizarralde, G., and De Coninck, P. (2016). Iterative project processes within temporary multi-organizations in construction: The self-, eco-, re-organizing projects. *Project Management Journal*, 47(1), 27-44.
- de Holan, P. M., and Phillips, N. (2002). Managing in transition: A case study of institutional management and organizational change. *Journal of Management Inquiry*, 11(1), 68-83.
- Denhardt, R. B., and Denhardt, J. V. (2000). The new public service: Serving rather than steering. *Public Administration Review*, 60(6), 549-559.
- Denis, J.-L., Dompierre, G., Langley, A., and Rouleau, L. (2011). Escalating indecision: Between reification and strategic ambiguity. *Organization Science*, 22(1), 225-244.

- Denis, J.-L., Langley, A., and Rouleau, L. (2007). Strategizing in pluralistic contexts: Rethinking theoretical frames. *Human Relations*, 60(1), 179-215.
- Denis, J.-L., Langley, A., and Sergi, V. (2012). Leadership in the plural. *The Academy of Management Annals*, 6(1), 211-283.
- Déry, R. (2010). *Les perspectives de management*: Éditions JFD.
- Déry, R. (2013). *Les fondements de la gestion des connaissances*. Montreal: JFD Éditions.
- Deschesnes, M., Drouin, N., and Couturier, Y. (2013). Schools' absorptive capacity to innovate in health promotion. *Journal of Health Organization and Management*, 27(1), 24-41.
- Deschesnes, M., Drouin, N., Tessier, C., and Couturier, Y. (2014). Schools' capacity to absorb a healthy school approach into their operations. *Health Education*, 114(3), 208-224.
- Dille, T., and Söderlund, J. (2011). Managing inter-institutional projects: The significance of isochronism, timing norms and temporal misfits. *International Journal of Project Management*, 29, 480-490.
- Dille, T., and Söderlund, J. (2013). Managing temporal misfits in institutional environments: A study of critical incidents in a complex public project. *International Journal of Managing Projects in Business*, 6(3), 552-575.
- Dodd, E. M. (1932). For whom are corporate managers trustees? *Harvard Law Review*, 45(7), 1145-1163.
- Donaldson, L. (2001). *The contingency theory of organizations*: SAGE Publications.
- Drouin, N., and Jugdev, K. (2014). Standing on the shoulders of strategic management giants to advance organizational project management. *International Journal of Managing Projects in Business*, 7(1), 61-77.
- Drouin, N., Müller, R., and Sankaran, S. (2013). *Novel approaches to organizational project management research: Translational and transformational*: Copenhagen Business School Press.
- Dubé, B., Facal, J., and Mazouz, B. (2009). La communication, un outil de gouvernance des partenariats public-privé. Quelques enseignements tirés du

- cas : Bonjourquébec.Com. *Revue française d'administration publique*, 130, 291-306.
- Dupuis, J.-P. (2011). Performance et organisation multiculturelle: Le cas d'entreprises montréalaises. *Les Cahiers du Cedimes*, 5(2), 9-28.
- Dupuis, J.-P. (2012). Enquête sur les relations problématiques entre français et québécois francophones. *Recherches sociographiques*, 53(2), 357-387.
- Dupuis, J.-P. (2014). New approaches in cross-cultural management research: The importance of context and meaning in the perception of management styles. *International Journal of Cross Cultural Management: CCM*, 14(1), 67.
- Edkins, A. E. (2014). *Thinking about the management of projects: A celebration*, The Bartlett School of Construction and Project Management, UCL, London.
- Eisenhardt, K. M. (1989a). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Eisenhardt, K. M. (1989b). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Engwall, M. (2003). No project is an island: Linking projects to history and context. *Research Policy*, 32(5), 789-808.
- Esty, B. C. (2014). Why study large projects? An introduction to research on project finance. In B. Flyvbjerg (Ed.), *Megaproject planning and management: Essential readings* (pp. 400p.). UK: Edward Elgar.
- Ezzamel, M., and Reed, M. (2008). Governance: A code of multiple colours. *Human Relations*, 61(5), 597-615.
- Fabianski, C. (2015). *Elaborating a cultural perspective for the governance of complex projects: The case of taksim 4. Levent, the first urban rail infrastructure project (urip) of istanbul*. Paper presented at the IRNOP, London, UK.
- Facal, J., and Mazouz, B. (2013). L'imputabilité des dirigeants publics. *Revue française de gestion*, 8(237), 117-132.
- Feldman, M. S., and Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48, 94-118.

