

Utrecht University and Berenschot

Heating up Cold Cases

A qualitative international research towards best practices in the cold case approach, commissioned by Berenschot

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Foreword

It has been a period of five months of ups and downs. These five months contained many interesting and instructive moments, yet contain many days of frustration as well. I've written this thesis in request of Berenschot and as a conclusion to my Master: Sociology: Contemporary Social Problems.

I would first like to thank my mentor Sanne Boschman for her great guidance and feedback on my thesis. It played an important role in the completion of my thesis. I would next like to thank my supervisor Mark Vermeulen for his help in making the right connections during the five months of working on my thesis. I also would like to thank my fellow colleague Gied van Hoorn, for the many moments of discussion and the frustration that was shared. I also would like to give special thanks to all respondents who took part in interviews with me during the last five months. It was a hard task finding my respondents and without them this thesis would never have been where it is now. I would lastly like to thank my family and friends for supporting me throughout my research and for not bugging me every five minutes.

Tom

Summary

The term cold case has developed over the world in the last twenty years. Cold cases have various definitions over the world, but are typically defined as serious unsolved crimes and typically involve homicide and/or rape cases (Leiden & Ferwerda, 2006).

Attention towards these cold cases has increased in the last twenty years, leading to the development of cold case squads and attention from the media. Media attention resulted in the development of many crime series such as 'Cold case' and 'CSI', increasing the attention of cold cases in the public (Dale & Robinson, 2011). Further attention is given to cold cases through the rapid development of new technology, causing evidence that was once deemed useless, to become useful (Leiden & Ferwerda, 2006). Overall many cold cases still aren't solved and the development in attention and budget cuts has put pressure on cold case squads (Allsop, 2013). This asks for innovation that may also be found on an international scale. The main goal in this thesis is therefore to find out how the approach towards cold cases may be improved, through insight in cold case approaches, and international best practices on cold cases.

To fulfil this goal 15 semi-structured interviews were held on an international level, involving the best practices and approaches on cold cases in five different countries; The Netherlands, Belgium, United Kingdom, United States and Canada. Questions were asked to gain insight in three different theoretical aspects. These aspects are the institutional and cultural factors, the retroactive social control theory and technology (Innes & Clarke, 2009). Central in these aspects is the concept of linkage blindness, the failure to recognize links and leads within and between cold cases. Factors covered were noise, non-recording and non-reporting, institutional friction, the rapid development of technology, the digital divide, the retroactive social control theory and three cultural dimensions (Hofstede et al., 1990; Sheptycki, 2004).

The factor noise involves the addition of useless or the lack of vital information from processing raw data sources. Non-recording and non-reporting occur when police officers skip or forget procedures for various reasons. Institutional friction causes poor cooperation through conflict between different subcultures. The digital divide refers to conflicts that may arise between different technological systems and (paper) storage systems. (Sheptycki, 2004)

The retroactive social control theory suggests society constantly redefines its own social system, causing events, rules and institutions to be redefined over time when viewed (Innes & Clarke, 2009).

Lastly Leiden & Ferwerda (2006) suggest that technology is the driving force behind solving cold cases due to the constant development of new and more advanced technologies, allowing for the progression of cold cases that could once not be solved.

Hofstede et al. (1990) describes three different cultural dimensions. This includes the dimension of a professional and local culture, indicating in how far sub cultures based on work descriptions exist. Hofstede et al. (1990) further lists the dimension of work structure, which indicates the structure, discipline and seriousness of an organization. Hofstede et al. also describes the open- and closeness dimension, which indicates in how far an organization is willing to cooperate with others. Lastly there is the openness of a culture, indicating in how far an organization is willing to cooperate with external parties. (Hofstede et al, 1990)

In my results I find little evidence for the non-recording and non-reporting of files and noise. In addition I find that the police organizations show willingness to cooperate, leaning them closer towards a more local and an open culture. I find mixed results towards the work structure of cold case squads, showing both independence and a strict structure. I further find my findings in line with the retroactive social control theory. Lastly I find my findings to be in line with that of Leiden and Ferwerda (2006), showing technology to be the driving factor in selecting and approaching cold cases. My policy recommendations include

recommendations on increasing further cooperation, to both better make use of technology and to further fall in line with the retroactive social control theory by getting new perspectives on cold cases. I lastly suggest the digitalization of cold cases, while providing a simple implementation plan and suggest the development of a *smart* database to help link cold cases.

I in lastly provide a self-reflection on the process of connecting with international police organizations and provide tips in connecting with public organizations.

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1. Introduction

It is 30 November 1984 Zaandam. At 11 AM a 21 year old woman is found dead in the boutique she worked. Tied up inside a fitting room, using the curtain of that same fitting room, she was the victim of a brutal murder. A bicycle tradesman is later arrested, based on vague witness reports and a dog smell test, and sentenced to 12 years in prison. He is however later given his freedom in an appeal, leaving the murder unsolved. It would take 17 years before the case is reopened by the police upon request of the mother of the victim and solved using modern DNA techniques. The real killer having passed away several years earlier in 1992. (Trouw, 2002; Crimesite, 2015; Nu.nl, 2017)

This case, which is referred to as the fitting room murder, is one of the more notable examples of what is known as a later solved ‘cold-case’. Cold cases, or rather the process of evaluating and solving them, is a relatively new process of law enforcement. While the exact definition varies from place to place. It is defined by the Dutch Police as “*serious crimes that have remained unsolved and carry a minimum penalty of at least twelve years*” (Politie, 2016; Leiden & Ferwerda, 2006). This typically means that cold-cases involve homicide or rape. Despite being relatively new, cold cases are well-known in the world. Cold cases, or rather the process of solving them, could even be seen as ‘hot’ in today’s world, its popularity fed by television shows such as ‘cold case’, ‘New Tricks’, ‘CSI’ and the Dutch civil Detective *Peter R. de Vries* (Dale & Robinson, 2011). It is further kept alive through blogs and thriving online communities, which are built around re-visiting and investigating these unsolved police cases. Public interest in cold-cases can even be seen in tourism, often termed dark-tourism or disaster-tourism, involving old crime scenes being visited by curious tourists.

It is clear an interest towards cold cases exists. However it is not just curiosity towards cold cases that resulted in the current attention these cases receive. It is in addition the constant development of modern and new techniques that share a part in this. New DNA techniques and constant scientific advancement offer new chances in cold cases, solving cases that could not be solved using modern day technology.

However not all cold cases end up being solved. Even after having been looked at again (Leiden & Ferwerda, 2006). In addition the popularity around cold cases is not always a welcome one, especially with the pressure it may bring to detectives working with cold cases. Internally detectives may push cold case squads towards pointing their attention at specific cold cases. Externally media attention and frustrated families can put pressure on cold case squads with phone-calls or otherwise giving media attention to a specific case. This can cause attention towards cases which have a low chance of being solved, leaving the more promising cold cases without attention. There is in addition the issue of living in a sober age where budgets end up repeatedly cut (Allsop, 2013). This not only puts pressure on cold case squads, but also puts their existence at risk as less money is directed their way.

To solve these issues an innovative approach can be useful. However such innovation does not necessarily have to be found within the country of origin. Being mostly unsolved homicide and rape cases society internationally holds an interest in seeing cold cases looked at. Families of victims in unsolved murder cases often cannot put their minds at ease till the case involving the murder of their loved one is solved, gathering evidence and tips on their own and pressuring the police through the media (Leiden & Ferwerda, 2006).

