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THE ARCTIC
UNIVERSITY
OF NORWAY

School of Business and Economics

Time, change and resistance

A literature review of the influence of time on change and resistance to change in organisations

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Master's Thesis in Business Administration - June 2018



FOREWORD

(In Norwegian)

Denne oppgaven markerer slutten på et lærerikt, givende og utfordrende MBA-studie.

Som deltidsstudent, i tillegg til fulltidsjobb og et liv som småbarnspappa, er det litt ironisk at oppgaven handler om *endring* og *tid*. I en livsfase med store endringer, og der tid er en mangelvare, vil jeg takke min veldig tålmodige og støttende kone som har strukket seg langt for at jeg skulle kunne fullføre studiet. En stor takk går også til mine snille svigerforeldre, som alltid stiller opp.

Jeg vil også takke min dyktige veileder, Anne Grete Saudanet, for gode og konstruktive tilbakemeldinger.

Oliver P. E. Holman

Tromsø, 1. juni 2018

ABSTRACT

This study explores how the multifaceted concept of time influences change. A comprehensive systematic review of the literature is used as the method, with twelve empirical studies forming the base of the empirical data considered against the theoretical framework. There was division found in the studies between "recipient"-focused and "management/organisational performance"-focused studies. Combining both presents a broad portrayal of the relationship which *time* has with *change*. Within the studies *pace*, *temporality*, *timing* and *rhythm* were found to be important dimensions of time as they relate to change. Analysis of the findings using Kurt Lewin's classic three-step model, revealed that each dimension was important in at least one stage of the change process. The results suggest that the probability of success of change will increase if the timing of change events are in the right chronological order (i.e. sequence), and periods of (intense) change are evenly intermitted with periods of lesser change. There is also a key difference between subjective experience of time among recipients and objective time by which organisations are run. The results suggest recipients' perspectives on the temporal aspects of the change (i.e. their subjective time) are an important factor on whether there will be resistance to it. Major events, including change events, appear to shape recipients' perspectives of time and can cause *temporal shifts*, changes in the collective experience of time amongst employees, which bring their view of time closer in line with the organisation's perspective. This, in turn, can facilitate change.

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1 INTRODUCTION

Time and *change* are seemingly simple and everyday terms in organisations, yet unravelling these concepts reveals surprisingly complexity with important connotations for their interrelation. This study looks closer at how time influences change processes.

The aim of this thesis is to contribute to the understanding of change by systemising the current knowledge of how time affects change. I explore how the various dimensions of time affect the success of change implementation and organisational performance following change. I also explore how the dimensions of time affect the recipients of change and, more specifically, potential resistance to change.

I use Lewin (1947) three-step process of change to help systemise, compare and analyse the findings. The result being a broad understanding of the influence of time, and its dimensions, on change and resistance to change in organisations.

1.1 Background

«Change or die» (Robbins & Judge, 2013) is one of the many dramatic warnings from the managers and organisational literature, that organisations should under a nearly constant development/change to be able to keep up with changes in technology, globalisation and competition (Jacobsen & Thorsvik, 2014, p. 384). Organisations are under a constant pressure to improve performance to survive and satisfy stakeholders. Doing the same as one has done before rarely leads to improvement in performance, and hence the pressure to change. However, it has been widely reported that a large percentage of strategic change initiatives do not have the desired effects, have adverse effects or simply fail (Burnes, 2011).

This importance given to change and the high failure rate can be the reason behind the study of change being one of the greatest themes in organisational literature and research. Early change research has been critiqued to “*being largely acontextual, ahistorical and aprocessual*” (Pettigrew, 1985; Pettigrew, Woodman, & Cameron, 2001, p. 697).

Change in an organisational context is described as the differences between the organisation at one point in time to another (Jacobsen, 2012). Time is hence a necessary factor in all change. Pettigrew et al in their well cited article note that “*several writers have acknowledged ... that time must be an essential part of investigations of change if processes are to be uncovered*” (Pettigrew et al., 2001, p. 697). If time is a determining factor in the success of change initiatives, then surely it is worth adjusting the timeframes to give the change initiative the best possible chance of success. Examination and understanding of time, context and processes are gaining momentum as key areas of change research, although several authors still consider time to be under-explored in studies of organisational change (Dawson, 2014; Jacobsen, 2012; Waterworth, 2017).

Time is a surprisingly complex and multi-faceted concept. There are also many terms used for the different dimensions of time, and this study highlights the inconsistency in the usage of the terms. To date, there is lack of systemisation of how time and its various dimensions affect change. This study looks closely at how each of the dimensions of time has been examined against change, both in how they affect the overall success of change in organisations and how it affects the recipients, i.e. the individuals within the organisation.

Organisations are comprised of people and, therefore, change in an organisation invariably involves change to (something about) the people within it. Change within an organisation often results in changes in the power dynamics within the organisation (Pfeffer, 1992), where some individuals gain power and other lose power. Change can also have other negative consequences for (some) individuals, for example redundancies, struggle to adapt to new practices, changed working hours, etc. Change, therefore, often meets resistance to change from the recipients of it. This resistance to change (and lack of overcoming/reducing it) is a theme throughout the literature on why change often fails. It is of interest to investigate how time affects recipients, and whether it can more directly affect resistance to change.

Change literature has traditionally examined resistance to change from the change agent perspective (Huy, Corley, & Kraatz, 2014); questioning what change agents can do to reduce resistance to change, with the underlying stance that change is beneficial to the organisation and resistance is a barrier to those benefits (Huy & Mintzberg, 2003). However, several leading scholars believe that resistance to change research should take a recipient focus (Huy et al., 2014).

A key determinant of whether there will be resistance to change is the “readiness for change” of the recipients (Balogun, Hailey, & Gustafsson, 2016). “*Readiness is the cognitive precursor to the behaviours of either resistance to, or support for, a change effort*” (Armenakis, Harris, & Mossholder, 1993, p. 681). Recipients need to, in effect, make sense out the change before they are ready for it. *Sensemaking*, the cogitative process that recipients have to go through to comprehend the change that they are expected to undertake, has been shed light on by empirical studies over the last two decades. It has been argued that this body of empirical evidence has concentrated on the micro-processes within one organisation, and that further research is needed to explore how the macro-processes of change affect sensemaking (Guette & Vandembemt, 2017). In this study, time is explored as one of macro-processes that could affect the sensemaking of recipients.

Changes can be traumatic to the employees. Zell (2003), for example, compares the thought process of professionals who are faced with change with the mortal patients; denial, anger, negotiation, depression and acceptance. Scholars have thus examined the emotional and subjective processes which recipients of change go through prior, during and after the change, and to attempt to capture the “*the lived reality of organisational change*” (Guette & Vandembemt, 2017). Isabella (1990) created a cognitive model of individuals’ interpretation of change based on Lewin’s three-stage process of change. In the model, individuals speculate on how the change will affect them before knowing the full details, with a predominant focus on the negative outcomes, leading to resistance to change. During and after the change event, individuals must revise their interpretation of change as the real details of the change are confirmed. Isabella thus suggests that resistance can be amplified as the change progress, as the previously anticipated negative effects become a reality while moving through the process. In this study, Lewin’s model is also used to analyse individuals’ interpretation through the change process, and its impact on resistance and the overall success of the change. The finding suggest that temporal dimensions are very important to this process.

1.2 Personal Interest

My personal interest in the topic stems from being a recipient of several change processes (including early involvement and part responsibility for implementation in some cases), which have had both short and long timescales. The change processes have varied in scope

and form, although management in these processes have generally gone through the standard *recipe* prescribed by change management theory of “creating urgency”, involving staff at all levels, large amounts of communication about the process, definitive time deadlines for steps in the process.

While change often involves a step into the unknown, managers seem often to be given, or choose, a definite timeframe by to implement the change. As timeframes are often a choice, it would seem an important area of change research, to enable managers to make better choices.

Personal experience has been that implemented change in short timescales have come as a shock for many employees. While longer timeframes, where the need for change has been communicated early, have created uncertainty, active resistance to change and political manoeuvring, particularly amongst recipients who feel threatened by the change.

The thesis started as a project to find out whether there are any “answers” or theoretical explanations in the literature to what the processes that the recipients go through, and how these can be affected by time. In addition, whether there is a *goldilocks* timescale, in which resistance to change minimized. I am aware that these personal experiences influence the research process and have tried to minimise and highlight the potential influence through the method used and its description below.

2 THEORETICAL FRAMEWORK

The importance of change for modern organisations, and its potential impact on recipients, was highlighted in the introduction. In this theoretical overview, I consider briefly the content that organisations are looking to change and the process by which that change comes about. Once we have covered this basic idea notion of the “what” and “how” of change, I review how time has been conceptualised within the study of organisational change. Finally, I present a detailed model of multi-dimensional concept of time as it relates to change.

2.1 What to change?

Organisations are a somewhat abstract concept that are hard to define. Most definitions include some reference to targeted/binding cooperation between people (Kvåle & Wæraas, 2006). Therefore, to change an organisation, (something about) the people within the organisation need to change. Balogun et al. (2016, p. 66) categorise change targets into three categories:

- *“Outputs: the outcome of what people do;*
- *Behaviours: what people do and the way they do it;*
- *Values: the way people think about their work”*

The common theme here is that it is the recipient who actually have to change. It should also be noted, that for most people employment is an extremely important part of their life as the source of income they depend upon and the single activity, which they use most of their waking time. It is no surprise that changes at work have a profound impact on the individuals. Emotions, like the concept of time, are a well-known everyday phenomenon for most people. Emotions can be positive or negative. Emotions can be described as short-lived psychological reactions to happenings, which can then merge into moods, which are longer lasting and less concrete psychological states (Frijda and Goodstein (1988) and Barsade and Gibson (2007) via (Smollan, Sayers, & Matheny, 2010)). In the 1960’s organisational scholars began to discuss the notion individuals experienced a form of psychological contract which was then “broken”, and that this breach of psychological reactions could lead to negative emotions and behaviours (Turnley & Feldman, 1999).