- Florichel, S., Bonneau, C., Aubry, M., and Sergi, V. (2014). Extending project management research: Insights from social theories. *International Journal of Project Management*, 32(7), 1091-1107.
- Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*: Cambridge University Press.
- Flyvbjerg, B. (2005). Social science that matters. *Foresight Europe* (2), 38-42.
- Flyvbjerg, B. (2011). Over budget, over time, over and over again: Managing major projects. In J. K. P. Peter W. G. Morris, and Jonas Söderlund (Ed.), *The oxford handbook of project management* (pp. p321-344). Oxford: Oxford University Press.
- Flyvbjerg, B. (2013). Quality control and due diligence in project management: Getting decisions right by taking the outside view. *International Journal of Project Management*, 31(5), 760-774.
- Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6-19.
- Flyvbjerg, B. (2017). *The Oxford handbook of megaproject management*: OUP Oxford.
- Flyvbjerg, B., Bruzelius, N., and Rothengatter, W. (2003). *Megaprojects and risk: An anatomy of ambition*. Cambridge, UK: Cambridge University Press.
- Flyvbjerg, B., Garbuio, M., and Lovallo, D. (2009). Delusion and deception in large infrastructure projects: Two models for explaining and preventing executive disaster. *California Management Review*, 51(2), 170-193.
- Flyvbjerg, B., Holm, M. S., and Buhl, S. (2002). Underestimating costs in public works projects: Error or lie? *Journal of the American Planning Association*, 68(3), 279-295.
- Foss, N. J., Husted, K., and Michailova, S. (2010). Governing knowledge sharing in organizations: Levels of analysis, governance mechanisms, and research directions. *Journal of Management Studies*, 47(3), 455-482.
- Gauthier, J.-B., and Ika, L. A. (2012). Foundations of project management research: An explicit and six-facet ontological framework. *Project Management Journal*, 43(5), 5-23.

- Gehman, J., Trevino, L. K., and Garud, R. (2013). Values work: A process study of the emergence and performance of organizational values practices. *Academy of Management Journal*, 56(1), 84-112.
- Geiger, D. (2009). Revisiting the concept of practice: Toward an argumentative understanding of practicing. *Management Learning*, 40(2), 129-144.
- George, A. L., and Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge, MA: The MIT Press.
- Geraldi, J. and Söderlund, J. (In Press). Project studies: What it is, where it is going. *International Journal of Project Management*.
- Gherardi, S. (2009). Introduction: The critical power of the 'practice lens'. *Management Learning*, 40(2), 115-128.
- Gherardi, S. (2012). *How to conduct a practice-based study: Problems and methods*: Edward Elgar.
- Gherardi, S., and Perrotta, M. (2013). Doing by inventing the way of doing: Formativeness as the linkage of meaning and matter. In P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 227-259). Oxford: Oxford University Press.
- Giddens, A. (1984). *The constitution of society. Outline of the theory of structuration*. Berkeley: University of California Press.
- Gioia, D. A., Corley, K. G., and Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the gioia methodology. *Organizational Research Methods*, 16(1), 15-31.
- Girard, M. (2012). *La gouvernance : Une synthèse*. JFD.
- Glaser, B. G., and Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Publishing Company.
- Goertz, G., and Mahoney, J. (2012). Introduction *A tale of two cultures: Qualitative and quantitative research in the social sciences* (pp. 1-15): Princeton University Press.
- Golsorkhi, D., Rouleau, L., Seidl, D., and Vaara, E. (2010). *Cambridge handbook of strategy as practice*. Cambridge: Cambridge University Press.

- Grabher, G., and Ibert, O. (2011). Project ecologies: A contextual view on temporary organizations. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management*. New York: Oxford University Press.
- Grand, S., Riegg-Stiirm, J., and von Arx, W. (2010). Constructivist epistemologies in strategy as practice research. In D. Golsorkhi, L. Rouleau, D. Seidl, and E. Vaara (Eds.), *Cambridge handbook of strategy as practice* (pp. 63-78). Cambridge, UK: Cambridge University Press.
- Greenwood, R., and Miller, D. (2010). Tackling design anew: Getting back to the heart of organizational theory. *Academy of Management Perspectives*, 24(4), 78-88.
- Greve, C., and Hodge, G. A. (2010). Public-private partnerships and public governance challenges. In S. P. Osborne (Ed.), *The new public governance? Emerging perspectives on the theory and practice of public governance* (pp. p.149-162). New York, NY: Routledge.
- Guba, E. G., and Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. D. Y. S. Lincoln (Ed.), *Handbook of qualitative research* (3rd ed., pp. 105-117). Thousand Oaks: Sage.
- Guba, E. G., and Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. D. Y. S. Lincoln (Ed.), *Handbook of qualitative research* (3rd ed., pp. 191-216). London: Sage.
- Gubert, L. (2007). Book review: Reassembling the social: An introduction to actor-network-theory. By bruno latour. *Critical Sociology*, 33(3), 603-607.
- Gulick, L. (1937, 2012). Notes on the theory of organizations. In Shafritz and Hyde (Eds.), *Classics of public administration*, 7th ed. (pp. 81-89). Boston, MA: Wadsworth.
- Hafsi, T. (2009). Partenariats public-privé et management de la complexité : Les nouveaux défis de l'état. *Revue française d'administration publique*, 130(2), 337-348.
- Hales, M., and Tidd, J. (2009). The practice of routines and representations in design and development. *Industrial and Corporate Change*, 18(4), 551-574.