When coupled with the aforementioned grown interest in cold cases and rise of technology, it has therefore become an interesting subject to not just look at one’s own society, but also look at other societies and discover not only their innovations in selecting the most promising cold cases, but also seeing which approach solves the most cases. This also forms the main question in this research;

How can we improve the approach towards cold cases by gaining insight in cold case approaches and international best practices?

In this research I have sought to answer this question in several steps. I have first provided a clear overview of existing theory and research on the subject and process of cold cases. Next I have gathered research data using qualitative research in the form of interviews from a total of five different countries. I further provide a set of recommendations which are constructed based on the results of the gathered data. These recommendations and results may then be used by existing police forces to improve their own approaches towards cold cases.

In this way I have made use of the social exchange theory. This theory proposes that actors make decisions based on a cost-benefit analysis (Cook et al. 2013). This thesis and research reduces those costs by already providing a set of recommendations that may be adopted without having to be gathered or constructed first.

This is similar to the DNA academy method used in the Berenschot Organization. The DNA academy method is focussed on finding innovations internationally to provide recommendations and improvements to the public sector.

Some general empirical research towards cold cases, such as Innes & Clarke (2009) and Spreen & Vermeulen (2008), has been done in the past. However the total amount of literature that touches cold case remains little. This thesis will further add to that amount and in addition display the usefulness of a more international approach.

We will structure this thesis by first gaining insight in the context and background surrounding cold cases, after which we will focus on relevant theory, building into the methodology, and eventually provide the findings, conclusion and recommendations of this thesis.

2. Literature and Theory

In this chapter I will discuss the relevant theoretical framework around the subject of cold case. I will first provide information on the background and context of cold cases. This includes information on the definition and history of cold cases and cold case squads. I will in addition cover the selection of cold cases in the past.

I will next discuss the theories and the best practices they offer towards the selection of cold cases, separated in four sections. This includes sections of organisational structures, institutions and culture, the retroactive social control theory and lastly the influence of technology.

Lastly I will provide a summary of the most important expectations and a graph to provide further clarity. Smaller summaries can also be found between sections.

2.1: The Background and Context of Cold Cases

2.1.1 Definition, History and the rise of cold case squads.

As was stated in the introduction, The exact definition of the term ‘cold case’ varies from place to place and is often a little vague. It is by the Dutch police referred to as *serious crimes that have remained unsolved and carry a minimum penalty of at least twelve years* (Politie, 2016; Leiden & Ferwerda, 2006). In the Netherlands however, a case has to be marked as a cold case by a senior official and a detective official before they are seen as such (Politie, 2016). Similarly, internationally cases are typically defined as cold when none of the viable leads result in any new discoveries (Allsop, 2013). This however may further vary depending on the country. It is when these cases are opened again that they become *cold case investigations* and are then typically handled by a cold case squad or a regular homicide squad if no cold case squad exists.

The rise of the concept of cold cases is however a fairly recent one. In the USA, the process of re-opening and solving cold cases started to become a more common process in the 1990s, a process lead forward and performed by cold case squads. These squads are police teams which are dedicated to selecting and solving cold cases. In Washington DC, this re-evaluation process performed by cold case squads led to the successful closure of 157 cases from 1992 to 1997 (Leiden & Ferwerda, 2006). The implementation of cold case squads, responsible for the process of reviewing cold cases was then soon imported into the UK. It however wasn't till 1999 that the first cold-case squad was implemented in The Netherlands. This first team was set up in the police-region of Groningen, called the ‘Project Unsolved Serious Crimes’ (Project Onopgeloste Ernstige Delicten). Their example was quickly followed up in 2000 by a pilot which was started by the cooperating police regions Utrecht & Amsterdam-Amstelland. This pilot focussed on murder and rape cases, and was supported by the Ministry, Dutch Forensics Institute, National Police Services and the Department of Homicide and Sexual Crimes (Leiden & Ferwerda, 2006). It was the accidental finding of a link between the murder cases of two young woman and their successful closure that led to a jumpstart in attention for cold cases in The Netherlands. (Leiden & Ferwerda, 2006)

A further interesting development started nearing the end of the year 2000. It was during this time that the ‘Landelijk Team Kindermoorden (LTK)’, or the ‘Country-wide Team Childhomicide’, was called into life. This team was responsible for revisiting thirteen unsolved child homicide cases. From these cases eleven were re-opened due to the discovery of new leads, while two cases were eventually outright solved. (Leiden & Ferwerda, 2006)

2.1.2 Cold Case Squads: What do they look like?

Cold Case Squads do not typically have to follow a specific structure. In the US for example, the structure of cold case squads differs from region to region. There may even be varying structures within a specific department, or varying structures from case to case (Turner & Kosa, 2003).

Yet in the world we can typically differ between different types of cold case squads. Based on their permanency we can differ between three different types of cold case squads:

- The temporary cold case squad
- The semi-permanent cold case squad
- The permanent cold case squad.

Which type of cold case squad one can find employed will differ based on region, country and context. Context can involve matters such as budget (Turner & Kosa, 2003), the amount of serious crimes and organisational structure (Leiden & Ferwerda, 2006; Turner & Kosa, 2003). In some situations cold case squads are organised simply due to decline in new homicide cases (Turner & Kosa, 2003). This means that when relatively few new homicides are committed at a given time, police departments may choose to implement a cold case squad as a way of spending extra time.

One of the three types of cold case squads are the temporary cold case squads. These squads are typically created with a single specific case in mind. These teams are then formed ad-hoc to solve one specific case, after which once the case is solved or otherwise closed, the team dissolves. These squads typically have varying structures depending on the specific cold case. They in addition are often formed to solve a cold case that was selected from a country-wide selection of unsolved cold cases (Leiden & Ferwerda, 2006).

Semi-permanent cold case squads contain a core of permanent team member that solely focus on cold cases. They receive support from case to case from a constantly varying group of team members (Leiden & Ferwerda, 2006).

Permanent cold case squads lastly consist of a set team of police members, which solely received the task to focus on cold cases (Leiden & Ferwerda, 2006). We can find two types of permanent cold case squads in The Netherlands. One which focusses on only preparing a cold case investigation, including selecting cases and reviewing them, and then leaves the operational part to a regular detective team. The other type performs both of these tasks.

A similar setup can be found in the US, where cold case squads are typically considered a viable option in a jurisdiction that is plagued by a large amount of unsolved murders. However as mentioned before, cold case squads are occasionally also formed out of convenience when there are few new murder cases. Cold case squads may however also be formed when there are so many new cases, that otherwise no work at all could be done on cold cases.

Different, but comparable to the Netherlands; cold case squads in the US may contain so called 'light duty' detectives who are focussed on reviewing cases, writing summaries and performing work-ups on witnesses. A function comparable to that of a cold case team in the Netherlands which is only focussed on preparing a cold case investigation. Squads in the US may in addition make use of interns, students or retired personnel when extra help is required. When needed and the budget allows it, cold case squads in the US may also make use of the expertise from the FBI and internal or external experts (Turner & Kosa, 2003). This is similar to the UK, where cold case squads may make use of retired personnel and interns when attempting to tackle cold cases and extra hands are needed (Innes & Clarke, 2009)

Members of cold case squads in the US in addition may benefit from additional compensation, rank and work conditions (Turner & Kosa, 2003).

2.1.3 Cold Cases: Selection and Grounds for Re-opening

In The Netherlands active cases that go 'cold' are typically checked periodically several times by the police. Especially more famed cases have the tendency of receiving a variety of tips over time, even long after the crime was committed. There is however no national guidance on cold cases and while cold cases typically have a supervisor which monitors these cases, there are no set guidelines on when to review cold cases. There are in addition no set guidelines on when to re-open cold cases and when a case is re-opened this actual order typically comes from the public prosecutor or the leadership of a police department. This is slightly similar, yet different in the US. In the US a cold case may be opened by prosecutor, but cases are more typically opened by a homicide squad supervisor, who may or may not discuss this first with other detectives (Turner & Kosa, 2003).

