



UNIVERSITETET I AGDER

The Notion of Innovation and Technology in the Norwegian New Year Speeches 1987-2010

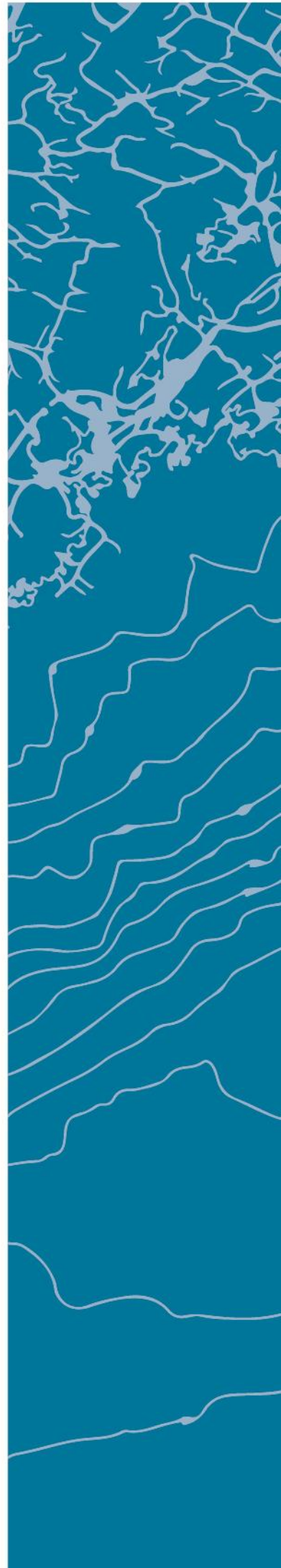
DAG JOAR ØSTTUN

SUPERVISOR
Apostolos Spanos

University of Agder, 2018

Faculty of Humanities and Education

Department of Religion, Philosophy and History



Foreword

I want to acknowledge several people for their contributions towards the completion of this work. Without them this endeavor would never have been possible to accomplish. Professor Apostolos Spanos and Professor Øyvind Tønnesson from the University of Agder deserve special gratitude for their tireless academic feedback. They have each influenced me between their theoretical and empirical considerations that have balanced this work, and their vigor, integrity and demeanor have inspired me personally throughout this project.

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The last paragraph is dedicated to the most important person, my fiancée Thu. Without her unceasing patience and warm support this last year would not have been the same. She has also been the one who has borne the brunt of the negative aspects of this work, with a partner that have often been absent-minded and who has spent numerous late nights writing. If there is one person who deserve the most acknowledgement it is her.

There are many others, family and friends, who has contributed to a smaller degree, and I assure that any remaining errors are solely my own.

Kristiansand, spring, 2018.

Dag Joar Østtun

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Introduction

During the spring of 2018, the Crown Prince of Norway, Haakon, visited the film, music and interactive fair SouthBySouthwest in Texas. This fair is said to be a place where new technological innovations can be discovered. When the Crown Prince was interviewed by Norwegian state television he conveyed an outward oriented belief, where Norwegian entrepreneurial endeavors should not only be world-leading, but also that it is through these future-oriented endeavors that Norway's future lays.¹ What was expressed here is a notion that innovation is positive, detrimental for future success, and is inter-connected with an international context. It also shows how the historical reality impacts the Crown Prince's considerations, as he believed that the oil industry, that Norway heavily depended on, will not be a viable part of the future.

A notion is not quite an idea, it is more like an impulsive belief; when one hears the word innovation, a reaction is positivity, that it is something good. Is this notion something one can track through time and between political actors? And how has the political vocabulary changed in accordance with the historical reality? That is the theme of this work. I will explore a notion of innovation and technology to see how political language was expressed, positively and negatively, and how the vocabulary changed through time. Innovation is today used as a selling point to change, but very little is discussed to the quality, or attributes given innovation and technology. Nor is there much discussion into where and how discourses influenced policy-making.

The research question I have chosen to further investigate this theme is: "what was the notion of innovation and technology in the new year speeches in the period 1987 to 2010?" To find the answer to this question I will use the new year speeches of both kings and prime ministers as my main historical sources. During this period the international document, the Oslo Manual, was published by the Organization for Economic Co-Operation and Development. The period that has been chosen is five years before the first, and five years after the last edition of this document. The Oslo Manual's main purpose is to introduce a framework for national innovation surveys. It is this document I have chosen to investigate the international discourse on innovation and technology to see if the content corresponds with the established notion of innovation and technology in the new year speeches.

¹ Magnus & Carlsen 2018.

Each chapter, excluding chapter 1, has been given its own working question that structures my investigation in order to answer the research question. These are as follows:

- Chapter 1 is a presentation of the empirical and theoretical background that will give a framework of the future discussion in this work. Here the historical context of the speakers will be presented, with relevant theoretical perspectives and terminology.
- Chapter 2 is the presentation of the onomasiological analysis of the speeches and the working question for this is: “How were the concepts of innovation and technology designated in the new year speeches?”. This method has been used to structure the source material for the discussion in chapter 3 and chapter 4.
- Chapter 3 is a discussion of innovation in the speeches and the working question has been chosen to be: “What was the notion of innovation in the new year speeches?”
- Chapter 4 shares similarities with chapter 3 and the chapter question is: “What was the notion of technology in the new year speeches?”.
- In chapter 5 the working question is: “Did the notion of innovation and technology in the speeches correspond with the two editions of the Oslo Manual?” An elaboration of the findings from the discussion in chapter 3 and chapter 4 will here be merged with the comparison of the two editions of the Oslo Manual.

Each chapter serves their own purpose, but the common purpose is to establish the notion of each concept individually based on the background chapter and the structure established from the onomasiological analysis. Chapter 5 will then merge the findings from chapter 3 and 4, and focus thematically on topics that have not received sufficient attention. The research design for this work has been with structure in mind, where the two first chapters frames the discussion in chapter 3 and chapter 4, before an elaboration is made in chapter 5 where remaining reflections that have not been sufficiently investigated will be discussed. A more in-depth disposition the paper’s structure will be presented at the end of this introduction.

I will first present where this master dissertation lies within the research field of conceptual history, Norwegian political history, and other research that investigates the Scandinavian new year speeches. Afterwards, the new year speeches will be discussed as historical sources and as objects of analysis. Then the theoretical and methodological framework that I will use

to help in structuring the paper and answering the research question will be presented. In the last part of this introduction I will go through the disposition of this work.

Research field

This dissertation's theme and scope falls within several research fields. The first, and most apparent, is conceptual history. The historian Benoit Godin has written extensively on the concept of innovation and has been the main conceptual historical influence of this work. I will mostly rely on the later chapters of his book *Innovation Contested* as it deals with the same period as mine.² He states his reason for writing the book when he

noted the discrepancy between the voluminous literature on innovation and the absence of reflexivity on what innovation is. Despite the hundreds of papers and books and theories produced on innovation every year for decades, no one has ever asked where the concept of innovation comes from, how it has evolved over the centuries and why innovation is so popular in the public imaginary today.³

My work will be part of answering what the Norwegian political mindset expressed what innovation was, though thematically and periodically, in a more limited way. I have also chosen a theoretical and empirical approach that Godin does not share. This choice of using relevant theory, empirical evidence and also focusing on the concept of technology makes this work not align to a strictly conceptual history of innovation.

Through my studies I have come across literature on technology, society and politics in Norwegian historiography that have been of use. For the most part, I have relied on literature written by Francis Sejersted, as he writes on how society is influenced by technology, and how public policy is formed to control industry and the development of technology. Some of his works is especially of note as they are centered around countering technological deterministic beliefs in society which is a theory that will be used on the speeches. Much of his writing has formed the empirical and theoretical background that will be presented in chapter 1, and is especially relevant for chapter 4 which investigates the notion of technology.

² Godin, B (2015) *Innovation Contested: The Idea of Innovation Over the Centuries*. Hoboken: Taylor and Francis.

³ Godin 2015: XI.

I have not come across relevant research that uses the Norwegian new year speeches as an object of analysis. There was however a dissertation in political science, written by Tor Gaute Syrstad, that analyses the new year speeches of the Danish prime ministers and how national identity is formed through rhetoric.⁴ I have found his investigation into the structure of the Danish new year speeches to fit well with my reflections regarding the Norwegian counterpart. My dissertation does not delve deeper into rhetoric, meaning that much of his work has proven to not align with my research as this dissertation falls within the field of conceptual history. Some problems have also become apparent.

A problem I have found is that my dissertation does not fit into one mold of past research. This multitude of areas between conceptual history, political history and national rhetoric as a source material has given this dissertation ample opportunity to fill a knowledge gap, as no one has looked at this question in this manner before. Nonetheless, certain problems have shown themselves because I cannot base this work on previous research. There have been several abandoned strategies that have made this work more difficult than it needed to be, which I will present in the relevant parts of this dissertation. My findings will be a part of filling this knowledge gap by merging both the conceptual history of innovation and technology in the new year speeches with an empirical and theoretical perspective that will broaden the knowledge on Norwegian political ideas and merge it with an international perspective.

The work on this dissertation has been interesting for several reasons. The first ones are more grounded in the source material and history, bridging the gap between the political ideas uttered and the context they were expressed in. Political language and ideas are influenced by the discourses that the speakers partake in. To find out if the speakers were influenced by notions that were also shared in, for example scientific, or economic discourses can say a lot about the influence that these discourses had. The next reasons are based more on the theoretical aspect of this dissertation where one can disprove or confirm relevant theories on concepts, modernity and technology through the perspective shown in the source material. A loftier reason is the philosophical reflections on how we humans look to the future for answers, and our belief in modernist principles in technology, reason and science. Should not the political mindset of our times prioritize change for its benefits, rather than for the change

⁴ Syrstad, T G. (2017) *The political language of identity*. University of Oslo.

itself? It is my conviction that the political language of the speakers is genuine, and that their utterances form and influence the public's mindset, therefore it is important to look deeper into their notion of innovation and technology.

The speeches as historical documents and source critique

As mentioned above the historical sources that I will use to answer the research question are the new year speeches of the prime ministers, kings and crown prince of Norway. I have used Bjørn Magnus Berge's book and his collections of the prime ministers' speeches,⁵ while the kings and crown prince's speeches have been taken from the Norwegian royal court's web pages.⁶ The new year speeches are condensed institutionalized traditional political documents with a temporal dimension that captures a specific moment in time year after year that shows the historical movement of Norwegian society and then also its political thinking. Through work on this dissertation I have found they mention technology and innovation sufficiently to capture both concept's historical change. The speeches are interesting in a historical light because of their similar structure through time. A very important thing to remember when continuing reading is that I have dated the Norwegian royal speeches one year ahead, to make them align to the dating of the prime ministers. The Kings and Crown Prince held their speech on the 31st of December, while the prime ministers held theirs on the 1st of January. This was done in order to make the historical chronology clearer. Thus, when I write 1987 in the text and in the footnotes, the speech was in fact held in 1986. I will now problematize the speeches as historical sources.

The authenticity of the new year speeches cannot be disputed as a traditional historical source. They are live-broadcasted into the homes of hundreds of thousands of Norwegians every year, they are subject for debate in media, and they are found in written form on web pages and in books. This becomes especially clear the nearer one comes to the present, I will therefore not delve deeper into the external critique of the new year speeches. Though an internal focus is needed to problematize the content of the speeches and its validity.⁷ The speeches are interesting as they are both normative, descriptive and performative sources. They are normative and descriptive because the speakers commented on the positive and negative

⁵ Berge, B. M. (2016) *Statsministerens nyttårstaler gjennom 70 år*. Oslo: Cappelen Damm.

⁶ A list linking to all the relevant royal new year speeches can be found in the appendix beyond the bibliography.

⁷ Tosh 2015: 102-105.

outcomes and potentials of various topics, giving their judgement of either their approval or disapproval. The speeches are also performative sources as the speakers calls for action, which was then initiated.⁸

Both the kings and prime ministers were and are political actors with their own motivations that influenced what topics that were discarded or added into the speech by the speakers and their speech-writers. In other words, they and their writers held a bias. Another factor is that the speakers are not the only ones formulating a new year speech. It is written by a team that revise and work on a speech over several months.⁹ This is important to note as it is not the mindset of the individual speaker that is being investigated, but rather the discourse that were formulated around the concepts of innovation and technology. A problem is not only the speakers bias, but also my own.

Through my conceptual and linguistic approach, I have attempted to objectify my own bias towards specific contemporary political themes as the period is so close to the present. A good example here is Stoltenberg's *moon landing*¹⁰, a divisive political case in Norwegian political and public discourse. My approach does not judge any of the political implications or consequences they had. By following the concepts of innovation and technology it is rather a question why technology had now become such a large part of these speeches, and what notion of technology that could be gleaned from them. Though I have taken measures against my own bias, the speakers' own bias does not make them less valuable as sources for investigation. As Tosh says: "Once bias has been detected, however, the offending document need not be consigned to the scrap-heap."¹¹ Their bias had a historical value.

Another factor when working with speeches is the loss of meaning between the oral presentation and the written language. Tone, metaphors and other cultural norms that are understood by a listener or viewer, might be lost to a reader. After the onomasiological

⁸ Kjeldstadli 1999: 170-174; Their utterances made things happen, showing how the speeches could have been investigated as *speech acts*.

⁹ Stoltenberg 2016: 284-285; Berge 2016: 552.

¹⁰ The *moon landing* is the rhetorical name given by Stoltenberg towards the new project of building a carbon capture and storage facility at the end of this period. It would garner much attention not only as a strong expression of rhetoric, but also because of how ambitious the project was. It would be built at Mongstad, an oil refinery, north of the city of Bergen, in the western part of Norway. This will be recurring topic in this work as it shows a new political perspective towards technological solutions in the new year speeches.

¹¹ Tosh 2015: 107.

analysis was done, the relevant paragraphs were also looked at in this light and efforts have been made to alleviate some of these concerns.

Methodological challenges and solutions

There are in total 46 speeches delivered by 8 speakers. In order to sufficiently investigate the amount of source material and follow the concepts of innovation and technology I have used the linguistic method of onomasiology to map and structure the discussion held in chapter 3 and chapter 4. In the working question of chapter 2 I used the word designation. Kurt Baldinger writes that onomasiology looks “*at the designations of a particular concept, that is, at a multiplicity of expressions that form a whole*”.¹² Designations are the names that is used to designate a concept and onomasiology is a method that charts these designations. I have used this method and found the designations of innovation and technology based on an understanding on the concepts that I will make clear in chapter 1. In chapter 2 I will present the designations and discuss briefly their meaning.

A division can be made in how one uses onomasiological method, this can be divided between *use* and *structure*. When a speaker designated a particular concept, s/he used that designation to express a part of that concept. Borrowing an example from Dirk Geeraerts where he compares the three terms of *dead*, *deceased* and *departed*, illustrate this. If the speakers only designated *dead* and *deceased*, that pertains to the use of those two designations, however *departed* is then a term that a structural onomasiological analysis would investigate.¹³ *Structure* adheres to the *potential* designations of a concept, meaning that it investigates all the various terms that *might* be used. I will pertain to how the speakers used the designations and therefore the *structural* analysis of a concepts potential designations will not be looked at.¹⁴ The clearest example here is that Norwegian word for innovation, *innovasjon*, was a likely term to be designated by the speakers in the period but was not mentioned until 2015. A question of why will not be answered in this dissertation as it falls outside the scope of my work, but some reflections will be discussed in chapter 3. To shortly summarize I am using the more pragmatic interpretation of onomasiology that looks at the

¹² Baldinger & Wright 1980: 278.

¹³ Geeraerts 2002: 3.

¹⁴ Grondelaers & Geeraerts 2003: 69-70.

noticeable use of designations to the concepts of innovation and technology.¹⁵

Through the work on the onomasiological analysis there has been several benefits regarding this work. The first that I mentioned earlier is how source material have become more manageable, with this method relevant paragraphs have been structured when designations of innovation and technology has shown themselves. However, a negative side of this is how much attention the qualitative method demands of the one that uses it. I would recommend a future researcher, if they are not a linguist, to limit the amount of source material if the method of onomasiology is planned to be used. This will make it easier to ensure the quality of the onomasiological analysis. There are two other beneficial factors that have helped in objectifying my own bias as a historian and mitigated the meaning that is lost between the interpretation of Norwegian to English. As these speeches are close to our own time, several political actors, policies and themes has still not run its course. The onomasiological analysis have helped in structuring what I focus on as an historian rather than me choosing the relevant parts to fit my own narrative.

The largest defense I found against unclear interpretation in this investigation was the onomasiological analysis. Each designation will in chapter 2 be presented and explained. An example here is the difference between *nytenkning* and *nyskaping*, which are used as synonyms to innovation in the speeches. One however, deals strictly with thoughts and ideas, while the other is used conceptually, or as action. Onomasiology helps by narrowing down the amount of data that needs interpretation and by elaborating on the designations, making the Norwegian meaning clear to an international reader.

Another factor that will help in lessening the meaning lost in this dissertation is how the content of the speeches will be presented. The onomasiological analysis deal with single designations, from this the relevant paragraphs have been chosen for the discussion in chapter 3, chapter 4 and chapter 5. I will not translate these quotes that have come from the onomasiological analysis. Instead a focus will lie in explaining why the chosen paragraphs matter in answering the working questions and the overall research question. Though non-Norwegian readers will lose context based on this decision, it was more important to safe-

¹⁵ Grondelaers & Geeraerts 2003: 69-70.

guard against an eventual wrong translation than to risk presenting a wrong interpretation. All these different considerations are important in making the meaning of the designations of innovation and technology as clear as possible.

Introduction of the empirical and theoretical background

The empirical and theoretical framework will be presented in this section of the introduction. They will be fully elaborated in chapter 1 and will lay much of the groundwork in elucidating the discussion on the content of the speeches. I will first briefly present the historical themes based on writing from Norwegian historians. These historical works are two books written by Francis Sejersted, the first is a collection of articles that discuss the various ways politics respond to and formulate policy, which are influenced by technological developments.¹⁶ The second is an historical comparison between Norway and Sweden in the social democratic era during the twentieth century.¹⁷ Einar Lie's book on Norwegian political economy has been chosen to show some aspects of the economic recession, and how politicians changed their priorities at the beginning of this period.¹⁸ And lastly I will use Ola Svein Stugu's book on the general historical development in Norway regarding digitalization and globalization.¹⁹ I have chosen four historical themes, or developments, that I have seen to have influenced the notion of innovation and technology. These are not presented in any particular order, but are as follows:

- First, the economic recession in the period 1987 to 1993 has been chosen as it shows how the techno-industrial complex that oversaw the expansion, production and exportation of fossil fuels, now had to begin a process of rationalization as the market reeled in response to the fall in oil price. It also made the dependence on fossil fuels in the Norwegian economy apparent in the political discourse.
- The second theme was how the state having a large part in the creation of this techno-industrial complex had bred a political belief in autonomy. Meaning that the political actors believed they could control the development of industry and technology.

¹⁶ Sejersted, F. (2013). *Sosialdemokratiets tidsalder: Norge og Sverige i det 20. århundre* Oslo: Pax.

¹⁷ Sejersted, F. (2002) *Er det mulig å styre utviklingen?: teknologi og samfunn*. Oslo: Pax.

¹⁸ Lie, E. & Svinningen, T. (2012). *Norsk økonomisk politikk etter 1905*. Oslo: Universitetsforl.

¹⁹ Stugu, O. S., Homlong, B., Svinningen, T. & Dyrvik, S. (2012). *Norsk historie etter 1905: vegen mot velstandslandet* (vol. B. 4). Oslo: Samlaget.

- The technological revolution that occurred in the period is the third theme, and had consequences on how society perceived technology. This revolution might have widened the perceived horizon of the speakers in terms of technology's potential.
- The last theme will briefly discuss this focus on knowledge as it is a recurring topic on the speeches. All these themes have their own unique perspective, but through my investigation I have found that these themes are also inter-connected and are part of a broader historical development where society is changing because of rapid technological innovation.

It is important to note that these four themes are not the only ones that can be seen in this work. A problem might be that they are too narrow in their considerations and this dissertation might have missed other factors that have influenced the notion of innovation and technology in the speeches. They are however chosen as they shed a broad light on the historical context that the speakers found themselves in and that have influenced the political mindset in this period. So far, I have presented my empirical background, but in the next section I will present the theoretical background for this dissertation and the theories I will use as a method to elucidate the notion of innovation and technology in the speeches.

I mentioned the techno-industrial complex above, and I will use this term when I speak of the entire system that is interconnected between industrial, technological, political elements, that was established when oil was found in the North Sea during the late sixties. I will be relying on how Francis Sejersted presented it. This complex interacted with the political discourse at the time, where industrial and technological concerns were influenced by political will. Two theoretical terms from Gabrielle Hecht will be merged with this techno-industrial complex that is relevant in explaining how politicians imposed their will on the development of industry and technology.²⁰ The first term is *technopolitical regimes* that adhere to the various systems within the techno-industrial complex that operate with their own rationale and goals, while *technopolitics* are the wishes, goals and policies that politicians want to, or did enact towards industry and technological development during this period.

Concepts are interesting objects of analysis that show a deeper understanding than just the very terms that are uttered. I will use two theories regarding concepts, the first from Mieke Bal and the second Reinhart Koselleck. These perspectives are traveling concepts and

²⁰ Hecht, G. & Callon, M. (2009). *The Radiance of France: Nuclear Power and National Identity after World War II*: MIT Press.

conceptual history theory and will be used to shed light on how I have understood concepts and used them in this dissertation. Concepts are not ideas; however, it is important to note that any discourse is an expression of various notions that form how an actor will speak of a concept. I will attempt to understand what notion of the concepts of innovation and technology were in the new year speeches through these expressions in the speeches. Though these theoretical perspectives are more passive, they do establish a fundamental understanding on how I have investigated the speeches. Other theories will take on a more active role.

The notion of innovation and technology is part of a broader philosophical belief in modernity. Belief in progress, science and technological innovation is a central part of this dissertation's theme. I will use Willy Guneriussen's book: *Å forstå det moderne: framskrittstro, rasjonalitet, ambivalens og irrasjonalitet i diskursen om modernitet*. A purpose will be to lay a foundation of understanding in how beliefs in modernity influence how people think of certain aspects of past developments and their hopes and aspirations for the future. The goal is to use these aspects of modernity to see if they are present in how the speakers expressed the concepts of innovation and technology. I will broaden this theory with the *ecomodernist* perspective which is a new movement that combines traditional modern belief in technology and progress with more focus on the climate and environmentalism. It is especially their adherence to technology as a solution to future problems that will be relevant for chapter 4 that deal with the notion of technology.

Technological determinism is the adherence that technology has taken control over society. That we humans are no longer in control and that technological development is happening with its own autonomy. Francis Sejersted has written about this subject in the Norwegian context and I have used his presentation of technological determinism to see if the speakers held such a view. This theory needs to be strengthened and I will use the two different perspectives of *technological optimism* and *technological pessimism* to see if the speakers commented on either the positive or negative consequences of technology. I will also use perspectives from social constructivism of technology, mostly relying on Wiebe Bijker and John Law, to give a theoretical balance to the main theory of technology determinism, but chapter 4 will concern itself mostly to see if the speakers uttered technological deterministic views.

At the end of this period climate concerns intensified and a new perspective towards technology and how it could help in lessening carbon emissions appeared in the speeches. Jens Stoltenberg would speak of how technology could serve as a solution. I will use the perspectives in the book *The Technological Fix*, relying on chapter 7 written by Timothy J. Lecain. It is especially the reasoning behind what motivates the *techno-fixers* had and what kind of *techno-fix* Stoltenberg's *moon landing* was that is of interest.

I have found few theories that delve into innovation in the same manner that, for example, technological determinism does. Theory on innovation are either technological or is formulated towards the goal of how to cause innovation in industry or is aimed at firms or the business sector. There are no problematizations of the utopian qualities given innovation, and the concept seems to be taken for granted by those that formulate these theories on innovation.²¹ This dissertation will therefore lack such established theories that could have helped elucidate the innovation part of the research question. I will attempt to remedy this by using Godin's perspective and part of Guneriussen's presentation on modernity. There is still a clear theoretical lack, in my work and in other literature, according to my reading, that problematizes how innovation itself has been understood by policy-makers and how it influences and legitimizes their choices and potential notions. Hopefully this dissertation will be part of inspiring to change this insufficient research.

Disposition of the dissertation

This dissertation will have five chapter, excluding the conclusions. We can divide these between four purposes. Chapter 1 is the presentation of the empirical and theoretical background that I will use to elucidate various topics of the argumentation held in chapter 3, 4 and 5. It is the background for which I base my argumentation on. The purpose for chapter 2 is to structure the discussion in chapter 3 and 4, where I will present the onomasiological analysis and discuss the designations of innovation and technology.

Chapter 3 will discuss the notion of innovation and this will be approached by using the perspective of the pro-innovation bias, an inclination that does not question the qualities of innovation. By using different perspectives on modernity, I will discuss the speakers' tendency to downplay, critique, reject, applaud, or fully accept innovation. A look into the

²¹ Godin 2015: 284.

different connotational value towards terms adhering to progress will also be made to deepen the perspective on how certain terms carries a different notion. This discussion will be expanded by looking at the changing labor market in Norway and the increasing attention on environmental and climate concerns in an attempt to reflect more on the peripheral consequences of innovation.