- Hall, P. A. (2003). Aligning ontology and methodology in comparative politics. In J. M. a. D. Rueschemeyer (Ed.), *Comparative historical analysis in the social sciences* (pp. 373-399).
- Hällgren, M. (2014). *Goal grounding: The (dis-)organizing features of timespace in temporary organizations*.
- Hällgren, M., and Lindahl, M. (2017). Coping with lack of authority: Extending research on project governance with a practice approach. *International Journal of Managing Projects in Business*, 10(2), 244-262.
- Hällgren, M., and Söderholm, A. (2011). Projects-as-practice. New approach, new insights. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The oxford handbook of project management* (pp. p.500-518). New York: Oxford University Press.
- Hatchuel, A., Pezet, E., Starkey, K., and Lenay (Eds.), O. (2005). *Gouvernement, organisation et gestion : L'héritage de Michel Foucault*. Québec: Presses de l'Université Laval.
- Hayek, F. A. (1960). The corporation in a democratic society: In whose interest ought it and will it be run? In M. Anshen and G. L. Bach (Eds.), *Management and corporations 1985* (pp. p.99-117). New York: McGraw Hill.
- Hernes, T. (2010). Actor-network theory, callon's scallops, and process-based organization studies. In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 161-184). Oxford: Oxford University Press.
- Hernes, T., and Maitlis, S. (2010). *Process, sensemaking, and organizing*. Oxford: Oxford University Press.
- Hietajärvi, A.-M., Aaltonen, K., and Haapasalo, H. (2017). Managing integration in infrastructure alliance projects: Dynamics of integration mechanisms. *International Journal of Managing Projects in Business*, 10(1), 5-31.
- Hodgson, D., and Cicmil, S. (2006). *Making projects critical*: Palgrave Macmillan.
- Hofstede, G., Hofstede, G. J., and Minkov, M. (2010). *Cultures and organizations: Software of the mind, third edition*: McGraw-Hill Education.
- Hood, C. (1991). A public management for all seasons? *Public Administration*, 69(1), 3-19.

- Hood, C. (2011). *The blame game: Spin, bureaucracy, and self preservation in government*. Princeton, NJ: Princeton University Press.
- Hudon, P.-A., and Mazouz, B. (2014). Le management public entre « tensions de gouvernance publique » et « obligation de résultats » : Vers une explication de la pluralité du management public par la diversité des systèmes de gouvernance publique. *Gestion et management public*, 3(2), 7-22.
- Hufty, M. (2007). La gouvernance est-elle un concept opérationnel ? *Fédéralisme Régionalisme*, 7(2 - Société civile, globalisation, gouvernance : aux origines d'un nouvel ordre politique ?), 1-10.
- Jarzabkowski, P. (2004). Strategy as practice: Recursiveness, adaptation, and practices-in-use. *Organization Studies*, 25(4), 529-560.
- Jarzabkowski, P. (2008). Shaping strategy as a structuration process. *Academy of Management Journal*, 51(4), 621-650.
- Jarzabkowski, P., and Spee, A. P. (2009). Strategy-as-practice: A review and future directions for the field. *International Journal of Management Reviews*, 11(1), 69-95.
- Jarzabkowski, P., and Whittington, R. (2008). A strategy-as-practice approach to strategy research and education. *Journal of Management Inquiry*, 17(4), 282-286.
- Johnson, G., Langley, A., Melin, L., and Whittington (eds.), R. (2007). *Strategy as practice: Research directions and resources*. Cambridge: Cambridge University Press.
- Johnston, J., and Clegg, S. (2012). Legitimate sovereignty and contested authority in public management organization and disorganization: Barangaroo and the grand strategic vision for Sydney as a globalizing city. *Journal of Change Management*, 12(3), 279-299.
- Jones, M. (2013). Untangling sociomateriality. In P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 197-226). Oxford: Oxford University Press.
- Kettl, D. F. (2002). *The transformation of governance: Public administration for twenty-first century America*. Baltimore, Maryland: Johns Hopkins.