Actual reasoning for re-opening cold cases tends to vary greatly, and can both be appointed to internal and external reasoning. (Leiden & Ferwerda, 2006)

In the Netherlands intrinsic reasons given for the re-opening of cold cases include the development of new technology and new investigation methods. Examples include the development of more accurate fingerprint technology and the development of better interviewing methods. Both of these reasons may warrant a second look at a cold case, through resubmitting old evidence for new results or through reprocessing the existing evidence more thoroughly.

Extrinsic reasoning can also lead to the re-opening of cold cases and can include the expiration of old cases by law and internal or external pressure from sources such as media, family or detectives wishing to look at the case once more. Examples include phone-calls to the cold case squads by family members of a victim, media attention for a specific cold case on the news or an old detective asking a cold case squad to look at one of his old unsolved case files. The expiration of cold cases refers to the expiration of a crime by law, a process present in some cases that causes cases to be closed permanently if not solved within time.

While Leiden & Ferwerda mentions that such external reasoning does not necessarily offer an increased chance to solve the cold case.

2.2: Structural, Institutional and Cultural Factors

The selection of promising cold cases is influenced by a variety of aspects. In this section I will discuss a variety of success factors that play a role in the selection of promising cold cases. These include a variety of organisational factors, cultural and institutional factors, technological factors and lastly the influence of the retroactive social control theory and tunnel vision. These factors and the theory that supports them will be discussed below in the coming sections.

2.2.1 Structural factors and opportunities in police departments

Police departments spend much time on solving cases, yet many of these end up unsolved due to a variety of reasons. Police departments have much to gain here, as many inhibiting factors may be reduced with proper measures or even prevented. This would allow once unsolved cases to be re-opened and solved. One of the traits, or effects of the inhibiting factors in policework is the concept called linkage blindness. Linkage blindness as the name implies refers to the failure of analysts to recognize connections between and within cases (Sheptycki, 1998). Linkage blindness typically occurs when there is a lack of horizontal flow of information. Horizontal flow of information referring to the information shared between departments within the police organizations. Linkage blindness also typically occurs when the crime being dealt with crosses international borders (Sheptycki, 2004). It is this failure to recognize links within or between cold cases that provides many chances for by police departments to improve.

A first area of opportunities where new leads and links may be found between and within cold cases is within the field of IT. Links and leads may be found through re-ordering and updating old archives into a universal digital format and the adoption of a single universal database. This may result in cold cases being re-opened and solved. This can be explained due to the reduction of the influence of the so called 'digital divide'. Sheptycki (2004) first mentions the digital divide, as a well-known problem amongst the police. The digital divide refers to the conflicts that arise between different systems, including databases and communication systems. Examples are differing databases that each record information in specific ways and are unable to communicate with one another, but also problems that arise due to information stored that is stored on paper and never ends up being stored on a newly introduced digital system (Sheptycki, 2004). A recent example would be the continuing struggle for the Dutch police attempting to implement and adapt to the new database system called Documentum. Resulting in additional yearly costs as an older system is being kept running parallel (Voskuil & Winterman, 2017). Much influence of the digital divide is visible around cold cases, which often rely on written reports. As is mentioned by Leiden & Ferwerda (2006), much of the data around cold cases is either missing, incomplete or spread around in a variety of databases, files and even entire office rooms. They further mention that the inclusion of some of the more complete case files is purely due to the detectives who were involved with the case itself at the time and kept the case files with them due to a feeling of responsibility (Leiden & Ferwerda, 2006).

There are more aspects than ordering and collecting the needed evidence in one place. A second factor that offers police departments many chances to improve is that of the quality of information. Through re-filtering raw information sources within cold cases, new evidence or leads may be discovered. Suitable raw information can consist of old recordings, reports and transcriptions of witness interviews. By reprocessing such data new information or leads that once weren't noticed or considered unimportant may re-surface. Re-filtering raw information can in addition be important because processed information within (cold) cases may vary strongly (Sheptycki, 2004). Sheptycki (2004) calls this effect *noise*. *Noise* strongly affects the quality of information and is a continuously present factor during daily police work. Noise, the lack of vital information and the addition of useless information, is created due to a poor or inappropriate filtering when new information is processed. It however also appears alongside new sources of information that arrive in the form of excessive attention to a singular detail or information on unrelated subjects. Noise, or the low quality information resulting from noise, could affect how, or if a case is solved at all. This on its own could result in cases remaining unsolved. The influence of noise however does not disappear when cold cases are looked at again. On the contrary, noise can be considered unavoidable in police work, as linkage blindness may prevent one from recognizing a lead, recognizing it as noise instead. This may hinder solving cases and the re-opening of cold-cases due to the resulting linkage blindness that comes from the influence of noise. Leiden & Ferwerda (2006) further describe how noise, in the form of poorly transcribed recordings, inhibited cold case investigations.

Police departments may lastly improve their approach towards cold cases through the act of properly recording and reporting when performing work on both cases and cold cases. This can be clarified due to the existence of *non-reporting and non-recording* of information within cases. Recording and reporting information is a highly time consuming process, which due to the earlier mentioned digital divide often has to be performed more than once by those working on cases (Sheptycki, 2004). Sheptycki mentions further that this fact is not helped when the notion is taken into account that the recording process typically does not help solve current cases. Especially when pressed for time this may result in information not being recorded in one or more systems, which could be problematic for the future if the case ends

up unsolved, becoming a cold case. This is confirmed by Leiden & Ferwerda (2006) who state that aside from poorly build case files and tape transcriptions, in some cases even physical evidence was found to be missing when reviewing cold cases.

2.2.2 Institutional Friction and Organizational Culture

Aside from structural factors cold case squads may gain from opportunities in police organization institutions and culture. Institutions consist of the written and non-written rules of our lives. It is these rules that define how we, and an organisation behaves. Bureaucracy in an organization can be considered a collection of those rules. However, institutions may instead result in a variety of side-effects. Such side-effects are also described by Merton (1936) as unintended consequences. These unintentional consequences occur when new rules are made as side-effects of such rules. A simple example would involve adding a toll to a bridge. An unintentional side-effect may involve people walking around the bridge instead. Den Boer and Doelle (2000) suggest that such organizational 'flaws' can be found in Police Forces in at least fifteen European countries.

These organizational flaws may lead to poor cooperation between police organisations. This poor cooperation results in reduced flow of information, which leads to linkage blindness, inhibiting cold cases from being solved (Sheptycki, 2004). Sheptycki also argues that different subcultures within an organisation with varying institutions may collide together, leading to the same reduced flow of information and linkage blindness. Such friction can result when two existing subcultures have a colliding job description or when a new agency or department is added to an organisation Sheptycki (2004).

Sheptycki's description of subcultures however implies that such would have to exist within the police organization. Hofstede et al. (1990) describes a variety cultural dimensions which type a culture. I will discuss some of these dimensions in relation to police organizations.

Hofstede et al. (1990) first describes a range between a professional versus a local culture. A local culture implies that an organisation consists of one single culture. A professional culture consists of a set of subcultures that are defined based on the profession and content of jobs within an organisation. Paoline (2003) and Terpstra and Schaap (2013) show based on their research that a variety of sub-cultures exist within the Dutch police organization. This image fits with a more professional culture and implies that institutional friction within the organisation is more likely to occur and may result in linkage blindness (Sheptycki, 2004).