Chapter 4 will have a similar structure to chapter 3, but the main goal here is to see if the speakers adhered to a technological deterministic stance, broadened by theory on technological optimism and pessimism. A final case in chapter 4 will be a deeper look into Stoltenberg's *moon landing* and how this case shows a new perspective on technology in the new year speeches.

In chapter 5 the notion established from chapter 3 and chapter 4 will be investigated to see if this notion and the content of the Oslo Manual correspond. As an international document from OECD it is a clear indication on not only what this document believes innovation to be, but also how it wants it to be spread. The purpose is to see if the international discourse on innovation – which the Oslo Manual is a part of – changed how the speakers communicated innovation and if their policy was affected by the increasing importance of innovation and technology.

Chapter 1 - Empirical and theoretical background

There are several approaches that have influenced this dissertation and I will in this chapter present, discuss, and lastly, reflect on why they have been chosen. A structure has been set for this chapter where I first deal with the speeches, concepts and the problems that have arisen from interpreting meaning between Norwegian to English. The second part deal with the empirical background which is divided between four historical themes that are mentioned in the speeches and that have, in my mind, had an influence on the speakers' notion of innovation and technology. In the last part of the chapter the theoretical background will be presented.

I will first establish and explain three theoretical terms that is used regarding the four historical themes, which are the techno-industrial complex, technopolitical regimes, and technopolitics, as they are presented by Francis Sejersted and Gabrielle Hecht. Continuing, I will present modernity as it is detailed by Willy Guneriussen and an elaboration of the new movement of ecomodernists. These two perspectives on modernity are important as they deal with a society's modernistic belief in technology, science and progress, and it will deepen the discussion on what kind of stance the speakers held towards modernistic principles. Then I will discuss technological determinism, pessimism and optimism with a small divergence into the theory of social construction of technology to show why technological determinism receives the greatest focus. In the last part of the theoretical section I will present the perspective of Timothy J. Lecain, from the book *The technological fix*, and his recollections of the techno-fixes towards the environment around the turn of the last century. This perspective is especially relevant towards the later part of the period, when technology became a more prominent theme. These theories are broad in their considerations but will shed light on important aspects of the speeches as they deal with established perspectives on technology and innovation.

The purpose of this chapter is to make clear all the various perspectives that I use to approach the source material, whether they are empirical or theoretical. These will establish a fundamental understanding in how the speeches are expressions of a notion. The terms that follow the concepts of innovation and technology can be observed and then investigated. It is in this investigation that the historical context that the speakers found themselves in becomes important as any political actor would change its rhetoric, and in turn the very terms used to express their ideas. The theories and perspectives chosen are there to deepen any discussion

especially towards the qualities that the speakers gave the concepts of innovation and technology.

The speeches as historical events

In the introduction I discussed the speeches as historical sources, but they need to be elaborated in view of their other qualities and structural background. The speeches are an historical event that summarize the past year and presents expectations for the future. Both the kings and prime minister gather an audience of around 700 000 viewers each year.²² Though the speeches are political, the rhetoric is still determined by norms and conventions that have instituted themselves through time. The new year speech is its own genre that makes it difficult to define within traditional genres of rhetoric.²³ To quote Syrstad regarding the Danish new year speeches:

The combination of politics and festivity, which certainly characterizes the New Year's speech, creates a complex rhetorical genre that is challenging to label. Even the most broad-based rhetorical categorization are of little help. [...] It is certainly political in content: Prime ministers since the 1940 have used the speech to argue for their own political goals. At the same time, it has a wider perspective than pure persuasion by party politicians. It is a value-loaded speech, which in many cases functions as a celebration of "the common".²⁴

A political speaker will adapt his or her rhetoric when the audience changes. The audience in the new year speech is the entire nation, forcing topics to the most generally accepted, or common. Through the work on this dissertation I have seen little of party rhetoric from the prime ministers. It is not about what sets them apart politically, but rather what brings them together nationally. This aligns with Syrstad's findings and show a similarity in structure between the Danish new year speeches and its Norwegian counterpart. When they adhere to the *us* and *we* in their rhetoric it is in a national sense. There are also similar structures and differences of political standpoints between the speeches of the kings and prime ministers.

²² Langset 2016.

²³ Syrstad 2017: 46-49; Syrstad's work is on the Danish prime ministers' new year speeches, but I have found his analysis on the speeches as a rhetorical genre to fit well with the Norwegian context.

²⁴ Syrstad 2017: 47.

Another aspect is how the speeches follow the same structure. Usually the nation's most grave and immediate problems are first presented, then comes the more positive developments or changes, before hopes and aspirations towards the future are made.²⁵ The difference can be seen between the kings and prime ministers in how resolutely they proclaim political standpoints. The kings are more careful in their rhetoric, rather making sweeping comments on society. An exception here is when they reject clear social developments such as bullying, drug abuse, or political extremism. A good example of this difference is how King Olav, during the economic recession, would *hope* for innovation, while Syse and Brundtland would proclaim how *we*, in the national sense must *cause* innovation. Though this dissertation is not a rhetorical analysis, this difference is still important to keep in mind. The new year speech is a yearly tradition that have been repeated for generations have also strengthened this traditional rhetorical structure.

The new year speeches have a long historical tradition. King Olav, then the crown prince, was the first speaker whose speech was broadcasted to the Norwegian people in 1934.²⁶ Prime Minister Einar Gerhardsen would hold his first speech after the second world war in 1946.²⁷ Since the war, prime ministers, kings, and crown princes have held the new year speech resolutely every year, barring 1948, where the question of why has so far not been successfully answered.²⁸ A respect is given the speeches through the historical tradition, and towards the large national audience that year after year sit down to listen to them. The work on a new year speech takes over several months and goes through several revisions.²⁹ This gives the new year speech an importance not only as a yearly event, but also as a historical political document that have solidified a tradition in the structure of its presentation. The speeches are also held at a special moment in time.

When the new year speech is held, reflections on the past year are combined with resolutions towards the future that put the speeches in a specific place in time, year after year. This temporal dimension of the speeches sets a boundary in what topics the speakers focus on, but

²⁵ Berge 2016: 16.

²⁶ Hovland 1997: 6.

²⁷ Berge 2016: 13.

²⁸ Berge 2016: 14.

²⁹ Stoltenberg 2016: 284-285; Berge 2016: 552.

it also shows what topics that are most important to the speakers. If it is included in the new year speech, then it matters. The speakers and speechwriters through the process of writing a speech have deemed certain topics either too important to not include, or acceptable enough to not be rejected by the majority of the audience. The concepts of innovation and technology are part of this broader national discourse, and their thematic inclusion show their relevance. It is an interesting perspective between the future and past that is visible in the new year speeches and it can tell much of the diachronic change or persistence of a concept.

Concepts as an area of investigation

Both innovation and technology are concepts that have ambiguous meanings, and these meanings have changed through history. When analyzing them this ambiguity creates problems as one meaning might be overlooked while another is given precedence. In this part I will make clear what it means to work with concepts and then I will define both concepts. Both Mieke Bal and Reinhart Koselleck perspectives are important in this regard. Some reflection is also needed regarding whether it is my definition that is most important, or what the speakers meant when they spoke of technology and innovation. First some thoughts on working with concepts.

The German historian Reinhart Koselleck wrote extensively through his career within the field of conceptual history, or *Begriffsgeschichte* in his own language. He underlies the initial purpose of conceptual history as a specialized method of source critique that sets its attention at

the utilization of terminology relevant to social and political elements, and directing itself in particular to the analysis of central expressions having social or political content.³⁰

Not only is conceptual history a tool that can bridge the gap between the historical place and present time, but it also worked against the notion that ideas are constant, unchanging through historical time. The concepts of innovation and technology are not unchanging and the people who use them evoke different ideas when they utter the concepts. It is through this ambiguity that a concept can be defined as a concept. Koselleck emphasizes this when he says that

³⁰ Koselleck 2004: 81.

a concept must remain ambiguous in order to be a concept. The concept is connected to a word, but is at the same time more than a word: a word becomes a concept only when the entirety of meaning and experience within a sociopolitical context within which and for which a word is used can be condensed into one word.³¹

Both the concepts of innovation and technology have this ambiguity of meaning in the new year speeches. I will use the historical context of both industrial, economic and societal changes that surrounded the speakers to try and capture the notion that each word, designation, held in the speeches.

Generally, concepts are interesting objects of analysis as they are used and understood differently through time or by different actors. This is what Mieke Bal calls traveling concepts. She underlies how concepts

travel – between disciplines, between individual scholars, between historical periods and between geographically dispersed academic communities. Between disciplines, their meaning, reach and operational value differ.³²

This is also the case for political actors and the political discourses that they participated in. The new year speeches are expressions within a distinct discourse that might have changed the meaning of the concepts of innovation and technology. I will work through the speeches in a way that captures when the meaning of the concepts change. It is through the work on concepts that discoveries are made:

While groping to define, provisionally, and partly what a particular concept may mean, we gain insight into what it can do. It is in the groping that the valuable work lies. This is why I have come to value concepts.³³

Through my investigation a focus lies with finding out what the speakers believed innovation and technology could do and what they said it had achieved. This conceptual belief will then

³¹ Koselleck 2004: 85.

³² Bal 2009: 20.

³³ Bal 2009: 17.

be looked at with different theoretical lenses, or perspectives (groping) such as whether the speakers believed that technology was wholly positive or had negative effects on the population. A goal is to establish an understanding of innovation and technology in such a manner that they adhere to the deeper useful use of concepts as tools for analysis:

In fact, concepts are, or rather do, much more. If well thought through, they offer miniature theories, and in that guise, help in the analysis of objects, situations, states and other theories.³⁴

It is the qualities of technology and innovation, and how they have traveled between speakers and time that is of interest in this dissertation. Koselleck also states that concepts must be investigated diachronically to properly find the social and political meaning of a particular concept.³⁵ So far, I have presented what it means to work with concepts, but to bring the topic towards this investigation we need to look further into how I have defined the concepts in this dissertation.

I have used Everett Roger's definition of innovation through this work, which is: "Any idea, practice, or object that is perceived as new by an individual or other unit of adoption."³⁶ This is a very broad definition and suits the historical situation and understanding of innovation that Godin outlines. There are many definitions of technology but the commonality between several of them are two common definitional elements, first technology is knowledge, second it is "something one does".³⁷ However a third characterization is also necessary to consider when the concept is used about specific technologies, such as the internet or computers. I will in this dissertation use Read Bain's definition as it is sufficiently broad enough and encompasses all these factors: "technology includes all tools, machines, utensils, weapons, instruments, housing, clothing, communicating and transporting devices and the skills by which we produce and use them."³⁸ It is important to note that *skills* is also the knowledge necessary to use technology, while *produce* also adheres to creation, or the process in which technologies are invented. These two definitions capture the necessary elements of technology and innovation in how I have understood it and how it is used in this dissertation.

³⁴ Bal 2009: 19.

³⁵ Koselleck 2004: 82.

³⁶ Rogers 2003: 15.

³⁷ Wahab 2012: 2.

³⁸ Bain 1937: 860.

I found more theories on technology that could deepen the discussion on how the speakers understood technology than on innovation. This uneven balance speaks of a lack of research on innovation outside an industrial, technological or enterprise context. Or that the research done does not problematize innovation and how it used. It is an unbalance that I have found hard to equipoise. Another question is whether one should have not defined technology and innovation and rather let the speeches' content define the concepts. This would have posed problems and I will use Apostolos Spanos' reflections on innovation to argue for my choice of defining the concepts:

most historians approach innovation as a self-explanatory word and not as a concept demanding definition and theoretical reflection: "innovation means innovation", that is to say it may mean everything and nothing, any newness that impresses the historian or any change to the established order of things.³⁹

His claim speaks true when also looking at technology. It means what it means. Such hurdles of understanding are not sufficient when studying concepts. A clear framework, through a definition of a concept is needed, especially when looking at perspectives outside the source material, such as historical writing and theory. One can argue that defining the concepts sets limitations to the research in question, but a definition is set more to the benefit of a researcher and the reader. Definitions not only structure the work of the researcher, but also make it clear to the reader how *they* should understand innovation and technology through the reading of works on concepts.

To summarize I have outlined how concepts are to be understood in this dissertation by using both the perspectives of Reinhart Koselleck and Mieke Bal. Concepts holds ambiguous meanings that changes between contexts, actors, and through time. It is this synchronic, and most importantly, diachronic quality that makes concepts valuable for historical research. I have defined both concepts and defended that choice, and a problematization of the unbalanced literature towards technology has been made. Some reflections regarding the problems that arise from interpreting meaning from Norwegian to English is also needed.

³⁹ Spanos 2015: 4.

Lost in translation or interpretation?

As this dissertation is written in English and chapter 5 deals with an international document written in the same language, some problems might arise with the comparison with the Norwegian speeches. The most immediate one is the question of the validity of meaning between the Norwegian content of the speeches and my interpretation to English. I am not a translator and as such there is the chance that certain words and sentences will not be interpreted correctly. My goal in this dissertation is to aspire to the standard that Nes, Abma, Jonsson and Deeg recommend in their article *Language differences in qualitative research: is meaning lost in translation?* When they speak of translating meaning from data, they go a step further from just attempting to make meaning as clear as possible to a stance that

hold that the findings should be communicated in such a way that the reader of the publication understands the meaning as it was expressed in the findings, originating from data in the source language.⁴⁰

Therefore, some precautions have been made as to make certain that any errors in interpreting meaning will be minor. It is also important to note the difference between translation and interpretation as I will not focus on the former but rather the latter.

Nes, Abma, Jonsson and Deeg also warns against using and speaking English disproportionately when dealing with non-English source material. They say that this

focuses on the thinking and reflection processes that are needed in the analyses. We experienced that talking and reading in English leads to thinking in the English language as well.⁴¹

As Norwegian is my native-language and much of the literature for this dissertation has been Norwegian, many of these concerns have been lessened. But it is my conviction that having a continuous conscious mindset when presenting the interpretation of the source material in English will diminish the meaning that is lost in the interpretation between the languages. The choice of method and argumentation have also helped in this regard. One last remark: this dissertation is written with both a Norwegian and international audience in mind. Therefore, an attempt has been made to as thoroughly as possible make clear any particular Norwegian cultural traits that might be lost to an international reader.

⁴⁰ Nes, Abma, Jonsson & Deeg 2010: 314.

⁴¹ Nes, Abma, Jonsson & Deeg 2010: 315.

The politics of innovation and technopolitics

It is important to establish how politics were influenced by innovation and technology, and in what manner the different industrial, political and technological discourses in Norway might have changed the notion of innovation and technology in the new year speeches. I will use the last part of Godin's book, *Innovation contested*, as he questions the single-headed way that innovation is understood and gives a brief outline on how this have influenced the political discourse in various western nations. I will also discuss how in Norway there emerged a techno-industrial complex that show how Norwegian politicians formulated and put into practice their *technopolitics*, which show a political belief that political choices could control the development of industry and technology. Innovation had from sixties and seventies become understood as wholly technological, but then put within an industrial or organizational context. Godin underlie that especially from 1982 with the book *The Economics of Industrial Innovation*, written by Chris Freeman, and published in 1979, innovation was now given a national framework. It was no longer only about firms, but also how political actors and nations not only could but should participate and encourage innovation.⁴² The Oslo Manual is a document that is part of this encouragement by aiming the publication at how individual nations can perform innovation surveys.

Godin continues this line of thought when he emphasizes how the field of research on innovation and the forming of public policies are mixed. He does not specify if one or the other influence most, but there is a discourse present that enforces a certain understanding of innovation as technological and oriented towards the firm and market:

Whether the policy perspective drives the conceptual construction and representation of academics on technological innovation or vice versa is difficult to say precisely. One thing is certain: given that many researchers work in both academia and public organizations as consultants, both perspectives go hand in hand, and the ideas travel in both directions.⁴³

⁴² Godin 2015: 275-276.

⁴³ Godin 2015: 273.

In chapter 3 I will briefly present a part of this discourse through the Norwegian Official Reports⁴⁴ that will show an active and changing understanding of innovation from the national Norwegian perspective. Though it is not a purpose of this dissertation to map these Norwegian Official Reports, a minor understanding is needed to see that the political discourse in Norway were in contact with publications that dealt with technology and innovation that could have influenced the notion in the speeches.

The Norwegian state did not abandon the entire development of the technological system to market forces, nor to international actors or external experts. The Norwegian politicians followed a belief where they were free to pursue goals they deemed important. Guiding the development of technology, or the use of technology through these regimes were important to the political climate of the time. Hecht's term of *technopolitics* is one that suits well this belief that the state not only could but should involve itself in industrial and technological development: "I use this term to refer to the strategic practice of designing or using technology to constitute, embody, or enact political goals."⁴⁵ Especially was this true with the creation of the techno-industrial complex.

When oil was found in the North Sea, in the late sixties, the Norwegian government instigated the development of a techno-industrial complex based on a heavily regulated cooperation between international oil companies and the Norwegian state. In the beginning a nationalization of knowledge was instigated, where technological agreements were made with international actors to form the base for the Norwegian control of the development of technological innovation.⁴⁶ This techno-industrial complex is an historical example I will use to explain how Norwegian politicians conducted their *technopolitics*, and how it strengthened a belief that political choices could influence the development of industry and technology.

I will merge the example of the techno-industrial complex with *technopolitical regimes*, which is a theoretical concept launched by Gabrielle Hecht. The reason for this is that the technopolitical regimes describe more in-depth the interplay between actors and the process of developing technology and the interplay between politics and industry and the business

⁴⁴ Norwegian Official Reports (Norsk Offentlig Utredning) are documents that are ordered by the government in Norway on various themes. A commission is set down and is comprised of individuals from different backgrounds from either a political, academic, industrial or business sector, chosen for the theme of the report.

⁴⁵ Hecht 2009: 15.

⁴⁶ Sejersted 2002: 215-218.

sector. The techno-industrial complex comprises of several of these technopolitical regimes. She refers to these regimes as such:

These regimes, grounded here in institutions, consist of linked sets of people, engineering and industrial practices, technological artifacts, political programs, and institutional ideologies, which act together to govern technological development and pursue technopolitics.⁴⁷

The political climate of the period was concerned with *technopolitics* and had to adapt to a changing reality of globalization, increased demands towards mastering new technology, environmental and climate concerns, deindustrialization of older traditional sectors and so forth. In this one had the technological, industrial and political discourses that conveyed their ideas of what innovation and technology was and would impact political goals and wishes. These contexts will be important further in the discussion as they all are topics in the speeches, but also might have had an influence on the notion of innovation and technology.

Historical background

Through this work I have found four historical themes that I have deemed important in elucidating the notion of innovation and technology in the new year speeches. The period from 1987 to 2010 is one marked by various historical changes, however not all these changes can be covered in this work. These themes have been chosen not only because I deem them to be important, but also because they are specifically mentioned in the new year speeches. These themes do merge with one another on certain aspects, but some measures have been taken to capture each theme's most essential aspects that are important to keep in mind. I will now systematically present each theme:

- First, the economic recession in the period 1987 to 1993 has been chosen as it shows how the techno-industrial complex that oversaw the expansion, production and exportation of fossil fuels, now had to begin a process of rationalization as the market reeled in response to the fall in oil price. Here we can observe how the Norwegian economy began to become under the influence of changes in the global market and it

⁴⁷ Hecht 2009: 16-17.

also made the dependence on fossil fuels in the Norwegian economy apparent in the political discourse.

- A political belief was formed through the reality that the state had a large part in the creation of the techno-industrial complex. The political actors, had in consequence, come under the strong conviction that they could control the development of industry and technology.
- The digital revolution and technological upheaval during the period is important as it impacted all aspects of society, it changed many industries and created new business, and increased global trade just to name a few. It has been added not as a definite answer to *what* extent its impact had, or *how* it impacted the notion of innovation and technology in the speeches, but that it did influence is apparent.
- During the period there emerged a new kind of society where knowledge would become increasingly important. Both the acquirement and spreading of knowledge through efforts in R&D (research and development) and the education system would intensify. This is an example of adapting to external demands, such as global competition, and how ideas from outside influenced Norway, neoliberalism being the most apparent example of this in my mind.

Before we deal with these themes, a short summary of the various governments is needed to better outline the period's political climate.⁴⁸ In 1987 Gro Harlem Brundtland formed her second Labor party government and would hold office except for a small interregnum year between 1989 and 1990. Jan P. Syse and his Conservative party would form this coalition government with the Centre party and the Christian Democratic party. Brundtland would enter office again in 1990 and would be prime minister until 1996. She stepped down and handed the reins to Thorbjørn Jagland and in the next year, in 1997, Jagland would cede power to Kjell Magne Bondevik. His first coalition government comprised of his own Christian Democratic party, the Liberal party, and the Centre party. In 2000, Jens Stoltenberg would hold power only for a year in the last government the Labor party ruled alone. The new coalition of Bondevik that took office in 2001 would change partnership from the Centre party to the Conservative party and held office until 2005. From 2005 until this period's end Jens Stoltenberg would lead his center-left coalition of the Labor party, Socialist party and

⁴⁸ Though the political center fluctuated between coalition governments in this period, one can divide it from the political left to right: Socialist, Labor, Centre, Liberal, Christian Democratic, and Conservative party.

Centre party.⁴⁹ King Olav passed in 1991, but held his last speech in 1990, Crown Prince Haakon would hold the 2004 speech while his father King Harald was recovering from cancer surgery. King Harald held one speech as crown prince regent, which was in 1991. Let us now see what historical reality these political actors found themselves in.

The fall in oil price in 1986 created economic concerns that started to overtake traditional political considerations, such as policies that sought to spread the industry to revitalize districts on the national periphery. This also made the older risk aversion in new industrial and technological projects to be abandoned and, when launched, they held new technological solutions that had lowered costs significantly.⁵⁰ This profit-oriented and risk-taking mentality regarding technology can especially be observed in Bondevik and Stoltenberg's rhetoric in the speeches where Norway was presented as a potential technological pioneer nation.⁵¹ They would however be in power when Norway was experiencing unprecedented economic growth, in stark contrast to the recession that the country had experienced in the beginning of this period.

During the economic crisis between 1986 and 1993, a reemerging wave of political belief in state intervention towards the economy began, with a strength that had not been seen since the fifties and sixties. This belief was shared in a political consensus between the labor and the center-right coalition government, making it a part of the political thinking and direction between the two political sides that held power during the recession.⁵² Though the belief in political control could be traced back to the fifties and sixties, the reforms enacted now made the present neoliberalistic principles more extensive, rather than shallow consumer-oriented reforms that distinguished the policies of the early eighties.⁵³ Both economic and political structural changes combined with the faith in hard hitting and decisive reforms would change how politicians in this period formed their policies, on both side of the political spectrum. However, it would always be with a pragmatic and positive view on the state, and the belief that market and production influences might not provide the best solution for the creation and

⁴⁹ Tvedt 2017.

⁵⁰ Sejersted 2002: 249-253.

⁵¹ Berge 2016: 586, 650.

⁵² Lie 2012: 160-161.

⁵³ Lie 2012: 163.

distribution of wealth.⁵⁴ The nationalization of knowledge mentioned in the previous section was abandoned in the techno-industrial complex before the beginning of the period, and a new drive to develop new technology was made around 1986.⁵⁵ The reason was the external demands that the fall in oil price forced, but also because of goals set by the different *technopolitical regimes* in the techno-industrial complex to develop new technology.⁵⁶ With develop I mean the entire process of finding, creating and implementing technology.

At the same time of these internal changes, increased internationalization was setting technological restrictions on the extraction of gas and exportation towards the EU. All the speakers had to work within these regulatory restrictions through their cooperation with the EU and the European Economic Area (EEA) agreement.⁵⁷ The technological structure, the political aspects, and the transfer to a buyers' market forced the politicians to participate in trade negotiations.⁵⁸ There are two points in the above paragraph and this, that is important, first is the pragmatic and positive political belief in state intervention, second are the external influences that changed the political mindset and reality. The mindset of the time believed in political freedom of action, while the political reality had introduced limitations to the politicians' potential to enact policies. This changed how they could conduct their *technopolitics*. No longer could the Norwegian politicians solely work within a strict national context. Now, they had to adapt to the ever-shrinking world and especially the expanding European Union. This dichotomy between having national political ownership over the oil industrial complex, and in extension the development of new technology, and the increasing contact with the international community would set its restrictions through the period. The change which had occurred can be described between this positive belief in state governance, but within a stricter framework that internationalization and modernization demanded.

From 1987 to 2010 the Norwegian population became more technological oriented. The removal of the monopoly of state television made the world and its influences more prevalent and accessible. Introductions of the cellphones to most individual citizens, and digitalization with personal computers and the internet, also marked a private increase in technology usage. In under a generation, 95 percent of all households had a computer and the access to the

⁵⁴ Lie 2012: 192.

⁵⁵ Sejersted 2002: 253.

⁵⁶ Sejersted 2002: 237.

⁵⁷ Sejersted 2002: 247.