Balogun et al. (2016) argue from a change management perspective that that outputs are often targeted when time is short and there is pressure to show improved results/performance. Behaviours require the organisational system in which the individuals operate in to be changed, otherwise they will resume to the status quo. Behaviour changes can take a longer time than output changes, unless there is a crisis which facilitates the behavioural changes. Changing the values of individuals is generally accepted to very difficult to achieve and takes a long time, but true fundamental change will involve some degree of change in the beliefs and assumptions of the individuals.

However, the emerging view is that the time aspects of change have been somewhat neglected in comparison to the research on the content of change and that we do not have a full understanding of their effects (Pettigrew et al., 2001). Before we consider the time aspects in more detail, I present the theoretical framework of the process of change, which is later used in the discussion of results.

2.2 How to change?

Lewin's (1947) classic three-step process remains the most popular theory for explaining the process, which recipients need to go through to change. Lewin originally described change behaviour in everyday life, but the theory has been widely used in change management theory. For example, Kotter's eight-stage process for change implementation, which is rooted in Lewin's theory, is one of the most popular widely used model for change implementation (Kotter (1996) as further developed in Kotter (2012)). Most change management textbooks also cite Lewin (e.g. Jacobsen (2012) and Balogun et al. (2016)), particularly in relation to understanding and managing resistance to change.

Lewin explained behaviour as determined by two opposing forces; the urge to maintain the status quo and driving forces, which want to change that status quo. Lewin described the process of change as having three phases; 1) unfreezing, 2) moving, 3) freezing. *Unfreezing* is the unlearning current practices, which is achieved by increasing the driving forces and/or decreasing the decreasing the restraining forces. *Moving* is the transition state where the actual change happens, moving the equilibrium of the forces in the desired direction. *Freezing* concerns establishing the *future*/post change state is cemented in practice, to avoid slipping back to the old equilibrium.

2.3 Change as a linear event vs continuous process

One of the major criticisms with Lewin's model is that it is too linear (Balogun et al., 2016; Cummings, Bridgman, & Brown, 2016; Purser & Petranker, 2005). Along a linear timescale, change is seen as a finite period (the moving), between two periods of stability. Several of the most cited change theories share this linear/episodic view of change (Dawson, 2014; Purser & Petranker, 2005). Even the more modern punctuated equilibrium theory (Romanelli & Tushman, 1994), sees changes as episodic where periods of inertia, when performance is high, are interspersed with periods of more rapid change when necessary to "catch up" or match environmental conditions. Considering change in organisations, it oversimplifies change as being one episode or event instead of a sequence of events. In modern organisations keeping up with the aforementioned pressures to change, change processes in various stages can often be happening simultaneously in different parts of one organisation, particularly in larger organisations. In practice, the process of change is also often characterised by modification from original plans, uncertainty and delays (e.g. Greenwood and Hinings (1988), van Hoek, Johnson, Godsell, and Birtwistle (2010)).

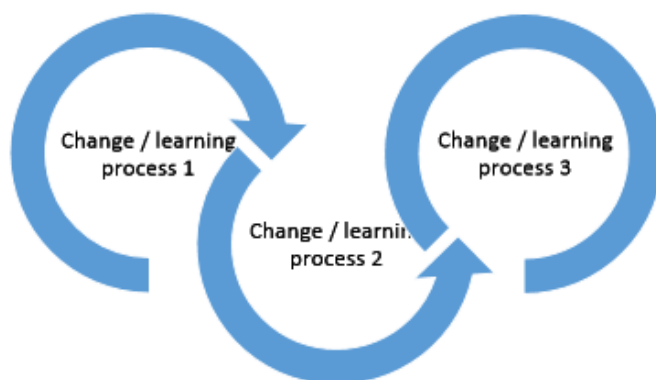


Figure 1 - Change as a continuous process

There is an emerging shift in the change literature, which views change as a continuous, evolving or incremental process (Purser & Petranker, 2005). Change becomes a more cyclical or continuous process (see Figure 1), where something some change event is always ongoing. Organisations evolve to match their surroundings in a pseudo-Darwinist process. The differences between the theories, may just reflect the perspective of the observers, where from a distance it may seem that change happens only intermittently within an organisation but, up close, there is continual or at least very frequent adjustment or smaller changes (Purser

& Petranker, 2005). Dawson (2014) takes the view that change scholars' tendency to differentiate theories based on this divide, "*has inadvertently scholars to underplay the central dimension of time in their attempted to clarify, compare and contrast theories on organisational change*" (Dawson, 2014, p. 287).

While the linear view of time in Lewin's model of change may be an oversimplification, which is most likely a more continuous process in modern organisations, Lewin's model can still be valuable to understand the process of change from individuals' perspective. In this study, Lewin's three stages is used to help understand the processes that the individuals that make up the organisation go through. At the same time understanding these processes may not follow a simple linear trajectory, but there is a possibility for them to have to go back a stage a two before continuing, or for the stages to go in loops as represented in Figure 1.

2.4 Time perspectives in the study of change

The paradox of time is that while appearing to be a simple concept that is heavily integrated in nearly all aspects of society, is extremely difficult to describe in words and is multifaceted. Philosophers and scholars of nearly all disciplines have heavily theorized time (Dawson 2014). However, several leading authors within the study of change have contended that time has not been given the focus it deserves, as such a vital aspect (Dawson, 2014; Huy, 2001; Jacobsen, 2012; Pettigrew et al., 2001). "*Time is a vital component to understanding change and yet it is rarely unmasked, examined and theorised*" (Dawson, 2014, p. 287).

In organisational theory, hereunder also the study of change, time has been broadly categorised into *objective* and *subjective* time. Clocks and calendars define *objective* or *quantitative time*. Objective time is completely imbedded in the way the organisations are run. For example, work routines, contracts, budgets, projects and remuneration for employees are all managed and based on objective time. The common saying "*time is money*" is a good representation of how time can be viewed as a commodity not to be wasted (Huy, 2001). Indeed, in LEAN or *continual improvement* thinking, overuse of time in the form of waiting is considered as "muda" or waste (Waterworth, 2017). Time has thus been the source competitive advantage for those organisations that can use least clock-time (all other things being equal).

At its most basic, clock-time can be seen as a barrier to change (Wilkinson, 2011), where those responsible for implementing, or those recipients who are expected to change, lack the time to actually implement the change. Some amount of clock-time will thus be necessary in all change to complete the practical tasks associated with the change. However, as previously mentioned changing the individuals is often the most difficult task, and they will have their own experience of time and this experience can have consequences for whether the recipients resist the change. Huy (2001, p. 602), citing McGrath and Rotchford (1987), notes “*qualitative time is important in change processes, because temporal experiences represent potential sources of psychological stress*”. Therefore, subjective time becomes a major factor.

Subjective or *qualitative* time is harder to define than *objective* time and is very dependent on context. Subjective time is how the individual (or team or other entity) views or experiences time. Subjective time can follow different trajectories than object time, have a plurality of meanings, flows discontinuously, cannot be easily measured or manipulated (Huy, 2001). What is experienced as a short period of time to one person can be experienced as a long period of time to someone else. Including subjective time in this study provides a better understanding of the processes that affect the individuals that organisations consist of. “*(I)t is the subjective and intuitive aspects of time, that may be most critical in understanding how time relates to organisational processes*” (Lord, Dinh, & Hoffman, 2015, p. 263).

Capturing the importance of subjective time and the multi-sequence nature of change in the modern organisation, in a simple, widely applicable theory is an understandably difficult task. The task becomes even more difficult when the concept of time is broken down into its various dimensions.

2.5 A model of the dimensions of time as they relate to change

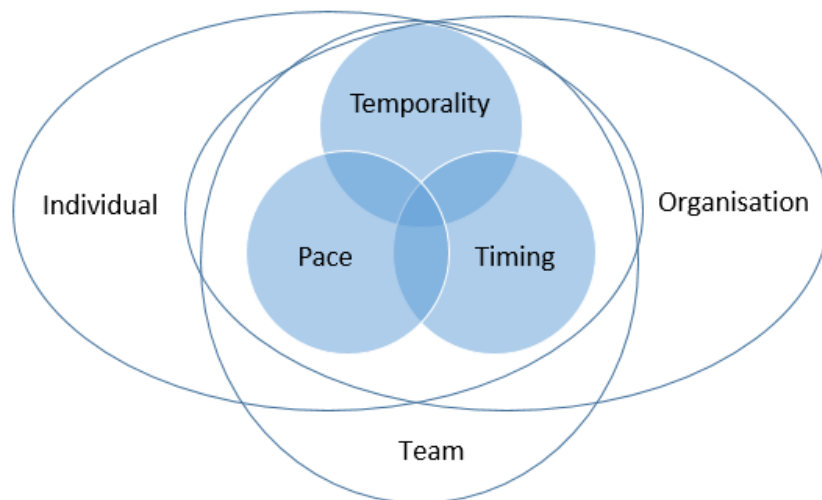


Figure 2 - the multidimensional nature of time, adapted from Waterworth's (2017 p.359) figure depicting ideas from Adam's Social Theory of Time (1995)

Figure 2 (borrowed from Waterworth's (2017, p. 359) figure depicting the concepts from Adam's (1995) Social Theory of Time) provides a simple representation of three of the most commonly described dimensions of time in change literature; *pace*, *temporality* and *timing*, in addition to showing the several perspectives they can be viewed in. The parties involved will *subjectively* view each of these dimensions. Waterworth's figure includes the individual (recipient), the organisation and the team level, which will collectively form its own perspective. This could also be extended to, for example, shareholders or other stakeholders. Important also to note that change agents are also individuals, and will have their own perspective on all of the factors.