Hofstede et al. (1990) describes a second dimension. This dimension describes the open- and closeness of an organization. Hofstede (1990) explains this dimension as one that describes the communication climate, or in how far it is easy for different employees to communicate amongst each other. Terpstra & Schaap (2013) found that the Dutch, but also American police culture is rather closed and is distrustful of outsiders. This can inhibit cooperation between and within police organizations, which may lead to linkage blindness as described by Sheptycki (2004).

Another dimension mentioned by Hofstede et al. (1990) is the work-structure dimension. An organisation may either have a loose or a strict work structure. It is likely that a police force has a strict work structure, based on the mention by Sheptycki (2004) on the high load of specific reports police officers must systematically fill in during their daily routine. Sheptycki (2004) argues that a strict work structure promotes non-recording and non-reporting as officers struggle to keep up with the strict workflow. This can result in the loss of data and result in linkage blindness. However Leiden & Ferwerda (2006) reported a large amount of cold case data being spread over a large area during their research. A strict work structure may help reduce this problem.

Lastly the customer orientation dimension described by Hofstede et al. (1990) may influence the selection of cold cases. Hofstede (1990) states that a customer oriented organisation will follow the requests of a customer. This is opposite to an organisation with a low customer orientation, which assumes it knows what is best for the customer and applies its own methods. Following Leiden & Ferwerda (2006), external and internal pressure both appear to be a reason for opening several cold cases. In this sense both a 'customer' from within the police, in the form of a detective asking for attention, or outside the police in the form of a worried family, may influence the selection of cold cases. It however remains unclear how this influence affects the selection of cold cases in a beneficial way.

2.2.3 Summary

There are a variety of organisational aspects which can be improved upon to reduce the concept of linkage blindness, causing one to miss links within or between cold cases. These aspects include the digitalization of cold case files into one universal database, re-filtering of evidence to reduce noise and by reducing the non-recording and non-reporting in cases files.

Chances around the process of cold cases in addition lie in the culture and institutions of the police organisation. Linkage blindness may be reduced through improved cooperation focussing on a more local and open culture. However a more professional culture may promote friction among teams and result in more linkage blindness. A strict work structure may further result in more linkage blindness due to non-reporting and non-recording, but it may also aid in keeping data structured in one place. Lastly it is likely that the customer orientation of the police organization influences the selection of cold cases in some way.

2.3: Retroactive Social Control Theory

Besides technology, organisational and institutional factors, the constantly changing social system a society has, also allows for cold cases to be solved. On one hand I propose that through timely revisiting cold case files, new links may be found and cases may be solved due to a change in societal perception. This allows police forces involved see cases in an alternative way, compared to past times. On the other hand I expect that new links in cold cases may be found if viewed by those not previously related to the case, resulting in alternate ideas definitions of the event. These expectations are explained by the retroactive social control theory. In this theory it is argued by Innes & Clarke (2009) that a society as a whole is constantly redefining its own social system, affecting how norms, (political) values and regulations affect present and future events and how events in the past are defined and viewed. Innes & Clarke argue that the retroactive social control theory works based on two elements. The first element focuses on the past; placing its focus on which historical events are deemed important and how these events are viewed by society. The second element on the other hand places its focus on how the changing views of past events affect the view, norms and values of present or future events.

Linked to cold cases, Innes & Clarke provide a variety of examples where a redefinition of past events, such as a new view on the motive of an unsolved murder, affects the perspective of the present case. Allowing progress and even successful closure in the present case. In this way the retroactive social control theory offers clarity on why cold cases end up being re-opened and solved after a long period of time. It in addition offers insight in how issues such as tunnelvision and groupthinking is later solved through the changing perception of the past.

To provide an example; In a cold case homicide, the detective A may decide early on that the victim was murdered in a specific room and focus his efforts on investigating that specific room. However as the case is looked at by detective B at a later date, the new

detective working on the case may instead make the judgement that the victim was instead murdered in a different room, and *dragged* to another room. This leads to the detective investigating the other rooms, and finding evidence in those rooms.

In other words; detective A defined the situation (the murder) in a specific way and focussed on that. However when detective B looks at the situation, he defines it in a different way, resulting in a different approach.

2.4 Theoretical Framework: DNA and other Forensic Technology

Aside from culture, institutions and organisational factors, there is a third separate field within cold cases that provides police departments with many chances to improve the selection and solve cold cases. Namely the field of DNA and other forensic technology. To clarify, forensic technology involves fingerprint related technology, material analysis and more. I will discuss the developments and importance of DNA related technology below. It is through re-analyzing forensic evidence with modern DNA technology and other forensic technology that DNA related technology is likely to be a driving factor in both selecting and successfully solving cold cases. The importance and explanation of this technology can be found in both history and its rapid development today.

We can find one of the first involvements of DNA in the UK in 1986, where a man was charged with the murder-rape of one two murders-rapes that were respectively committed in 1983 and 1986. The man was later proven to be innocent in what would be the first case in history that made use of DNA analysis technique. Not only did the DNA analysis prove that the man was not responsible for the crime, it in addition proved that the two murder-rapes were in fact connected and committed by the same man. (Gill & Werrett, 1987).

DNA, also called the building block of the human body, contains the aspects of a human person and is unique for every person. Provided the DNA profile is complete, the odds that of a false positive are negligible. This meaning that the results of DNA testing are highly accurate and unlikely to point to the wrong person. (Leiden & Ferwerda, 2006)

Combined with the notion that technology around DNA-techniques is in constant active development, it is no surprise today's interest in forensics is large. Today DNA can be exacted from small samples that were deemed useless in the past (Caglia, Stefanoni & La Rosa, 2011). Where large samples were needed and used to perform the process of a long and costly DNA analysis (Lord, 2005), current technology allows the extraction of proper DNA profiles from even the tiniest samples (Leiden & Ferwerda, 2006).

DNA therefore is a highly interesting material to collect and link both victims and suspects to crimes. DNA carries further importance by being capable of being stored for years upon years when kept properly. This means that that even old evidence samples can be used to perform valid DNA analysis using modern techniques which weren't possible during the time of the crime. (Leiden & Ferwerda, 2006)

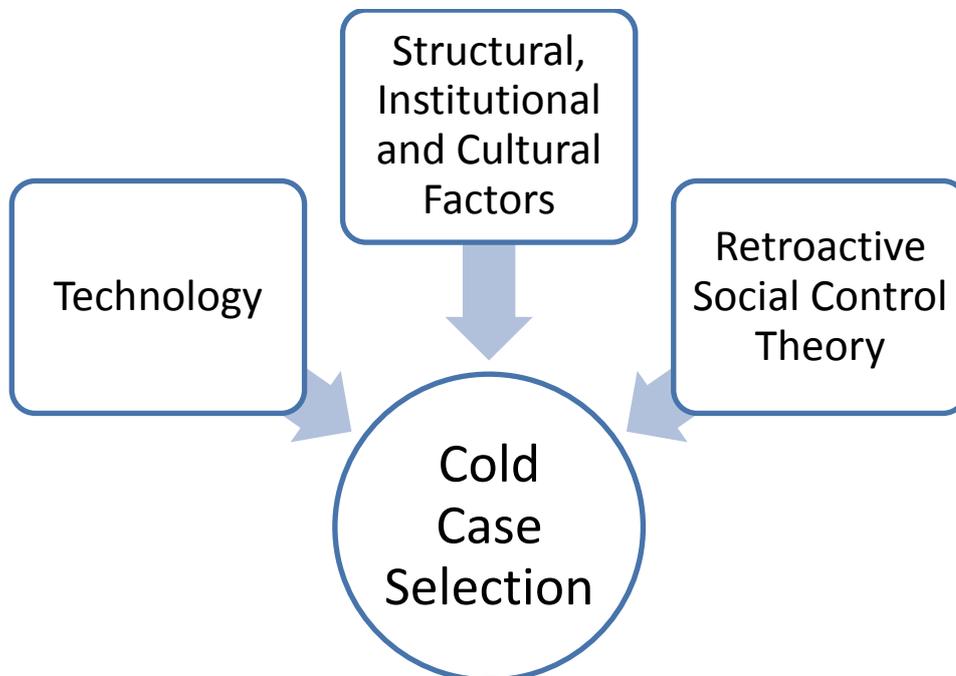
It is therefore no surprise that the development of this modern technology has, and still plays a major role in solving both cold and new cases. One could even argue that it is the development of forensics and especially the developments in DNA-techniques that are responsible for the increase in attention towards cold cases. (Allsop, 2013; Leiden & Ferwerda, 2006)