⁵⁸ Sejersted 2002: 248.

internet. The new electronic communication channels also doubled the amount of stock trade which is an example of a more globalized economy.⁵⁹ These wide sweeping developments would change how society thought of technology, and through my reading it seems that a new optimism towards technology would become more visible in the rhetoric of the new year speeches. Now the talking points about the potential harm that technology inhabited became less prevalent, exemplified with the threat of nuclear annihilation and environmental pollution, while its positive promising potential became more visible.

In the pursuit for knowledge the Norwegian society would become more educated, and this would be a topic in the new year speeches. Political considerations would focus more on the acquirement (research and development) and spreading (education) of knowledge as new technologies and global competition became a concern. Norway had until 1997 a public-school tradition based on social democratic principles of collective unity, rather than individual freedom, and worked to build the individual pupil's character while also educating them. Previous school reforms had underlined these principles rather than applying neoliberalist policies that would encourage an individualized and decentralized education system. After the center-right government, led by Bondevik, took power these neoliberalistic tendencies would become the norm.⁶⁰ In 1990 the percentage of the population that only finished primary school⁶¹ was 41.5%, in 2012 this percentage was 28.2%. The number of students that finished any degree at universities or colleges went from 15.5% to 29.8% in the same period.⁶² This societal shift, made politicians change their prioritization and increased expectations regarding quality and accessibility to education, because it was concerning a larger part of the population, and because the labor market was demanding more qualified people. Education for youth moved from being voluntary, to become obligatory, and the education system itself came under higher expectations. Knowledge was now seen as detrimental to Norwegian success, and I have observed that this success was attributed to advances made through innovation and technological development in the speeches.

⁵⁹ Stugu 2012: 291-298.

⁶⁰ Sejersted 2013: 504-509.

⁶¹ Pupils at this stage in the Norwegian education system are in the 13-16 age group.

⁶² Thune, Reisegg & Askeheim 2015.

The historical developments at the beginning of the period speak of a political belief that the state could formulate and instigate *technopolitics*. Through the creation of the techno-industrial complex and a technological system that had its goal to nationalize the invention of new technology in the oil sector, this belief became part of the political thinking of the period. While internationalization and the economic and industrial situation demanded change, the politicians adapted to a new reality where they held a pragmatic, future-, profit-, and risk-oriented mentality. Older political concerns would therefore fade while others took its place. Structural changes in the economy and political sphere solidified liberalistic principles. But, as Sejersted concludes, it was always with a shared goal of preserving the welfare state.⁶³ Increasing demand for knowledge also changed how the politicians had to strengthen both the acquirement and spreading of knowledge through efforts in R&D and reforms in the school sector. All these aspects of historical change have been chosen as they elucidate the historical context that have influenced the notion of innovation and technology.

Modernity and the Ecomodernists

The belief in the potential of technology, science and the future are inherent parts of a modern mindset. I have decided to divide and use certain aspects of Willy Guneriussen's work⁶⁴ on modernity to see if parts of this mindset are shared with the speakers. As I have already discussed in the introduction, there is an uneven amount of perspectives towards technology, and it is a goal to balance this by using Guneriussen's perspective. In his presentation of modernity, he presents different stances, or mindsets, such as premodern, antimodern or premodern. I will present, through his book, what parts of modernity that will be used, and then the different mindsets of modernity. A second modern viewpoint, the ecomodernists, will also deepen the investigation as this new movement merge an ecological sustainable viewpoint with the modern ideals of positive belief in science and technological development.

Modernity is a broad term that have influenced different cultural movements for well over two hundred years. In this dissertation there are two aspects of modernity that will be considered. First is the belief in science and technology to find solutions for the future. This belief is related to the second consideration, which is the perspective of time. Modern is what is valid now, and the irrational or inefficient parts of the past are to be discarded.⁶⁵ In

⁶³ Sejersted 2013: 512.

⁶⁴ Guneriussen. W (1999) *Å forstå det moderne*. Oslo: Tano Aschehoug.

⁶⁵ Guneriussen 1999: 9-10.

Guneriussen's mind, the modern culture is fundamentally oriented and motivated to change.⁶⁶ This is a sentiment that I have seen through the work on this project. This mentality between the belief in science and technology and a fundamental perspective of time that favors the future will be important to see in the speeches.

There are several distinctions in how modernity is understood. Some believe more traditional and older ways are better than modern solutions, other are directly hostile towards modernity, while a third group might embrace modernity in its entirety.⁶⁷ I have divided these convictions between pre-modern, anti-modern and pro-modern sentiments. However, in Guneriussen terminology pre-modern goes far into the past, before the emergence of modern society. I will in addition, use it when the speakers comment on the shorter societal changes that occurred in the period. The reason is that the speakers did at certain times convey doubts, or commented on the consequences of progress. Such an example is how King Olav would express sadness that many traditional jobs that defined his era as crown prince and king were disappearing.

Ecomodernity is a term that tries to merge the ideals of ecological thought, with the environmentalists' concerns, and the belief in modern solutions through science and technology. The Ecomodernists are a gathering of academics, engineers, social figures, and leaders from the business sector that hold the belief that one can merge the modern ideals with an ecological mindset:

We offer this statement in the belief that both human prosperity and an ecologically vibrant planet are not only possible but also inseparable. By committing to the real processes, already underway, that have begun to decouple human well-being from environmental destruction, we believe that such a future might be achieved. As such, we embrace an optimistic view toward human capacities and the future.⁶⁸

A new perspective in the speeches emerged that might show a changing idea of modernity. I will use this ecomodernist viewpoint to deepen the discussion of chapter 4 where technology and the climate emerged as a prevalent theme.

⁶⁶ Guneriussen 1999: 268.

⁶⁷ Guneriussen 1999: 237.

⁶⁸ Ecomodernist manifesto 2015: 31.

Why I have chosen to focus on these ideals of modernity is because in this long philosophical tradition there is a strong belief in what science and technology can achieve. It also brings the relationship of time, with the past, present and future, into consideration. The speakers did express different viewpoints towards science, technology, past progress and future endeavors and Guneriusen's work will be used to elucidate these viewpoints and the belief in the future solution through science and technology.

Technological determinism, pessimism and optimism

With the digital revolution in the last generation and the technological upheavals in the last century there have been several theories formulated on the relationship between technological progress and society. Technological determinism is one of these theories and usually follows two theses of understanding: (1) Technological development is globally unambiguous and is not influenced by other factors. (2) Technology is set outside other societal factors and carries a crucial and determinative influence over them.⁶⁹ It is a two-sided belief in a universality and unapproachableness of technology, giving it a life on its own. I will see if the speakers held such a technological-deterministic viewpoint, but the speeches will also be investigated to see if the speaker held an optimistic or a pessimistic stance towards technology. Let us start with technological pessimism.

Francis Sejersted says that there is a belief in society that technology has taken command over people, enslaved them even.⁷⁰ This is part of the technological pessimistic viewpoint. Not only is it a belief in the loss of human autonomy over technological progress, but also the negative impacts that technological progress had. Historical examples can be the threat of nuclear weapons and environmental pollution. At present it is the addiction of social media, erosion of privacy and the feeling that one always must be *on*.⁷¹ If one does not follow the development one is consigned to abandonment as the wheels of progress do not stop turning. Within the technology-pessimism presented by Sejersted there are three problems that can shed light on the speaker's perception of technology and its influence on society; *systemic force, ignorance, and indifference*.

⁶⁹ Nielsen, Lie, Myklebust & Sejersted 1996: 218; referencing Feenberg, A. *Critical Theory of Technology* Oxford 1991: 122.

⁷⁰ Sejersted 2002: 39.

⁷¹ Turkle 2011: 140-143.

Systemic force is the term Sejersted used to describe the feeling of rapid change that people must constantly adapt to. A continuous drive for new development that undermines long term plans, as short-term considerations take precedence. An example is our economic system where emissions from industry rewards in many cases the very thing that does irreparable damages to the climate. The background for these beliefs were not all negative as it has come out of the belief in progress and the betterment from improvements in technological and scientific fields.⁷² The second problem is *ignorance*, which deals with perceived distance from consequences. It is easier to observe the immediate results of our actions, rather than try to perceive the distant future. This limits how one can rationally and properly calculate the risk of future endeavors and is the main element of the *ignorance* problem; that it is impossible to coordinate human action.⁷³ The last problem is *indifference*, and Sejersted calls it more a morale problem. People do no longer care about the consequences that technology or the technological industrial society is causing.⁷⁴ But technology can also be seen in a more positive light.

Technological optimism is a term that focuses more on the qualities of technological advances that benefit humans and society, rather than the pessimistic focus on its negative and degrading effects. Easing workloads, effectivization, global communication and prosperity were all factors that the speakers commented on through the period, giving technology the positive blame. Technological optimism holds a specific position “that *exponential technological growth* will allow us to expand resources ahead of exponentially increasing demands.”⁷⁵ In other words technological development will continue to solve humanity’s problems far into the future. A position that has been under heavy attack in public, political and academic debates over many years. What is important in this context is the dependence on innovative technology. It is not existing technology that will solve future problems, but rather the development of innovative technology. That is an important distinction in technological optimism. An accumulation of technological breakthroughs will continue finding solutions to the problems that are encountered.⁷⁶

⁷² Sejersted 2002: 41-43.

⁷³ Sejersted 2002: 45-47.

⁷⁴ Sejersted 2002: 47-51.

⁷⁵ Krier & Gillette 1985: 407: citing W. Ophuls, supra note 3: 116.

⁷⁶ Krier & Gillette 1985: 409.

The social construction of technology (SCOT) is the theoretical opposite of technological determinism. Instead of technology developing under its own autonomy or rationale, it is social factors that determines what kind, and how, technology is developed. I am bringing up this perspective as the speakers are political actors that influenced the development of technology, especially the prime ministers. However, even if the speakers adhered to a wholly social constructivist view on technology in the speeches, the main purpose is to see if they uttered technological deterministic tendencies. This theory will be used only to deepen any further argumentation. The reason for this choice in the investigation is two-fold: the SCOT perspective does not consider the social consequences of technical choice, as Langdon Winner has already critiqued it:

This is a social theory and method geared to explaining how technologies arise, how they are shaped through various kinds of social interaction. One tries to show why it is that particular devices, designs, and social constituencies are the ones that prevail within the range of alternatives available at a given time. But the consequences of prevailing are seldom a focus of study. What the introduction of new artifacts means for people's sense of self, for the texture of human communities, for qualities of everyday living, and for the broader distribution of power in society – these are not matters of explicit concern.⁷⁷

All these considerations are aspects I deem important further through this investigation. The second reason is that I do not adhere to a strictly social constructivist or deterministic stance. My stance is that technological innovation is developed by the inner logic of the particular social group, or process, that it finds itself in. There is a difference between the use of a particular innovation – which is exemplified by the approaches made by Wiebe Bijker, Thomas Hughes, Trevor Pinch and John Law⁷⁸ – and the process in which it was developed. The speakers are social actors, but not in direct control of a technological innovative process. Of course, did social factors matter, but to completely disregard the rationality of technological development is taking it too far. Therefore, I have given SCOT a lesser weight

⁷⁷ Winner 1993: 369; It must be said that the social constructivists defend their choices by stating that this area has been investigated extensively in previous research, but technological development is not a solid phenomenon. Technological development is rapid and ever-changing, demanding continuous different approaches in making clear all the various consequences.

⁷⁸ Bijker & Law 1992; Bijker, Hughes & Pinch 1989; Some reflections on their approaches are needed as to not make it seem I put less focus on their work and the SCOT perspective without thought.

in this work. When I use technological determinism, it is to see if the speakers distanced themselves from the technological process as this is an important notion to investigate. It is about whether they uttered a belief that they had no control over the development of technology or put technology in an unassailable position.

The technological fix

As was presented in the introduction, *The technological fix* is a book that discusses a varied way of how people have used technology to find solutions to problems. I will use chapter 7, *When Everybody Wins Does the Environment Lose?* written by Timothy J. Lecain, to present the perspective I will use as my method to elucidate the discussion on Stoltenberg and his *moon landing* in chapter 4.⁷⁹ The reason for this is that Lecain's work is about specific technological innovations, fixes, that solve specific environmental problems. No other speaker expressed technology in a manner that suits his work. When Jens Stoltenberg presented the expansion of the Mongstad facility that would focus on Carbon Capture and Storage technology it showed a new perspective towards technology in the speeches. Lecain writes on pollution to the environment, but there are several interesting perspectives regarding the relationship between the *techno-fixes* and the people that applied them.

In order to understand Lecain's research and relation to the *moon landing* a deeper presentation is needed. I will use some reflections from chapter 4 to explain if his work is compatible towards mine. In his chapter, he presents how environmental pollution was decreased by new technology during the last years of the 19th century and beginning of the 20th century. These technologies were developed only after threats of lawsuits by state legislature towards the corporations that ran the factories in question. In the case of the Mongstad facility the state and business were more merged and share the same goal of finding a technological fix to carbon emission, and as such this relationship in the theory does not align with the *moon landing*. Lecain also defends the engineers and innovators that developed this new technology saying that their motivations were not driven purely by profits, but also for their love of nature. A more idealized motivation to develop *techno-fixes*. I will mirror this perspective and see if Stoltenberg and the political mindset of this time had more noble intentions than just purely profits, and that he might also have held realistic expectations

⁷⁹ Lecain, T. J. (2004). When Everybody Wins Does the Environment Lose? The Environmental Techno-Fix in the Twentieth-Century American Mining. I L. Rosner (ed.), *The Technological Fix: How People Use Technology to Create and Solve Problems* (p. 137-153): Routledge.

considering costs, and expectations of the gains that could be made in the international community.

Lecain presents three technological fixes: (1) transformational techno-fix, (2) relocational techno-fix, (3) delaying techno-fix. The first is true when the technological fix dramatically alters the way an industrial production functions. For example, turning sulfur dioxide into sulfuric acid is such a transformational techno-fix. If the industry, then uses that sulfuric acid to create superphosphate fertilizer which is then sold to farmers you have the relocational techno-fix because the by-product of pollution is moved from original production facility. The delaying techno-fix is when pollution, or a by-product, is stored or hampered in a way that delays its inevitable consequences.⁸⁰ I will compare these three techno-fixes on the CCS technology and then see if it aligns with the *moon landing* in chapter 4.

A last perspective is about the motivations of the techno-fixers who “view both the industrial and natural world in terms of their technological knowledge and abilities. Environmental issues were studied only insofar as they affected the operation of complex technological systems”.⁸¹ This perspective will be important as Stoltenberg was not a *techno-fixer* per se, but rather a *techno-user*, utilizing CCS technology beyond merely improving the production process. He worked within a *technopolitical regime* to formulate *technopolitics* that defended, funded and implemented this technology. It is here that I take the most freedom of Lecain's work and mold it into a useable method to shed light on the increasing importance of technology at the end of the period. This will be part of the end of chapter 4 and will be the final discussion on the notion of technology.

Conclusions

I have in this chapter presented the historical context and theoretical background that I will use to answer my research question. An elaboration was also made regarding the speeches as objects of study and the conceptual historical considerations, from both Reinhart Koselleck and Mieke Bal, that have influenced this work. The purpose of this chapter was not only to give a proper picture into how I will use the empirical background and theory to answer the research question, but also to give the reader an understanding of the discussions in future chapters.

⁸⁰ Lecain 2004: 138-140.

⁸¹ Lecain 2004: 138.

The purpose of the historical background was to give a summary of the developments and events in this period that I have seen to have influenced the content of the speeches. Especially was this the case in the techno-industrial complex around the production and exportation of fossil fuels. Through the creation of this techno-industrial complex the political idea of autonomy was formed that gave Norwegian politicians the belief in realizing *technopolitics*. However, Norway underwent a change where technology became more important and an increasing globalized economy changed consideration in different policy fields. Not narrowing the amount of options available to politicians, but rather shifting considerations and concerns to a society where knowledge became more important and making it clear in political thinking that Norway could not isolate itself. Though the developments and events does not capture the entire period, they elucidate the historical reality enough to follow the conceptual history of innovation and technology in the speeches. It is also a reason why such broad developments have been focused on. Delving into specific historical examples will only be done when it serves in answering the research question. The theoretical background also followed this principle.

I have focused on a theoretical understanding that shed light on different perspectives towards technology, science, innovation, concepts, and the past and future. These have been chosen according to what I have seen is reflected in the source material. The new year speeches are general summaries of the past, and expressions of wide aspirations for the future. Some questions for reflections can be if these aspirations were an expression of modernistic belief in progress and technology? Or perhaps they felt that the social ramifications of technological development had gone too far? The theories chosen will help in answering such questions and deepen the understanding of the notion of innovation and technology. Most of all, this chapter is a merging of how I have worked on the source material, the empirical reality and ideas that surrounded the speakers, and lastly theoretical literature that solidify a mold of understanding. Not only towards the notion of innovation and technology at a specific time, but also the diachronic change that it underwent.

Chapter 2 – presentation of onomasiological analysis

Concepts are ambiguous that evoke different meanings when used. To Reinhart Koselleck concepts have a historical weight and hold within them a multiplicity of meanings that alienate them from being just simple words.⁸² With this multiplicity, one run into the problem of making sense of the various ways the concepts were designated. In the introduction I wrote that onomasiology investigates the designations of a concept, or the many expressions that form a whole. The purpose of this chapter is to map the onomasiology of innovation and technology in the new year speeches and then discuss the meaning of each designation. I have chosen the chapter question to be: “how were the concepts of innovation and technology designated in the new year speeches?” The structure for this chapter is divided into two parts, first the onomasiology of innovation and then technology will be presented, then in the last part of the chapter a discussion comparing the designations will be made. I will also contextualize the designations briefly, but will not provide quotations as these will be presented in chapters 3 and 4.

In making clear the designations of the concepts a better understanding of how I have structured the coming discussion in chapter 3, chapter 4 and chapter 5 will become apparent. Before the onomasiology is presented it is important to note that the number of speeches have influenced the number of designations. This can also be of note as when King Harald had 11 designations in the period divided on 18 speeches while prime minister Kjell Magne Bondevik had 8 divided between 7 speeches, Bondevik had more designation per speech than the king. This has also made prime ministers Thorbjørn Jagland and Jan P. Syse, and crown prince Haakon not appear in one or both analysis of the concepts. Their perspective is therefore not included or less prevalent than the other speakers.

Designations of innovation

The designations of innovations in Norwegian will be presented in cursive, while the English counterpart chosen by me, will be written normally. The designations from my analysis are: renew (*fornye*) which was used 9 times, progress (*fremskritt*) was used 1 to adhere to innovation, modernization (*modernisering*) used 2 times, innovation (*nyskaping, nyvinning*) was used 7 times, innovative thinking (*nytenkning*) used 4 times, inventions (*oppfinnelser*) which was used once. The only speaker that do not mention any designations of innovation is

⁸² Godin 2015: 211; referencing Koselleck 1972: 85.

crown prince Haakon with his single speech in 2004. The structure going forward will be an explanation of the designations meaning. This contextualization will however will be brief, as the designations and their relevant paragraphs will be presented chronologically in chapter 3 and 4.

The speakers' acronyms are ordered like this: GHB – Gro Harlem Brundtland, KMB – Kjell Magne Bondevik, SYSE – Jan P. Syse, TJ – Thorbjørn Jagland, JS – Jens Stoltenberg, KO – King Olav V, KH – King Harald V, CPH – Crown Prince Haakon.

Norwegian	English	GHB	KMB	SYSE	TJ	JS	KO	KH	CPH
Fornye	Renew	3	2		1			3	
Fremskritt	Progress	1							
Modernisering	Modernization		2						
Nyskaping	Innovation	1	2	1		1	1	1	
Nyvinning	Innovation							1	
Nytenkning	Innovative thinking	1	1	1		1			
Oppfinnelser	Inventions	1							
Revolusjonert	Revolutionized							1	

The first thing that can be presented from the onomasiological chart of innovation is the lack of the Norwegian word for innovation, *innovasjon*. It is rather the synonyms *nyskaping* and *nyvinning* that is used when they speak of innovation. This is interesting because it shows that *innovasjon* had not entered the political vocabulary in the new year speeches during this period. It was used for the first time in 2015, by the Conservative party's Prime Minister Erna Solberg. *Nyskaping* adheres to creating something new. An interesting division is how in Norwegian they divide between action and thought with the designation innovative thinking (*nytenkning*). It was usually used in correlation with concrete examples where thinking had led to solutions. *Nyvinning* is another close synonym to innovation, but the term itself speaks clearly of the positive quality of a single innovation. King Harald used it when he spoke of the internet. These three designations are the ones that I have found to be the clearest synonyms to the concept of innovation, *nyskaping* being the closest in meaning and use.

The areas they were used in also matter. *Nyskaping* was used by almost all the speakers, except Prime Minister Thorbjørn Jagland and Crown Prince Haakon. It was used by the prime

ministers and King Olav in the same areas as R&D, the education system and the economy through strengthening industry and business sector. Only King Harald and Bondevik would diverge from this: King Harald, speaking of cultural *nyskaping*, while Bondevik spoke on various topics. Cultural in this context meaning theater, film and art. *Nytenkning* was spoken of generally by Syse, while in the remaining uses by Brundtland, Bondevik and Stoltenberg it was used concretely towards examples of how innovative thinking had found solutions to problems. The other designations also need to be discussed.

The terms of *fremskritt* and *fremgang* meaning progress in English, do not adhere to innovation, except once. I will still discuss them in chapter 3 as they will shed light on the different semantic qualities of a term of modernity. Contextually they are important as they are used usually to describe the longer lines of historical development. Another aspect that have shown itself and is how the designations were followed with a *however*, that can speak of a skepticism towards modernist terms. Something that George W. Downs, Jr. and Lawrence B. Mohr observed regarding terms such as progress and growth.⁸³ Discussion on this theme will be elaborated in chapter 3 and I will discuss the specific time that progress is used to adhere to innovation. Modernization (*modernisering*) is used by Bondevik when he speaks of modernizing public management both in 1997 and 2004. It is spoken of positively and not with denotations such as progress. He uses it in the same line as renewal (*fornyning*). To renew something is to make new of something old, changing it to better fit the present situation the people find themselves in. Renewing to preserve the welfare is the theme of both Brundtland and Jagland as well. Revolutionize (*revolusjonert*) was used, by King Harald, in the context of the technological development that society was undergoing.

Designations of technology

The concept of technology had fewer designations, but still showed interesting semantic aspects. The designations of technology are: technology (*teknologi*) which was used 21 times, technique (*teknikk*) was used 8 times, information-technology (*informasjonsteknologi*) was used 3 times, and equipment (*utstyr*) which was used twice. These needs elaboration.

⁸³ Mohr & Downs 1976: 2; they also stated that this skepticism had not yet changed how people spoke on innovation.

Norwegian	English	GHB	KMB	SYSE	TJ	JS	KO	KH	CPH
Teknologi	Technology	2	4			8	1	6	
Teknikk	Technique	2					1	5	
Informasjons- teknologi	Information- technology		1			1		1	
Utstyr	Equipment	2							

Technology was used in three different ways during the period. It was in the first place used about concrete technologies, information-technology could be included here, but I have chosen to use it on its own as it is expressed to explain the digitalization that society was undergoing, and because digitalization (*digitalisering*) is not present in the speeches. The designation information-technology shows a wider development than just a specific technological mention. The second way that teknologi was used was the general adherence to technology as a skill or knowledge, and the last was more future-oriented, where the speakers would speak of the creation or causing technological development or innovation.

Teknikk (*technique*) seems to be a term that has slowly faded from the vocabulary of the speakers.⁸⁴ It was only king Harald that would use it later in the period. Its meaning is both used as an adherence to technology but also knowledge, or skill. Its fading use might imply a semantic change where technology rose as the preferred term to designate technology. Equipment (*utstyr*) is the final designation and is a concrete term that was used by Brundtland to speak of new medical equipment. Comparing the designations of the concepts creates a few questions. One of these questions are if the speakers used the concept of innovation more broadly, while using technology more specifically. I have not found such a connection. There are two kinds of references in the speeches that can be said to make the usage of technology more specific. Either it is used to specifically speak on a technological field such as environmental technologies or bio-technology, or when the context is technological examples. These are however part of a broader thematic where technology is either the example or intertwined with other aspects such as an architectural project.

⁸⁴ This is a general tendency internationally as investigated by Evandro Agazzi in his article *From Technique to Technology: The Role of Modern Science* (1998).

One thing that can be seen is this *however* following progress (*fremskritt*) and technique (*teknikk*) where the speakers would first comment on the boons that had been gained, before commenting on the negative effects. This dissertation will delve into the question of anti-modernist sentiments and technological pessimism and a further discussion on this observation of the two-sidedness of technique and progress is needed in chapter 3 and 4.

Summary

At the beginning of this chapter I asked: “how were the concepts of innovation and technology designated in the new year speeches?” In the previous pages I have charted my findings from the onomasiological analysis. The designations from my analysis on the concept of innovation have shown themselves to be: renew (*fornye*), progress (*fremskritt*), modernization (*modernisering*), innovation (*nyskaping*, *nyvinning*), innovative thinking (*nytenkning*), inventions (*oppfinnelser*), revolutionized (*revolusjonert*). The onomasiological analysis of technology have shown the designations to be: technology (*teknologi*), technique (*teknikk*), information-technology (*informasjonsteknologi*), and equipment (*utstyr*). All designations have been counted and a brief contextualization have been presented.