While, I present a definition for each term below based on the change literature, it should be noted that there is no single definitive definition for each term, particularly in a practical research setting. For example, respondents of interviews will have their own interpretation of the terms. Figure 2, appropriately presents an overlap between each of the terms. The dimensions are also heavily interrelated and will affect each other.

2.5.1 Pace / Speed / Tempo

In the original figure to Waterworth and in Adams' Social Theory, the term used is *tempo*, which she describes as a synonym of *pace* and *speed*. In Figure 2 the synonym *pace* is used, as it is the most common of the three synonyms used in change literature. Pace is also the dimension of time, which has received the most attention in change management literature.

Change management scholars have examined and theorised the pace of change in organisations, although here the definition is dependent on whether the researcher views change as an episodic or continuous process. While early research examined change as a one off event, the emerging literature looks at change as a sequence of events (Huy, 2001). The *pace* of change is generally categorised as either *evolutionary* (slow-paced) or *revolutionary* (fast-paced).

Evolutionary is the often-used term for when the pace is slow, and *revolutionary* for high pace of change. Some argue that a high pace of change is beneficial to be dynamic and overcome organisational inertia (Burgelman and Grove (2007), Hannan and Freeman (1977); both via Klarner and Raisch (2013)). Others have revealed that high-paced change can negatively affect performance, because of a need for stability periods, and causing management overload and time compression diseconomies (Dierickx and Cool (1989), Huber (1991); both via Klarner and Raisch (2013)). Many scholars also suggest that organisations need to combine both *revolutionary* and *evolutionary* pace, one after the other, to ensure best possible outcome (Huy, 2001).

Each individual's subjective view of the pace of change may vary dramatically from each other. The experienced pace of change is also affected by a number of factors, including the individuals background, communication of the change from management, how affected the recipient is by the change.

2.5.2 Temporality

Temporality relates time to processes. “(T)emporality is generally used to refer to the way periods of time (for example, the ongoing present) connect and related to other periods in a backwards (past) and forward (future) directions” (Dawson, 2014, p. 286). To give an example, a sentence spoken by one person to another, is usually part of a greater conversation, and when the listener interprets this one sentence, she relates it to previously parts of the conversation and expectations of what that person will say in the future.

For those that view time as linear, e.g. past, present and future, temporality is being aware that actions relate and to that time context as a whole. As such, it is seeing the change in the context/history of the organisation and the desired future that it wishes to achieve. As an example, change will always be experienced in a temporal form, as individuals relate the

change to the status in the period before the change and their expectations of the future. This last concept is known as “*temporal experience*” (of individuals). The background to the individuals and, for example, when they joined the organisation, will therefore affect their temporality.

2.5.3 Timing

Timing is about *when* something (change) is done. It is about placing the event/change on an objective timeline/calendar. For example, making changes just after Christmas or before event *X*. Timing relates to the concept of temporality, but somewhat more definite and less subjective.

Timing can be considered a change design choice by in strategic change initiatives (Balogun et al., 2016), although this may overlook some of the pressures which organisations are under to implement change by the external environment. As an active choice, it requires that the person/group/organisation has temporal capability, i.e. know when the timing the right. There is also internal political connotations to the choice of timing, as with all design choices of change.

Timing will also be a personal/subjective experience to some extent. Events in individuals’ personal life outside work will affect how good or bad the timing of changes within work are for them. For example, it could be a period when they not able to work additional hours, or are extra dependant on income.

2.6 Conclusion of theory

“Future goals affect present behaviour when there is a temporal integration that makes the future continuous with the present and when people perceive that they are able to influence the outcome” (Huy, 2001, p. 601).

The above quote from Huy, illustrates how interrelated and interdependent the various dimensions and perspectives are. Individuals, recipients and managers alike, have their own perspectives on time and this will affect their expectations of the change process. Individuals with short-term perspectives will want processes and actions that produces short-term outcomes and those with long-term perspectives will conversely prefer actions that produce longer term change (Huy, 2001).

From an organisational perspective, clock-time is central, as organisations are run and measured by clock-time. Therefore, it is natural that they want the overall clock-time used for change processes to be a minimum, albeit there is a balance where the success of change cannot “cost” more than the benefits of its implementation. Therefore, the experiences of the recipients needs to be taken into account, to reduce the psychological impact of the change and potential for resistance to change. Time “spent” at the beginning of the process, preparing recipients for change, may lead to less time used overall.

It is clear that the methodology used to answer the research question, needs to encompass the many perspectives and dimensions of time. However, there is also a balance to avoid overanalysing the concept of time and end up stuck in a conceptual spiral.

3 METHOD

In this study, I use literature review as method, and in this section explain the method in detail, and account for why it has been used in relation to the research question.

3.1 Literature review

The term literature review is often used to describe a written product; the write up of an author's search through the body of academic literature on the wider subject to which their project relates. As science is based on building on previous knowledge, the previous knowledge each work is based on should be specified, as I have done in the previous section and throughout this piece through references. Literature review also is the term used for the process of searching for relevant literature/studies. Literature review is now considered a method in its own right, in social science research (references), particularly for MBA projects (Jesson, Matheson, & Lacey, 2011). The commonly quoted definition of a literature review by Hart (1998) sums up the process well:

“The selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed”.

There are thus two key sub-processes; finding the documents/data and analysing the data.

(Jesson et al., 2011) makes a clear distinction between a *traditional* and a *systematic review*. This project combines both methods, using the traditional review for the initial literature review and then using a more systematic method to validate the finds from the initial search, and seek more data/studies to include. This use of both methods enables a comparison of the results generated by each, and to assess their effectiveness, in this research project.

In the initial (more traditional) literature review, I used a method similar to what (Ridley, 2012, p. 56) appropriately describes as *“the snowball technique”*. This involved reading the relevant sections in text-books, followed by the relevant articles named in the text books, general searches on Google Scholar and Oria (UIT library's electronic database), then

checking references used by relevant articles, as well searching for articles who have cited relevant articles. I have written a search report, which describes the process more fully, see appendix B.

3.2 Choice of literature review as method

The choice of a systematic literature review as the primary method (for collection of empirical data) for this study was made for several reasons. The initial literature review revealed that there are many terms used for the different dimensions of time, and inconsistency in how the terms are used between the different authors. The more I read on the concept of time, its dimensions and how they relate to change, the more complex the topic revealed itself to be. I was also unable to find any major articles or textbook material which gave a comprehensive overview of the terminology and state of research. To be able to give a comprehensive overview of the terminology used and to tie together the various terms/variables, a comprehensive systematic review of the literature was considered the most appropriate method.

The concept of time, as discussed in the theory section of this piece and as demonstrated by the number of terms and their inconsistent use, is so complex that it would not be able to properly explore the concept how it relates to planned change through interviews or surveys, within the scope and the timescales of a 30 study-point, MBA project.

Two often cited articles on the topic from back in 2001; Huy (2001) and Pettigrew et al. (2001), give summary of the research in the topic but generally encouraged more research considering time and its variables as it relates to change. Jacobsen (2012), in his textbook on organisational change and managing change, also states that time as a concept has been under-theorized in change research. By performing a comprehensive literature search, I have summarised empirical research on the topic in the seventeen years since the appeal for more research by Huy (2001) and Pettigrew et al. (2001).

3.3 The study design

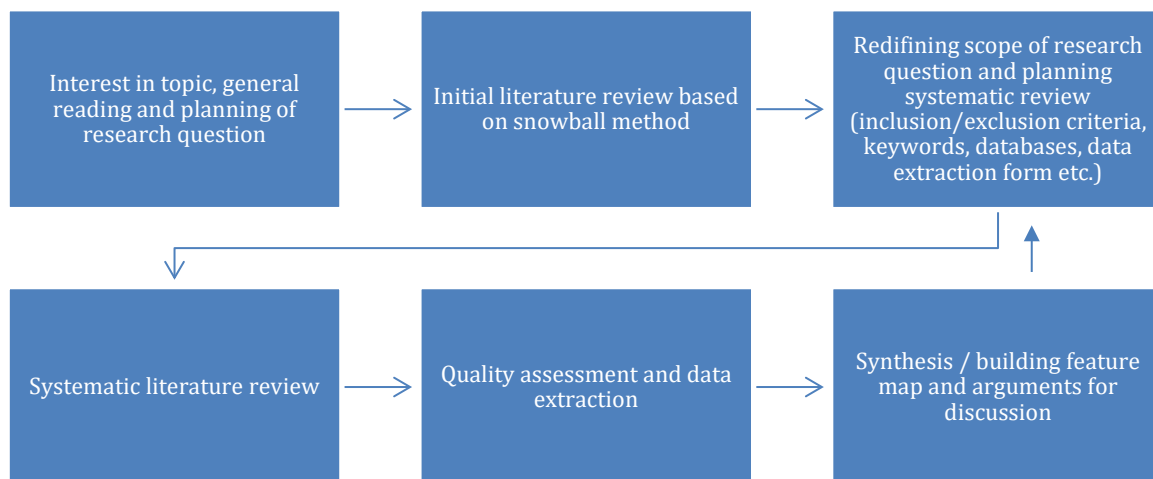


Figure 4 – overview of the methodological process used (as adapted from suggested process in Jesson (2012))

3.4 The data collection process in the systematic review

The data collection process has been to search on electronic databases for studies that can be used as empirical data in this research project. In the searches, I used defined/planned keywords and tried to “filter” the results using the inclusion criteria that were possible to filter by in the database’s search engine. I scanned through the results, reading the titles to see if any could be relevant (i.e. also met the other inclusion criteria, which could not be used as filters in the search engine). If the title sounded in any way relevant, I read the abstract to again assess if relevant. If it was not possible to assess whether the study met the inclusion criteria by reading the abstract, I skim-read the method section of the article.