As the technology and attention around DNA-techniques and forensics continues to grow, so does its importance in the courtroom. Evidence provided by forensic DNA-techniques has had an increasingly larger value in the courtroom. This is not only due to the advancement in techniques, but also as due to changing culture. Especially in the United States where the jury is made up from civilians, the importance of forensic evidence such as DNA matches has risen. It is popular TV-shows such as CSI and NCIS that had led to the public holding forensic evidence, such as DNA matches and fingerprints, with higher value

than regular evidence. An effect that is often also referred to as the CSI-effect (Durnal, 2010). Similarly the constant development and introduction of new technology has shown to be a large driving factor in the Netherlands for both current and cold cases (Leiden & Ferwerda, 2006).

2.5 Theoretical Framework: Model

Overall there are three different aspects that play a role in the selection process of cold cases. Each of these aspects affect the selection of cold cases in a specific way. Technology overall increases the solvability of cold cases and is a driving factor in re-opening cold cases. Structural, Institutional and Cultural factors consist of several aspects, some of which are beneficial, while others inhibit the selection and solvability of cold cases due to linkage blindness (Sheptcyki, 2004). Lastly the Retroactive Social Control Theory (Innes & Clarke, 2009) helps reduce aspects such as tunnel vision, aiding in the solvability and selection of cold cases. These aspects are visually presented below.



3. Data & Research Methods

In this chapter I will discuss the methods that were used in conducting this research on cold cases. I will first discuss the research type that was used to investigate this subject. Next I will discuss the aspect of data collection, and shed light on how the data was gathered. Thirdly, I will discuss the topic list and discuss the major topic points. I will then proceed to discuss the way data was analyzed, the validity and reliability of the results and end this chapter with a few points on ethics.

3.1 Methodology

In this research the gathering of international best practices is central. Because of the somewhat explorative nature, potential for strongly varying structures, approaches and opinions found internationally, the choice for a qualitative research was made. Qualitative research allows for the collection and interpretation of textual material obtained from talk or observation (Malterud, 2001).

Here a specific choice was made to choose for semi-structured interviews. This offered the advantage of gathering data on a specific set of points, while still offering the possibility to explore and ask additional questions if the interviewer felt there was more to be learned (Barriball & While, 1994). This type of research in addition allowed the flexibility needed for respondents to explain structures or practices that weren't previously known or expected by the interviewer.

Furthermore the use of a qualitative approach allowed for a direct interaction between the interviewer and respondents, allowing the interviewer to judge the tone, speed and other aspects of the respondent. This offered the interviewer the advantage of being able to recognize potentially hidden meanings or the need to ask additional questions or clarification on a topic.

Lastly the use of qualitative research allows the researcher to better capture mechanisms, opinions and assumptions made by respondents than would be possible using a quantitative approach (Boeije, 2009).

In summary, the use of a qualitative research type offers the extra flexibility and accuracy needed to gather data on cold cases from respondents.

3.2 Data Collection and Respondents

In this section I will discuss how the data was collected and processed. I will in addition discuss the difficulties that were encountered gathering the data and what respondents were interviewed.

The collection of data is done at an international scale. Cold case supervisors, detectives or other functions that are comparable have been interviewed in several countries to achieve this. The main requirement for respondents is that they have to either be actively involved with or knowledgeable on the selection process around cold cases. All respondents that were interviewed are listed below. Please note that due to anonymity names are kept out and job titles have been simplified.

Respondent	Country
1	Netherlands
2	Netherlands
3	Netherlands
4	Netherlands
5	Netherlands
6	Netherlands

7	UK
8	United States
9	United States
10	Canada
11	Canada
12	Canada
13	Belgium
14	Belgium
15	Belgium

The majority (14) of the respondents interviewed were all active police detectives or police supervisors. (10) respondents were active within cold case squads, while (3) respondents were active within a homicide team and (1) respondent was active in a reviewing team. Outside of the respondents active internally within a police department, (1) respondents were active in external organizations.

All data gathered from the respondents that were interviewed was recorded using a skype recording plugin. These recordings were then transcribed into .doc files and processed to ensure anonymity. This process included removing all names, altering specific ages into age brackets and removing the names of locations and countries.

Gathering international research data has proven to be a challenging task. The response rate was very low and police departments were reluctant to participate in the interviews. I initially planned on writing several personalized e-mails and making several phone-calls to plan interviews. My expectation was that through the use of snowball sampling I could gather more respondents on the way. Unfortunately this method had proven to be ineffective. Few were gathered and those that were gathered were not capable of linking me to new respondents. I therefore altered my approach to a form of convenience sampling. One standard universal e-mail was prepared, which was then send to a large amount of e-mails belonging to police departments in a variety of countries. E-mail addresses were recovered from media articles, blogs, forums and official police websites. This approach led to the majority of the respondents for this research. I in addition did not abandon the snowball sampling method and kept requesting for new respondents after each interview. This has in a few cases proven successful, leading to new respondents.

Another difficulty that was encountered was that of the language barrier. In some situations potential respondents had great difficulty communicating with the researcher in English. This inhibited any potential interviews with such respondents. This in addition may have resulted in the eventually participating countries being either Dutch or English speaking countries. Potential respondents who replied positively to the invitation e-mail were approached in an e-mail with a suggested date and time for the interview. Respondents either agreed to this time or proposed an alternative time which was then accepted. In two cases respondents directly called the interviewer using the provided mobile phone number within the invitation e-mail. These respondents were interviewed directly during this call. All other respondents were called using skype on the set time and date and interviewed at that time. For one respondent skype was not capable of reaching their provided address, which resulted in a slightly delayed interview after which they contacted the researcher themselves using the provided skype address in an e-mail. All interviews took an average of 30 minutes, some of which shorter and some longer. Respondents were offered insight in the results of the research as a form of compensation, to which all respondents replied positively. In addition several respondents specifically asked to view these results before the interview took place.

3.3 Topic List

This qualitative research made use of semi-structured interviews. This means that a set list of topics was discussed with respondents while still offering freedom to discuss other topics or ask additional questions. This list of topics was constructed in a topic-list based on the theoretical context and theories. The list is split up in three main sections. These aspects are then split up into various sub-topics. Each sub-topic is further constructed of several sub-questions that offer both descriptive and explanatory insight in the main topics.

The first section involves the introduction and ensures that respondents are aware of their anonymity and the ability to stop the interview at any time. They are additionally told that they may skip or refuse to answer questions at any time. The second section is based around the structure, cooperation and expertise of cold case squads. Questions involve the average age and experience within cold case squads, the permanency of cold case squads and the experienced cooperation with external or internal actors. Respondents are in addition asked for their opinions on these aspects. The third and longest section discusses the process around cold cases. Questions asked include how respondents approach cold cases, what makes a cold case interesting to look at, how the reviewing process works and what they consider best practices in this approach. Much like the previous section, respondents are in addition asked their opinion on the described processes.