The primary designation for innovation in the speeches was *nyskaping*, with the two other designations of *nytenkning* and *nyvinning*, where one divided thought and action, while the other held positive connotations. Technology (*teknologi*) on the other hand was used in different ways from specific technologies, knowledge, and in a broader conceptual way. Technique (*teknikk*) would lose its semantic prevalence and when one looks at the designation of progress (*fremskritt*) one might see a scepticism follow these designations, which will be further discussed.

The contexts the designations were used in have not been properly established. This outline has only been a brief presentation to show the onomasiological chart and its findings. All the designations and the areas in which they were used will be further investigated in the next chapters. The onomasiological method have been used to narrow the content to manageable amounts for study, structure future discussion, help in mitigating meaning lost between Norwegian and English, and finally worked as a way of objectifying myself as a researcher.

Chapter 3 - The notion of innovation in the speeches

To follow the political thinking that is expressed in the speeches a more argumentative and theoretical approach is needed. Chapter 2 was a presentation of the designations of innovation and technology but held little discussion into why the terms were used, and what ideas can be discerned from the speaker's utterances. In this chapter and chapter 4 I will remedy this by using relevant theory, literature and examples from the historical development in Norway to discuss the speakers' notion of innovation and technology. This chapter will deal with innovation and the chapter question has been chosen to be: "What were the speakers notion of innovation in the new year speeches?" To answer this, I have chosen to study innovation in the speeches in concrete steps.

This chapter will go about answering the working question in steps. In the first step I will look at the pro-innovation bias, which is an expression of positivity towards the qualities of innovation, to see if the speakers held such a belief. The next step will be an investigation into the tendency of how innovation had become a virtue of the individual. This chapter can be divided between the stance of whether the speakers believed that the future held promise, and that innovation could bring them there, or that they discarded the new developments and critiqued what the future promised. After this chapter it is my belief that it will be easier to answer the research question because the notion of innovation in the speeches will be clearer, and it will also deepen the discussion about the relationship between technology and innovation; by making clear what the speakers believed innovation could do, what innovation was, and how much faith or wariness the speakers expressed towards it.

When one hears the word innovation, a meaning is formed from previous associations with it. These associations hold today connotations of a positive value. It is used, in various ways in the public sphere as a selling point of change. This is a reassurance that the change will bring a positive outcome. In Norway the word for innovation, *innovasjon*, had at the end of this period become a word that held a natural persuasiveness in the public discourse and become widely used. I will present in the very first sections of this chapter how innovation and its synonyms had become increasingly popular through the dissertation's period. This will show that the rhetoric in the new year speeches had not yet accepted the word, and how this can show also a wariness in adding *new* terms into the new year speech political vocabulary.

As mentioned above there is a presumption, or conviction that innovation is always good, and its negative sides are rarely, or never spoken of. With the concept of innovation there follows positive connotations. In chapter 2 I mentioned George W. Downs, Jr. and Lawrence B. Mohr who already observed this fact in the seventies. They denote the ideas of growth and progress, saying that these have lost their inherent positive force, while innovation “especially, when seen as more than purely technological change is still associated with improvement.”⁸⁵ Holding such positive thoughts towards innovation has been coined the *pro-innovation bias*, and in this dissertation, I will divide this bias into two. The first is the belief that innovation is always good, the second that it is always seen as an improvement. This distinction is between looking at innovation only in a positive light, with no reflections on its consequences. While improvements might have unforeseen consequences, for example effectivization through technological innovation leading to layoffs in traditional Norwegian industrial jobs. In the next part I will discuss how the longer influence from liberalization and comparative reforms of the education system changed the rhetoric in the speeches. Innovation had now become a virtue for the individual. Examples of this will be outside the onomasiological analysis, but will shed an important light of the individualization and the increasing importance of knowledge in Norwegian society.

Confirming or repudiating the pro-innovation bias is not a sufficient approach in this chapter. I will also bring attention to the areas that the speakers would mention innovation, such as economic, or science, or any other area. Another focus will lie on discussing how the speakers spoke on modernity. There are today many academic, societal and political discourses that discuss if we have moved past the modern era. Whether it is the post-modern anticipation of the end-times or the pre-modern constructed nostalgia of older eras there are in these movements words and concepts that set them apart in the discourses.⁸⁶ A purpose of this chapter is to use these modernist perspectives to give innovation the same weight. This is important as it will show how a speaker reflected on the past and present, while expressing wishes, hopes and aspirations for the future. It will help in saying something about the speaker's belief in their own autonomy, or control, in an ever-changing world.

⁸⁵ Mohr & Downs 1976: 2.

⁸⁶ Guneriussen 1999: 237.

The absence of *innovasjon*

“Derfor vil det i år være en historisk satsning på forskning, innovasjon og kunnskap.”⁸⁷

Erna Solberg, New Year Speech, 2015

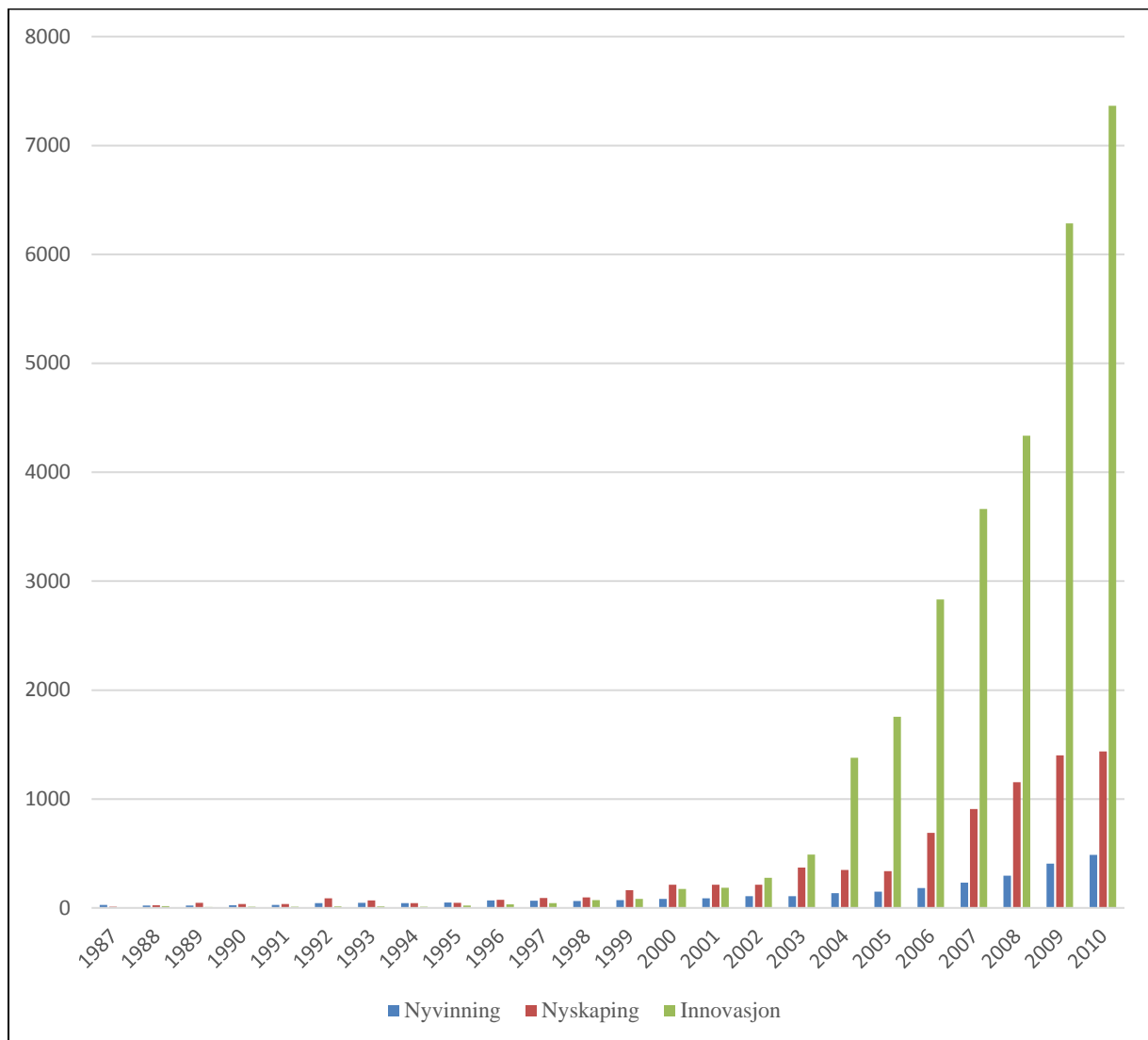
The quote above shows the first time a prime minister used the word *innovasjon* in their new year speech. This is relevant because of how popular the word had become in the public discourse. When Stoltenberg mentioned innovators (*innovatører*) in his 2010 speech it marked the closest any speaker had come to uttering *innovasjon* in this dissertation's period. This is a term that held such heavy positive connotations that one would presume a speechwriter would include the word a single time in the 46 speeches between 1987 to 2010. I will present some data that underlie this rise in popularity but will not investigate the question why it was not included as it is outside the scope of this dissertation. The reason is that it would consider a linguistic approach that would set it outside the historical approach chosen for this work. This question does however deserve more attention in future research.

During the first decade of the new millennium innovation as a concept became more widely used. Not only did people use the words of *nyskaping*, *innovasjon* and *nyvinning* more, but the governments of Bondevik and Stoltenberg both formulated their own specific innovation policy, something that had not been done before.⁸⁸ That *innovasjon* was not chosen as a designation in the speeches is peculiar as the word had become widely popular. Below I will present numbers from the database Atekst that show a word's usage in all the articles in Norwegian newspapers. It will show how *innovasjon* had exploded in the public's vocabulary.

⁸⁷ Berge 2016: 720.

⁸⁸ This statement needs a clarification. The previous governments had of course initiated policies to encourage innovation, such as funding of R&D. It is not before in the early 00's that *innovasjon* or *nyskaping* was used in the titles of government documents. Examples here are the Parliamentary message of 2008-2009 nr. 7 *Et nyskapende og bærekraftig Norge* [A Innovative and Sustainable Norway], and Bondevik's second government (2001-2005) *Regjeringens innovasjonspolitik* [The Government's Innovation Policy] published in 2005. Innovation had become a broader and more widely used word in the field of politics that in turn needed its own dedicated policy. Another factor is that the designation of *innovasjon* was used as *nyskaping* was used earlier in the period, adhering to innovation conceptually.

Retriever Archive Analysis of *Nyvinning*, *Nyskaping* and *Innovasjon*



Source: Retriever Archive Analysis 06.02.2018: <https://www.retriever-info.com/?e=2>

These are three graphs that show the usage of innovation in Norwegian public discourse. They were gathered from the database Atekst that search through Norwegian news articles. I have focused on each synonym of innovation: *innovasjon*, *nyskaping*, and *nyvinning*. All three share a common development in that they became more popular, but to what degree is also very telling. I have chosen to focus on the years from 2000 to 2010 first since all the graphs show little usage of the words before the last decade of the period. *Nyvinning* started being mentioned more during the nineties and saw afterwards exponential growth. In 2000 the designation was mentioned 83 times, while in 2010 it was mentioned 487 time. *Nyskaping* saw a similar development, at the end of period it had three times as many mentions as *nyvinning*, with 214 in 2000 and 1436 in 2010. However, it is the word *innovasjon* that would see the most growth.

Both the designations of *nyvinning* and *nyskaping* were slightly more used at the end of the eighties and during the nineties than *innovasjon*. In 1999 *nyvinning* had 71 mentions while *nyskaping* had 163, *innovasjon* had the count of 84. In the next years a drastic increase would occur. From the 174 mentions in 2000, *innovasjon* was now mentioned 7363 times during 2010(!). This same tendency is shown at the government's official web pages where a quick search on *innovasjon* in their historical archive show that in 2000-2001 there were 153 mentions in political documents, while in the period between 1990-1999 it was mentioned 118. In the preceding years after 2001 it had on average 450 mentions every year. With such a diffusion of a word it is peculiar that the only mention that could be said to be semantically related is Stoltenberg's compliments to innovators in the last speech of the period. *Innovasjon* had, however, been part of the scientific political discourse for longer than that.

Through a simple search at the national library of Norway's web pages I have seen two tendencies in how the NOU's divided and used innovation. During the eighties it was normal to speak of *nyskaping* in an economic and labor market context, while *innovasjon* had a technological context.⁸⁹ In the nineties this division would fade, and *innovasjon* would again be used more broadly, it would also rise in popularity and overtake *nyskaping* as the most popular word used in the documents.⁹⁰ This shows that the word *innovasjon* was used in certain discourses in Norway before this dissertations period. It also shows how the word is associated closer to the meaning of the Oslo Manual, innovative technology, at the beginning of the period, but then changed to a broader meaning. This will be discussed further in chapter 5.

A potential explanation why *innovasjon* had not entered the political vocabulary is the historic structure of the new year speeches that sets cautionary restrictions on changes in the political rhetoric. *Innovasjon* might have been too centered around the scientific discourse for the speech-writers to add it. Another explanation might have been the debate of the *anglification* of Norwegian that was ongoing in the public discourse in the last part of the period.⁹¹ To add words that could have been viewed as too distant from Norwegian might have been a consideration. No matter the reason, in 2015 the term was finally added into the vocabulary of

⁸⁹ Thulin 1981; Johnstad 1985; Aamo 1984.

⁹⁰ Torp 1994; Holden 2000; Henriksen 1996.

⁹¹ Gundersen 1996; Morgenbladet 2008; Løvfall 1997.

the new year speeches by Prime Minister Erna Solberg. Berge, the one that compiled the prime ministers' speeches said in his introduction that the new year speech is a remnant of older communication forms. In today's society where, rapid communication has become the norm, the new year speech might be a conservative medium in political communication that sets certain restriction on the language used.

The pro-innovation bias and the new year speeches

When innovation is used an idea is formed in people's mind that holds positive connotations. This is not a problem as long as there actually are positive repercussions of the changes called for, but one can argue that using innovation as a selling point does not speak of the quality of the changes made. Godin writes that discourses make innovation happen, but there is little discussion into what innovation actually is. He gives it a utopian characterization and says innovation is

an panacea, anti-historical and disconnected from the study of social problems (the problems are taken for granted) but aimed at solving all of humankind's problems and bringing about in a radical way a perfect society. Innovation has become a panacea for every socioeconomic problem.⁹²

The pro-innovation bias is this one-sided stance that innovation is a solution to every problem, and it has been part of the innovation studies for decades before this period,⁹³ and have influenced how researchers deal with innovation in policy-making; focusing too much on the *successes*.⁹⁴ Rarely does the discussion go beyond this shallow understanding. Is this perspective something we can perceive in the speeches?

In this part I will go through each designation chronologically by showing the relevant quotations and the context in which the designations were used. The primary purpose of this section of chapter 3 is to investigate if the speakers held a pro-innovation bias. However, I will also discuss theoretical and empirical themes when they are relevant. The next section will delve deeper into the consequences of societal development occurring in the period and

⁹² Godin 2015: 284.

⁹³ Rogers 2003: 72.

⁹⁴ Karch, A., Nicholson-Crotty, S. C., Woods, N. D. & Bowman, A. O. M. (2016). "Policy Diffusion and the Pro-innovation Bias". *Political Research Quarterly*. p. 83-95; The perspective that they present in this article is that researchers in the field of innovation studies does not consider the innovations that failed, but rather those that were successfully adopted, giving a skewed perspective in what policies that are viable.

see if the blame for these negative developments were given innovation. I have divided these negative developments between environmental and climate concerns, and how the Norwegians had to adapt to the changing labor market. The first designations that will be discussed is *nyskaping* and *nyvinning*.

The economy would be a prevalent theme as the oil price fell and the Norwegian economy reeled in response. The speakers would dedicate much of their attention to this economic recession that lasted from 1987 to 1993. In the first speech of this dissertation King Olav would in 1987 relate innovation to the improvement of the economy:

I året som er gått har vi opplevet en svekkelse av vår nasjonaløkonomi på grunn av det sterke prisfall i det internasjonale oljemarked. Samtidig er kostnadsøkningen i ferd med å gjøre det vanskelig for store deler av næringslivet i fastlands-Norge, og dette berører vel de fleste av oss. Situasjonen er alvorlig for såvel næringslivets organer som for arbeidstakerne. Det er likevel mitt håp at det gjennom samarbeid skal vise seg mulig å finne løsninger som fremmer nyskaping og vekst.⁹⁵

Innovation and growth here is part of the same economic coin that will improve the negative economic development in Norway. The cooperation that King Olav adhere to here is the dialog between the labor unions and the representatives of the employers that during the nineties would help improve Norway's competitiveness through pay raise compromises. Also note his careful hopefulness rather than a strict rhetoric of what must be done. Both Syse and Brundland would discard such careful rhetoric, but would share the belief in innovation and its impact on the economy. Syse would say in 1990:

Nå er det svart hav i nord. Tilbakegang og krise. Det er et felles ansvar. Det krever nytenkning og nye tiltak. Innsats og nyskaping må belønnes slik at landsdelen kommer i balanse. Det haster. Forslag om tiltakssone kommer om kort tid.⁹⁶

While Brundtland would underlie this is in 1991:

⁹⁵ King Olav V 1987.

⁹⁶ Berge 2016: 488.

Men la meg da minne om den enkle sannhet: Grunnlaget for sosiale reformer og den trygget vi ønsker, er en sterk økonomi. Ressurser må faktisk skapes før de kan brukes. Vi er fortsatt avhengig av oljevirkosomheten, og har for liten bredde i industri og annen konkurranseutsatt virksomhet. Derfor har vi ikke noe valg. Vi må bli bedre. Vi må sette fart i nyskaping og næringsutvikling, satse på utdanning og forskning.⁹⁷

She belays this same positivity in her 1993 when she speaks of increased contact between nations:

En annen side ved den økende kontakten landene imellom er at vi alle får tilgang til nye oppfinnelser, uansett hvor forkserne arbeider og hva du arbeider med – medisin, ny teknologi mot forurensning eller forbruksartikler. Slik blir det stadig flere tråder i den veven som binder landene sterkere sammen.⁹⁸

This shows a clear perception of innovation as good, and as an improvement. Both the speakers mirror an international development of state intervention at the time where policies aim to build national competitiveness in an increasing global market.⁹⁹ Other themes are also visible here such as the dependence on oil, the need for education and research and rhetoric of the necessity to innovate. Interestingly after the economy improves, King Harald would move away from this economic theme and broaden the theme of innovation:

I arbeidet med å ivareta og søke å oppnå en større forståelse av vår fortid bygger vi bro til fremtiden. Parallelt med dette foregår det en betydelig tilvekst og kulturell nyskaping innenfor mange uttrykksformer. I løpet av det kommende år åpnes to teatre. Norske musikere og sangere erobrer stadig nye scener.¹⁰⁰

This is interesting because of two reasons. First is the broadened use adhering to cultural innovation, and furthermore it is an attest to the positive connotations given to innovation, even when it is used outside its typical economic theme. Even when the theme moves from

⁹⁷ Berge 2016: 495-496.

⁹⁸ Berge 2016: 518.

⁹⁹ Hilpert 1990: 75-76.

¹⁰⁰ King Harald V 1997.

economy to culture, the openness and positivity towards innovation remains. He would however reflect more on the concrete technological innovation of the internet:

Det er ingen tvil om at Internett er en fantastisk nyvinning hvor verden er blitt tilgjengelig på en lettvinnt og spennende måte. Samtidig må en utøve en viss kritisk sans til mange av de tilbud som ligger der, og det sosiale aspekt må sies å være begrenset. Vi trenger også varmen fra bestemorsfanget og eventyrbøkens fantasiverden.¹⁰¹

King Harald is the speaker that show the broadest reflection on innovation, and innovations. He would not only use it towards a new theme, cultural,¹⁰² but would also reflect on the limitation the use of a new innovative technology had. This is the closest example of a direct critique of the designations *nyskaping* or *nyvinning*, or reflection on the consequences of its use. It is also important that his first sentence is a confirmation of the incredible innovation that the internet is and uses for the first time the designation of innovation, *nyvinning*, with its semantic positive connotations. It was not a critique of the innovation, but rather when it was misused. King Harald would show a three-sided perspective between pre-modern, anti-modern, and pro-modern sentiments through the period.

Bondevik would in a way share this positive side of innovation with the king, believing innovation to be a reason for the success of many aspects of society:

Ja, alle dere som ved ansvarsbevisst arbeid, faglig innsats og mot til nyskaping har vært med å bygge opp vårt næringsliv, vårt helse- og sosialvesen, vårt kirke-, skole- og kulturliv – og vår offentlige forvaltning. [...] Vi må ligge i front som kunnskapssamfunn, utvikle skolen, satse på forskning og utvikling. Er vi en nyskapende nasjon, har vi også noe å gi til andre.¹⁰³

Not only is this evidence towards the claim of the pro-innovation bias, as he states that innovation is the cause of much of Norwegian society's success, but shows also a pro-modernist stance. Bondevik uses innovation more broadly and takes in more themes than

¹⁰¹ King Harald V 2001.

¹⁰² Culture in the new year speeches were usually meant as theater, art, movies and literature.

¹⁰³ Berge 2016: 585-286.

usual, also cultural, mirroring how King Harald did it in 1997. It also shows two other aspects that is important for this chapter. First is how Bondevik mirrors Brundtland regarding how Norway must be a society of knowledge, in line with the societal development of in the period. Second is how Stoltenberg, Brundtland and Bondevik share this two-sided conviction that to create value one needs to innovate, and what is created is to be shared. Either with the world, or with the rest of society. Stoltenberg would also use a new word in his 2001 speech adhering to encouraging entrepreneurship:

Vi skal oppmuntre til nyskaping og nyetablering. La oss ønske velkommen alle dem som utvikler nye bedrifter innen både gamle og nye næringer. De som har nye ideer blir ofte møtt med skepsis. Men uten nye ideer kommer vi ikke videre. Vi trenger alle de som skaper noe nytt av egen kraft.¹⁰⁴

This is the last time *nyskaping* was used in the speeches and the paragraphs so far needs to be discussed. What is clear is that innovation is positive in the minds of the speakers. Not only was it a solution to economic troubles, it would also create even greater prosperity. Only King Harald would relay a careful skepticism towards the internet, but only when its original purpose was misused. The area is also relevant as they all, except King Harald, adhere to an economic, business or enterprise, or R&D and the emerging knowledge-based society. Godin writes that the innovation discourse is usually centered around a market or industrial orientation,¹⁰⁵ something that the findings above show. The political discourse of this time had at least a common perception of where *nyskaping* belonged, and it did not combine the designation with solely technological context. The speakers also relayed a pro-modern stance through the designations of *nyskaping* and might show that they were fundamentally oriented and motivated to change. The next designation is the designations of innovation pertaining to ideas, *nytenkning*.

Stoltenberg would in the last quote show a perception shared amongst the speakers, innovation is not only action, it is also a mindset and ideas. The designation of *nytenkning*, which I call *innovative thinking* in English is important because it makes innovation more abstract and brings it into the world of ideas. The speakers concretized it more than *nyskaping* as they complimented innovative thinking that had found new solutions. They used concrete

¹⁰⁴ Berge 2016: 593.

¹⁰⁵ Godin 2016: 283-285.

examples where innovative thinking had led to successful solutions. Note below how Brundtland also mentions inventiveness, a trait that is seen as positive, which will be discussed at the end of the chapter. Brundtland would say in 1989:

Da møtte vi et menneske som hadde vist pågangsmot og oppfinnsomhet. Hun hadde fått til store forandringer på Brødholt sykehjem til beste for beboerne, som er psykisk utviklingshemmede. Dette er bare et av mange eksempler på den nytenkning og forandring som nå skjer for eksempel innenfor vårt helsevesen. Det er en slik innstilling vi trenger mer av på alle områder. Det gir resultater.¹⁰⁶

Bondevik would also compliment a small town in 2004 for innovative thinking and creativity to find new solutions:

Takk til bygdefolket i Næroset for nytenkning og kreativitet. Vi trenger slike initiativ som styrker samhold, optimisme og omsorg for hverandre. I vårt velferdssamfunn har vi mye å forbedre, men også mye å være takknemlige for.¹⁰⁷

Stoltenberg would in 2007 speak of more entrepreneurial endeavors:

I Kirkenes har gründeren Bente Fiskerstrand startet call-senter, i Kårhamn i Finnmark har den unge gründeren Lene Wiese sammen med mannen Andreas startet Lean Fish, som leverer førsteklasses fersk fisk til det internasjonale gourmetmarkedet. Nytenkning og kvalitet i verdensklasse fra rent og rikt hav. Slik er de med å på å skape arbeid og utvikling der de bor - og med det tro på framtiden. Vi må tro på at det går. Uten en slik optimisme mister vi handlekraft. Og vi trenger handlekraft for å møte vår tids store utfordringer.¹⁰⁸

These quotes show a positivity towards finding solutions through new ideas, and it does not only improve the economy, but also strengthen more abstract ideas such as compassion and companionship. The recital of all these quotes show an adherence to a pro-innovation bias, not only that innovation is an improvement but that it is seen as wholly good. It is not only a

¹⁰⁶ Berge 2016: 474-475.

¹⁰⁷ Berge 2016: 621.