3.4.1 Search engine

The choice of search engine was based on trial-and-error, advice from UiT The Arctic University of Tromsø’s library service and personal preference. The search engines trialled were Google, Google Scholar, Oria (electronic library search engine developed for Norwegian universities by BIBSYS), ScienceDirect and ProQuest. Each search engine has access to different databases and, hence, articles. Of the search engines trialled, Google Scholar has access to the most databases, closely followed by Oria, followed by Science Direct, followed by ProQuest.

Each search engine also has its own filter options. These were found to be critically important, to be able to refine large number of results to match the study’s inclusion criteria,

without inadvertently discarding relevant studies. Oria was found to be the best balance of having access to the most articles (databases), while having suitable filters that made enabled finding relevant studies within the body of results.

Once the studies were found, Google Scholar (access to most databases) was then used to check number of citations of each article, which was part of the evaluation process. Citations in Google Scholar, were correct per 3rd of May 2018.

3.4.2 Keyword combinations

Upon the recommendation of Jesson et al. (2011), the searches were based upon searches for keywords that the authors/journals have assigned to their works. My initial literature review revealed that there were many terms used in the literature for dimensions of time in change management literature. The most commonly used terms from the articles were used as the keywords in searches, in combination with the word “change”. By using the connector AND the searches showed results only where both words were present. Due to the volume of literature, the results were confined to where these keywords were used in the title of the articles. The idea behind this being that that the authors/journal have identified that the article has made a contribution to the literature, in the field of change, together with the other keyword/term.

A full list of the searches, with combinations of keywords, conducted is given in Appendix B.

Keywords used were as follows:

- Time
- Pace
- Temporality
- Tempo
- Speed
- Frequency
- Timing
- Timeframe (several variants)
- Deadline (several variants)
- Emotional reactions

3.4.3 Inclusion/exclusion criteria

To limit the amount of results, and to ensure the quality of the results, the following inclusion criteria were determined:

- The studies/results are published in 2002 or later (i.e. to present date). 2002 was chosen as the cut-off point for two main reasons. Change management, work culture and society as a whole is ever evolving, so a date needed to be set that was believed to yield enough results/data, at the same time as not being too historic so the results are contemporary. The articles of Q. N. Huy (2001) and Andrew M. Pettigrew et al. (2001) from 2001 imply that there was little research done in the field, so it felt like a natural cut-off point.
- The studies are published in a peer-reviewed journal, which is an important quality control measure. While the quality of the studies to be included was also assessed before inclusion, the fact that the empirical data in the studies has already be assessed as part of the acceptance process to peer reviewed journals, is comforting. The studies have thus already gone through a quality control process.
- The journal they are published in is in the field of management/business/organisations.
- The studies collect their own empirical evidence, whether it be case study, qualitative or quantitative data collection method. Theoretical or review articles were not included. We are using the data collected by studies as our own empirical data, and thus we want to limit the degrees of separation, and hence potential misinterpretation, by only using studies who have collected their data directly.
- The studies consider at least one dimension of time as a variable, considered in organisational change setting. This must had to be referenced to some extent in the abstract to be identified.
- Worldwide studies were considered, although publication language had to be English.

Jesson et al. (2011) suggests listing up both inclusion and exclusion criteria, however, I feel that exclusion criteria in this project would just be the negative formulation of the inclusion criteria and therefore not necessary to repeat (e.g. excluding articles published 2001 or earlier).

3.4.4 Anticipated challenges

One anticipated challenge is the sheer volume of change management related articles. This, combined with the fact that “time” is a very often used word, results in that many articles will

contain the word time, or one of the various terms related to time. There are likely to be articles/studies that have not assigned a time related keyword even though the empirical data they collected could be used as contribution to this topic. The nature of the initial literature review mitigates this to some extent, in that very prominent studies/articles would have been found through the snowball method.

3.4.5 Methodological modifications during project

Where the searches resulted in too many results to be able to practically deal with, additional constraining factors were used, e.g. that the word “organi*ation” was used in the text of the article. See Appendix B for the full details.

3.5 Empirical studies included in this study and their character traits

Twelve empirical studies matched the inclusion criteria. That is an average of under one a year, and the publishing dates are well spread within the time period. The search techniques used could clearly have missed relevant studies, although we feel the majority of empirical studies should have been found. The volume of findings would support the views of the theorists that, considering the large volume of change literature and the how embedded time is in organizational life, it is a somewhat understudied dimension of change. The volume of empirical evidence is, however, more than sufficient to provide an understanding of how time and change related, and give us a better understanding of the mechanisms which affect resistance to change. All of the studies will be included, although different weight given based on the method used and the focus of the articles

The studies show enormous diversity in their approach to both time and change. This is perhaps not surprising considering the afore mentioned multifaceted concept of time and the theoretical disagreement over the nature and process of change. There was also low rate of citation between the studies, which implies that the body of empirical evidence is somewhat fragmented. The articles were published in a wide variety of journals, covering a wide variety of themes within organisational studies/management. No author is represented in more than once in the articles. However some of the authors (e.g. Van de Ven, Hinings and Slack) have published other articles concerning temporal aspects of change, though not empirical studies which met the inclusions criteria. Two of the articles are published in the prestigious Academy of Management Journal (Amis, Slack, & Hinings, 2004; Klarner & Raisch, 2013),

with the other journals ranging degree of prestige. The number of citations varies greatly, with Amis et al. (2004) cited most at 303 times and Akhtar, Bal, and Long (2016) cited least with 5 citations on Google Scholar. Mean citations of the articles is 61.4, with a standard deviation of 91.2 (both to nearest full number). The number of citations per year since publication for each article also showed a significant range. Klarner and Raisch (2013), 29.2, had the highest citations per year since publication, and Sylvie (2003), 0.7, had the lowest. The mean of citations per year for all the articles is 7.4, with a standard deviation of 9.0.

The studies originate from several countries, with three (Klarner & Raisch, 2013; Liguori, 2012; Staudenmayer, Tyre, & Perlow, 2002) studies including data from two or more countries. Despite the large body of American change literature, only three studies of the came from the USA. Four of the studies include data from European countries (whole of Europe, UK, Italy and Germany), two include data from Canada, and one study includes data from each of China, Korea, New Zealand, Pakistan and Brazil. There are large cultural differences between many of these countries, although it seems that their findings in this topic (temporal aspects of change) are surprisingly alike. One explanation for this could be that many are looking at relative rather than the absolute effect on, for example, behaviours. There are, of course, implications to the different cultures, and these are commented where they are found to be relevant. There also a wide range industries and organisation types represented in the empirical studies. Eight of the studies concentrated solely on private sector, three concentrated solely on public sector and one study combined respondents of both sectors.

The methodology used by the various studies also showed a great deal of variety, with both qualitative, quantitative and combinations of methods used. The table of the findings in each of the two sections gives a brief outline method used in the studies, and these are commented upon where relevant. The diversity of the studies may result in difficulties in comparing results and reduce the applicability of the results to specific situations; however, it does provide a broad view of the impact of time, which may enable more generalisation of the finds, in line the study's aims.

3.5 Method for data analysis

3.5.1 Data extraction form and feature map

To extract data from the studies which were identified as relevant to all the criteria above a data extraction form was created, see Appendix A. This form comprises of questions, which have been used to essentially “interview” the literature. The data extraction form used is based on ideas from Jesson et al. (2011) and Hammer (2015). The questions were designed based on the concepts from the theoretical overview gained from the initial literature review, as adjusted by the process depicted in Figure 3. It became clear that the question regarding whether the study took an objective or subjective view of time was one of the most important for the analysis and categorisation of results.

The information from the data extraction forms, together with the theoretical framework was used to create a series of feature maps (Hart, 1998) to help in the analysis and develop arguments. The feature maps were a reflexive tool rather than one intended for presentation, and therefore I have chosen not to include them feature maps in the final thesis.

3.5.2 Assessment of Citations and Impact factor

I have chosen not to measure impact factor of the various journals, as there is a so many different and varying methods of calculation, the choice of which adds a subjective and potentially confusing element. The study is also not looking for the most prominent articles, but looking for empirical studies in a specific field, so impact factor and Citation Index less important.

The number of citations each article has been considered instead, which gives a much simpler and easily readable value. Google Scholar is the platform that I have access to that has can search in the most databases, and is open to all to check, so that is the platform used to measure number of citations, which was done for all articles on one date. Given the seventeen-year time range of the articles, the number of citations per year since publication was also considered.

3.6 Weaknesses in methodology and ethical considerations

Themes and ideas from the initial literature review, as well as personal experiences of change, will have affected what elements have been included in the feature map, questions to the

literature and the search criteria/words used. Additionally, the decision of which results to include was done by one person, i.e. no one controlling the choice of which studies to include. This will lead to some subjectivity, but the systematic nature of the search, and the inclusion/exclusion criteria checked by supervisor before and after conducting the search, should make the study more objective than a traditional literature review. For publishable studies based on systematic literature review as the empirical evidence, Jesson et al. (2011, p. 108) suggests that two researchers check/select the results. I have not found any ethical considerations concerning this study, which I believe need to be mentioned.

4 FINDINGS AND ANALYSIS

In this section, I outline and systemise the major findings and contributions of the individuals studies. I have chosen to divide the studies into two categories. The categorisation is as a result of the data extracted from each article through the help of the data extraction form. The first category includes studies which say something about the effect of time (or one of it's dimentions) on the overall success of the change happening within the organisation. They can give us insight in the overall process implications which temporal aspects can have on the general success of change processes. The second category studies say something about the effect of time (or one of it's dimentions) on the recipients of change and how it may have affected their resistance to the change. These studies will give us more detailed insight into how time affects the mechanisms of resistance to change.

4.1 How does time influence the success of change?

Table 1 below gives an overview of the empirical studies found which consider how temporal aspects affect the success of the change initiatives. Whether that be in the success of the implementation of change, or the success / increase in performance of the organisation following change. The latter surely being the aim of most change, even though there is an appreciable difference between the two. The articles are ordered in their perceived value of their contribution to this study.