- Kilduff, M., Crossland, C., Tsai, W., and Krackhardt, D. (2008). Organizational network perceptions versus reality: A small world after all? *Organizational Behavior and Human Decision Processes*, 107(1), 15-28.
- King, G., Keohane, R. O., and Verba, S. (1995). *Designing social inquiry: Scientific inference in qualitative research*: Princeton University Press.
- Klag, M., and Langley, A. (2013). Approaching the conceptual leap in qualitative research. *International Journal of Management Reviews*, 15(2), 149-166.
- Klakegg, O. J., Williams, T., and Magnussen, O. M. (2009). Governance frameworks for public project development and estimation (pp. 284p.). Newtown Square, PA, US: Project Management Institute.
- Klakegg, O. J., Williams, T., Magnussen, O. M., and Glasspool, H. (2008). Governance frameworks for public project development and estimation. *Project Management Journal*, 39, S27-S42.
- Lalonde, P.-L., Bourgault, M., and Findeli, A. (2012). An empirical investigation of the project situation: Pm practice as an inquiry process. *International Journal of Project Management*, 30(4), 418-431.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691-710.
- Langley, A. (2010). The challenge of developing cumulative knowledge about strategy as practice. In D. Golsorkhi, L. Rouleau, D. Seidl, and E. Vaara (Eds.), *Cambridge handbook of strategy as practice* (pp. 91-107). Cambridge, UK: Cambridge University Press.
- Langley, A., Smallman, C., Tsoukas, H., and Van De Ven, A. H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal*, 56(1), 1-13.
- Langley, A., and Tsoukas, H. (2010). Introducing "perspectives on process organization studies". In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 1-26). Oxford: Oxford University Press.
- Lappi, T., and Aaltonen, K. (2017). Project governance in public sector agile software projects. *International Journal of Managing Projects in Business*, 10(2), 263-294.

- Lascoumes, P. (2004). La gouvernementalité : De la critique de l'état aux technologies du pouvoir. *Le Portique*, 13-14.
- Lascoumes, P., and Le Galès, P. (2004). L'action publique saisie par ses instruments. In P. Lascoumes and P. Le Galès (Eds.), *Gouverner par les instruments* (pp. 11-44). Paris: Presses de Sciences Po.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford: Oxford University Press.
- Lawrence, T. B., Suddaby, R., and Leca, B. (2009). *Institutional work: Actors and agency in institutional studies of organizations*: Cambridge University Press.
- Lawrence, T. B., Suddaby, R., and Leca, B. (2011). Institutional work: Refocusing institutional studies of organization. *Journal of Management Inquiry*, 20(1), 52-58.
- Le Moigne, J. L. (1990). Épistémologies constructivistes et sciences de l'organisation. In A. C. Martinet (Ed.), *Épistémologie et sciences de gestion* (pp. 81-140). Paris: Economica.
- Levy, R. (2010). New public management: End of an era? *Public Policy and Administration*, 25(2), 234-240.
- Lincoln, Y. S., and Guba, E. G. (1985). Establishing trustworthiness *Naturalistic inquiry* (pp. 289-331). Newbury Park: Sage.
- Lindberg, K., and Czarniawska, B. (2006). Knotting the action net, or organizing between organizations. *Scandinavian Journal of Management*, 22(4), 292-306.
- Linde, A., and Linderöth, H. (2006). An actor network theory perspective on it projects. In D. Hodgson and S. Cicmil (Eds.), *Making projects critical*: Palgrave Macmillan.
- Lindkvist, L. (2011). Knowledge integration in product development projects: A contingency framework. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management*. New York: Oxford University Press.
- Lizarralde, G., Blois, M. d., and Latunova, I. (2011a). Structuring of temporary multi-organizations: Contingency theory in the building sector. *Project Management Journal*, 42(4), 19-36.

- Lizarralde, G., De Blois, M., and Davidson, C. (2011b). Relations intra- and inter-organisations for the study of the temporary multi-organisation in construction projects. *International Journal of Project Organisation and Management*, 3(1), 57-77.
- Lizarralde, G., and Djemel, M. (2010). La gouvernance de projets d'architecture : Une typologie de la multi-organisation temporaire. *Les ateliers de l'éthique*, 5(2), 76-87.
- Locke, K. (2011). Field research practice in management and organization studies: Reclaiming its tradition of discovery. *Academy of Management Annals*, 5(1), 613-652.
- Logue, D. M. (2014). Book review: W. Richard Scott, Raymond E. Levitt and Ryan J. Orr (eds.) global projects: Institutional and political challenges. *Organization Studies*, 35(7), 1090-1094.
- Lundin, R. A., Arvidsson, N., Brady, T., Ekstedt, E., Midler, C., and Sydow, J. (2015). Managing and working in project society *Managing and working in project society: Institutional challenges of temporary organizations*. Cambridge: Cambridge University Press.
- Marris, R., and Mueller, D. C. (1980). The corporation, competition, and the invisible hand. *Journal of Economic Literature*, 18, p.32-63.
- Mathieu, J. E., and Chen, G. (2011). The etiology of the multilevel paradigm in management research. *Journal of Management*, 37(2), 610-641.
- Mazouz, B. (2014). De l'analyse... À la mise en oeuvre des stratégies des organisations de l'état : "The dimension of publicness" In Mazouz and Toulouse (Eds.), *La stratégie des organisations de l'état : Contexte d'analyse, paramètres de décision et gestion du changement* (pp. 13-35). Québec: Presses de l'Université du Québec.
- Mazouz, B., Tremblay, B., and Facal, J. (2005). Au cœur du renouveau administratif : L'engagement institutionnel. Quelques enseignements empiriques tirés de l'expérience québécoise. *Revue française d'administration publique*, 115(3), 403-419.
- Meyer, J. W., and Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340-363.