¹⁰⁸ Berge 2016: 650.

continuation of the pro-modern sentiment following the designation of *nyskaping*, but it also shows how Stoltenberg, Brundtland and Bondevik wanted people to have a fundamental mentality to find new solutions. The areas in which they speak of *nytenkning* was managerial, societal and business. This perspective would, however, change when the designations changed.

The positivity would become less prevalent with the designation of progress (*fremskritt*). According to my reflection it seems Brundtland would reflect more on the past and see that not everything was as it should be. Brundtland inspires in 1989, not to halt progress but rather that other parts of the world should take part in it: “Vi skal ikke stanse utviklingen. Millioner på millioner av mennesker er avhengig av økonomisk utvikling og framgang for å komme ut av fattigdom og nød.”¹⁰⁹ Not all the terms of progress that were used in the period adhere to innovation. I will go through them after the ones that does, to show that the modernistic term of progress followed less positive connotations than innovation. It is important to keep in mind that international humanitarian and environmental problems were and is a large part of a new year speech. In 1992 she would merge both themes:

Mens det i vår del av verden i stor grad er overfloden som skaper miljøproblemene, er det i mange land fattigdommen som er den viktigste årsaken. Skal miljøet reddes, må gjeldsbyrdene lettes og miljøvennlige fremskritt må støttes av dem som har kunnskap, ressurser og økonomi til det. Vårt bidrag til dette må vi se på som forsinket vederlag for hva vår egen vekst har ødelagt til nå, og som investering i jordens felles fremtid.¹¹⁰

Here progress is spoken of as innovation, since she speaks of novel progress, not established solutions. Her area on which she speaks of innovation is towards environmental problems, and she does not specify what kind. I will present more of these quotes in the next section to see if this *however* connotation of progress follow the other terms as well.

Renewal and modernization are interesting designations as they used in the context of wanting to innovate public institutions and welfare programs. Brundtland would in 1988 comment on this renewal in the health sector:

¹⁰⁹ Berge 2016: 457.

¹¹⁰ Berge 2016: 510-511.

Mange har det siste året bidratt til slik fornyelse. Innenfor helsevesenet har nye måter å organisere arbeidet på gitt fine resultater, slik at vi kan bruke utstyret mer og gi enda bedre og enda flere tjenester, som det er et behov for.¹¹¹

She continues this adherence that renewing will secure the welfare framework, and how essential that should be: “Å bekjempe arbeidsledigheten og sikre og fornye velferdsordningene våre må fortsatt være de aller viktigste oppgavene.”¹¹² The word renewal is important as it speaks of not changing something completely, but rather to keep important aspects, which many aspects of the welfare state were to the speakers. They wanted a incremental innovation. Modernization also states this but has more connotational value in the form of stating something as unmodern. Bondevik would be the only using the designation of modernization.

Jagland focused on how vital this was to prepare for the new century and would in 1997 say to reinforce and renew the walls of his innovative project *The Norwegian House*. A project that set out to set down unifying principles of what the Norway was to be and solidify those principles beyond a four-year election cycle.¹¹³ One can argue if renewal (*fornye*) is not, in this case, a proper designation of innovation. The reason I have kept it is because it was part of an innovative endeavor which was perceived as new by its audience (adoption unit), placing it within the definition of Everett Rogers. It was about keeping the essential parts of society into a new millennium, by innovating:

Disse veggene må forsterkes og fornyes hvis de skal tåle de store forandringene som møter oss ved inngangen til et nytt årtusen. Taket utgjøres av våre felles verdier som verner huset.¹¹⁴

Bondevik also mirrored this broad adherence that the welfare system was to be strengthened for a modern reality in 1999:

¹¹¹ Berge 2016: 465.

¹¹² Berge 2016: 545.

¹¹³ Berge 2016: 548-552.

¹¹⁴ Berge 2016: 556.

Regjeringen har satt i gang arbeid for å fornye og modernisere forvaltningen under mottoet: ”Et enklere Norge”. Innen utgangen av neste år skal alle statlige etater ta i bruk serviceerklæringer, slik at brukerne blir klar over hva de kan forvente seg av forvaltningen.¹¹⁵

And he would state the same in 2004:

Nå skal velferden trygges for framtida. Folketrygden er en bærebjelke i vårt velferdssamfunn, og den skal sikres og moderniseres. En innstilling fra pensjonskommisjonen blir presentert om noen dager. Regjeringen vil invitere til en bredest mulig politisk enighet om et framtidig pensjonssystem.¹¹⁶

Both Bondevik and Jagland spoke of renewing what is, as a solution to meet the future. Through my reading it seems that this perspective of innovating to keep/save important aspects of society such as welfare institutions is inherent in all the prime ministers speeches. It is a battle of not sacrificing too much of the old, while at the same time finding prosperity through incremental innovation. It is also important to note that Bondevik is the only speaker who used modernization in the speeches, and that the area in which he used it was public management.

There are two different tendencies that I think are of note regarding the notion of innovation so far. First is the almost unanimous adherence to put the designations within certain areas. *Nyskaping* was put within the economic, R&D, knowledge and business and enterprise area. Only King Harald would speak of cultural *nyskaping*, while Bondevik would use it on several aspects of society where innovation had caused promising solutions. *Modernisering* and *fornyning* was spoken mostly about public welfare institutions and *nytenkning* was spoken of in the exact same way with specific examples of individuals coming up with innovative ideas that led to desirable solutions in Norwegian districts. The areas in which they speak of *nytenkning* was managerial, societal and business.

In addition, the quotes above show a positivity towards innovation, and the adherence to innovation as a solution. I mentioned above a quote of Godin that spoke of innovation as a

¹¹⁵ Berge 2016: 575.

¹¹⁶ Berge 2016: 622.

panacea; a solution to all problems. There is another perspective that is presented by Sebastian Pfothenauer and Sheila Jasanoff, where they flip this on the head, and rather view an innovation process as a *diagnosis* and *cure* that is not only a set universal model, but also influenced by the cultural context the process find itself in. They state that both

‘diagnosis’ and the imagined ‘cure’, in the form of the imported model, are shaped by and reinforce pre-existing visions of desirable and undesirable futures in a given society. [...] What governments and institutions envision under the label ‘innovation’, we show, depends primarily on the ways in which they perceive their own weaknesses – whether sluggish growth, waning global influence, ossified institutions, complacent populations, human resource constraints or lack of a national vision – which we capture through the term of ‘diagnosis’.¹¹⁷

The speakers might have *diagnosed* public management or the economy as inefficient or sluggish, prescribed a *cure*, which would then remedy it. This cure was innovation and was communicated differently through its designations. Pfothenauer and Jasanoff presents an interesting perspective that share this work’s claim; that the notion of innovation is not a set structure, and the implementation of an innovation process is constituted by cultural factors.

Negative denotations of progress

I presented the one designation of innovation that meant progress. Though Brundtland spoke of progress as positive, it was still in a negative context. The other times progress was used where the speakers did not speak of innovation show an interesting difference between innovation and progress. I chose to discuss these different designations as they form a better picture of how contexts change based on the terms used, and as I had already examples from the onomasiology of innovation. Though not every speaker would negatively denote progress in the speeches and King Harald did admit, in 1997, that in the Norwegians strive to succeed it could be useful to admit that the living standards were satisfactory. This strive to succeed is often commented on by the speakers, as they also reflect on what is lost on the way to prosperity. However, there would more doubt regarding the quality of progress, than innovation. King Harald said in his millenium speech:

¹¹⁷ Pfothenauer & Jasanoff 2017: 786-787.

Det er sikkert flere enn meg som med takknemlighet kan se tilbake på året som snart har gått. Midt i vår søken etter fremgang og øket velstand kan det være nyttig å innrømme at vi tross alt har det godt her i vårt fredelige hjørne av verden.¹¹⁸

There is a tendency in the speeches to speak of the great leaps of progress that Norwegian society had experienced. However, it seems with the designations of *fremgang* and *fremskritt* there is also an admission that these leaps have missed its mark or landed short. A rhetorical *but* seems to accompany designations by Bondevik in 2004:

Det *har* skjedd store fremskritt. Men vi har også mangler. Og det vil alltid være behov for privat og frivillig omsorg, gjennom organisasjoner, familie og nabolag.¹¹⁹

To King Harald the ramifications that progress and science caused when it was abused at the beginning of the century were important in his speech at the turn of the millennium. All the principles and potential of modernity through science and reason seems here to have been betrayed:

Ved forrige århundreskifte gikk det en bølge av optimisme over Europa: Nå skulle verden omsider gå inn i fornuftens og vitenskapens lyse tidsalder, med fred, fremskritt og økende velstand for alle. Fjorten år senere kom første verdenskrig. Vi vet hvordan det endte; i et blodbad som kostet millioner av menneskeliv og utløste store samfunnsomveltninger: - tragiske kriser som rystet hele vår sivilisasjon.¹²⁰

King Harald would again mirror this sentiment in 2007:

Det norske folk har tidligere opplevd fremgang ved å løfte i flokk. Derfor er det ekstra skuffende når noen bryter spilleregler som er nedarvet gjennom generasjoner. Det moderne demokrati bygger på forestillingen om at vi både skal bidra og ta i mot. For å nyte, må vi også yte.¹²¹

¹¹⁸ King Harald V 2000.

¹¹⁹ Berge 2016: 622.

¹²⁰ King Harald V 2000.

¹²¹ King Harald 2007.

This negativity towards progress falls in line with how Downs and Mohr presented it at the beginning of this chapter. When the speakers reflect more broadly on progress they adhere to the past and where development had not been satisfactory in their minds. Especially when King Harald looked nearly a hundred years back in the past, a clear critique of the pro-modernist viewpoint is seen. I believe that this shows how the speakers show a different conveyance, or idea, when other concepts were used. When the concept of progress is uttered other ideas came to life than *nyskaping* and *nytenkning*. When past change is reflected upon they comment on how the elusive finish line of progress has not yet been reached, or how humanity had, in the past, veered of its course. Looking towards the future, and what had to be done, changes this perspective. Then designations of innovation take on a more optimistic leaning; the future still held promise.

Ideas are formed by words in rhetoric and this is what the American Linguist George Lakoff called *framing*. He says that politicians *frame* a word, and a listener will form an idea based on previous knowledge: “Framing is about getting language that fits your worldview. It is not just language. The ideas are primary – and the language carries those ideas, evokes those ideas.”¹²² The speeches are worked on for several months and it is my reflection that what this similarity shows is how the speechwriters and speakers worked within an established discourse where certain designations would evoke a notion of innovation, when other terms such as progress would evoke other notions. Instead of causing progress (*fremskritt*), the speakers wanted rather to cause innovation (*nyskaping*) because they might have believed that those words would evoke different ideas.

The difference between progress and innovation show the final *travel* of a concept, at least pertaining to the communication towards the national audience. Not final in that it will never change or be used again, but a speech is a one-way communication, where changes can only occur in a new speech. When the speeches are formulated they mark the finalization of a vocabulary that have been influenced from a myriad of sources. As they are formulated the terms that are added show how the speakers and speech-writers believed that the terms and paragraphs were believable and genuine. The designation of *fremskritt* awoke different connotations and the speaker and speech-writers deemed it more appropriate to say that society should cause innovation rather than progress through a long process of formulation.

¹²² Lakoff 2008: 3-4.

The peripheral consequences of innovation

At the beginning of this dissertation's period, Norway was experiencing an economic crisis. Both the rise in interest rates and the fall in the international markets had made it difficult for the average population to pay their loans and keep their jobs. A special cause for this was the fall in oil price, which the Norwegian economy was beginning to increasingly rely on. The topics of the new year speeches were therefore chosen accordingly. Brundtland spent most of her time speaking on what is happening to the troubled economy, but she also voiced opinions on what had to be done. When opportunities arose – such as the emerging new industrial markets – it had to be seized. It is on the topic of economic growth that a positivity towards innovation is most apparent. By encouraging industrial, and labor market endeavors with investments within research and development and education, innovation will solve many economical, and in extension, societal problems. New inventions, novel knowledge, technological progress, industrial development, and improvement in the exploitation of natural resources are all examples that are used by all the prime ministers in the period.¹²³ Though these factors were viewed as positive it also caused negative consequences.

There are two themes in the speeches that would disprove an eventual pro-innovation bias: climate and environmental concerns, and the demands that innovation was putting on the individual worker or citizen. The reason for this internal and external distinction in the critique is that innovation influenced both negatively in the mind of the speakers. Innovation can cause increased pollution and carbon emission, and effectivization in industries in turn forces Norwegian laborers into new lines of work or education. Now I admit that innovation can of course lead to new solutions that will lower carbon emissions, but for the sake of this argumentation I will treat it as cause of negative consequences, rather than look at the positives. The next pages will reflect on these two consequences to see where the speakers put the blame.

In Norwegian politics there is a dichotomy between industry, and environmental and climate concerns. On one hand the need to create wealth and jobs through the production of goods is elementary, but at the same time the increasing global responsibilities brought new political awareness of pollution and global warming into the speeches. All speakers mention

¹²³ Berge 2016: 495-496, 519-520, 546, 488, 573, 585-586, 593, 595.

environmental concerns, and climate change becomes a dominant topic at the end of the period. There is however the question whether this new focus can be viewed as a critique of innovation, or as a critique of development, or development gone wrong. If the former is the case then one can argue that the speakers do not hold a pro-innovation bias, as innovation also causes damage to nature and emit carbon dioxide into the atmosphere. My claim is that it is not innovation that is critiqued but rather the consequences of economic growth caused by the necessity to change.

We have already seen that innovation is viewed in the speeches as something positive for the economy, and that such innovation may be part of an industrial growth that causes pollution. Brundtland does address this in her first speeches, but it is not the economic development itself that is negative, it was even vital to continue such endeavors. She stresses the need for sustainable development; to continue economic growth without the negative impacts on the environment.¹²⁴ Where Brundtland did acknowledge this link between pollution and economic development, the other speakers isolated the topics. Both Syse and Bondevik would speak of environmental and climate concerns in one paragraph and then about economic development in the other.¹²⁵ Jagland did not denote to economic development, but rather toxic consumerism when speaking of consequences on the environment,¹²⁶ and Stoltenberg would even specifically mention innovation as a solution to carbon emission.¹²⁷ Innovation in this regard, were not viewed as something negative even when the speakers were on the topic of the consequences of innovation. However, another negative effect was the continuing demands of adaptability in the labor market. This made the speakers worry about the effects this had on the population.

With adaptability, I mean the increasing demand to conform to new lines of work or education that is put upon the Norwegian population. A continuing topic in the speeches through the period was either when labor situation forced people from their work, or when the speakers encouraged adaptability to new lines of work. Richard Sennett has written about the personal consequences that befall workers in what he calls the new capitalism. In this new capitalism being *flexible* is a virtue of the modern worker. Not only being flexible to the

¹²⁴ Berge 2016: 457-458.

¹²⁵ Berge 2016: 484-489, 565-567.

¹²⁶ Berge 2016: 555.

¹²⁷ Berge 2016: 650.

increasing specialization that more complex technology is demanding, but also to a more personal flexibility that influence how long one stays in a job.¹²⁸ This development was already underway at the beginning of our period.¹²⁹ Having one job through your entire life had become a rarity, and Norway was no exception.¹³⁰ It is this change that the speakers often comment on when they acknowledge and sympathize large shifts in the labor market, or educational standards.

When King Olav expressed sympathies towards the traditional Norwegian seafaring professions, sailors and fishermen, as the economic situation forced them on land, it marked a new turning point in Norwegian history.¹³¹ The people with degrees from higher education doubled, the technological revolution made it more demanding to be a worker, and individualization made keeping to one job a rarity.¹³² The question concerning the pro-innovation bias is how the speakers commented on this change through the period. As the economy saw signs of improving in 1989 Brundtland did acknowledge that the necessary sacrifices made in the preceding years had been tough, she did however not regret nor express wishes to reverse the course that had been set.¹³³ King Olav had a pre-modern sentiment where he romanticized traditional labor roles and the new developments in society were rapidly changing this part of Norwegian identity. It was never an option to stop the development, and no critique was leveled against innovation. As we saw above innovation was given positive connotations.

Bondevik expressed the same mentality as Brundtland, as he does not wish to stop the development when he speaks of the increasing demands on knowledge that new technology is enforcing, rather it is a question of accepting to adapt to the new change in society,¹³⁴ or focus on traditional values to strengthen oneself for the future.¹³⁵ King Harald commented on the negative effects of the constant demand on change and adaption,¹³⁶ and he felt it sad that so many were buckling under the pressure of performing up to the expectations that were now

¹²⁸ Sennett 2001: 56-60.

¹²⁹ Hilpert 1990: 82.

¹³⁰ Folkestad 2006.

¹³¹ King Olav V 1989.

¹³² Rønning 2002.

¹³³ Berge 2016: 472-474.

¹³⁴ Berge 2016: 564.

¹³⁵ Berge 2016: 573.

¹³⁶ King Harald V 2001.

apparent in society.¹³⁷ It was however, never a question of whether to stop the development, but rather a reflection on the consequences. And the speakers did not express a wish to halt, stop or reject, because that would inadvertently mean to reject prosperity.

The societal shifts that the Norwegian public were experiencing, was a topic in several of the speeches, and interestingly it was a topic throughout the period. The topics were either how demands in education had made it more difficult for schoolchildren or how the changing economy made traditional professions not viable for a larger part of the population. It was never stated that a new course should be slowed, changed, or stopped. This inevitability of a new society also underlies how the speakers do not want to reject or discard innovation. The negative consequences are commented on, but never is the blame put on innovation. How all the speakers on one hand spoke of how innovation would better the economy, job prospects, and give the ability to solve future problems, while also commenting on consequences that had been caused by innovation shows a two-sided part of the concept of innovation.

This two-sidedness of the speakers show that there were certain aspects of this new emerging society that were not seen as wholly positive. The coming of the knowledge-based society, the increasing technological ramifications and wealth, was changing the social fabric during this period. We saw in the previous section how the speakers commented on these developments. I will argue that by not specifically criticizing innovation, the speakers show a pro-innovation bias that influenced their stance towards novelty. The exception is King Harald which showed the most reflection on innovation through the period. The other speakers were however, not wholly positive towards the consequences of innovation as they were rapidly changing the societal fabric of Norway. This might show that the speakers held an anti-modern skeptical stance more akin to the description given by Mohr and Downs; that innovation was viewed as an improvement. And, not to the statement that innovation was inherently good, as the speakers do reflect on the negative consequences. Another perspective is how innovation had now become an individual virtue.

Innovation as an individual virtue

As presented in chapter 1, knowledge had now become increasingly important in the mind of politicians as global competition and the demands from the labor market intensified.

¹³⁷ King Harald V 2009.

Brundtland had already commented on this fact in 1989:

Fremover ser vi konturene av et internasjonalt konkurranseklima der kunnskap blir stadig viktigere. Det er derfor vi har økt innsatsen i forskning og i utdanning, og bedret vilkårene for studenter.¹³⁸

Improving the acquirement, accumulation and spreading of knowledge speaks of a structural change that put the individual's ability to master this new change at the center. This is shown through encouraging or commenting on positive traits that leads to innovation or show innovativeness. King Harald V had a positive perception of the creativity and inventiveness inherent in the population using the cultural example of Gyro Gearloose from the Donald Duck universe to exemplify this in 1995:

Mitt inntrykk er at det er stor kreativitet og oppfinnsomhet blant folk. Mange suksesser har startet opp som en ide i hodet til en lokal «Petter Smart». Det er viktig å ta vare på de gode initiativ og å gi idéer og talenter det nødvendige livsrom.¹³⁹

This was the first time in the speeches that a characterization of innovativeness was given towards individuals. He would precede Stoltenberg and Bondevik who began to speak of innovators *and* innovation. It was a personification of the concept where the abstract idea of being innovative became a virtue for the individual. Both would focus on knowledge, but Bondevik would look to the Norwegian youth and the school sector:

Skolen kan i større grad dra nytte av nærmiljøet, på samme måte som lokalsamfunnet må se skolens verdi: Det er viktig at barn og unge ser mulighetene der de bor. Vi trenger nyskapende, kreative og produktive mennesker.¹⁴⁰

Stoltenberg would look to knowledgeable professions and individuals:

Det var kunnskap som gjorde at vi kunne temme fossekraften. Det var kunnskap som satte oss i stand til å hente opp oljen fra det mørkeste dypet under havet. Naturen har gitt oss mye. Men det er kunnskap som har gjort at vi kan ta det i bruk. Det at vi har

¹³⁸ Berge 2016: 474.

¹³⁹ King Harald V 1995.

¹⁴⁰ Berge 2016: 576.

erfarne fagarbeidere, gode ingeniører, flinke lærere, dyktige helsearbeidere, skapende innovatører og dristige entreprenører - mennesker med kompetanse, mot og fantasi, er det som vil drive oss framover.¹⁴¹

Other speakers had spoken about the new society where demands for knowledge was becoming more evident and that an innovative attitude was desirable. This was shared only in part with the examples above. King Harald, Stoltenberg and Bondevik spoke of the importance of innovative persons. The historical development at the time underlie this new change towards focus on the individual and knowledge. The Norwegian education system would undergo a process of liberalization and individualization.

It was in 1997 that this process would affect the education system when the Bondevik government would enact reforms influenced by neoliberalist influences. This undermined the Norwegian tradition in the education system of social democratic principles of unity and wholesome character-building. From 2006 the social democratic government would halt this development, but the old social democratic principles had faded.¹⁴² It is this historical example of the fading of the older tradition in the education system that elucidates the individualization of Norwegian society, and it is this I claim was visible in the rhetoric of Bondevik and the social democratic Prime Minister Stoltenberg. The focus shifted from innovation to the innovators. Stoltenberg said clearly that the acquirement of knowledge had now become an individual and lifelong endeavor: “Vi skal lære gjennom hele livet. Den som tror at han er ferdig utdannet er ikke utdannet, men ferdig.”¹⁴³ It was these demands on people that also was part of the skeptical critiques of the development in the previous section. This also speaks towards Guneriussens perspective that modern culture is fundamentally oriented and motivated to change, and this is then expressed towards its individual citizens.¹⁴⁴

Underlying that internal critique does not call for rejection as it is seen as fundamental in order to continue the prosperity of Norway.

Though the examples above can be denoted to a rhetorical coincidence it is the first time the individual and the concept of innovation were merged. It shows that the individual had become its own rhetorical category. Stoltenberg would underlie this at the end of the period:

¹⁴¹ Berge 2016: 674.

¹⁴² Sejersted 2013: 504-509.

¹⁴³ Berge 2016: 593.

¹⁴⁴ Guneriussen 1999: 268.

“Det er hverandres arbeid og hverandres kunnskap vi skal leve av i framtiden. [...] Det handler om landets viktigste ressurs: menneskene.”¹⁴⁵ No longer was it only about the improvement of society, but also about the virtue of the individual.

Conclusions

I began the chapter by presenting how the concept of innovation increased in popularity in the public discourse and how it was used in the scientific political discourse by looking at the Norwegian Official Reports published before and during the period. A change occurred from *innovasjon* having a technological meaning and *nyskaping* a broader conceptual meaning, often adhering to an economic and industrial context, to *innovasjon* becoming the normal way to express the concept. Innovation would also become an explicit policy field during the period. Even though the concept had increased in popularity, the rhetoric of the new year speeches had not yet used it.

The chapter question was: “What were the speakers notion of innovation in the new year speeches?” To answer this, I used the perspective of the pro-innovation bias to see if they held such convictions, something I will conclude that they did. All the speakers believed that innovation would improve and find solutions to the future or gave innovation the responsibility of past successes. It was seen a panacea to a variety of problems. *Nyskaping* was used by King Olav, Brundtland and Syse during the economic recession, as a solution. The exception is King Harald V who expressed the most critique or asked questions regarding the consequences of innovation. He and Bondevik used *nyskaping* differently, the King adhering to a cultural theme, while the Prime Minister would speak on a variety of topics but sharing the commonality that it was innovation that had helped spark its success. The other speakers used innovation in common areas of economic, R&D, knowledge and business and enterprise sector. This similarity in using the concept in the same areas speak of a common notion that goes beyond traditional party lines, time, and individual political actors.

When a traditional modernistic term of progress was used, more skeptical reflections were made. This shows a difference in what ideas were evoked when the designations changed and does correlate with Brown and Mohr’s reflections on the denotations following more traditional modernistic terms from the seventies. Even when time passed, and the speaker

¹⁴⁵ Berge 2016:

changed did the same themes and connotations remain the same. This can show how a common notion of the concept of innovation is part of a broader political discourse. This similarity even when time passed, and speakers changed, can attest to how different ideas are deliberately formulated in political rhetoric when certain designations are used. Through my convergence of these designations a common shared notion, with a few exceptions, has become visible in the new year speeches.

To bring a more balanced perspective to the pro-innovation bias I looked deeper into the consequences that showed themselves in the speeches. Climate and environmental concerns and the changing reality of the Norwegian laborer in the knowledge-based society was the two examples given attention as these internal critiques might blame the concept of innovation. I found that none of this critique was aimed at innovation, nor did the speakers call to reject or revert the development. To continue the development was a necessity, speaking of a pro-modernist inclination towards change.