Authors' last names (Year) Title, No. of citations	Aspect of time considered	Method, Country	Major contribution as relevant to this study
Amis, Slack & Hinings (2004) The pace, sequence and linearity of change, 303	Objective view of pace of change and its relative importance to sequence and linearity.	Study of 36 Canadian Olympic NSO's over 12 year period, through 180 interviews and quantitative data collection, Canada	Sequence, to change "high-impact elements" first, was important to complete radical change. Fast-paced early change not necessary for radical change. Pace of change could have impact on outcome. Change found to unfold in a non-linear manner.
Liguori (2012) The Supremacy of the Sequence: Key Elements and Dimensions in the Process of Change, 35	Objective view of pace of change and it's relative importance to sequence and linearity.	Comparative study of 3 departments of 2 Canadian and 2 Italian municipalities - total 12 cases, over 12 year period, Canada and Italy	Support to Amis et al (2004) findings. Found a supremacy of sequence over the pace and linearity of change for implementing radical change. Existence of "high-impact element"

			which needed to completed in right order.
Klarner & Raisch (2013) Move to the Beat: Rhythms of changes and firm performance, 146	Frequency and rhythm (variant of timing) of change on an objective timeline	Explorative analysis (qualitative and quantitative) 64 insurance companies, based on annual reports, Europe	Regular and sequential balance between change and stability found to be associated with long term success. Frequency found not to have curvilinear relationship with firm performance.
Yi, He, Ndofor & Wei (2015) Dynamic Capabilities and the Speed of Strategic Change: Evidence From China, 17	Objective time in relation to performance but subjective view (of management) of speed of strategic change	Survey of 213 firms, interviews with their management, China	Fast implementation of strategic change positive effect on performance, yet negative performance repercussions if carried out too quickly (i.e. curvilinear relationship). Positive relationship between dynamic capabilities and speed of strategic change.
Sylvie (2003) A lesson from the New York Times: Timing and the Management of Culture, 10	Timing of change on an objective timeline, and an organisation's temporality	Case study of cultural change at the New York Time, USA	Socialist/longer term change more effective leadership style than moderately fast-paced change but "timing" of the change was the decisive factor for successful change implementation.
Lucey (2009) Action research case study in transacting a major change at pace, 7	Objective time, both timescale of change and availability of it for manager	Case study of implementation of LEAN project in dept. of large firm, UK	Manager freed from daily responsibilities capacity to focus on the change, facilitated change within set timescales, with other positive effects.

Table 1 - Studies found which consider time and the overall success of change initiatives

4.1.1 Time and change implementation

Amis et al. (2004) is the highest cited article amongst the included studies, published in the prestigious Academy of Management Journal, and has a very solid method and data analysis. They looked at implementation of radical change in 36 Canadian National Sport Organisations (NSO), the national governing bodies for their sports, over a twelve-year period. They tested a hypothesis that fast-paced early change necessary for radical change, but found no support for this. They found that fast-paced change throughout organisations was not only insufficient to bring about radical change, but may in fact be detrimental to its outcome. They categorised pace of change as either, comparatively fast or comparatively slow.

They did find clear support to their second hypothesis that sequence, hereunder changing "high-impact elements" first, was important for the NSO's to complete radical change. Changes to the "high-impact elements" early was necessary to technically alter the organisation, and to give a symbolic message to internal and external stakeholders. They also found support for their third hypothesis that change unfolds in a non-linear manner. They

noted that while on the surface 23 of the 36 NSOs studied appeared to change in a linear manner, however a deeper analysis, particularly of the contentious changes, revealed that change followed a non-linear path.

Liguori (2012) also supports the findings of Amis et al. (2004) to a degree in her study of twelve departments of Canadian and Italian municipalities also over a twelve-year period. She found a supremacy of sequence over the pace and linearity of change for implementing radical change. Existence of "high-impact elements" which needed to be completed in right order, being more important than the pace of change implementation. Results also suggest that the traditional "recipe" of reconstruction followed by evolution may be less effective than evolutionary change followed by revolutionary change. Her conclusion being that recipients get used to change, before major change. This contradicts slightly with the findings of Amis et al. (2004) who found that these "high-impact elements" should be changed first, although both agree that the sequence which elements are changed is very important to successful implementation.

There is some debate as to whether the concept of *sequence* is a time-related term. Sylvie (2003, p. 296), for example, mentions sequence as a dimension of time, whereas Amis et al. (2004) make no mention of its temporal dimension. Sequence refers to the order in which events are placed on a timeline, and therefore can be considered to be a form of timing (i.e. which event is timed before or after other events). Liguori (2012, p. 531) notes, "*what seems important is not the pace in itself, but the timing which defines the beginning of the process of change*", before going on to describe the concept of sequence.

Sylvie (2003) studies the New York Times through a period when management attempted, and subsequently managed, to change the culture of the organisation following a crisis. He considers a wide range of temporal dimensions, such as *pace* (where fast-paced leadership-style was replaced with slow-paced leadership-style), but concluded that the key factor for the successful implementation of change was *timing*; "*the "when" becomes just as important as the "what"*" Sylvie (2003, p. 294). The crisis which occurred, influenced the organisation's temporality and meant that the *timing* was "right", which enabled the change. The change thus only occurred, at a point in time and taking into consideration the organisation's temporality (its history and expectations for the future), because of the crisis that preceded it. Temporal dimension was only important in relation to the event of the crisis. In other words,

the time period *before* the event the management was unable to change the culture, but *after* the event the change was made. The importance of events in facilitating change is a major theme in the studies considering resistance later on in this thesis.

Lucey's (2009) case study of the implementation of LEAN project in department of large firm also looks at the success of change implementation rather than performance of the organisation, although he does imply that performance was improved as a consequence of the change. Lucey's insight, as related to time factors, is that the success of this change project "*at pace*" and "*on time*" was to a large degree due to the manager responsible being freed from daily responsibilities. The manager was thus able to focus wholly on the change implementation, work with every member of the department during the process and resolve issues that has been around for some time. This resulted in "a noticeable improvement in morale". This insight into the freeing up of time in the daily schedule is echoed in the studies that look at the effect of time on resistance to change, which will be discussed in the next section. Lucey's (2009) study looks at just one change project over a short period of time, and therefore has a rather linear view of change (i.e. before, during and after) in contrast to Amis et al. (2004) and Liguori (2012) who were studying change as multiple events over a long time period. In Lucey's (2009) study included a survey to employees/recipients; however, time and content of change were not separated in the questions to recipients, which excludes making conclusions about recipients' responses in relation to temporal dimensions of the change.

Amis et al. (2004), Liguori (2012) and Lucey (2009), measure the success of change implementation based on whether the change was implemented or not, i.e. whether the structure and systems of the organisations in question are changed. They do not measure the performance of the organisations during or after the implement change. Sylvie (2003) to some extent does consider the performance of the New York Times, based on reputational performance instead of financial performance, but does not measure it and focuses mostly on change implementation and therefore I have included his study in this sections. Change implementation (usually) has a goal to increase performance in some way, for example, to make the organisation more efficient, increase sales, providing better service, etc. Therefore, while Amis et al. (2004) and Liguori (2012) find that *pace* did not have an effect on success on change implementation, they did not attempt to measure what "cost" the successful

implementation had. They did not examine what effect implementing the change at fast or slow pace had on, for example, staff costs or organisational goal achievement.

4.1.2 Time, change and organisational performance

Klarner and Raisch's (2013) article is the second most cited, has the highest citations per year since publication, is published in the prestigious Academy of Management Journal and has a very solid method and data analysis. In their explorative analysis 64 European insurance companies, based on annual reports over a ten-year period. They, in similarity with Amis et al. (2004) and Liguori (2012), considered change as multiple change sequences, rather than on single transformational events. They considered two time aspects, which they define as aspects of the *pace* of change, *frequency* and *rhythm* of change. *Frequency* for them being the total number of strategic changes in the period, while they define *rhythm* as the length and pattern of intervals between periods of change and periods of stability. Therefore, for them, *frequency* is close to what other researchers (see theory section) would consider to be *pace* – i.e. amount of change as related to time, or put in another way how many of the multiple change events occur within a time period.

They found that *rhythm* and *frequency* of change have distinct performance effects, with *rhythm* being the most important of the two time aspects. They found that the insurance companies that changed regularly outperformed those that did not. Thus, “*regular and sequential balance between change and stability found to be associated with long-term success*” (Klarner & Raisch, 2013, p. 160). They hypothesised that *frequency* has a curvilinear (U-shaped) relationship with firm performance, i.e. that frequent change increases the adaptability of an organisation up to a point where it becomes detrimental, but found no support for this.

This finding of a lack of curvilinear relationship contrasts, to some extent, with the findings of Yi, He, Ndofor, and Wei (2015). Yi et al. (2015) surveyed 213 firms in China, by interviewing the management of the firms (varying in size), with the aim of understanding how the *speed* of strategic change and the effect of dynamic capabilities on this relationship. They found that a curvilinear relationship did exist between the speed of change and performance, in that while faster implementation of strategic change had positive effects on performance, if it was too quick there were negative performance repercussions. They also found that dynamic (technological, marketing and market-linked) capabilities enabled greater

speed of strategic change, while risk orientation of decision-makers moderated this relationship.

There are several possible explanations for these contradictory findings. The authors use different terms; *speed* vs *frequency*, although I interpret them having a similar meaning to the respective authors. Another is the difference in data collection methods. Klarner and Raisch's (2013) look at the number of changes (reported in the annual reports) during the fixed 10-year period. Yi et al. (2015) measured *speed* by asking the respondents (management) four questions about how quickly change was implemented, with the answers are given 1 (strongly disagree) to 5 (strongly agree). This latter method is thus a subjective view of speed of change, whereas Klarner and Raisch (2013) is based on an objective timeline. Yi et al. (2015) have also only considered the one temporal dimension, whereas Klarner and Raisch (2013) considered two. Yi et al. (2015) also point out that their results could be skewed by the multi-industry nature of their sample. Cultural differences between China and Europe could also be the reason for the different findings.