- Michaud, V. (2011). Proposition pour l'étude des tensions dans le mouvement, la sociomatérialité et le paradoxe. *Communiquer*(5).
- Miller, R., and Hobbs, B. (2005). Governance regimes for large complex projects. *Project Management Journal*, 36(3), 42-50.
- Miller, R., and Lessard, D. (2000). *The strategic management of large engineering projects: Shaping institutions, risks, and governance*. Massachusetts: Massachusetts Institute of Technology.
- Miller, R., and Lessard, D. (2001). Understanding and managing risks in large engineering projects. *International Journal of Project Management*, 19, 437-443.
- Mintzberg, H. (1979). *The structuring of organizations: A synthesis of the research*. Englewood Cliffs, NJ: Prentice-Hall.
- Moe, T. M. (1984). The new economics of organization. *American Journal of Political Science*, 28(4), 739-777.
- Morris, P., and Hough, G. H. (1987). *The anatomy of major projects: A study of the reality of project management*. Wiley.
- Morris, P. W. G. (2013). *Reconstructing project management*. Wiley.
- Morris, P. W. G., Crawford, L., Hodgson, D., Shepherd, M. M., and Thomas, J. (2006). Exploring the role of formal bodies of knowledge in defining a profession – the case of project management. *International Journal of Project Management*, 24(8), 710-721.
- Morris, P. W. G., Pinto, J. K., and Söderlund, J. (2011). *The Oxford handbook of project management*. New York: Oxford University Press.
- Morris, T., and Lancaster, Z. (2006). Translating management ideas. *Organization Studies*, 27(2), 207-233.
- Müller, R. (2009). Governance of project management *Project governance* (pp. 29-44): Gower Publishing.
- Müller, R. (2011). Project governance. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.), *The Oxford handbook of project management* (pp. 297-320). New York: Oxford University Press.

- Müller, R., Pemsel, S., and Shao, J. (2015). Organizational enablers for project governance and governmentality in project-based organizations. *International Journal of Project Management*, 33(4), 839-851.
- Müller, R., Zhai, L., and Wang, A. (2017). Governance and governmentality in projects: Profiles and relationships with success. *International Journal of Project Management*, 35(3), 378-392.
- Müller-Seitz, G., and Sydow, J. (2012). Maneuvering between networks to lead – a longitudinal case study in the semiconductor industry. *Long Range Planning*, 45(2–3), 105-135.
- Narayanan, V. K., and DeFillippi, R. (2012). The influence of strategic context on project management systems: A senior management perspective. In T. M. Williams and K. Samset (Eds.), *Project governance: Getting investments right* (pp. 19-76): Palgrave Macmillan.
- National Performance Review. (1993, 2012). From red tape to results: Creating a government that works better and costs less. In Shafritz and Hyde (Eds.), *Classics of public administration*, 7th ed. (pp. 541-548). Boston, MA: Wadsworth.
- Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford: Oxford University Press.
- Noël, A. A. (2011). *La conduite de recherche : Mémoires d'un directeur*. Montréal: Les éditions JFD.
- O'Laocha, E. (2014). *Constructing a logic of inquiry into project managers' practice: An illustrated example*. Paper presented at the PMI Research Conference, Portland, OR, USA.
- O'Leary, T. (2012). Decision-making in organisations. In T. M. Williams and K. Samset (Eds.), *Project governance: Getting investments right* (Digital edition ed., pp. 254-316): Palgrave Macmillan.
- O'Reilly, K., Paper, D., and Marx, S. (2012). Demystifying grounded theory for business research. *Organizational Research Methods*, 15(2), 247-262.
- Obstfeld, D. (2012). Creative projects: A less routine approach toward getting new things done. *Organization Science*, 23(6), 1571-1592.
- OECD. (2004). Principles of corporate governance (pp. 69). Paris.