In the final part of the chapter I looked at innovation as an individual virtue and how it now had become a positive trait of Norwegian citizens. Brundtland, Harald V, Stoltenberg and Bondevik would speak on the need for knowledge and how this was caused by individuals being innovative; it was expressed as a positive trait.

Chapter 4 – the notion of technology in the new year speeches

The last chapter investigated the notion of innovation in the new year speeches. This chapter will investigate the counterpart in the research question, technology. The chapter question has been chosen to be: “What was the notion of technology in the new year speeches?” To broaden this analysis three technological theories, determinism, optimism and pessimism, will also be used as a lens to investigate the notion of technology as it is expressed in the speeches. Did the speakers express a feeling that technology was set outside societal controls, while it still held crucial and determinative influence over it? Were the speakers afraid of the harm that technology could pose, or did they believe in the benefits to society? The purpose of this chapter is to give a partial answer to the second half of the research question, that will help in answering it in its entirety. In finding out if the speakers believed they could control the development of technology and what potential and conclusions they gave technology, good or bad, a more reflected view on technology will be established.

The first part of this chapter will investigate the content of the speeches towards the theories of technological determinism, pessimism and optimism. Just as the pro-innovation bias was the main investigative concern in chapter 3, so is technological determinism the main concern in this chapter. I will broaden the discussion when certain aspects of modernity or other relevant tendencies are apparent that is important in making the notion of technology clear. At the end of the period technology became a recurring topic according to the onomasiological analysis. It was especially Stoltenberg that would use the designation to launch and defend his *moon landing*; the carbon capture and storage facility at the Mongstad refinery. Not only was it an innovation in terms of rhetoric in the new year speech, it also marked a modernistic belief in technology. A case-study at the end of this chapter will investigate Stoltenberg’s *moon landing* further and see how Stoltenberg used this *techno-fix* to formulate his *technopolitics*, not only as a solution to climate problems, but also to navigate the national and international political community.

Belief in technology is also a large part of the philosophy of modernity. This chapter will separate technology away from innovation, as not all innovation is technological, and not all technology can be called an innovation. Attention will also be given to the conceptual or explicitness of technology to find out if the speakers often focused on concrete technological examples or technology itself. Though the differences are important, chapter 5 will compare

the Oslo Manuals to the new year speeches, and in those documents, innovation are defined mostly as technological. Then it becomes important to also capture the similarities between the two concepts in the speeches. The structure of this chapter will be more chronological than chapter 3, as the designations are not that different as they were with the concept of innovation.

Technological determinism, optimism and pessimism in the speeches

Chapter 1 presented an empirical and theoretical background that will be used to broaden the way we can look at the notion of technology in the speeches. If the speakers believed that societal factors, and then in extension policy choices, could control the development of technology, it would disprove a technological deterministic stance in the speeches. That is the perspective that will receive the most focus in the next part. To elaborate this discussion a look into the perspectives of technological optimism and pessimism will also be made where a focus lies on if the speakers spoke positively or negatively on technological development that had occurred or could occur. This part is where the speaker's notion of technology is reflected upon with theory and the political history. Jan P. Syse, Thorbjørn Jagland and Crown Prince Haakon has not been included in this part because of their lack of mentions towards technology.

The designation equipment (*utstyr*) show how Brundtland believed that technological equipment not only could be used, but that it should be used to optimize the access and value, pertaining to an optimistic view as it alludes to the potential usefulness of technology. She says in 1987:

Kanskje kan vi bruke det dyre utstyret vårt i bedriftene, i sykehusene, i skolene i flere av døgnetts timer, så får vi større nytte av dem?¹⁴⁶

Brundtland continues this line of thought in 1988:

¹⁴⁶ Berge 2016: 454.

Mange har det siste året bidratt til slik fornyelse. Innenfor helsevesenet har nye måter å organisere arbeidet på gitt fine resultater, slik at vi kan bruke utstyret mer og gi enda bedre og enda flere tjenester, som det er et behov for.¹⁴⁷

Here we see encouragement towards innovative endeavor that will lead to effectivization in the use of technology. Brundtland would, however, also utter a skepticism towards modernity and the potential harm of technology when she reflects on the consequences of the Chernobyl nuclear disaster in 1987: “Vitenskap og teknikk, som skal være menneskenes hjelpemiddel, framstår også som en trussel mot menneskeheten.”¹⁴⁸ This shows two aspects of technology that will be important going forward. Technology, referenced here as technique, had inherent positive traits, a virtue that should benefit humans. They had misused technology and betrayed its purpose and Brundtland puts the responsibility at the feet of everyone: “Vi må se alvoret i øynene, vite at vi heller ikke her har lov til å skyve problemene foran oss.”¹⁴⁹ This shows a wary pessimism when potentially noble modernistic pursuits are veered of its path. A belief that would be mirrored by other speakers. This noble pursuit was achieved in 1993 when she compliments the achievement of building the Hamar Olympic Hall where new technology was a major part of its construction:

Den siste helgen før jul var jeg med ved åpningen av Hamar Olympiahall, Vikingskipet. Dette praktbygget kan stå som eksempel på hva vi må gjøre mer av. Her er historiske linjer fra vikingskipene forenet med norske råvarer, ny teknologi og dristig byggeskikk. Slik kan vi på mange områder kombinere råvarer og erfaringer med ny kunnskap og fantasi, og på den måten skape nye og bedre produkter. Hvorfor er jeg så opptatt av hvordan vi skal få fart og fornyelse i vårt næringsliv? Fordi dette er så grunnleggende for alt det andre vi ønsker å få til.¹⁵⁰

In these examples, Brundtland does not give technology its own autonomy or power, it is the Norwegian people, or the national *us* and *we* in the speeches that are in control, giving society the belief and responsibility to guide progress, both societal and technological. A clear contradiction to technological deterministic tendencies and follow the historical reality of

¹⁴⁷ Berge 2016: 465.

¹⁴⁸ Berge 2016: 457.

¹⁴⁹ Berge 2016: 457.

¹⁵⁰ Berge 2016: 520.

political autonomy. However, it must happen within the established framework of economic growth, adhering to a potential *systemic force*, but it is not because of either *ignorance* or *indifference*.

King Olav held both an optimistic and pessimistic view towards technology. Modern technology had eased burdens in the work-place and he mentioned the television as a medium that had optimistic potential, but he also underlined how it, if used uncritically could have consequences:

Heldigvis har moderne teknologi lettet arbeidsbyrden betraktelig. Men de fleste medaljer har som kjent en bakside. Det omfattende tilbud på fjernsynskanaler, for eksempel, brukt ukritisk, kan ha uheldige følger. Derimot er fjernsyn i seg selv uten tvil et medium som kan styrke vår bevissthet om nasjonale kulturformer.¹⁵¹

This quote reflects the skepticism towards modernity that was also present in chapter 3. Modernity had led to great things, but with this saying there also accompanied a rhetorical *however*. Both Brundtland and King Olav held this wary pessimism towards technology, as it is not the technology itself that is a problem, but rather when we humans use it to wrong ends. King Olav did not show an *ignorance* or *indifference* in the technology-pessimistic light as he not only reflected on the consequences of technological use but also conveyed a feeling of concern of the potential that come from technological development. What is clear is that King Olav does admit that technology has a crucial and determinative influence over societal factors, but he does not elevate it to the unapproachable.

At the last half of the nineties Bondevik would comment on the increasing demand that technology was enforcing on the Norwegian society. Importance was put on adapting to this new reality, not to set a new course for society: “Livslang læring blir stadig viktigere for at vi som mennesker, og som nasjon, kan følge med i utviklingen. Vi må også unngå et nytt klassdelt samfunn – mellom dem som kan nyttiggjøre seg informasjonsteknologien og de lett kan falle utenfor.”¹⁵² Bondevik did not express a technological deterministic stance as information technology was something one could learn, making it under the control of societal factors. New technological development was something the population had to adapt

¹⁵¹ King Olav V 1989.

¹⁵² Berge 2016: 564.

to, according to Bondevik, not control. Tendencies of *systemic force* were however visible, as it is the rapid adaption to new challenges that are detrimental to not only individual success, but also society. It is however, after the speech at the turn of the millennium that this change between prime ministers and king is most visible.

Den teknologiske utvikling har forandret hverdagslivet og arbeidssituasjonen for de fleste. Vi lever i et samfunn med rike muligheter. Men utviklingen har også ført til store påkjenninger for felleskapet og for mange familier. Det er skapt større avstand mellom generasjonene.¹⁵³

Bondevik would continue to comment on the changes that had occurred during the last century in his year 2000 speech. Technology was given qualities of human freedom through opportunities: “1900-tallet var også et århundre da enkeltmenneskets frihet ble utvidet. Ny teknologi ga nye muligheter, nye rettigheter og likestilling økte vår valgfrihet.”¹⁵⁴ Technology was not put outside a societal context, but rather as a positive and natural part of the historical development. He would emphasize the importance of technology also in the future, further into his speech: “Norge må være en teknologisk pionernasjon.”¹⁵⁵ It was completely necessary to develop new technology to continue Norwegian prosperity. This shows an optimistic view toward technology and the economic consequences of technological innovation but does not allude to a technological deterministic stance. The reason for this is the focus on *we* and *us* in the national rhetoric of the new year speech. It was not technology that would bring prosperity, but rather when society developed technology. Stoltenberg would share many of these same convictions when he took office for the first time.

Stoltenberg held an optimistic view towards technology in his 2001 speech. He says: “Ny teknologi skaper nye muligheter. [...] Vi skal passe på at all ny teknologi blir utnyttet innenfor en etisk forsvarlig ramme.”¹⁵⁶ Technology held a potential of exploitable characteristics, both good and bad. He consoles the potential of harm that abuse of technology can have, and uses the *we*, as in politicians to alleviate doubts by promising to stay within ethical boundaries. Not only does this show a non-deterministic approach to technology by

¹⁵³ Berge 2016: 573.

¹⁵⁴ Berge 2016: 583.

¹⁵⁵ Berge 2016: 586.

¹⁵⁶ Berge 2016: 593.

saying that one can control how one uses technology, but it is also a recognition of its potential harm. A recognition he does not keep when he enters office a second time in 2005. As was discussed in chapter 2, the context of the designations of technology, after his 2001 speech, uttered by Stoltenberg was on the climate and environmental problems. No longer was technology divided between the potential harms and goods it could enact. It was wholly optimistic.

This optimism is clearer when he speaks on the bio-sequestering a few years later, which is the policy of not cutting down trees. What is interesting is how technology now was spoken of as a knowledge, or skill: “Teknologien er kjent. Alle vet hvordan man ikke hogger ned trær.”¹⁵⁷ This example was the first time technology was used in such a manner. Bio-sequestering¹⁵⁸ was part of his climate endeavors during these years, and he was invested in preventing the rain forest to be harvested. In his last speech Stoltenberg makes a clear break from any technological deterministic inclination when he gives the *us* in his speeches control over technology: “Om hvordan vi skal utvikle den kunnskapen og teknologien vi trenger.”¹⁵⁹ This is continued at the end of his speech on environmental technologies: “I tillegg må vi utvikle miljøvennlige teknologier som gjør at vi kan kombinere vekst med lavere utslipp.”¹⁶⁰ One could argue that this shows *indifference*. That industrial and economic enforcement of continued growth, though this endangers the climate further, it is still the only option that is viable. Stoltenberg did not, however, convey technological deterministic tendencies as he did say that societal factors could influence technology and he never elevated technology above the influence of people. It is in this time frame that a difference appears between the king and prime ministers. Bondevik and Stoltenberg were optimistic towards the opportunities that technology could inhabit and encouraged new technological endeavors, and then *technopolitics*, to be braved. Their faith in technology’s potential for the future had become stronger than the historical technological ramifications of the past. A stance that king Harald did not share.

¹⁵⁷ Berge 2016: 658.

¹⁵⁸ Bio-sequestering speaks of various ways one can recycle carbon through natural means. For example, by letting plants grow that increases their absorption of carbon dioxide. This was exactly the policy measure Stoltenberg took in addition to his efforts in lowering the carbon print of Norwegian fossil fuels production.

¹⁵⁹ Berge 2016: 675.

¹⁶⁰ Berge 2016: 676.

King Harald would express the clearest example to *systemic force* and the feeling that progress was out of society's hand in 1999. Technological development is given precedence towards this feeling:

Et samfunn er i stadig utvikling, og slik vil det alltid være. Men det har i den senere tid foregått en viss "fartsøkning" på mange områder, ikke minst i teknikkens verden. Denne noe plutselige akselerering gjør at vi kan føle en viss mangel på stabilitet rundt oss. Forandringer, eller det de fleste kaller "fremgang", er i ferd med å endre tilværelsen for mange på en måte de selv kanskje ikke applauderer. Sterkt press øves utenfra. Arbeidsplasser forandrer seg, og vi ser at hederskronede yrker forsvinner. Håndverksfag må ofte vike for mer moderne teknikker, og menneskene føres inn i en ny verden som de må forholde seg til. Uten å mestre omstillingene blir vi lett akterutseilt.¹⁶¹

King Harald raised issues here that are of interest to this chapter. First was the feeling that time was accelerating, and an uneasiness that society was under constant change.¹⁶² The King questioned the negative consequences of what many labeled progress where a pre-modern nostalgia towards traditional labor roles can be seen when such jobs were either lost or forced to adapt; making King Harald mirror his father's sentiments. This constant need to adapt is an expression of *systemic force* where society is constantly under pressure to change to the whims of a higher transformative power. Technological deterministic inclinations were also expressed as he did not give concrete autonomy to society, but rather that they had to adapt within the frame of technology, rather than shaping the frame itself. These pre-modern and anti-modern expressions would continue in his 2000 speech.

Even though mentions towards technology nearly disappeared in King Harald's speeches at the end of the decade, he commented on technology in 2000, and held a more pessimistic stance than Bondevik and Stoltenberg. He compares the optimism shown at the turn of the last century to this one: "I dag er det ikke samme stemningen av begeistret optimisme som for

¹⁶¹ King Harald V 1999.

¹⁶² Reinhart Koselleck has written on this feeling of the acceleration of time. It was to him an expression of the new modern mindset that emerged from the French revolution. One's own time is viewed as distinguished from previous time and that this led to a feeling of acceleration where one passed into new periods at an increasing frequency. Koselleck, R. (2004). *Futures past: on the semantics of historical time*. New York: Columbia University Press.

hundre år siden. Mange tror ikke lenger på automatiske fremskritt, for de har sett at vitenskap og teknikk kan utnyttes til både godt og ondt.”¹⁶³ The wary pessimism that both King Olav and Brundtland expressed, returned in this speech. Progress itself and in extension technology had the potential for both good and evil purposes. Technological development had revolutionized society in the last century and King Harald summarized the change that had occurred in the last century later in the same speech:

Mer enn noe er det den teknologiske utvikling som skiller vårt århundre fra tidligere tider. Ved hjelp av ny kunnskap kan vi reise til månen, pumpe olje opp av sjøen og gi et menneske et nytt hjerte. Ved teknologiens hjelp kan man også bringe personer sammen på tvers av kontinentene - på måter som generasjoner før oss ville tro var umulig. Den menneskelige intelligens, nysgjerrighet og skaperkraft har gitt oss bilen, flyet, telefonen, radioen og fjernsynsapparatet. Reisesmønstre og arbeidsliv har fått nye former. Ikke minst har den nye informasjonsteknologien revolusjonert vår hverdag. For senere generasjoner vil kanskje vår tids teknologi fremstå som gammelmodig og uferdig. Hver ny generasjon fostrer forskere som bygger videre på den viten de er overdratt. Det er viktig å være åpen for de muligheter - og farer - dette representerer.¹⁶⁴

The King expressed a two-sided perspective on not only the positive consequences of technology, but also the negative. Neither Bondevik, nor Stoltenberg, would share this wary pessimism with the King rather focusing on technology in an optimistic light.

The last time king Harald would mention technology was in 2009 and his perspective is similar King Olav and his comments on the increased access to TV-channels, this time however the topic was on the internet: “Internett har blitt en arena for åpne debatter og frie uttrykk. Det er en styrke for demokratiet at flere kan, og ønsker, å delta aktivt på denne måten. Men av og til bør vi reflektere over hvordan vi bruker ytringsfriheten. Enkelte opplever å bli uthengt offentlig.”¹⁶⁵ The similarities with King Olav’s reflections were that specific technology had inherent positive traits, but through misuse, people had betrayed its positive sides. This reflection had mostly disappeared from the prime ministers in the period and can show a change in how Stoltenberg and Bondevik conveyed technology.

¹⁶³ King Harald V 2000.

¹⁶⁴ King Harald V 2000.

¹⁶⁵ King Harald V 2009.

The examples above show that King Harald did not express a technological deterministic viewpoint. He gave autonomy to society through experts that increase their wealth of knowledge in new generations and did not elevate technology above societal factors. Through his reflections he also did not show signs of *systemic force*, *indifference* or *ignorance* as he was concerned with the consequences, gave autonomy to society, and had a perspective of time beyond the immediate future and past. This is important as it can show a new notion of technology in political thinking as one generation expressed both optimistic conclusions towards the consequences of technology, but also held a wariness because technology's true purpose could be betrayed. The new generation emphasized the potential that technology had, encouraged technological endeavors and did not show a two-sided perspective that had been the case in previous speeches.

The areas that technology was spoken of shares similarities to innovation but shows also some peculiarities. Brundtland would speak of technology in the health care sector, effectivization, architecture and business and enterprise sector. King Olav commented on how technology had lessened burdens, and the specific technology of the television. King Harald, Bondevik and Stoltenberg would adhere to technology first and foremost conceptually, speaking of technological development and its negative and positive repercussions and potential. King Harald would especially show wide reflections on the specific technological innovations and the general technological development that had occurred in the last century.

Through the period a common conveyance of technology had been that society was in control of technology. The framework of the new year speech adhered to a national context that emphasized the *us* and *we* in its rhetoric. This is shown in a language that gave individuals and society autonomy over the development of technology. Since the speeches were a conscious reflection on the past and future the optimistic and pessimistic views on technology became apparent. Brundtland and Olav would begin the period with a wary pessimism as some consequences such as environmental damages had affected their feelings on technological ramifications. However, this was an expression of the betrayal by mankind towards the inherent potential of technology, which was optimistic. King Harald V would continue this two-sided reflection on both the negative and positive consequences of technology. Stoltenberg and Bondevik would adhere to a more optimistic stance towards

technology; encouraging in their rhetoric a control of technological development. When Stoltenberg took such a leading role towards the specific technology he inhabited a historical tradition of political autonomy, and a new belief in technology. Looking specifically at his *moon landing* will better capture how the notion of technology had changed during the period.

Norway's dilemma: How technology became a fix

Vitenskapen og teknikken er det skapende subjekt, den bevegende, men også den frigjørende kraft i historien.¹⁶⁶

The quote above was from Francis Sejersted commenting on the technological determinism during the political climate regarding the nuclear power debate during the fifties, in both Sweden and Norway, but this mentality is just as relevant at the end of this work's period. Liberation through progress within science and technology is a strongly held modernist belief, even with a consciousness of its negative ramifications. Technology is more often than not, related to science, speaking of a common connection of the phenomenon. Was such a belief visible in the *moon landing* of Stoltenberg, and had now technology taken on a new role in the Norwegian political discourse?

During the nineties environmentalism would as a political field in Norway be broadened by the inclusion of climate change and threat of global warming. The first mention in the new year speeches of such threats was made by Bondevik in 1998, though it had been of concern especially since the UN report *Our common future*, published by a commission lead by Brundtland. Climate concerns would receive increased attention in the coming years in the speeches, marking a new change in the prevalence of this theme. Before this, climate change was a sub-category within the larger political field dealing with environmental problems. Environmental problems were closer and attainable, such as radiation fallout from Chernobyl and the building of hydroelectric dams in Norwegian nature. Climate change was global, its perceived threat imminent and dire, and efforts to halt or stop the development would take decades and require unprecedented cooperation between all nations. It also put Norwegian politicians in a peculiar dilemma.

¹⁶⁶ Sejersted 2013: 262.

As was presented in the beginning of this chapter, Norway had built up a large industry based on the extraction, production and exportation of fossil fuels. A *techno-industrial complex* that was economically and politically impossible to halt. The environmental movement, however, had gained a lot of political clout during the last decades. This influence was used to impact the establishment of new industrial facilities and the improvement or expansion of existing facilities. With the added consciousness of climate concerns, it created a dilemma where on one hand Norway had to continue the production of fossil fuels while also binding itself to international global agreements to lower emissions. It was in this political dilemma that Stoltenberg launched his *moon landing*. He presented this specific technology as the solution:

Vi må ta vårt ansvar. Klimautslippene må ned. Norge påtar seg en pionerrolle når vi har bestemt at gasskraftverket på Mongstad skal ha rensing av klimagassen CO₂. Vi skal gjøre dette mulig. [...] Vår visjon er at vi innen 7 år skal få på plass den teknologien som gjør det mulig å rense utslipp av klimagasser. Det blir et viktig gjennombrudd for å få ned utslippene i Norge, og når vi lykkes, tror jeg verden vil følge etter.¹⁶⁷

The quote above show several motivations that are interesting in the relation between the idea of technology as a solution and the demands of the political reality facing Stoltenberg. These motivations can be divided into a national and international context, and from idealistic to realistic considerations. On a national realistic level, the *moon landing* represented an opportunity to exploit the resource of natural gas, lowering the emissions at that facility, create wealth, jobs and activity vital to this district in Norway, and secure the industrial voter base which was vital to the labor party. This would not only please his political coalition, but also the environmental movement. Another motivation is the loftier idealistic goal of lowering global carbon emission by developing new technology. International motivations of prestige and profit are of acclaim and commercialization. Not only was the potential exportation of new technology an important factor, but also the continued exportation of natural gas to the EU.

Natural gas had been a sore spot for the environmental movement because of the high emission of CO₂ it produced. Consequently, the political parties had not yet managed to get

¹⁶⁷ Berge 2016: 650.

over the obstacle to properly exploit this natural resource to its fullest. The political authorities and the environmental movement struggled on a deeper level to define their own version of what modernity should mean, instead of maintaining the techno-industrial complex, the environmentalist wanted more an ecological modernity, and Sejersted asked if this marked the end of the industrial social democratic high-energy society.¹⁶⁸ A new movement of ecomodernists are however appearing this discourse and their perspective show a more pro-modernist belief in technological and scientific solutions.

To use technology as solution to problems is not a new way of acting, but this was the first time in the new year speeches that a technological optimistic stance was so clearly laid out. Stoltenberg's rhetoric was heavy with warnings of the future of the climate and humanity's ability to live on the planet, and this new political endeavor had to be braved and it had to succeed. Why did Stoltenberg believe so ardently that innovative technology could solve climate problems, and how did he use this technology to further his political goal? To answer this question, the three motivations above will be discussed in the light of their historical context, and theory on why we use technology to fix our problems will be presented. Stoltenberg had a motivation that made him consider climate concerns in an international light.

Stoltenberg had invested himself in the climate and environmental problems in politics for a time. He became deputy minister of the Ministry of Climate and Environment in 1990,¹⁶⁹ and was in 1997 part of the same parliamentary committee that would pass the Mongstad technology center 12 years later. This was the year the Kyoto-agreement was signed and marked a milestone in the political struggle for global climate policy.¹⁷⁰ As Prime Minister, Stoltenberg still held the belief that global considerations were the most important factor. He invested himself heavily in the climate conferences that were held in Bali in 2007 and in Copenhagen in 2009.¹⁷¹ It was in the context of the national climate deal made between most of the political spectrum in Norway and the future climate conference in Bali that inspired Stoltenberg's *moon landing* in his new year speech.

¹⁶⁸ Sejersted 2013: 431.

¹⁶⁹ Stoltenberg 2016: 61.

¹⁷⁰ Stoltenberg 2016: 391.

¹⁷¹ Stoltenberg 2016: 392-405.

Prime Minister Stoltenberg was presented in the fall of 2006 with plans for a new thermoelectric system at Mongstad which would use the heat from the production to provide electricity to the oil field Troll in the North Sea. Problems occurred because of the political coalition – that Stoltenberg led – had made agreements that all such emissions now had to be clean. The Carbon Capture and Storage technology had not been developed enough to make this a reality. The proposed *moon landing* held therefore two purposes: day one utilization of CCS technology at the Mongstad refinery caused by the new thermoelectric system and to further develop CCS technology.¹⁷² Carbon capture and storage (CCS) is a technology that sets out to prevent carbon emission into the atmosphere and store it in geological spaces underground. As such it is both a transformational and relocalational techno-fix as it has changed the way the production function and its by-product is stored deep underground. One could argue that it also has a delaying techno-fix as well, as a study has shown that such storage can leak CO₂ and in consequence damage the organic matter at the bottom of the sea, delaying the negative effects, but also moving the problems to another location.¹⁷³ The point here is not to defend or criticize the technology used, but rather to show that the technology of CCS is very much a *techno-fix* for the climate as presented by Lecain.