4.1.3 Common traits for the studies considering success of change initiative

All of these articles consider time in an *objective* way. With Yi et al. (2015), and possibly Sylvie (2003), also considering time in a subjective way. While Yi et al. (2015) measured performance (sales, market share, RoE and net income) over a five-year period, i.e. objective timeline, they assessed the speed of change in their article based subjective view of the management they interviewed. There could clearly be a large degree of subjectivity, and variance, between what the 213 respondents in their study not only consider to be “quickly” (in terms of implementing change) but also to what degree that they “agree” that their firm has met that quickness. Sylvie (2003) accepts that timing will be affected by an organisation's temporality (i.e. events will be related to past, present and future of the organisation).

The dominance of *objective time* in these studies is not surprising. *Objective time* (clock-time, calendars, etc.) are so fundamentally entrenched in the organisation of organisations that it is natural that “success” is also measured in objective time Dawson (2014), whether that be success in change implementation or performance. There is also management focus in the studies addressing the success of change. The respondents in the studies are (senior) managers or reports prepared/signed off by managers. The only exception being Lucey (2009) who used data from employee survey to measure effectiveness of the change, but in

terms of the *pace* of implementation relied on observations (from himself, a manager) and data from the manager in charge of change implementation.

These studies find that there is something more than just the *pace* of change (in its simplest definition) that affects both change implementation and performance, and thereby what is generalised here as the success of change. In the next section, we look at whether the studies that have looked at how time affects resistance to change give us greater insight into the mechanism behind that additional factor, and shed more light on the relationship between time and change.

4.2 How does time influence resistance to change?

Table 2 below gives an overview of the empirical studies found which consider the influence of temporal aspects on resistance to change. The first three studies in the table consider the impact events can have on recipients' temporal experiences, and how this in turn affects resistance to change. The last four studies in the table consider how temporal dimensions in change affect the reactions of recipients of change. These reactions, if of negative nature, would generally be classed as resistance to change, or at least influences change negatively. I have chosen to divide this section into these two sub-categories and then summarize the common traits that the studies have. The articles in the table are ordered in their perceived value of their contribution to this study within each sub-category. First, the studies considering events followed by studies considering resistance to change and reactions.

Authors' last names (Year) Title, No. of citations	Aspect(s) of time considered	Method, details of study, country	Major contribution as relevant to this study
Staudenmayer, Tyre & Perlow (2002) Time to change: Temporal shifts as enablers of organizational change, 142	Subjective time of recipients (temporality) and objective time	3 field studies of technology intensive organizations, interviews and observation, US	Rhythm changing events caused "temporal shifts" (changes in a collective's experience of time) among recipients, which in turn facilitated organizational change.
Da Silva & Wetzel (2007) Organizational Change and the Meaning of Time, 12	Subjective view of time and own temporality of recipients.	Composition of two explorative studies, total of 133 semi-structured interviews at 8 organisations, Brazil	Recipients establish a reference to central events in their attempt to make sense out of changes. The organisations perspective on time became dominant, with more interaction at work and at a potential cost to personal time of recipients.

Lee & Lee (2008) Time to Change, Time for Change: Time as a catalyst for organizational change, 9	Subjective time of recipients (temporality) and objective time	Case study, radical change of working hours in a large business group, 17 interviews & secondary data, Korea	Implementation of a new temporal system (change in working hours), caused a "temporal shift" and gave employees new focus on time, which facilitated change.
Smollan, Sayers & Matheny (2010) Emotional responses to the speed, frequency and timing of organizational change, 38	Subjective view of speed, frequency and timing of change	24 semi-structured interviews of both managers (majority) and recipients from varied organisations, New Zealand	Speed, frequency and timing of change found to affect emotions felt by recipients and managers. Timing found to be the least important of the three. Low speed lead to frustration, while high speed led to negative emotional reactions. Uncertainty and exhaustion from high frequency.
Jones & Van de Ven (2016) The Changing Nature of Change Resistance: An Examination of the Moderating Impact of Time, 13	Objective time (clock-time - year 1, 2, 3)	Examined three annual employee surveys (1997 to 1999) in a large, 40 clinic health care system. Approx 800 replies. US	Resistance to change had increasingly negative relationship over time with two important consequences: employees' commitment to the organization and perceptions of organizational effectiveness. Suggests festering effects of resistance to change. Supportive leadership was increasingly impactful in reducing change resistance over time.
Akhtar, Bal & Long (2016) Exit, voice, loyalty, and neglect reactions to frequency of change, and impact of change: A sensemaking perspective through the lens of psychological contract, 5	Subjective view of frequency of change	Survey, questionnaire (n=398) employees in banks, Pakistan	Frequency of Change negatively related to loyalty and positively related to exit, voice, and neglect (EVLN) behaviours, with psychological contract fulfilment as mediator. Success of past changes found to moderate EVLN behaviours.

Table 2 - Studies found which consider time and the effect on recipients of change

4.2.1 Events shaping recipients of change's perception of time

Staudenmayer et al. (2002) article has the third most citations and is published in the respected Organization Science journal. The article is a combination of three field studies (each of which published in their own right), with solid methodology. The three organisations studied are large high-tech companies, with two based solely in the US and one spread over the US, Italy and West Germany.

Their major finding was that in all three of their studies, change occurred only after some event, which they call a rhythm-changing event, altered the recipients of change daily rhythm of work and, therefore, the way they experienced time. An example of one of these events was the management's implementation of "buffers periods" in the schedule, where team members stop production and turn attention to broader issues. At another organisation, the event was the introduction of "quiet time" during each day, where workers were not to interrupt each other. There were also several other events found to which caused changes in

the collective's experience of time, what the authors call "*temporal shifts*". The events have in common that they had an effect on the rhythm of daily work life.

The *temporal shifts* involved change to five aspects of the individual's perception of time; 1) sense of time pressure, 2) perceived discretion over time, 3) perceived tension among competing tasks, 4) time horizon, and 5) sense of "found time". The temporal shifts were found to facilitate change in four ways; 1) as a trigger for the individuals to re-evaluate the situation and be more open for change, 2) create the resource of time and attention to problems which previously they individuals were too busy to deal with, 3) provide a co-ordinating mechanism between actors who could implement the change, and 4) as a symbol of need for change. Thus, they found that, "*in many cases, events shape time itself*", as opposed to the conventional idea that events are shaped by time (Staudenmayer et al., 2002, p. 583).

Lee and Lee's (2008) findings in their in-depth case study of the Samsung Group (Korea's largest company) support those of Staudenmayer et al. (2002). They studied a ten-year period in which the organisation underwent substantial change, and found that the implementation of a radical and rather controversial new working hours policy (7am to 4 pm, instead of 9am to 5pm, which the employees had to adhere to strictly, i.e. they were not allowed to stay in the office after hours) caused a *temporal shift*. The implementation of new temporal routines gave employees new focus on time, which was more in line with the organisation's perspective. In Figure 2 above, the individual's perspective/loop encompassing the temporal dimensions, would thus align closer to the organisation's perspective. Similar to Staudenmayer et al.'s (2002) findings, the employees at Samsung experienced a sense of crisis for change, got a new awareness of time as a resource and generated new ways of working. A limitation of Lee and Lee's (2008) study is that due to internal culture within the company, the fact the respondents were managers and time elapsed between study and the period of change, they may not have been able to obtain a truly accurate picture of the resistance.

Da Silva and Wetzel's (2007) composition of two explorative studies of eight organisations in Brazil also found that events shaped the temporal perspective of individuals, with many viewing time as "before" and "after" the major events (for example privatisation or move to a new factory), enabling them to make sense out of the change and their own future.

Individuals also felt a feeling of loss of control over time and, like above, a view of time which was more in line with the organisation's.

4.2.2 Time and the reactions of recipients of change

Smollan et al.'s (2010) survey of 24 managers and recipients of change, from varied organisations in New Zealand, considered emotional responses to the *speed*, *frequency* and *timing* of organizational change. In identifying these three temporal dimensions, they reveal a linear view of change, i.e. can be broken down into single change processes; how fast (*speed*), how quickly after each other (*frequency*) and when (*timing*) they are implemented. *Frequency* for these authors is therefore much like the concept of *pace* for authors who view change as a continual process (who consider many small steps in a larger change process in a short period as fast-paced change).

They found that the *speed*, *frequency* and *timing* of change all affect emotions felt by recipients and managers alike, although *timing* was the least important of the three. Low speed lead to frustration, while high speed led to negative emotional reactions. High frequency could lead to uncertainty and exhaustion, with both managers and recipients feeling "punch drunk" (Smollan et al., 2010, p. 39). Timing was found to be least important due to a sense of inevitability around change, and that is a very personal experience. "*(I)t is the inner experience of time that largely dictates an emotional reaction to the timing of change.*" (Smollan et al., 2010, p. 47). They also found that when people perceived they had control over the change (including the temporal aspects) they appeared to have fewer negative emotional reactions towards it. The negative emotional reactions, can lead to behavioural reactions (i.e. resistance to change), for example on respondent refusing to leave after being made redundant, hiring a lawyer which eventually extended her position.

Jones and Van de Ven (2016), in their study of a large, 40 clinic health care system in US undergoing major change, considered resistance to change more directly, as well as other cognitive ("perceptions of effectiveness" and "fairness") and behavioural reactions ("organisational commitment"). They found that resistance to change had increasingly negative relationship over time with several of the reactions, which possibly expands on Smollan et al.'s (2010) find of frustration when change occurred at slow speed. Employees' commitment to the organization and perceptions of organizational effectiveness decreased

over time, suggesting festering effects of resistance to change, although supportive leadership moderated this relationship.