The initially produced topic list was found to need no changes throughout the interviews. Topics included in the topic list covered all needed subjects. Several topics in the topic list were even brought up by the respondents and discussed in the interviews before they could be mentioned by the interviewer.

Respondents were never explained any specific theories and further explanations or examples were only given when respondents did not understand questions or specifically asked for examples. Overall these were kept to a minimum to avoid guiding respondents. The actual topic list has been enclosed within the attachment section of this paper.

3.4 Data Analysis

To analyze the data, all phone conversations were recorded using a skype plugin and transcribed afterwards. With one exception, transcriptions were performed 1:1, with the with word repetitions or ambient/unrelated sounds such as background noise or a respondent coughing being skipped. Due to time constraints one interview could not be transcribed, and only had its most interesting findings written down.

Data was analyzed using the computer analyses program Nvivo 11. As most interviews consisted of stories filled with data, the choice was made to first code openly, to ensure as little data as possible was lost. Data first grossly coded based on the interview topic, attaching text to the topics that were discussed. Later a second layer of more directed coding was performed, further splitting up the various topics into subjects and adding nodes related to theoretical subjects. This allowed for better overview on the relations between codes and the theoretical framework (Baarda et al., 2013). Many pieces of code were found to apply to multiple nodes. These were split up as far as possible, but otherwise added to both nodes. After coding a total of 41 nodes were made. The full code-tree can be found in the attachments of this thesis.

3.5 Validity and Reliability

Two important aspects of any research are that of validity and reliability. I will discuss both of these aspects and how they are warranted in this research.

Validity refers measuring what you actually wish to measure while gathering data. In other words, validity ensures that the results of a research reflect reality. (Baarda et al. 2013) To warrant validity in this research, all interviews were planned beforehand or respondents were

asked to call when they wanted to have an interview. This helped ensure that all respondents were alone in a room and at the place of their preference when the interview took place. This means that respondents were less likely to provide socially acceptable answers due to nearby colleagues. In addition full anonymity was guaranteed beforehand. All names, locations and even countries were anonymized. Specific ages were rounded up or down to help anonymization. Despite these measures, some interruptions during the interviews were unavoidable. These were however short interruptions and respondents were left alone again afterwards to continue the interview, minimizing any influence on validity. Unfortunately some instances of leading could not be avoided. During some interviews, respondents asked for examples and subsequently were led by the example provided.

The second aspect is that of reliability. Reliability refers to how reliably a research can be repeated. A reliable research will ensure the same results over and over; no matter how many times data is gathered on the subject and tested (Baarda et al. 2013). One of the aspects of reliability is data saturation. Data saturation occurs when enough data has been collected to ensure that all opinions, ideas and values have been recorded. This means that when data saturation occurs, a replication study will find produce identical results using different respondents (Fusch & Ness, 2015).

Unfortunately qualitative research is unlike quantitative research and involves context related opinions. Such opinions may change over time, meaning that repeatable results are much harder to achieve. This is also explained by the retroactive social control theory by Innes & Clarke (2009). An event interpreted in a specific way today, might be interpreted completely differently tomorrow. Nevertheless it is important to ensure as much reliability as possible. In this research therefore all steps of the research were documented. All interviews with respondent were recorded using a skype recording plugin and were closely transcribed shortly afterwards. These interviews were in addition all performed by the same interviewer and the topic-list was not altered throughout the interviews. In addition the selected respondents were fairly specific. All respondents spoke English and were inhabitants of western countries. This caused saturation for a majority of the topics to occur early and improves the reliability of this qualitative research.

Overall the researcher of this research took careful steps to ensure validity and reliability were upheld to the best of his ability.

3.6 Ethics

Aside from validity and reliability, ethical aspects also play an important role in research. Baarda et al. (2013) describe a total of four ethical requirements to ensure that respondents don't experience any drawbacks from participating in interviews and giving their opinion on a variety of subjects. These aspects are anonymity, willingness to participate, proper awareness on the research and a lack of negative side-effects. I will proceed to describe how these aspects were implemented.

The first step taken in this research is proper anonymization. All data gathered from respondents was fully anonymized. Provided ages were altered to age brackets, real names, project names and the provided country were removed. All respondents were informed of this anonymization process before their interviews took place. The next step taken was to ensure full willingness to participate. All interviews were based on pre-made appointments on the preferred time of the respondent. Respondents were in addition informed that they could skip any question they wanted and in addition stop the interview at any time if preferred. The third step involved providing proper awareness to the respondents on the handling and processing of their data in the research. All respondents were informed on the transcription process and asked permission to record the interview. Respondents were in addition told the goal of this

research and how the interviews would add to this research. Interviews only took place after the above steps were taken.

These taken steps all contribute to fourth step of avoiding any side-effects for respondents when participating in this research. To lastly ensure these side-effects the researcher of this research took great care in handling the gathered data.

4. Results

In this chapter I will present the results of the qualitative analyses. I will first discuss various contextual factors related to the structure of cold case teams around the world. I will next discuss the findings related to the theory in three sections, in line with the theoretical framework. I will first discuss the structural, institutional and cultural factors around cold cases in relation to the theory. I will secondly discuss the retroactive social control theory ((Innes & Clarke, 2009) in relation to my findings. In the last section the influence of technology on cold cases will be discussed. Short descriptions of all theories and factors which are discussed in a particular section will be provided.

4.1 Cold Case Squad Structure & Context

In this section I will discuss the team structure around cold cases, if one exists. I will first discuss the permanency of teams, followed by the size of teams. I will next discuss the experience and specialism within teams and how decisions are made. Both descriptive information provided by respondents and their opinion on the matter will be provided.

4.1.1 Size and Permanency

Falling in line with the findings of Turner & Kosa (2003), I have found that team structures around cold cases tend to vary strongly from location to location. Respondents have mentioned a variety of team structures surrounding cold cases, including size and permanency. Some respondents have stated that no specialized cold case squad at all exists within their department and that attending cold cases is done next to other tasks within their team. One respondent stated *“and right now for us, our squad. Because of manpower shortages our department has actually dissembled the cold case squad.”*. The remaining respondents have stated to work within a form of a cold case squad. These cold case squads for the majority of the cases permanent. One respondent mentioned having several permanent members but stated also to *“have police officers of other ranks that come in, on a lateral transfer or a short term transfer to assist in the unit for various reasons.”* Pointing to the configuration of a semi-permanent cold case squad, where only a part of the team is permanent.

I found squad size among respondents to vary strongly. one respondents reported to *“work within a team of five people”*, while others were part of large teams consisting of *“between 15 and 20 people”*. The size of cold case squads was an often discussed subject among respondents. I found that respondents typically wished for more manpower, while the lack of capacity was mentioned as an argument for existing problems in other cases. One respondent in a larger team stated that *“There should be much more structure nationally, where it is fairer for all squads to get more capacity.”* Showing a dislike to the large differences in squad sizes. Other respondents asked for a larger capacity for specific reasons, one mentioning a wish for volunteers to help administration, while another stated a wish for a team to collect discard DNA samples (DNA left on coffee cups, cigarette butts etc.). Overall the majority of respondents mention a need for additional staffing in one way or another to help them solve cold cases. However one interesting finding comes from some respondents

who are displeased with the *quality* of staffing. One respondent here mentioned the wish for separate solicitations for cold case squads in an attempt to improve the *quality* of team members. Stating that *not everyone is suitable*. Another respondent commented that *“Only people should do this who want to be one hundred percent busy with cold cases”*. Showing a clear wish for a specific kind of staffing to help solve cold cases.