The *techno-fixers* in Lecain's example concerned themselves mostly with the specific technological solutions in industrial production. His *techno-fixers* of the early twentieth century tended to

view both the industrial and natural world in terms of their technological knowledge and abilities. Environmental issues were studied only insofar as they affected the operation of complex technological systems.¹⁷⁴

Stoltenberg and his political colleagues worked within a framework based on their political knowledge, and maneuvered a complex political system, rather than one based on technology. However, they validated the potential of CCS technology and used it not only as a technological solution to fix the climate, but as a political solution to Norway's dilemma. Their *technopolitics* was not only about the development of new technology, but also how this technology could be used to maneuver an intricate international political system. What is

¹⁷² Stoltenberg 2016: 286-287.

¹⁷³ Rastelli 2016.

¹⁷⁴ Lecain 2004: 138.

interesting in a historical light, is that no other speaker had ever so ardently conveyed such an explicit conviction in the new year speeches over so many years.

In chapter 1 I briefly mentioned the ecomodernists and their perspective of a world where the modernistic belief in progress merges with an environmental sustainable one. They adhere to a new standpoint that rejects anti-modernity, believing rather that continuing onwards, but with a new mindset that will make humanity's negative impact on the globe less dire. I will not claim that Stoltenberg is a ecomodernist, but the ecomodernist perspective is interesting in this respect as it speaks of an evolving mindset towards technology. A mindset shared by Stoltenberg when he wanted to halt the building of hydro power plants in Norwegian nature; it was a conviction that a limit had been reached.¹⁷⁵ On the other hand he still needed progress, and with the *moon landing* he found a solution to combine prosperity with sustainability. Critique towards technology was more prevalent during the seventies, and skepticism was apparent during the nineties, but with the changing world and as solutions are tried and fail, old solutions and mindsets are viable once again.¹⁷⁶ When all other options are exhausted one turns again to the belief that progress through science and technology will find a way. It speaks of an old idea of hope through necessity: for what else will save us from our problems?¹⁷⁷

Stoltenberg's *moon landing* is, after my reflection, the final example at the end of the period that show how a pro-modernist and technological optimistic notion had now seeped into the rhetoric of the speakers. Whereas Brundtland, King Olav and King Harald, at the beginning of the period would express both the harm and good technology did, or could, pose to society, Stoltenberg would rather be wholly on the optimistic side. As a *techno-fix* CCS technology marks a new modernistic stance where it no longer was a question of whether to encourage technological development, but how it can be done within an environmental sustainable framework. Stoltenberg would use the technology idealistically towards saving the climate and realistically as an international political tool for economic and diplomatic gain. His *moon landing* is the final example of this new pro-modernist technological optimistic notion in the speeches.

¹⁷⁵ Berge 2016: 595-596.

¹⁷⁶ Andersen & Sørensen 1992: 25-26.

¹⁷⁷ Andersen & Sørensen 1992: 25.

Conclusions

At the beginning of this chapter I asked the question: “What was the notion of technology in the new year speeches?” I have in the preceding pages showed a diachronic change in how the speakers expressed technology. The main purpose was to see if there were any technological deterministic tendencies. Through my investigation I have found no proof of a technological deterministic conviction in the new year speeches, except in the pessimistic utterances of King Harald V in 1999. The prime ministers would speak of the national *us* and *we*, and how societal factors either had to, or could determine technological development. The kings would rather comment on technological development and its repercussions but did not set it outside the influence of societal factors. Though they did convey a feeling that technology did have a crucial and determinative influence over society, none of the speakers never showed expressions that technology was unapproachable.

Though there is an inherent optimism following technology, at the beginning of the period there followed also a wary pessimism. Technology was to Brundtland, King Olav and King Harald an aspect of their reality that held great potential of benefit, but also harm to humanity. At the end of the period such wary pessimism would disappear and be replaced by an optimistic stance. No longer were the negative consequences of technology mentioned, but rather its positive aspects. Bondevik and King Harald would express feelings of *systemic force* the turn of the millennium when a feeling of the acceleration of time and forced necessity to adapt to new circumstances was making itself visible in their rhetoric. There were no instances of the speakers showing an *indifference* perspective towards technology as Sejersted presented it. Neither could it be said that they held the *ignorance* perspective as all speakers commented on problems such as climate concerns.

The speakers would connect technology to various areas. At the beginning of the period Brundtland would speak of technology in the health care sector, effectivization, architecture and business and enterprise sector. How technology had eased burdens, and the specific technology of the television was the focus of King Olav. King Harald, Bondevik and Stoltenberg would adhere to technology first and foremost conceptually, speaking of technological development and its negative and positive repercussions and potential. King Harald would especially show wide reflections on the specific technological innovations and the general technological development that had occurred in the last century.

At the end of the period both Stoltenberg and Bondevik took a stronger stance in their rhetoric of an active control over the development of technology, stating how Norway was to become a pioneer nation. The mastering through use, and control over the development of technology seemed detrimental to Norwegian prosperity. This speaks of an uncritical optimistic stance towards technology. This was exemplified at the end of the chapter with the *moon landing*. *Technopolitics* would formulate that is related to the *ecomodernist* viewpoint were now visible showing an evolving notion of technology. This *techno-fix* was used both idealistically and realistically, to fix the climate, remedy Norway's dilemma and navigate an international political system. I will conclude that this showed a new pro-modernistic technological optimistic notion where the usual skepticism towards technology had fallen away.

Chapter 5 - The Oslo Manual and the notion of innovation and technology

The two previous chapters set out to find the notion of innovation and technology in the new year speeches. To deepen the discussion, I have chosen to compare this notion with the Oslo Manuals two editions from 1992 and 2005. The chapter question is thus: “Did the notion of innovation and technology in the speeches correspond with the two editions of the Oslo Manual?” This chapter will serve three purposes: First it will connect the Norwegian political context with an international one. Finding out if the notion of innovation and technology was shared with the international discourse will show of how a notion of concepts had been influenced by international development. Secondly, the notion of previous chapters will be compared to a document that mainly deals with technological innovation. This will merge the two notions that has already been discussed in chapter 3 and 4. Lastly, it brings the political content of the speeches into a more scientific theoretical one, which will show if an international scientific understanding was shared by the speakers. Thematically it will bring together the emergence of the knowledge-based economy in Norway and how technology and innovation played an increasing role in the development of society, and in the consciousness of politicians. One can ask if I will compare the onomasiology of the Oslo Manual and the speeches, but I have chosen not to approach this chapter in this manner. The reason for this is the obvious problem of interpretation between English and Norwegian and because the political rhetoric and the content of a scientific political document are too different in my opinion to compare such elaborate semantics.

The structure of the chapter will begin by presenting what the Oslo Manual was, its origin and authorship, why it was initiated, and what kind of impact the Oslo Manual had on the scientific political discourse and the creation of public policies. After this section a comparison between the content of the Oslo Manual and the notion of innovation and technology in the speeches will be made. This chapter will be used to continue and elaborate previous themes from chapter 3 and 4, that the framing of the onomasiological analysis might have missed. These themes will be explained in further detail in the comparison section, but I will now briefly outline what these are:

- First a look into how the speakers expressed, and the Oslo Manual presented, the economic consequences of innovation.

- The second theme is a discussion of the importance of R&D and the speaker's notion of science causing innovation, where two models, the linear and the chain-link model, that are presented in the Oslo Manual will be discussed.
- In the third section I will look further into the emergence of the knowledge-based economy and compare how the speakers emphasized the importance of knowledge and how the Oslo Manual presented it. In the period there also occurred an increased individualization of society which the speakers spoke on. The theme here is how did the Oslo Manual speak of the individual and how does this compare to the speeches.
- In the last section I will investigate further how the Oslo Manual spoke of the state and its part in the innovation process. This will be compared with the speakers' belief in state intervention in the business and industrial sector.

I have decided to approach this chapter in this manner because it will give opportunity to strengthen any argumentation that have not been sufficiently discussed so far and I have found this way to be the clearest way in making the comparison between the documents and speeches attainable. I believe that by looking at these themes it will be easier to discern the commonalities and peculiarities between the widely different documents of the speeches and the Oslo Manual. Within these themes one can also see the historical development of the knowledge-based society, the global market, and state involvement in the techno-industrial complex. I will in this chapter merge how the historical development transpired, with the notion of innovation and technology in the speeches and I will compare this with the content of the Oslo Manual.

The historical background of the Oslo Manual

The Oslo Manual is a document, published by the The Organisation for Economic Co-operation and Development (OECD), that set out to formulate a survey standard for innovation activity on a national scale. It is today widely accepted amongst OECD member countries, and especially in the EU under the responsibility of Eurostat. Earlier processes of this kind had been started in several European countries at the end of the seventies and during the eighties. These were at the time, not based on cross border cooperation, but surveys carried out by individual nations. The goal of the first edition of the Oslo Manual in 1992 was to formulate a draft that could serve as guidelines for future surveys. Experiences gathered from these surveys would help in future revisions which sparked the first coordinated

innovation survey of twelve European member states in 1993, and its feedback would revise the Oslo Manual until its final edition in 2005.¹⁷⁸ Its origin was not initiated by the OECD however, but rather the institution Nordic Fund for Industrial Development.

As of now the Oslo Manual is under the responsibility of the OECD and Eurostat, but its origin began under the influence of the institution Nordic Fund for Industrial Development, now merged into Nordic Innovation, which is under the umbrella of the organization Nordic Council of Ministers. Keith Smith who worked at the time at Innovation Studies and Technology Policy Group (Science Policy Council, Norway) wrote a draft for a workshop in 1988 that laid a conceptual framework for developing innovation indicators. The Nordic Fund financed the first surveys where Norway, Sweden, Denmark, Iceland, and Finland participated in 1989. OECD decided, with encouragement from the OECD group NESTI (National Experts on Science and Technology Indicators) that they should adopt the work based on the presentation of this draft. They asked the Nordic Fund to write a new draft based on the survey which became the first edition of the Oslo Manual.¹⁷⁹ This draft was written by Keith Smith and Mikael Akerblom (Central Statistical Office, Finland), in collaboration with the OECD secretariat.¹⁸⁰

As already mentioned the primary goal of the Oslo Manual was the standardization of national methodologies for innovation surveys. But, the manual also set other priorities. Benoit Godin elaborates these purposes of the Manual:

Collect standardized information on innovation activities of firms: the type of innovations carried out, the source of technological knowledge, the expenditures on related activities, the firms' objectives, the obstacles to innovation and the impacts of innovation activities.¹⁸¹

The manual's 2005 edition further states two objectives: "to provide a framework within which existing surveys can evolve towards comparability; and to assist newcomers to this

¹⁷⁸ Godin 2002: 3.

¹⁷⁹ Godin 2002: 14-16.

¹⁸⁰ OECD 1992: 4.

¹⁸¹ Godin 2002: 16.

important field.”¹⁸² It would also give insight in the new technological revolution that was not showing the same indicators on growth and productivity as before.¹⁸³ This shows that the Oslo Manual not only reflects the international notion of innovation, but that it also influences it.

As the main sources of this dissertation are written by Norwegian political actors, for the Norwegian people, I have decided not to write on the impact the Oslo Manual had on European countries, but rather focus on the Norwegian perspective. There were seven surveys gathered by Eurostat in the period;¹⁸⁴ and four of these before the last edition of the Oslo Manual.¹⁸⁵ In Norway, by looking at the archives of the Statistical bureau, and on Eurostat web pages, a picture of innovation surveys can be formed. Norway have participated in all the innovation surveys (dubbed Community Innovation Survey (CIS) by Eurostat), since CIS I in 1992.¹⁸⁶ This means that the Oslo Manual has had its intended impact, at least concerning the gathering of data in Norway. However, did the Oslo Manual have other areas of influence?

The above paragraph was about how the intended audience of the Oslo Manual was reached, but were there other documents that might have spread the impact of the Oslo Manual in Norway, and in extension changed the notion of innovative technology in the political discourse? As we saw in chapter 3, the Norwegian Official Reports would start using *innovasjon* more broadly, not just denote it to a technological category. In 2000, the Oslo Manual was only mentioned when defining technological innovation and cost of innovation, dividing innovation into a larger conceptual field.¹⁸⁷ In 1996, the Aakvaag-commission could report that Norwegian rate of R&D is falling behind other European countries and is hampering innovative growth.¹⁸⁸ The two governmental documents that I have focused on is the *Regjeringens innovasjonspolitik* (2005)¹⁸⁹ and the St.meld. nr. 7 (2008-2009)¹⁹⁰ from the governments of Bondevik and Stoltenberg. The reason for this choice is that this was the first time, after my inquiries, that a government formulated their own specific policy goals and

¹⁸² OECD 2005: 5.

¹⁸³ OECD 1992: 3.

¹⁸⁴ Eurostat 2018.

¹⁸⁵ Godin 2002: 16.

¹⁸⁶ SSB 2005: 6.

¹⁸⁷ NOU 2000: 7: 77-78.

¹⁸⁸ NOU 2000: 7: 8.

¹⁸⁹ The Royal Norwegian Ministry of Trade and Industry. (2005). *Regjeringens innovasjonspolitik*. Oslo.

¹⁹⁰ The Royal Norwegian Ministry of Trade and Industry. (2008). *Et nyskapende og bærekraftig Norge*. (St. meld. nr. 7. 2008-2009). Oslo; St. meld means parliamentary message and is a document from the government to the parliament outlining a certain policy field, where the goal is to present and discuss a case without having to dedicate themselves to a proposition.

wishes towards innovation. Regarding the Oslo Manual it is only mentioned in the 2008 parliamentary message as a footnote and a textbox about innovation surveys. I will say that this shows a minor impact on the government publications; the Oslo Manual being only a small part on a broader discussion on innovation. Before these documents were released, the political focus on innovation had been mostly done through an emphasis on the funding of R&D. Now, as we saw above, it had been formulated into its own policy. It was no longer only about causing innovation, but also being innovative.

The Oslo Manual and the New Year speeches

Through chapter 3 and 4 a picture of how the speakers thought of innovation and technology began forming. I have chosen to structure this investigation thematically, based on these chapters. These are as follows:

- In chapter 3 I found that the speakers held a pro-innovation bias. This bias was especially clear with how innovation was believed to have a positive outcome on the economy. I will compare this with the Oslo Manual's understanding that focus on the economic aspects of technological innovation.
- Continuing this discussion, I will look closer at the relationship between the belief in modernity through science, and the notion of how R&D causes innovation. The Oslo Manual presents two different models, the linear and the chain-link model, of how the innovation process is believed to transpire that is interesting in this regard.
- This brings us into the third topic which will discuss the emergence of the knowledge-society and I will investigate if this historical development can be traced in the Oslo Manual.
- With this increasing importance of knowledge in society so did the individual also become more important. In the fourth approach I want to see if the Oslo Manual spoke of the individual, in a manner that was similar with Stoltenberg and Bondevik at the end of the period.
- The Norwegian state has historically been heavily involved in the development of industry and business sector, a reality that was expressed in the speeches. What did the Oslo Manual say about state interventionism and is this stance shared by the speakers? That is the last theme of this chapter.

The reason that these themes have been chosen is because they make the inherent different content of the speeches and the Oslo Manual attainable for investigation. These themes are also a way to discuss historical changes that have been neglected in chapter 3 and 4. Now we will see if the content of the Oslo Manual correspond with the notion of innovation and technology.

Innovation, technological innovation and economic growth

The Oslo Manual is narrowed towards the business and enterprise sector and how effectivization and production is affected by innovative technological change. I have chosen to see if the speakers adhered to technological change and economic growth in comparison to how the Oslo Manual presents it. One might wonder if this angle is self-evident, and that the speakers adhered to such a conviction. It is my hypothesis for this part that the speakers considered other perspectives than purely economic or related to business or industry and that they used innovation more broadly. Before I present the argumentation based on the speeches, I will investigate how the Oslo Manual presented technological change and its impact on the economy.

The first edition of the Oslo Manual laid emphasizes on the lack of research on the economic impact of innovative technological change. This first edition was a draft that was published with the intention of being improved through a step-by-step process while innovation surveys were performed in OECD countries. They did however still relay a strong belief in their understanding so far: “technical change is the most important contributory factor in economic growth.”¹⁹¹

As we saw in chapter 3, it was especially during the economic recession that calls for innovation were made. Brundtland, Syse, King Olav, Bondevik and Stoltenberg would all adhere to *nyskaping* as a solution to economic problems and a cause for economic growth. But it did not adhere to technology. Brundtland would also speak on the dependence of fossil fuels the economy had, and that norwegian industry needed more variety in their production and exportation of goods. A connection between the notion of innovation in the speeches and the Oslo Manual is visible here, and Brundtland would make the closest connection in 1993 when she spoke on the Olympic Hall in Hamar.

¹⁹¹ OECD 1992: 11.

In the Oslo Manual the use of innovation corresponds with Brundtland's quote above. New technology is part of the process to create new and better products which in turn will create growth in the business and industrial sector. Bondevik would also mirror this sentiment towards small and medium-sized businesses in 2000 where it is important having leading knowledge in world market, using Norwegian business endeavors on the internet as an example.¹⁹² The 2005 edition would underlie this fact: "Innovation is at the heart of economic change."¹⁹³ The relation between technological change and economic growth was divided. Innovation was believed to cause economic growth, but it was used in a broader context. The praise given the Hamar Olympiahall also shows other considerations of a social and cultural perspective.

At the breakfast-TV episode 20th of December in 1986 on state television, a teary-eyed Brundtland had just watched Dr. Lindeman and his deaf patient Jarl Gunnar Andersen tell the audience and those at home about the innovative hearing operation that he has just undergone. When given the word she says that this is something we, as in the Norwegian people, must offer its citizens.¹⁹⁴ She continues this line of thought in her new year speech, where she encourages such innovative developments that help the sick and give the old a safe and richer life.¹⁹⁵ It was not only about economics for the Prime Minister, but also the human aspect, and how the Norwegian citizen could benefit from technological development. This notion of innovative technology set it aside as also a societal factor, rather than just one of economic gain.

Other examples through the period that underlie these other notions of technology in relation to society are for example both the King's skepticism that the use of the TV and the internet at each end of their period, could have harmful effects. Environmentalism also affected this perspective as new technology could improve environmental damage, and Bondevik would adhere to the belief that technological utilities could help in raising the qualities in the education system.¹⁹⁶ The human, and society, is an element in the speeches that are closely

¹⁹² Berge 2016: 586.

¹⁹³ OECD 2005: 15.

¹⁹⁴ NRK 1986.

¹⁹⁵ Berge 2016: 455.

¹⁹⁶ Berge 2016: 604.

related to technology and influenced to a large degree their notion of what technology could do. Did the Oslo Manual raise such issues that was important to the speakers?

Regarding environmental concerns the 1992 edition of the Oslo Manual spoke of environmental damage or environmental regulation. Environmental damage could be lessened by an innovation in the production process, or innovation could be promoted or restricted by environmental regulation.¹⁹⁷ The 2005 edition has the same content as the 1992 edition, but also elaborates the more social concerns of technology. Now *good for the environment* had become an accepted characterization of innovation and other topics such as health, ethics and education were added.¹⁹⁸ It is especially in the 2005 edition that cultural and societal factors are mentioned. These themes speak usually of how the cultural, political and societal factors hinders or promotes the invention of technologies and the subsequent diffusion of innovations.¹⁹⁹ In the Oslo Manual a broadening of innovation can also be gleamed in the last edition where organizational and marketing had now extended the conceptual use. Godin writes that this can change the canonical representation of innovation.²⁰⁰ Therefore, one can say that the Oslo Manual does consider themes of social, political and cultural importance, albeit in a minor way. The distinction between innovation and economic growth and technological innovations and economic growth is also important to underlie. I will argue that this shows a correlation between the notion of innovation and technology, and the content of the Oslo Manual. It also shows how the speakers adhered to a broader notion than just purely technological. Another question is how science and R&D was spoken of in the speeches in comparison to the Oslo Manual.

Science, R&D and the models of the innovation process

Two aspects of the innovation process are mentioned in the Oslo Manual. One aspect is the belief that research and development (and further the belief in science) was the main drive for technological innovations. This linear model where the scientist discovers something new that leads step-by-step until an implemented industrial innovation. Such a belief in science is part of the mentality of modernity.²⁰¹ In the 2005 edition this *old way* of viewing the innovation

¹⁹⁷ OECD 1992: 21, 31.

¹⁹⁸ OECD 2005: 85, 66, 22.

¹⁹⁹ OECD 2005: 19-21.

²⁰⁰ Godin 2015: 283.

²⁰¹ Misa 2011: 300.

process is summarized well:

Science was seen as the driver, and all that government needed was science policy. Fresh thinking about innovation has brought out the importance of systems and led to a more integrated approach to the delivery of innovation-related policies.²⁰²

This different conviction of the technological innovation process is the chain-link model that emphasizes a more back and forth attitude where it is a continuous process of finding a solution. Knowledge is important in both models, but in the chain-link one it is more used as a pool to be drawn from when needed rather than the original source of innovation. The Oslo Manual presents these two models: In the 1992 edition a careful consideration of the two is made, while in the 2005 edition the chain-link model is presented as the correct way of thinking of the innovation process. A way of thinking of developing technological innovation had changed. How did the speakers' notion of innovation and technology fit with either of these models, and their belief in science in the pursuit for knowledge?

Through the period there was an increasing focus on R&D from the politicians and industry, and only in the aftermath of the economic troubles in 1987 and 2008 did R&D falter in its growth. Since the Norwegian state is heavily involved in business, industry and the *techno-industrial complex*, makes their *technopolitics* focused on financing R&D. Though state sponsorship of R&D never exceeded more than 17 percent of a project at the end of the period, and the funding decreased exponentially the more employees a business had,²⁰³ meaning the businesses funded R&D themselves. This contrasts with forty years earlier when the state sponsored R&D with 24 percent,²⁰⁴ in line with the increased belief in market forces and privatization of the period. The 1992 edition would also state that states focus too much on R&D and not other aspects of the innovation process.²⁰⁵ In relation to the speeches, R&D is mentioned in the same paragraph as innovation in a few occasions.

There were two times in the speeches that innovation was mentioned at the same time as R&D. These paragraphs speak to a broader use of innovation rather than one meaning

²⁰² OECD 2005: 17.

²⁰³ Foyn 2017: 15-29.

²⁰⁴ Thulin 1981: 134.

²⁰⁵ OECD 1992: 19.

technological innovation. Brundtland would in 1989 connect innovation and business with education and research: “Vi må sette fart i nyskaping og næringsutvikling, satse på utdanning og forskning.”²⁰⁶ Bondevik would in 2000 combine R&D with the emerging knowledge-society: “Vi må ligge i front som kunnskapssamfunn, utvikle skolen, satse på forskning og utvikling. Er vi en nyskapende nasjon, har vi også noe å gi til andre.”²⁰⁷ These proclamations speak of a political mindset that connects innovation within the topics of R&D, these did not, however, adhere to technology, but rather spoke of innovation generally.

The political reality was that funding of R&D was seen as an important part of their *technopolitics* in promoting innovation. This can show an awareness that innovation, broadly defined, was economically important, while technological innovation only was a part of this larger picture. Something that would correspond well with the broad use of the designation *nyskaping* in chapter 3, and the findings in the previous section of this chapter. So far, I will share my observation that the words used by the speakers show a common understanding of the international discourse on innovation, that the Oslo Manual represent a part of. Innovation was seen as important to prosperity, and it is caused by these common factors. Nonetheless, I cannot conclude that the notion of innovation and technology corresponds with the content of the Oslo Manual regarding technological innovation.

The emergence of the knowledge-society

From 1987 to 2010 Norway underwent a historical change concerning the importance of knowledge. This was inspired by a belief in progress; that by educating people and creating experts, prosperity was secured. When I use the word knowledge, I mean everything that concerns itself with the acquirement, spreading and utilization of knowledge in a social, scientific, cultural, political, and industrial manner. I believe this is important for this comparison as the acquirement for knowledge is a recurring theme in the speeches that was commented on both negatively and positively by the speakers. This negativity came to light either as comments of applying increasing pressure on the population, or a feeling of losing time. Positive comments could be a proclamation that through knowledge Norwegian success was secured, interestingly, this success is rarely specified and is spoken of generally.

²⁰⁶ Berge 2016: 495-496.

²⁰⁷ Berge 2016: 585-586.

How this historical change transpired can be seen in statistics on the education system in Norway and Brundtland had already commented on this new historical change in 1988:

De markedene som vokser raskest ute er for produkter med et høyt kunnskapsinnhold. Bak slike produkter ligger det mye innsats innen forskning og utvikling. Derfor satser vi så sterkt nettopp på det feltet.²⁰⁸

The importance of the acquirement and spreading of knowledge is a recurring theme in the speeches, also seen outside the specific mentions towards innovation and technology.²⁰⁹ This drive for knowledge also impacted how long younger parts of the population had to stay in school and how many of them went to attain degrees from higher education. Not only is this a demographic change that have impacted what kind of jobs people now held, or what kind of expectations the population felt they must accommodate to. It is also an example of what politicians of this time believed the future would hold, and what kind of policies that would make the population capable of succeeding in the future. The best example that I have found through my reading is how Stoltenberg and Bondevik both conveyed the belief that the acquirement of knowledge now was a life-long endeavor,²¹⁰ which is a new perspective in the speeches. Increasing the acquirement and intensifying the spreading of knowledge was a mentality that permeated the speeches. Can we trace this same mentality in the Oslo Manual?