Akhtar et al. (2016) surveyed employees in Pakistani banks to measure behavioural (exit, voice, loyalty, and neglect) reactions against the *frequency* and impact of change. They define and measure frequency of change similarly to Smollan et al. (2010) and Yi et al. (2015), where it is the amount of (individual) change processes within a period, subjectively measured by the respondents, i.e. akin to *pace* as described in the theory section. Akhtar et al. (2016) found that frequency of change is negatively related to loyalty reactions and positively related to exit, voice, and neglect (EVLN) reactions, i.e. high frequency led to resistance to change. Psychological contract fulfilment found to be a mediator of the relationships, while success of past changes found to moderate EVLN behaviours. The notion of recipients of change considering the change a breach in psychological contract with their employer leading to an increase in these behavioural reactions (supporting work of Turnley and Feldman (1999)), highlights the importance and subjectivity of the sensemaking process. Frequency of change was found to influence the perception of breach of psychological contract and being able to make sense out of the change.

4.2.3 Common traits for the studies considering resistance to change

All of the articles consider time in a subjective way, except Jones and Van de Ven (2016) who considered resistance to change on an objective timeline (three-year period, year one, two & three). Overall, there is also a recipient focus, although several of the studies include managers amongst the respondents. For example, Smollan et al. (2010) have a majority of managers and HR personnel among their respondents, although many of the questions they asked in the interviews was about how the recipients of change were affected. As mentioned earlier, several leading scholars believe that resistance to change research should take a recipient focus (e.g. Huy et al. (2014)).

The studies generally view change as a continuous process, or at least that organisations are often in change processes. As discussed earlier, Smollan et al. (2010) and Akhtar et al. (2016) consider *frequency* of change in a similar way to Amis et al. (2004) and Liguori (2012) consider *pace*.

The studies unsurprisingly find that temporal aspects of change have a big effect on the recipients of change, both in their everyday work lives, their social lives and reactions they have to the change, which ultimately can cause resistance to change. Large change events are defining events for recipients, and their work timelines are defined by those events.

“Rhythm-changing events” can cause “temporal shifts” among recipients, which can facilitate change by bringing their temporal expectations more in line with the organisations. The *pace* or *frequency* of change could have a curvilinear relationship with behavioural and emotional reactions of recipients / resistance to change. If the pace is too slow, it will caused frustration and resistance will fester, whereas if it is too fast there could be a perceived to break the psychological contract and, again, lead to greater resistance.

5 DISCUSSION

In this section, I will relate the finds to the theoretical introduction made earlier, and more specifically Lewin's model of the process of change. This can provide insight into the various dimensions of change and how they influence the change process. The analytical process was done through the help of a feature map, trying to make sense of and relate the diverse findings to each other. I will also analyse the findings to see whether they show an order of importance amongst the various dimensions of time affect change.

5.1 The role of (the dimensions of) time in the in Lewin's three-step process

5.1.1 Unfreezing

In Lewin's unfreezing stage, conventional change management literature suggests that management need to communicate the need for change, involve employees and create a sense of urgency among them, to make them ready for change. "Rhythm changing events" seem to perform this role through creating a *temporal shift*, a change in the collective's (i.e. body of recipients) experience of time. This shift acts as a trigger for action, a coordinating mechanism and a symbol for change, as well as creating free time to implement the change. The idea that individuals faced with change interpret the change through reference to central events is not new (Isabella, 1990), however, the findings suggest that the previously under-considered temporal element is a very important part of the sensemaking (and thus facilitating) process.

One complicating factor is that the rhythm changing events identified in the studies included were all in themselves, implemented change events. In effect, some change had already been implemented. This supports the emerging view that change is a continuous process. This could also support Liguori's (2012) conclusion, when looking at which events should be implemented first, that evolutionary (*slow-paced*) change should proceed (*fast-paced*) revolutionary change, so that recipients are accustomed to change before the more difficult fast-paced change.

The findings also shed light on the temporal dimension of *sensemaking*, the previously mentioned cognitive and emotive process that recipients need to go through to rationalise the change. A process in which they use their cognitive and emotive senses to connect their past

and present to anticipate trajectories leading to the future (Lord et al., 2015). Recipients are as such not *ready for change* unless they are able to make sense of it. The findings suggest that recipients reference central events in their consideration of (i.e. subjective) time, to help make sense out of the changes and to adapt to the new situation (Da Silva & Wetzel, 2007). There was a positive paradox identified by Da Silva and Wetzel (2007), in that events at work which created a *temporal shift* gave recipients of change an increased ownership of the direction of their future (i.e. less determined by the organisation), despite increased possibility of losing their job. Research without a time focus, has suggested individuals faced with change “*assess what new ways of working needed, what demands these provide and whether they have the resources to meet these demands*” (Woodward & Hendry, 2004, p. 175). The findings of this study, suggests that this sensemaking will certainly be referenced to the timeframes involved in the change.

Frequency of change events also affects *sensemaking*, with high frequency resulting in negative emotive reactions (Akhtar et al., 2016) and uncertainty (Smollan et al., 2010). Jones and Van de Ven (2016) point out that the unfreezing process needs to occur not just at the start of continuous change process but throughout, to avoid resistance from festering.

It would appear logical that the sensemaking and the temporal shifts created by certain change events relate in some way to the found importance of sequence, i.e. the relative timing of change to the high-impact elements, by Amis et al. (2004) and Liguori (2012), although there is insufficient data to make a connection.

5.1.2 Moving

Lewin’s second step, *moving*, is the transition state where the actual change happens, moving the equilibrium of the forces in the desired direction. This can often be the practically most difficult, where management is traditionally advised to help those who are struggling with the new reality. Supportive leadership was shown to be a mediating factor in the relationship between time and successful change implementation, and time and resistance to change. Lucey’s (2009) findings suggest that it, rather unsurprisingly, takes a certain amount of objective time for changes to be implemented and managers should dedicate enough time to it. Other researchers have also found that there is often a paradox, where managers and recipients alike, want to change, but lack the time to both complete daily tasks and make the change at the same time (Guiette & Vandenbempt, 2017; Wilkinson, 2011).

On a subjective level, the temporal shifts found which enabled *unfreezing*, were also found in the findings to lead to new ways for the recipients to use time, and altogether new ways to work, suggesting they also facilitated *moving*. *Speed*, as considered by Smollan et al. (2010), concerns how fast the (single) change event is implemented and thus concerns *moving*. Low speed lead to frustration, while high speed led to negative emotional reactions. While high *frequency* lead to exhaustion, with both managers and recipients feeling “punch drunk” (Smollan et al., 2010).

These would suggest that there is a balance, where there needs to be enough (clock-time) allocated to make the move, while at the same time ensuring that the time allocated does not feel (subjectively) either too long or too short.

5.1.3 Refreezing

As discussed in the theoretical overview, Lewin’s view of change is episodic, whereas the general view of this study, is that even if change can be broken down into single episodes, there are likely to other episodes occurring either parallel or just after. Many have argued that in a continuous view of change that refreezing is an obsolete step (as recipients go straight back to unfreezing for the new change), however, many of the studies included in this thesis have shown that employees settle into the new practices after change is implement (e.g. Lee and Lee (2008)), even if other change is planned or ongoing. There is thus a value to *refreezing* each change episode or event, even if it is a part of a sequence. *Refreezing* concerns maintaining and institutionalizing the new status quo, to avoid slipping back into old habits.

Isabella (1990), when considering how the interpretation of change shifts during the process, found that “*refreezing seems to be associated with a broadening of perspective and general learning about what the event meant, and the end result is an evaluative frame of reference*” (Isabella, 1990, p. 33). The findings here concerning *temporal shifts* (i.e. changes in the individuals collective experience of time following rhythm changing events) the temporal factors could be an enabling factor not just for cognitive process, but also practically enabling the new ways of working.

When looking at the overall success of change initiatives, it is possible to relate Klarner and Raisch's (2013) study to all three of Lewin's stages. Their find, that regular periods of (major) change interspersed with regular periods stability led connected to higher performance, could suggest that the period of stability after the change enabled change to be *refrozen*. The negative emotive reactions found from high *frequency* could also support this ((Akhtar et al., 2016; Smollan et al., 2010)).

5.2 Is there an order of importance amongst the dimensions of time in affecting change?

It would appear that all aspects/dimensions of time have an effect on change. Each change process occurs in a specific context and time context (temporality). That context determines how important the various dimensions of time are. Has there, for example, been other/previous change initiatives in the organisation? When were these other change initiatives? What were time gaps between these changes? What type of organisation and sector/industry? How effective is management and what style of leadership do they employ?

Amis et al. (2004) and Liguori (2012) found that sequence was more important than pace. It appears logical that it is more important that the right things are done in the correct chronological order, then how quickly or slowly they are done. Sequence, can be considered a variant of timing. Timing affects the very context/temporality in which the change initiative is placed. Sylvie (2003) found timing to be very important, however, this was only timing considered from the organisation's perspective (see figure 2). From a subjective/individual perspective, however, Smollan et al. (2010) found *timing* was less important than *frequency/pace* and *speed* of individuals change events.

There were contradictory findings about the existence of a curvilinear relationship between the pace (as defined in theory section) and success of change. It would appear logical (hence hypothesised by many), although only found to be true by some. It was found only to exist with subjectively measured *pace*, i.e. not on an objective timeline. It is possible that this says something about the (large) variance of subjective timescales if plotted on objective timeline.

Klarner and Raisch (2013) found that the best performing firms changed with regular periods of change and periods of stability. This concept of rhythm was not considered as part of the

theoretical background, and thus is an added dimension of time as it relates to change, and a seemingly important one.