4.1.2 Experience and Specialism

I will now discuss the findings on the experience and specialism found in cold case squads. When referring to experience, I refer to the age or active years a detective has in law enforcement. When talking about specialism I refer to the variety of specialities one may have, such as forensics or tactics.

When talking about the experience found within squads, several of the respondents mentioned that the average age of the members of their squad was old, often above forty or even fifty years old. This was in conjunction with squad sizes, especially apparent within smaller teams. I found larger teams to have more of a mix of younger and older members. When discussing the preferred experience or age distribution within a team, the several of the respondents voiced preference for a more mixed team. Curiously, one respondent specifically mentioned a preference for older and more experienced detectives, based on the independent approach that was used within the squad.

“I don’t want people that are new in the office, that have not had allot of experience doing investigations. Because they need to work primarily on their own for the most part. They are left to it to go out and do.”

On the other hand some respondents favouring mixed experience in teams referred to the need of knowledge and know-how of operational work on the streets and modern forensic work typically found within younger detectives.

“...Then you just need young people, who know exactly how it works on the street and have the knowledge of the actual tools the police has.”

Other respondents referred to the fresh, or alternate look younger detectives often brought to the team. This argument falls in line with the retroactive social theory by Innes & Clarke (2009). A theory that proposes that society constantly redefines future and past events, meaning that way an event was defined yesterday, may be defined differently today.

I’ve found that around the topic of specialism, much difference can be found within teams. Specialism was especially found around the larger teams, while the majority of respondents part of smaller teams typically had less specialism. Respondents of larger teams mentioned the existence of a variety of roles, including that of forensics experts, psychologists and tactical officers. Respondents of smaller teams do not typically mention a need for specialists within the team.

Some respondents however do consider cold case research a specialism in itself. These respondents mention several points of importance as a requirement needed to do cold case research, mainly including the need for patience.

“cold case research is a specialism, you need specialists for it who will do that with heart and soul and have a feel for it.”

4.2 Structural, Institutional & Cultural factors

In this section I will discuss my findings related to the institutional and cultural factors and related theory.

4.2.1 Cooperation

I will first discuss my findings on the aspect of cooperation. Transferring information, services or providing manpower can all be considered cooperation. In addition cooperation can happen with both internal and external parties. I will relate the findings to institutional friction Sheptcyki (2004). Institutional friction refers to poor cooperation occurring in police organisations due to cultural differences in various sub-cultures which exist within police organizations. I will addition relate the findings on cooperation to two dimensions described by Hofstede (1990). The first dimension Hofstede describes is based on the open and closeness of an organisation, indicating in how far an organization is willing to cooperate with external partners. The second dimension refers to the professionalism or local culture that one may find in an organization. An organization with a professional culture will consist of several subcultures based on the different job and task descriptions, while a local culture implies an organization that consists of one single culture.

Going against my expectations, without exception all respondents mentioned several forms of cooperation both within and outside of their law enforcement agency. I found the form, type and amount of cooperation however to differ between cold case squads. All respondents mentioned the use of forensic agencies to allow the analysis of DNA and other forensic evidence. These agencies were in some cases specifically referred to as one of the more important collaborations. Aside from analysing DNA and other forensic evidence, one respondent mentioned requesting their local forensic agency to review specific cases for potential evidence worth (re-)analysing.

Various respondents mentioned different collaboration with a variety of external agencies outside of forensic agencies. One respondent here specifically mentioned: *“You cannot, the police cannot work alone. You must cooperate with everyone.”*. Respondents provided various examples on cooperation. One respondent for example mentioned the following:

“...But we also have lots of contact with the national bureau for missing persons, with the national unit, the specialist department. Where needed other forensic institutes [...] National unit if we need air pictures. There not much you can't think of.”

Cooperation with the public is also mentioned on multiple occasions by respondents. One respondent mentioned that *“Involving the public is important because it can give you good tips”* however the same respondent later states that *“because how I see it, the amount of time that goes in there and what comes out. I think it's pointless”* on the topic of public involvement.

Some respondents also mention actively attending workshops and conferences, sharing best practices and means to create better practices.

“My colleague and I are both members of a particular workshop.[...] We meet I think its quarterly, to discuss best practices and means to create better practices. [...] We also attend conferences.”

Lastly there is the aspect of internal cooperation. Internal cooperation is discussed by several respondents and overall seen as useful, if not necessary act. Some respondents mention the use of the national police network to aid them in their investigations. There are in addition

several mentions concerning the use of assistance from other internal department. Examples given here are help with camera footage, undercover work and telephone data. Some respondents in addition mention lending manpower to aid other investigations in other departments when needed, and providing facilities to departments when needed.

“Cooperation is important, to have all specialism at your disposal. Because I don’t know anything about phone caps, about the internet and how it all works. [...] about phone data, camera footage. For that you need experts and that is very important.”

The majority of the respondents report a good cooperation with both other departments and outside agencies. However one respondent mentions being forced to cooperate with specific agencies due to having to find missing files and evidence.

“What we encounter is that we must cooperate with many external, semi-external partners. [...] because files and leads, evidence. Those are often, you have to search those.”

Lastly, some respondents mention a lack of cooperation, their investigations being mostly solitary work. One respondent stated being able to seek guidance from experts, but overall referred to working on cold cases as being *“monics work”*.

In relation to the theory, the active cooperation and statements on the importance of cooperation between cold case squads and other actors is not in line with the institutional friction described by Sheptcyki (2004). This in addition makes a professional culture as described by Hofstede et al. (1990) unlikely. It is more likely that a local culture, involving one single culture in the police organisation, is a better fit. Lastly the active cooperation and the wish to cooperate display a more open culture in the police organisation, opposite to my expectation of a closed culture. This means that it is unlikely that a large amount of Linkage blindness, the failure to recognize connections and links in cases, occurs due to the aspect of cooperation (Sheptcyki, 2004).

4.2.2 Approaching Cold Cases

I will now discuss my findings on the approach towards cold cases. I will relate my findings to several aspects and one cultural dimension (Hofstede et al, 1990). The first aspect is that of noise (Sheptcyki, 2004). Sheptcyki describes noise as the lack of vital information and the addition of useless information that occur from processing raw pieces of information. Noise typically occurs from poor transcriptions or reports. The second aspect is that of non-recording and non-reporting (Sheptcyki, 2004). The non-recording and non-reporting of information typically results from a high work pressure, causing police officers to skip procedures or otherwise forget to do them (Sheptcyki, 2004). The third aspect is the cultural dimension of strict-loose work structure (Hofstede et al., 1990). Hofstede et al. explain the dimension of work structure as an indicator in how far an organization is disciplined, strict and makes use of a rigid set of procedures. I will lastly touch the concept of the digital divide; the rise of conflicts between different kinds of technological and storage systems (Sheptcyki, 2004).

Cold case reviews are not a very common occurrence within cold case squads. While the amount of cold case reviews performed yearly differs among respondents, the number is typically between one to six cases that are reviewed yearly. One respondent added that this number tends to vary, as the squad may already be too busy with other cold cases in the field to perform any more reviews.

In general respondents state to re-visit all or the majority of elements during a cold case review. Some respondents mention to visit all pictures, media, recordings and other evidence during reviews. However other respondents state to only do so if their files specifically list the importance of such media. Overall this shows that noise at-least partially is reduced for these respondents, as evidence is re-processed (Sheptycki, 2004). One respondent in addition points out reviewing old evidence can result in leads.