- Olsen, B. (2013). Reclaiming things: An archaeology of matter. In P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (Eds.), *How matter matters: Objects, artifacts, and materiality in organization studies* (pp. 171-196). Oxford: Oxford University Press.
- Orlikowski, W. J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404-428.
- Orlikowski, W. J., and Scott, S. V. (2008). Chapter 10: Sociomateriality: Challenging the separation of technology, work and organization. *Academy of Management Annals*, 2(1), 433-474.
- Orr, R. J., Scott, W. R., Levitt, R. E., Artto, K., and Kujala, J. (2011). Global projects: Distinguishing features, drivers, and challenges. In W. R. Scott, R. E. Levitt, and R. J. Orr (Eds.), *Global projects: Institutional and political challenges*: Cambridge University Press.
- Osborne, S. P. (2010). *The new public governance? Emerging perspectives on the theory and practice of public governance* (S. P. e. Osborne Ed.). New York, NY: Routledge.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks: SAGE Publications.
- Pemsel, S., and Söderlund, J. (2014). *Under pressure from conflicting institutional demands and time in inter-institutional temporary organizations: A theoretical exposé and empirical investigation*. Paper presented at the PMI Research Conference, Portland, OR, USA.
- Pemsel, S., Wiewiora, A., and Söderlund, J. (2013). *Building project competence: Developing dynamic capabilities with knowledge governance mechanisms*. Paper presented at the IRNOP, Oslo.
- Pentland, B. T. (1999). Building process theory with narrative: From description to explanation. *Academy of Management Review*, 24(4), 711-724.
- Pentland, B. T., and Feldman, M. S. (2008). Designing routines: On the folly of designing artifacts, while hoping for patterns of action. *Information and Organization*, 18(4), 235-250.

- Peters, B. G., and Pierre, J. (1998). Governance without government? Rethinking public administration. *Journal of Public Administration Research and Theory*, 8(2), 223-243.
- Pettigrew, A. M. (1997). What is a processual analysis? *Scandinavian Journal of Management*, 13(4), 337-348.
- Pierson, P. (2004). Long-term processes *Politics in time* (pp. 79-102): Princeton University Press.
- Pinto, J. K. (2014). Project management, governance, and the normalization of deviance. *International Journal of Project Management*, 32(3), 376-387.
- Pipan, T., and Czarniawska, B. (2010). How to construct an actor-network: Management accounting from idea to practice. *Critical Perspectives on Accounting*, 21(3), 243-251.
- Pollack, J., Biesenthal, C., Sankaran, S., and Clegg, S. (In Press). Classics in megaproject management: A structured analysis of three major works. *International Journal of Project Management*.
- Pollack, J., Costello, K., and Sankaran, S. (2013). Applying actor-network theory as a sensemaking framework for complex organisational change programs. *International Journal of Project Management*, In Press.
- Pollitt, C., and Hupe, P. (2011). Talking about government: The role of magic concepts. *Public Management Review*, 13(5), 641-658.
- Powell, W. W., and DiMaggio, P. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Project Management Institute (PMI). (2006). *Government extension to the PMBOK® guide third edition*. Newtown Square (PA): Project Management Institute.
- Ragin, C. (1997). Turning the tables: How case-oriented research challenges variable-oriented research. *Comparative Social Research*, 16, 27-42.
- Randall, J., and Hughes, N. (2015). *Connecting policy with practice: Insights from the connecting policy with practice programme in 2014-15*. Institute for Government, London, UK.
- Rasche, A., and Chia, R. (2010). Epistemological alternatives for researching strategy-as-practice: Building and dwelling worldviews. In D. Golsorkhi, L.

- Rouleau, D. Seidl, and E. Vaara (Eds.), *Cambridge handbook of strategy as practice* (pp. 34-46). Cambridge, UK: Cambridge University Press.
- Reed, M. (2006). Organizational theorizing: A historically contested terrain. *The sage handbook of organization studies* (2nd ed. ed., pp. 19-54). London: Sage.
- Rhodes, R. A. W. (1996). The new governance: Governing without government. *Political Studies*, 44(4), 652-667.
- Rigaud, B., Côté, L., Lévesque, B., Facal, J., and Bernier, L. (2010). Les complémentarités institutionnelles du modèle québécois de développement. *Recherches sociographiques*, 51(1-2), 13-43.
- Romzek, B. S. (2006). Business and government. In D. H. Rosenbloom and H. E. McCurdy (Eds.) (Eds.), *Revisiting waldo's administrative state: Constancy and change in public administration* (pp. 151-178).
- Rouleau, L. (2005). Micro-practices of strategic sensemaking and sensegiving: How middle managers interpret and sell change every day. *Journal of Management Studies*, 42(7), 1413-1441.
- Rouleau, L. (2007). *Théories des organisations : Approches classiques, contemporaines et de l'avant-garde*. Québec: Presses de l'Université du Québec.
- Rutgers, M. R. (1997). Beyond Woodrow Wilson: The identity of the study of public administration in historical perspective. *Administration and Society*, 29(3), 276-300.
- Sahlin-Andersson, K., and Söderholm, A. (2002). The Scandinavian school of project studies. In Liber (Ed.), *Beyond project management: New perspectives on the temporary-permanent dilemma* (pp. 11-24). Stockholm.
- Samset, K., and Volden, G. H. (2013). Investing for impact: Lessons with the norwegian state project model and the first investment projects (Vol. 36, pp. 1-53). Oslo, Norway: Concept Research Program.
- Samset, K., and Volden, G. H. (2015). Front-end definition of projects: Ten paradoxes and some reflections regarding project management and project governance. *International Journal of Project Management* (In Press).
- Samset, K. F., Volden, G. H., Olsson, N., and Kvalheim, E. V. (2016). Governance of major public investment projects: A comparative study of principles and