From a subjective point of view, we need to bear in mind that both the content and the temporal aspects of the change can vary considerably depending on who is considering them. “*Change is in the eye of the beholder*” (Woodward & Hendry, 2004, p. 159). A key finding was that many of the subjective temporal dimensions amongst recipients can be affected positively, from an organisational perspective, by “rhythm changing events”.

5.3 Limitations

The limitations of the data collection process are discussed in the method section and, therefore, will not be repeated here. The methods of each study were subjectively assessed, and the finding prioritised based upon this, although the diversity meant that most studies considered different aspects of the research question. Those that did consider the same aspect generally came to similar conclusions. Response rates of the survey studies included are good, and most studies tested for non-response bias, but that does not mean it definitely is not present.

The studies are published in a seventeen-year time period, and some of them consider change processes starting in the 1990’s and in one study back to the 1980’s (Amis et al., 2004). When drawing conclusions, I am aware that, not only the environmental conditions and the reason for change implementation, but also the explanatory factors behind the change can change over time (Lorente & Vicente, 2006). Therefore, the conclusions drawn in the next section need to be considered in light of the period of study.

Each of the studies also has its own limitations and, to some extent, the combination of the studies can result in an exponential increase of those limitations. Many of the studies focused on one type of change, one sector or one country, therefore the comparing results, generalisation and applying results to other situations can lead to distortion of reality. Part of the research process is to piece together smaller pictures until the bigger picture is revealed. While I do not feel anywhere near to completing the bigger picture, hopefully this piece has brought some of the smaller pieces together and can provide a broad (if still incomplete) view of the impact of time on change.

6 CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

This thesis has unravelled the complex concept of time and, through the application of Lewin's model, analysed how the various dimensions of time influence the change process. The dimensions considered were *pace*, *temporality* and *timing*, as per the theoretical framework, and the additional dimension of *rhythm*, which arose from the findings. Each dimension of time was found to be important in at least one stage of the change process.

The perspective of whom is considering each dimension of time was found also to be a key consideration. Organisations have their own perspectives, tied in with their goals and their temporality (their history and expectations of the future), and will naturally be closely tied to objective or clock-time. Understanding the subjective perspective of time, and its several dimensions, of individuals is a much harder task for managers and researchers. The subjective dimension is, however, very important for reducing resistance to change and ultimately increasing the success of change processes. It was even found that it could be used to facilitate change. This subjectivity means it is hard to give any definite answers on how much clock-time a change process should be allocated.

The theoretical framework in this thesis began with the content of change, and content is and will be an important factor in determining appropriate timescales (both subjectively and objectively) for a change process. It seems clear that minor change in a set timeframe is likely to be easier than major change in the same timeframe, i.e. have large chance of success and produce less resistance. The continuous (or episodic, with many episodes/change events) nature of change in modern organisations, means that each single change event must be viewed within the temporality of the organisation and the individuals effected. This study found it was important to consider what has happened in the time leading up to the change (if there been (much) other change or events of note, and the time-gaps since those events) and the anticipated events of the future. If one of these events caused a *temporal shift* among recipients, this could facilitate change. However, if there has been a lot of other change in an uneven frequency/rhythm, even a small change could produce negative emotional and

behavioural reactions among the recipients, who might be exhausted from the previous change.

The effect events have on the understanding of time, is summed up well by Staudenmayer et al. (2002, p. 583); "*rhythm-changing events (...) can change actors' perceptions of time pressures and time horizons, their sense of competing time demands, their sense of control over time and, ultimately, the way they understand time.*"

6.1 Implications for management

It is commonly accepted that, while organisations share similar traits, every organisation is different and comprised of different individuals, and that there is no “one size fits all” recipe for change. Therefore, those assessing or wishing to implement change in their organisation, need to understand these mechanisms and make an assessment of them against the scenario and the individuals in the organisation in question. The individuals’ subject experience/perspective of time as it relates to the proposed change, should be assessed and taken into account by management looking to implement change. Where change is seen as sequence of events, managers should consider changing something about the temporal aspects of the recipients’ work-life, as an enabler for other/further change by creating some clock-time in their schedules for change and bringing their subjective perspective of time closer in-line with the organisations.

Managers need to take into account that individuals faced with too frequent/fast paced change can experience negative psychological effects, such as fatigue, and lead to negative behaviours. Managers should also look to intermit periods of (intense) change evenly with periods of lesser change, as this was shown to increase organisational performance. This even rhythm of change, may allow time for the major change to be refrozen by the individuals, however reasons why is somewhat open to speculation before more research is conducted in the field.

6.2 Suggestions for further research

Smollan et al. (2010, p. 46) note, “*some people may not resist change itself, but rather some temporal aspect of it, and so researchers and managers need to differentiate time issues from*

content issues". This study found surprisingly few empirical studies that had differentiated made this differentiation and could be included in the study, despite a structured search of the literature. Encouragement by leading researchers has yielded a seemingly growing interest in the field over recent years. There is definitely a need for more empirical studies, covering more industries/sectors/countries, to be able further understand the concepts and to be able generalise findings. Many of the studies included could be replicated in other sectors to test the applicability of the suggested theories.

There is also a need for studies that measure the effect of time aspects on both success of change implementation and the overall performance of the firm, instead of just one of these elements as was found in the studies included in this thesis. This study also found a major division in the literature between "recipient"-focused and "management/organisational performance"-focused studies. There is a need for empirical studies, which tie together these two aspects, so that effect of the various reactions to change by recipients can be measured against the performance of the organisation.

Two of the studies included here (Da Silva & Wetzel, 2007; Staudenmayer et al., 2002) are revisions of data from studies which originally did not have a time focus. The researchers understood after their initial studies, the importance of time and adaptability of collected data. Many other researchers potentially hold such data that could be applied to more fully understanding the influence of time on change.

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APPENDICES

Appendix A – Data Extraction Form

Background info	
Title	
Author(s)	
Journal	
Year published	
Number of citings in Google Scholar	
Average citings per year since published	
Period of study	
Period of change	
Qualitative or quantative method?	
Type of study	
Subject of study	
Number of organisations?	
Private, public or both?	
Country?	
Size of organisation?	
Reason for change implementation	
Type of change	
Who are the respondents?	
Focus of article	
Primary focus of journal that article i published in?	
Does it consider overall success of (a) change initiative(s)?	
Management or recipient fous?	
Primary variables considered	
Change as a linear or continuous process?	
Is the success of change initiative measured?	
How is success of change initiatives measured?	
Effect of time on success?	
Does article consider resistance to change?	
How is the effect on recipients measured?	
Effect of time on resistance to change? Which dimension of time?	
Effect of time on sensemaking process / cognitive responses?	
Effect of time on behavioural responsive?	
Effect of time on emotional/affective responses?	
Dimensions of time	
Subjective or objective view of time?	
Is time (or a dimension of time) part of a hypothesis or one of the major variables considered?	
Other variables / dimensions considered?	
Definition given of any time related term/dimension?	
Is (the dimension of) time found to be important?	
Is (the dimension of) time found to be the most important variable of those considered?	
Order of importance of the variables considered	
Main conclusion made by authors re time & change	

Appendix B – Notes from the Search Process

Part I - Snowball method						
Date	Database / Source	Search term / method	No. of hits	No. of hits after sorting	No. included in study	Comment / articles of note found
Nov-17	Textbooks	General overview of topic	2	2	0	Inspiration for topic - Huy 2001 and Pettigrew et al 2001.
Nov-17	Google	Tidfrister AND endringsledelse	1000s not recorded	2	0	Woodward & Hendry (2004)
Nov-17	Science Direct	Pace AND Change	not recorded	1	2	Liguori (2012) - led to Amis et al (2004)
Jan-18	EBSCOhost Business Source Premier	articles citing Amis et al (2004)	52	5	1	Huy et al (2014), Klamer & Raisch (2013), Lukka & Partnen (2014), van Hoek et al (2010), Waterworth (2017)
Jan-18	Google Scholar	articles citing Huy et al (2001)	465	not recorded	1	Peigne (2012)
Jan-18	References of articles found	General snowball method	N/A	not recorded	2	Smolian et al (2010), Sylvie (2003), Wilkinson (2011)
Part II - Structured Literature review						
Date	Database / Source	Search term / method	No. of hits	No. of hits after sorting	No. included in study	Comment / new articles of note found
May-18	ScienceDirect	Pace AND change	9262	532	N/A	Due to limited ability to sort based on inclusion criteria, Science Direct as search database
May-18	Oria	Time AND change, in title + organi*ation*, in all fields	2034	298	3	Lee & Lee (2008), Staudenmayer et al (2002), Jones & Van de Ven (2016), Vicente-Lorente (2014)
May-18	Oria	Pace AND change, in title	618	24	1	Da Silva & Wetzel (2007)
May-18	Oria	Temporality AND change, in title	20	0	0	
May-18	Oria	Tempo AND change, in title	54	0	0	
May-18	Oria	Speed AND change, in title	904	0	0	
May-18	Oria	Speed AND change, in title + organi*ation*, in all fields	109	29	1	Yi et al (2015)
May-18	Oria	Frequency AND change, in title	1167	0	0	too many
May-18	Oria	Frequency AND change (in title) AND organi*ation*, in all fields	134	0	0	
May-18	Oria	Frequency AND change, in title, AND organi*ation* in all + NOT "climate", in all fields	84	4	1	Aktar et al (2016)
May-18	Oria	Timing AND change, in title + NOT "climate", in all fields	46	11	0	
May-18	Oria	Timeframe AND change, in title	4	0	0	
May-18	Oria	"Time frame" AND change, in title	11	0	0	
May-18	Oria	Deadline AND change, in title	73	6	0	
May-18	Oria	Deadlines AND change, in title	9	0	0	
May-18	Oria	"Emotional reactions" AND change, in title	11	0	0	Huy et al (2014)