The difference between the editions of the Oslo Manual regarding knowledge show this historical development. In the 1992 edition, I found mentions towards knowledge only when it was part of the innovation models or speaking about the knowledge gained from innovation surveys. The 2005 edition, on the other hand, would regard how the economy now depended more on knowledge: “Within the knowledge-based economy, innovation is seen to play a central role, but until recently the complex processes of innovation have been insufficiently understood.”²¹¹ It would continue this line of thought, and summarize how innovation policy had now emerged from being strictly about industrial and technology policy:

²⁰⁸ Berge 2016: 465.

²⁰⁹ Berge 2016: 474, 520, 649-650, 674; King Harald V 2000; King Harald V 2003.

²¹⁰ Berge 2016: 564, 593.

²¹¹ OECD 2005: 15.

Thus innovation policy has only recently emerged as an amalgam of science and technology policy and industrial policy. Its appearance signals a growing recognition that knowledge in all its forms plays a crucial role in economic progress, that innovation is at the heart of this “knowledge-based economy”, and also that innovation is a more complex and systemic phenomenon than was previously thought.²¹²

It was not the oil that was the future, but rather the Norwegian people and the knowledge they managed to attain and use. Stoltenberg would summarize this belief at the end of the period in 2010: “Verdien av det norske folks arbeidskraft og kunnskap er mange ganger større enn verdien av oljeformuen.”²¹³ Here we see a correlation between a historical development that was commented on by the speakers and the changing content of the Oslo Manual’s two editions. It shows a common understanding between the international scientific-political discourse and the national political communication in the new year speeches. Knowledge was used as its own entity, a resource if you will, that could be strengthened and then used to create prosperity.

The Oslo Manual and the individual

In chapter 3, we saw that innovation had become a virtue of the individual, rather than being used in strictly a conceptual sense. I made the claim that this change in language was part of a development of individualization that the Norwegian society underwent in this period. The topic in this section, is to see if this focus on the individual can be seen in the Oslo Manual. The reason why is to confirm that the international document either supported, rejected or at all mentioned the individual, and then also see if the theoretical considerations of technological innovation changed in accordance with the historical development of the time.

The 1992 edition of the Oslo Manual does speak of retraining personnel, and that personnel with specific qualifications is a source of innovative ideas.²¹⁴ It later adds the theme on how: “Users as sources of innovative ideas”,²¹⁵ but this example stands alone and is neither elaborated nor emphasized further, other than that industries might benefit from them. It does not adhere to qualities towards the individual, but rather the group of employees or users.

²¹² OECD 2005: 6.

²¹³ Berge 2016: 673.

²¹⁴ OECD 1992: 28; 32.

²¹⁵ OECD 1992: 56.

When it speaks of persons, it is in the context of labor costs not directly involved in innovative activities.²¹⁶ Each time the word individual was used it either meant individual nation, or individual innovation process, not towards an individual person or their qualifications.²¹⁷ In the 2005 edition this would change. No longer is it only the groups that are important, but also how individuals interact in groups. *Gatekeepers* is a new term that is used to describe individuals that use different means to implement new technology, and maintain a network of information:

the presence of expert technological “gatekeepers” or receptors – individuals who, through many means, keep abreast of new developments [...] and maintain personal networks which facilitate flows of information – can be crucial to innovation within a firm.²¹⁸

Not only was the individual added as a word, but it was also given positive traits important to the innovation process in a firm or enterprise. I do not believe this is a coincidence of just innovation theory being conveyed in an international document, but also part of the discourse towards knowledge, the individual and innovation as discussed in the previous section. Godin problematize this in his conclusions of *Innovation Contested* where the discourse on innovation attempts to

persuade policy-makers (and others) of the desirability and inevitability of innovation, said to be the latest or most recent stage of development of society or the economy (e.g., the knowledge-based economy). Together with national governments and international organizations like the OECD and the European Union, the theorists develop narratives, conceptual frameworks and modes aimed at supporting innovation.²¹⁹

Individuals were now part of this narrative of innovation. The reason I emphasize the word individual is because the word innovator held a different meaning in the two editions. It would rather speak of the entire firm when the term was used. Innovator was mentioned

²¹⁶ OECD 1992: 48.

²¹⁷ OECD 1992: 11; 19.

²¹⁸ OECD 2005: 20-21.

²¹⁹ Godin 2015: 284.

briefly in the first edition,²²⁰ but in the second it is used throughout the entire document, adhering to this meaning.²²¹ When the Oslo Manual then starts to speak of individual employees, how their qualities influence the innovation process, and how individuals cause innovation, it shows a changing understanding in what influences innovation and how the document want to convey that understanding.

My conclusion is that both the speeches and the Oslo Manual show the societal shift in Norway that followed the international trend that puts more weight on the individual in terms of official qualifications and skills. Success is measured more in terms of career choices, promotions and education than the traditional older Norwegian values that were normal around a generation after the war. I believe this is important as we can see a clear correlation between the content of the speeches, the literature on the historical development of the time, and an international document about technological innovation. It shows how the speakers have been influenced by this established discourse on innovation. All these different perspectives hold the same conviction that the individual is important in causing innovation.

State interventionism in the techno-industrial complex

Chapter 4 concerned itself mostly with the question if the speakers expressed that technology was set outside the control of society and if they elevated technology to an unapproachable position. As I concluded they did not express a technological deterministic inclination, but they did express a shift from a wary pessimistic to an optimistic viewpoint regarding technology. This is important as the Norwegian state was involved in the *techno-industrial complex*, and the industry and business sector. Inadvertently they also became involved in the innovation process. As we have already seen, the Norwegian political climate in this period formulated and instigated *technopolitics* on various areas, the clearest example in this dissertation is Stoltenberg's *moon landing*, I want to look further into if the Oslo Manual either supported or opposed state interventionism and if state involvement was said to promote, reject or alter innovation.

The 1992 edition of the Oslo Manual underlined how policy can promote or restrict innovation divided between three areas that are relevant to this discussion: “a) education and the supply of skills; b) taxation policy and accounting regulations; c) industrial regulation

²²⁰ OECD 1992: 50.

²²¹ OECD 2005: 17-18, 31, 49, 54, 70-71, 77.

(including environmental regulation, health standards, quality controls, standardisation and so on).”²²² Norway was a heavily regulated country and politicians strove to expand the education system and professionalize larger parts of the population in the period. It also had a comparatively high taxation level, and it concerned itself with everything from pollution to the well-being of the Norwegian laborer. However, the 1992 edition does not specify in what way these areas influence the innovation process. I cannot determine in what way these factors restrict or promote innovation as it is not specified. A closer look into the 2005 edition might give an answer.

As we saw above the 2005 edition was more confident in how knowledge and information systems played into the innovation process. Did this also occur regarding the parts of the document that dealt with the state and its influence on the industry and business sector which might have had influence on the innovation process? In the 2005 edition it is referred to an older OECD report that concluded on three points regarding policy:

- there is no simple policy answer to problems as complex as those raised by technology/employment relationships in a knowledge-based economy;
- an efficient policy strategy must combine a number of macroeconomic and structural policy actions;
- the coherence of the policy package is a condition of success, and it depends on the validity of the policy framework as well as on the quality of the process of policy formulation.²²³

A problem with these points is that they are too vague to say anything about it being related to the notion of innovation and technology in the speeches. Since this work does not primarily concern itself with the innovation policy launched by the governments of Bondevik and Stoltenberg, I will not look into the coherency of these political documents. I will though stress the point that the political need for a wholesome innovation policy seems to have convinced both governments at their time. I have found no other related content than the repeat of the same points from the 1992 edition above.²²⁴ The Oslo Manual does speak on topics that are related to state involvement in the innovation process, which is of note, but no

²²² OECD 1992: 21.

²²³ OECD 2005: 18.

²²⁴ OECD 2005: 27.

other correlation can be found.

Conclusions

My working question for this chapter was: “Did the notion of innovation and technology in the speeches correspond with the two editions of the Oslo Manual?” I will conclude that they did to a certain extent, but this claim needs elaboration. What is most clear is that innovation in the speeches was expressed broader than just adhering to technological innovation. A reason for this might be that the speeches speak broadly on a multitude of themes. Though the second edition extended the concept with organizational and marketing inclusions it concerned itself mainly with innovation within the firm, and not other areas such as social innovation. The areas in which the documents and speeches mentioned innovation were different to some extent, however, it was always spoken of in a positive light.

This positivity shows a commonality in that it aligns with the pro-innovation bias. The Oslo Manual did define what innovation was but did not question this understanding. Innovation means what it means, and it is positive. Innovation’s economic consequences were also shared by the notion in the speeches as innovation was viewed as an economic boon. The speakers had a different deference towards technological innovation when we recall Stoltenberg and the *moon landing* with all its other concerns than just economic. The Oslo Manual did speak briefly on other areas such as environmental damage, but these inclusions seem more to be added only as a necessity rather than something that was detrimental to the document’s purpose. In the Oslo Manual there was not enough concrete information on how state intervention influenced the innovation process, however there was the shared notion that innovation needed to be formulated into a coherent policy; which was shown through Bondevik’s and Stoltenberg’s innovation policy at the end of the period.

Two areas did, after my reflections, show a strong correlation: the importance of knowledge, and the inclusion of the individual. Why I have chosen to focus on these two areas is that they capture a historical change in society that was present in both the speeches and the Oslo Manual. The acquirement and spreading of knowledge was detrimental to success in the notion of innovation and technology in the speeches and the Oslo Manual. Speaking of the innovators and innovative individuals, is shared with the inclusion of *gatekeepers* in the second edition. Changing from speaking of the linear model and chain-link model equally to

adhering completely to the chain-link model show how a new understanding had formed. Knowledge was now a pool to be drawn from continuously through the innovation process, rather than a direct source to innovation. This view is also apparent with Stoltenberg's and Bondevik's comments on life-long learning, innovation as a virtue, and how it is the people that are knowledgeable which Norwegian society will depend on in the future.

I will argue that a common understanding is shared between the notion of innovation and technology in the new year speeches and an international scientific political one. In consequence this shows how the speakers in Norway were influenced by a broad international discourse on innovation. Politicians are in contact with a variety of scientific fields that tout their own understanding.

Conclusions and reflections

I have in the preceding chapters investigated the notion of innovation and technology in the new year speeches, and we have seen how this notion corresponded with the Oslo Manual. This final chapter will summarize the different conclusions from the preceding chapters, then I will reflect on these partial conclusions before I will provide an overall conclusion. After the conclusions I will give some additional reflections on what is evaluated to be important according to these findings, what they mean to the research field, I will also present some approaches that could not be answered, strategies that were abandoned, and lastly areas that needs further research.

The first discussion was held in chapter 3 and the main purpose of this chapter was to establish the notion of innovation. From the onomasiological analysis we could determine that *innovasjon* as a term had not yet entered the vocabulary in the new year speeches, but that its use increased exponentially in the public discourse. However, I will not focus on this but rather present the other approaches in this chapter and the conclusions that came from them:

- The main conclusion from chapter 3 was that the speakers, except King Harald, held a pro-innovation bias. The King would critique specific consequences of innovation and showed the broadest reflection when the concept was used. All the other speakers did comment on the consequences of innovation, but innovation itself was not critiqued, nor was any calls made to reject, halt or alter the changes that was occurring.
- There were several areas that was spoken of when the theme was innovation. Economic, R&D, knowledge and business and enterprise sector were common areas for Stoltenberg, Brundtland, Syse and King Olav. King Harald and Bondevik would on the other hand also use innovation on more broad areas, speaking of cultural innovation and how innovation had caused success in different areas of the Norwegian society.
- After looking at the terms of modernity adhering to progress (*fremskritt, fremgang*) it became more apparent that there is a difference in the terms used and the connotations that followed them. With the term of progress there followed a *however*, a doubt that the progress was either insufficient, or that past progress had not been beneficial. This is in clear contrast to the concept of innovation where the positivity was nearly unanimously conveyed. I made the claim that this can show how there is a common

and inter-connected political discourse where the notion of innovation is influenced, and that this in turn changes the political language.

- In the last part of the chapter I investigated more fully the observation that innovation now had become an individual virtue in the speeches. King Harald, Stoltenberg and Bondevik would begin to speak of being innovative and of innovators. I made the connection that this is influenced by the increasing demands of knowledge in society, and looking at the principles that was behind the education reforms in the period there is a clear connection to the individualization in society and the increasing belief that individual capacity to innovate is important.

In chapter 4 the purpose was to investigate the notion of technology in the new year speeches. The primary approach I chose was to see if the speakers held technological deterministic tendencies. I would deepen this perspective by looking at the two different perspectives of technological optimism and pessimism. The conclusions are:

- The main conclusion from this chapter is that the speakers, except King Harald's utterances in 1999, did not express technological deterministic tendencies. The national perspective of the speeches, the historical reality of political autonomy in forming their *technopolitics*, and the speakers' adherence to the rhetorical *us* and *we* diminished this. Even though the speakers did express a feeling that technology had crucial and determinative influence over society, especially with the emerging information technology, it was never spoken of as unapproachable.
- A historical change occurred in the period where the speakers' wary pessimism would be replaced by a more optimistic stance towards technology, as exemplified with Bondevik and Stoltenberg. It seems that technology's future potential now outweighed the technological repercussions of the past. This was seen especially clear when looking at Stoltenberg's *moon landing* and how it signified a pro-modernistic technological optimistic notion of technology.
- Technology would be spoken of in areas of the health care sector, effectivization in general and in public management, architecture and the business and enterprise sector, and lastly climate and environmental concerns. This shows how technology shared some contextual similarities with innovation, but also how it also was distinct on its own.

Chapter 5 would merge the perspectives from chapter 3 and 4 and see if these perspectives corresponded with the Oslo Manual. Its two editions were investigated to see if the document's content aligned the notion of innovation and technology in the new year speeches. I concluded that they did, albeit not on all perspectives:

- The perspectives that I found to align was first the positivity towards innovation, especially when concerning the economic consequences.
- The second was how the speakers and the Oslo Manual shared the same historical development in underlying more the emergence of the knowledge-based economy.
- Lastly the Oslo Manual would start to speak of the individual and how they influence the innovation process, which is in line with how the speakers now communicated how being innovative was a virtue for the individual and spoke on the innovators.
- The perspectives that did not align was whether state intervention in industry, or the business and enterprise sector, influenced the innovation process, as the Oslo Manual did not specify how the innovation process was impacted by state intervention. However, both Bondevik's and Stoltenberg's governments would formulate their own innovation policy, which was recommended in the last edition of the Oslo Manual.
- Another perspective that did not align was when the speakers would not speak on innovative technology and R&D, but rather they spoke generally about innovation.
- I concluded that this shared understanding shows a common understanding between an international discourse and the Norwegian notion of what innovation is and the increasing importance of innovation in policy-making.

Some reflections on these partial conclusions are needed. We can begin by looking at the differences between the concepts. If one looks at the concepts diachronically it was technology that experienced most change. The concept of innovation's use and areas, and connotational value remained, more or less, unchanged through the period. Technology however would see change in how it was used, how much attention it received and its connotational value went from wary pessimistic to optimistic. I will argue that the difference is important as technology was still viewed as positive, but it could be misused, while innovation seems to have been inherently good, if not also seen as desirable and completely necessary to meet the future. Following the concept of technology might show how historical development and events changes ways of thinking, while innovation can tell us something of

modern society's fundamental mindset towards change, and show how understanding is maintained and spread by discourses.

One can argue that it is the prime ministers' speeches that are most interesting in this regard as they are closest to the decision- and policy-making of the period. I chose to focus on both the kings and prime ministers as their differences or similarities might show how the notion changes between political roles. As we have seen King Harald was the speaker with most reflection, or perspectives, when speaking of the concepts. This can show how the King can speak differently about concepts as he does not need to worry about election cycles or policy. It might also speak of a different contact with the scientific political discourse. However, the kings were careful in their rhetoric, rather than making sweeping comments on changes in society. When they spoke on what direction society should head, it was more of an encouragement rather than a direct call for action.

Reflections can also be made regarding the political reality that surrounded the speakers and how it influenced the notion of innovation and technology. Both the economic recession and the climate crisis are examples of when the speakers would focus more on the different concepts. It was a notion that innovation would better the economy, and technology would help in solving the climate crisis. This shows not only a notion of the potential of the concepts, but also a consciousness in what the political actors was convinced was valid, believable and genuine. It shows the final *travel* of a concept through the discourses and it show a consciousness around the concepts as they are used about specific areas. The prime ministers were also political actors whom were involved in *technopolitics* that affected the various *technopolitical regimes* in the *techno-industrial complex*. An involvement that was expressed in the speeches through a belief in political autonomous control. It is also an example of the discourses the speakers might have been in contact with.

A necessary foundation of this work was that various discourses influenced the political climate of the period, and that in turn would impact the content of the new year speeches. When looking at the concept of innovation the shared understanding speaks of a commonly held belief that innovation was good, and when the *technopolitical regime* in Statoil presented their ideas of CCS technology Stoltenberg would dedicate large portions of his speeches on this topic. I will not make any claims of direct correlation; however, the political actors

partake in meetings, attend conferences and presentations, read documents, visit businesses and firms, formulate policies within their own political party and so forth. It is through this multitude influences from the political reality that the notion of innovation and technology were formed, and then further spread to the entire population with the speeches.

This brings us to the final reflection and that is how the international discourse and reality correspond with the Norwegian notion of innovation and technology. The pro-innovation bias was, and is, an international phenomenon that has been present in innovation studies for decades prior to this work's period. Its prevalence in the speeches show at least that a Norwegian discourse on innovation has accepted a notion of innovation as beneficial. Though the Oslo Manual is only a part of this international discourse on innovation, it is still an example of how a notion is developed and accepted through international contact. The period was also marked with other international considerations that, if not narrowed, at least influenced what kind of actions the political actors could take. The EU, internationalization, the global economy, and the climate crisis are all examples that impacted the Norwegian political climate.

Overall conclusions

My research question was chosen to be: "What was the notion of innovation and technology in the Norwegian new year speeches in the period 1987 to 2010?" The first thing I will conclude is that there was at the end of the period a common notion shared between Prime Minister Bondevik and Stoltenberg that was future-oriented. A notion that innovation could lead to new solutions, and that the political climate now believed that innovation needed its own policy. The speakers held in their speeches a pro-innovation bias that in addition reveals a pro-modernist stance. This was visible through the entire period. Areas where this was spoken of were the economy, business, enterprise and industrial sector, public management, and with the acquirement and spreading of knowledge. Innovation was either viewed as a necessary part of change, or as a solution to problems, however not everything about Norwegian society was to fundamentally change; the welfare state standing as the clearest example. This common notion speaks of an understanding of the reality surrounding the speakers that goes beyond party politics.

Through the speeches a belief in autonomous control was conveyed, that the politicians, or the

national *us* and *we* not only could control future development, but that one *should* control it. Norwegian politicians would through the period formulate and instigate their *technopolitics*. From speaking broadly on how technology should be used in creating prosperity, to how technology could be a contribution to solving the climate crisis. This belief in control did intensify after the diachronic change occurred through the period. The beginning of the period was marked with a wary pessimism when areas such as the nuclear threat and emerging problems of environmental pollution was a topic. At the end of period, however, this pessimism was replaced by an optimism and Stoltenberg's *moon landing* is the final example of this new pro-modernist technological optimistic stance. It also showed a political belief in control over the technological development. Though a belief in political control was uttered through the period the options available drastically changed with the increased contact with the EU, climate crisis, changing national political climate, and the global economy. This in consequence would change how much control the political actors, in reality, had.

King Harald stood out as the speaker that would not only share in the technological pessimism at the beginning of the period, but would also continue a more balanced stance between optimism and pessimism in his speeches by reflecting on the various developments that was occurring. Though a notion positive to the future was conveyed by other speakers, not all aspects of these changes in the period was lauded. The ramifications of highly-regarded traditional jobs disappearing in the demand to adapt is an example of this. Still, no calls came in the new year speeches to either halt, reject or alter the changes which occurred in these areas.

I will conclude that the notion of innovation and technology was also part of an international understanding of innovation through the corresponding content of the Oslo Manual. They shared in the pro-innovation bias, spoke of the same areas of the economy, business, enterprise and industrial sector, and the knowledge-based economy. This shows an influence from a discourse outside of Norway that has impacted what the speakers conveyed was necessary for the future, and have impacted how policy was formulated and instigated. In closing I will elaborate Sejersted's conclusion about the Norwegian politics in this period that sought to preserve the welfare state; not only that but the politics sought it through innovation. A self-contradictory notion, as one does not know what will be left behind or what the future will hold.

Additional reflections

The findings from this work is important in a broader sense. Looking at how the notion of innovation and technology is conveyed in political communication might give a more reflected view on the consequences of policies and societal development. When political actors formulate policies, this notion influence their decisions and a reflection on these themes is important as not to get carried away by illusory promises of the future. Especially finding out where these influences come from, and how they influence policy-making are detrimental in this endeavor. As mentioned before, Godin problematized how even the field of innovation studies took innovation for granted. They did not discuss what innovation is and it seems that the consequences of innovation are not reflected upon, as they might have been blinded by the positive sides of innovation. I have from this work taken the perspective that innovation in itself should not be treated as wholly positive, but careful considerations should be taken as not to throw important established aspects on the figurative scrap-heap, and accept innovation just because something is called innovation. One should be careful when formulating language that is fundamentally structured towards legitimizing of novel changes. Not to say that one should adhere to a rigid conservatism, but one should consider what is left behind in the continuing struggle towards the future.

These influences mentioned above are also important as they show how an international notion seep into the rhetoric of the speakers. I have not investigated deeply the sources of these influences. However, one can start to ask other questions when the content of traditional national new year speech holds a notion that can be seen in an international document published by the OECD. A country is not a solitary unit and especially in present times this has become apparently clear. Still, there should always be a critical view on where national policies are headed. National politicians might be losing their autonomous control to international influences, even though they state something else. I am not wholly pessimistic, but it is my conviction that such reflections are necessary in order to not be impetuous when dealing with rhetoric that are future-oriented, or policies that adheres to innovation and technology.

Regarding the research field I have given both the national and international field of conceptual history an additional perspective especially towards how political actors communicated innovation and technology. Through my reading I have found little research that have investigated how concepts are conveyed in political communication and this work

will help in filling that gap of knowledge. Though the onomasiological structuring and conceptual approach has limited what areas that were investigated there are still pieces in this work that have elucidated Norwegian political history concerning the economy, industry, technological development and the emergence of the knowledge-based society. My work has in part seen how the speakers summarized the past, and conveyed hopes and aspiration for the future, and then compared it to the historical reality that surrounded the speakers.

During this work there have been several questions that have appeared, but the scope of this dissertation made answering these not viable. In this work I have also chosen some strategies that have proven themselves not to have worked well in answering the research question and as such, were discarded. I will now reflect on these questions and strategies. The first question was why had the word *innovasjon* not yet been used in the speeches. It seems strange that a word which held such positive connotations would not be used in the political rhetoric of the speeches. Especially when both the governments of Bondevik and Stoltenberg launched their own policies regarding innovation at the end of the period. To answer this question different considerations and source material would have had to be used. A closer look might have been needed in the Norwegian Official Reports, other speeches and other public documents.

Another question would have been to delve deeper into the politics of innovation, basing itself of the Norwegian Official Reports, pamphlets, conferences, interviews, debates and so on to see the more policy side of innovation. I have concerned myself mostly with rhetoric in this work and to look further into how this discourse became policy and then realized would, after my reflections, given interesting findings. A last question I pondered was of a more philosophical leaning. In the speeches I have observed a rhetoric that speaks of the future in terms of inevitability and necessity. It is an expression that the future, or development, progress even, will come no matter what society does. This expression of inevitability is accompanied with an expression of necessity, which means that the future and changes come no matter what, but the changes are required in order to succeed. I chose not to pursue this topic any further.

Through this work some strategies have proven themselves not to have worked well. I began this dissertation by looking too broadly on innovation itself, encompassing themes varying from the fall of the Soviet Union to the digital revolution. This proved to be a wrong strategy as nothing conclusive could be found. By using onomasiology and then by narrowing it down

by focusing on technology the work became more attainable. This wide investigation did make me familiarized with a wide range of areas in Norwegian history, but much of this work were for naught.

Through this work there seems to be a lack of research into the usage of innovation in political discourses in Norway, and maybe internationally, though I cannot say this for sure. Investigating the Norwegian Official Reports that were published during the fifties, sixties and seventies might show when the concept of innovation started to appear in these scientific political documents. Furthermore, an investigation could be undertaken that looked at the speeches further back in time. The conceptual history of innovation is far from finished with this work, and with the increasing use of it; finding the source and mapping where it has influenced policy-makers would be prudent. As this work have shown there are not only valuable findings that can be gleamed from the semantics of a concept, but also by comparing other sources of rhetoric, party programs, how business and the enterprise sector tried, and succeeded to influence the political climate. There are many other approaches that can shed new light on how innovation and technology was expressed, what notion that followed the concepts, and lastly, how all this influenced policy.

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Appendix: New Year Speeches of Kings and Crown Prince 1987-2010

It is important to remember that I have dated the Norwegian Royalty's speeches from the first of January, while they in fact are held in the last few hours the day before. Meaning I have dated 1986 to 1987 through the dissertation. The reason for this change was to align the dating with how the prime ministers were dated in Berge's book and therefore make the historical chronology clearer.

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