- practices in six countries (Vol. 47, pp. 132). Oslo, Norway: Concept Research Program.
- Sanderson, J., and Winch, G. (2017). Public policy and projects: Making connections and starting conversations. *International Journal of Project Management*, 35(3), 221-223.
- Schatzki, T. R., Knorr-Cetina, K., and von Savigny, E. (2001). *The practice turn in contemporary theory*: Routledge.
- Schein, E. H. (1992). *Organizational culture and leadership*: Wiley.
- Scott, W. R. (1995). *Institutions and organizations: Ideas and interests*. Thousand Oaks, CA: SAGE.
- Scott, W. R. (2012). The institutional environment of global project organizations. *Engineering Project Organization Journal*, 2(1-2), 27-35.
- Scott, W. R., Levitt, R. E., and Orr, R. J. (2011). *Global projects: Institutional and political challenges*: Cambridge University Press.
- SECOR-KPMG. (2012). Étude sur la gestion actuelle du plan québécois des infrastructures et sur le processus de planification des projets - document principal (pp. 46).
- Secrétariat du Conseil du trésor. (2008). *Politique-cadre sur la gouvernance des grands projets d'infrastructure publique*. Québec, Canada.
- Secrétariat du Conseil du trésor. (2017). *Le plan québécois des infrastructures 2017-2027*. Québec, Canada.
- Secrétariat du Conseil du trésor. (2013). *Loi sur les infrastructures publiques*. Québec, Canada.
- Secrétariat du Conseil du trésor. (2014). *Directive sur la gestion des projets majeurs d'infrastructure publique*. Québec, Canada.
- Seidl, D., and Whittington, R. (2014). Enlarging the strategy-as-practice research agenda: Towards taller and flatter ontologies. *Organization Studies*.
- Shiferaw, A. T., and Klakegg, O. J. (2012). Linking policies to projects: The key to identifying the right public investment projects. *Project Management Journal*, 43(4), 14-26.

- Shotter, J. (2010). Adopting a process orientation ... In practice: Chiasmic relations, language, and embodiment in a living world. In T. Hernes and S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 70-101). Oxford: Oxford University Press.
- Simon, H. A. (1945, 1997). *Administrative behavior (4th ed.)*. New York, NY: Free Press.
- Smyth, H. J., and Morris, P. W. G. (2007). An epistemological evaluation of project and project management research. *International Journal of Project Management*, 25(4), 423-436.
- Söderlund, J. (2011). Pluralism in project management: Navigating the crossroads of specialization and fragmentation. *International Journal of Management Reviews*, 13(2), 153-176.
- Söderlund, J., and Tell, F. (2011). *Strategy and capabilities in the p-form corporation*. Paper presented at the IRNOP 2011, Montreal, Canada.
- Söderlund, J., Vaagaasar, A. L., and Andersen, E. S. (2008). Relating, reflecting and routinizing: Developing project competence in cooperation with others. *International Journal of Project Management*, 26(5), 517-526.
- Stoker, G. (1998). Governance as theory: Five propositions. *International Social Science Journal*, 50(155), 17-28.
- Sydow, J. (2006). Managing projects in network contexts: A structuration perspective. In D. Hodgson and S. Cicmil (Eds.), *Making projects critical*: Palgrave Macmillan.
- Sydow, J., Lindkvist, L., and DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge: Editorial. *Organisation Studies*, 25, 1475-1489.
- Taylor, F. W. (1912, 2012). Scientific management. In Shafritz and Hyde (Eds.), *Classics of public administration, 7th ed.* (pp. 37-39). Boston, MA: Wadsworth.
- Teulier, R., and Rouleau, L. (2013). Middle managers' sensemaking and interorganizational change initiation: Translation spaces and editing practices. *Journal of Change Management*, 13(3), 308-337.

- The Residential and Civil Construction Alliance of Ontario. (2016). Megatrends: The impact of infrastructure on Ontario's and Canada's future.
- Thomas, J., George, S., and Buckle Henning, P. (2012). Re-situating expert project managers' praxis within multiple logics of practice. *International Journal of Managing Projects in Business*, 5(3), 377-399.
- Tolbert, P. S., and Zucker, L. G. (1996). The institutionalization of institutional theory *Handbook of organization studies* (pp. 175-190). London: Sage.
- Too, E. G., and Weaver, P. (2014). The management of project management: A conceptual framework for project governance. *International Journal of Project Management*, 32(8), 1382-1394.
- Tracey, P., Phillips, N., and Owen, J. (2011). Bridging institutional entrepreneurship and the creation of new organizational forms: A multilevel model. *Organization Science*, 22(1), 60-80.
- Turner, J. R. (2010). Evolution of project management research as evidenced by papers published in the international journal of project management. *International Journal of Project Management*, 28(1), 1-6.
- Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford, UK: Oxford University Press.
- Van Marrewijk, A., Clegg, S. R., Pitsis, T. S., and Veenswijk, M. (2008). Managing public-private megaprojects: Paradoxes, complexity, and project design. *International Journal of Project Management*, 26(6), 591-600.
- Van Marrewijk, A., and Smits, K. (2015). *Cultural practices of governing in the Panama canal expansion megaproject*. Paper presented at the IRNOP, London, UK.
- Van Marrewijk, A., Veenswijk, M., and Clegg, S. (2010). Organizing reflexivity in designed change: The ethnoventionist approach. *Journal of Organizational Change Management*, 23(3), 212-229.
- Vérificateur général du Québec. (2011). Rapport du vérificateur général du Québec à l'assemblée nationale pour l'année 2011-2012 : Vérification de l'optimisation des ressources, ch 1: Infrastructures p.1.1-1.15 (pp. 238). Québec, Canada.

- Viel, L., Lizarralde, G., Maherzi, F. A., and Isabelle, T.-M. (2012). L'influence des acteurs dans les grands projets urbains : Les cas du quartier des spectacles de Montréal et de Lyon confluence. *Journal Cybergéo*, 604.
- Vinck, D. (2007). *Sciences et sociétés, sociologie du travail scientifique*. Paris: Armand Collin.
- Waldo, D. (1948). *The administrative state*. New York: The Ronald Press Company.
- Walker, R. M., Brewer, G. A., Boyne, G. A., and Avellaneda, C. N. (2011). Market orientation and public service performance: New public management gone mad? *Public Administration Review*, 71(5), 707-717.
- Weber, M. (1946, 2012). Bureaucracy. In Shafritz and Hyde (Eds.), *Classics of public administration*, 7th ed. (pp. 44-49). Boston, MA: Wadsworth.
- Whittington, R. (2006). Completing the practice turn in strategy research. *Organization Studies*, 27(5), 613-634.
- Williams, T. (2005). Assessing and moving on from the dominant project management discourse in the light of project overruns. *IEEE Transactions on Engineering Management*, 52(4), 497-508.
- Williams, T., Klakegg, O. J., Magnussen, O. M., and Glasspool, H. (2010). An investigation of governance frameworks for public projects in norway and the uk. *International Journal of Project Management*, 28(1), 40-50.
- Williams, T., and Samset, K. (2010). Issues in front-/end decision-making on projects. *Project Management Journal*, 41(2), 38-49.
- Williams, T., Samset, K., and Sunnevag, K. J. (2009). *Making essential choices with scant information: Front-end decision making in major projects*. Basingstoke: Palgrave Macmillan.
- Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust implications*. New York (NY): The Free Press.
- Wilson, W. (1887, 2012). The study of public administration. In Shafritz and Hyde (Eds.), *Classics of public administration*, 7th ed. (pp. 16-28). Boston, MA: Wadsworth.
- Winch, G., and Maytorena, E. (2011). Managing risk and uncertainty on projects: A cognitive approach. In P. W. G. Morris, J. K. Pinto, and J. Söderlund (Eds.),

The Oxford handbook of project management. New York: Oxford University Press.

- Winch, G. M. (2001). Governing the project process: A conceptual framework. *Construction Management and Economics*, 19, 799-808.
- Winch, G. M. (2006). Towards a theory of construction as production by projects. *Building Research and Information*, 34(2), 164-174.
- Winch, G. M. (2014). Three domains of project organising. *International Journal of Project Management*, 32, 721-731.
- Winter, M., Smith, C., Cooke-Davies, T., and Cicmil, S. (2006). The importance of 'process' in rethinking project management: The story of a UK government-funded research network. *International Journal of Project Management*, 24, 650-662.
- Winter, M., Smith, C., Morris, P. W. G., and Cicmil, S. (2006). Directions for future research in project management: The main findings of a UK government funded research network. *International Journal of Project Management*, 24, 638-649.
- Wirick, D. W. (2009). *Public-sector project management: Meeting the challenges and achieving results* New Jersey: John Wiley and Sons.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Newbury Park, CA: Sage.
- Zaheer, A., and Bell, G. G. (2005). Benefiting from network position: Firm capabilities, structural holes, and performance. *Strategic Management Journal*, 26(9), 809-825.
- Zahra, S. A., and George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185-203.