“Well everything is reviewed. [...] Everything that was recorded in a case and watched, we watch again. Images, photos, we do with the entire team [...] Everyone just looks at it critically. There is always some revelation that comes from there”

4.2.3 Cold Case Selection

Typically the first step in approaching cold cases is selecting cold cases to review or investigate further. This first step of case selection varies strongly among respondents. For some I found the factors of case selection to be aimed at selecting the more promising cases for reviewing. On the other hand, factors mentioned were much more simplistic and not based on successfulness. I will proceed to discuss these more simplistic methods first.

The first method mentioned by several respondents involves the selection to be dependent on national laws, forcing respondents to look at specific cases based on a time interval to prevent cold cases from being closed permanently and the crimes expiring. These respondents stated that every time a case is reinvestigated its closure date moves by several years. One respondent however mentioned that *“At the moment that it’s slightly less busy. Or when cases that stayed with us or are interesting. Then we take quick looks at them or even read through them.”* Showing that cases may also be picked up whenever more time is available, this partially falls in line with Turner & Kosa (2003) who stated that cold case squads may be created when there is a decline in homicide cases.

“That kind of means that there are expiry days actually. Those cause the expiry terms to reset again. So yeah, you can extend the terms several times that way.”

Other respondents discussed the use of a different way of selecting cases. These respondents selected cases at-random, picking several cases to look at based on a time interval of a few years. Respondents explained that such a system offered all cold cases a fair chance of being selected this way. One respondent stated that *“We want a mix of years and a mix that is not specifically one type of case.”*

...You can imagine we can’t do it all at the same time. So we made a list of those cases and thought of a method around it, giving every cold case a fair chance. For example between 2000 and 2005 we pick a few cases at random. Every case in that period gets an equal chance to be picked.

Aside from a random selection, I found respondents to also mention looking at specific cold cases based on internal and external pressure. Internal pressure refers to pressure from other detectives within the police organization to investigate a specific case. External pressure similarly refers to pressure from the media, families and friends to focus on a specific cold case.

When asked if internal and external pressure were considered in selected cases, respondents stated such cases were indeed selected and given extra attention.

“A retired homicide detective called me and asked if I could look at a case, an old case from 19XX. He said he always felt there was something there. [...] So long and short of it, we were able to arrest him, we got him through the DNA. [...] That lead came in through a retired detective who just said can you look at it?”

Overall the majority of respondents stated to be influenced by external or internal pressure to look at specific cases. One respondent further explains that the attention towards cold cases has grown in the past, forcing detectives to pay more attention to external pressure.

“Well yes, you are kind of forced right? It is obviously true that there is large amount of public opinion. Its clearly of importance. [...] then you see more people turn towards us, through social media or in another way. Or come with tips.”

However incoming tips and information can also be seen as a reason to select a cold case. *“The coalitions of today are the enemies of tomorrow”* was stated by one respondent in clarification. Various respondents explained that new leads typically came in through information from divorced spouses, ex-girlfriends or former friends of suspects. Respondents mention that it is the change of relationships or economic dependence of these witnesses that causes them to no longer have a reason to withhold incriminating information on a suspect.

“We know they know information, but they are hesitant or were hesitant to tell the full story that they know at the time. That idea is looking at those people if time has passed. [...] Are they now willing because of circumstances have changed in their life, [...] their morals might have changed. [...] if I ask now they might stand up and say what happened.”

The opinion on selecting cold cases based on internal or external pressure varies among respondents. One respondent specifically states that *“What is important, is the societal impact a specific case has.”* On the aspect of internal pressure this respondent further mentions *“that they are always really happy when we tell them that we are going to look at their case from ten years back again.”* showing a positive opinion towards this kind of case selection. On the other hand a different respondent explains that *“We really want to pick up the cases that fit with our criteria properly and not only when someone randomly yells something and then picking up the case. You will never progress that way.”* Another respondent pointed out the interruptions external pressure can form on the daily routine.

What makes it really difficult is that you are just interrupted by the daily events. By tips that come in for example. Due to a cold case that was in a show. [...] Families of victims with other questions [...] And if you then don't know where the file is in the organization. [...] That is the difficult part of the job.”

Outside of the selection methods above, some respondents made use of filter methods aimed at choosing more promising cold cases. Some respondents mention filtering their available cold cases. One respondent mentions filtering out all cases involving criminal assassinations. These assassinations are based on reckonings and stated by the respondent to already have received much attention in the past. The respondent further states such cold cases in addition have a very low chance of ever being solved due to involving shootings from cars and motorcycles. This means the amount of (forensic) evidence involved is typically very low.

Similarly a different respondent mentions filtering cold cases based on distance between the killer and the victim. Filtering out cases based with longer distances, expecting to find little to no evidence.

“Again that is looking at cases for close contact. The reason I do that is, if you have a shooting of you know two people that occurred. If we know that the shooter was ten feet away, or 15 feet away when the person was shot. There’s really no expectation of any evidence transfer in that case.”

The aspect most mentioned by respondents was that of DNA and forensic evidence. Reasoning for this varied. Some respondents here referred to the importance of the development in technology, allowing for much more accurate results. One respondent noted that criminals in the past were often much less concerned with leaving forensic evidence such as fingerprints and blood. The respondent explained that this was because DNA analysis was not yet widespread or existent at the time. Another respondent noted that while finding DNA or other forensic evidence does not always lead to a conviction, such information would remain in a database and could result in a hit sooner or later. In addition one respondent addressed the drop in value of other evidence over a long stretch of time.

“It would be great if one person comes forward and says yeah, you know ten years have gone by, I’m willing to tell you now who is responsible for that murder. That person is going to have a hard time in the witness stand in court. [...] If I have that one witness plus I had DNA or fingerprint. That would be a little bit more convincing in terms of running a prosecution.

Lastly an interesting subject touched by two respondents is that of case control. Both respondents discussed the wish for more control over the choice of their cases. One respondent stated that their volume of cases worked on was so high that *“what happens is you get a fatigue factor, [...] It’s not good on your body. A lot of guys can’t last, they get too fatigued and too tired and they just want out.”* showing that too many cases can be problematic. The other respondent explained that the enthusiasm present resulted in too many detectives working on single cases, resulting in fewer results.

“We can’t concentrate on one case every day. It’s almost as if we’re throwing spaghetti against the wall to see what sticks. Because we get so many leads that come in. For instance last Friday I had seven telephone calls concerning additional leads on cases, that’s just for one day.”

Overall the selection methods mentioned fall in line with those listed by Leiden & Ferwerda, (2006). Showing that cold cases are still selected based on varying reasoning, including internal and external pressure, and forensic evidence. In addition in line with Leiden & Ferwerda (2006) and Allsop (2013) the existence of DNA and other forensic evidence can be considered the main factor for selecting cold cases. It is a deciding factor in both selecting interesting cold cases and deciding which cold cases have a higher chance of being solved. What is surprising however is the at-random selection method explained by some of the respondents, which does not fall in line with Leiden & Ferwerda (2006). In addition the use of filters to avoid the selection of less promising cases does not fall in line with any theory.

4.2.4 Success Factors

Outside selecting promising cases, a variety of success factors in approaching cold cases were mentioned by the respondents. I will discuss these and their relation to theory below.

Some respondents discussed the advantage of cold cases being a cold cases. One explained that due to the a cold case being classed as such, it did not have the typical pressure

a 'fresh', or new, case has. This means that cold cases have the advantage of time, meaning that they may be solved in the future when new evidence comes in or relationships change.

A different respondent discussed the importance of proper detective work in both approaching fresh and cold cases. This respondent pointed to the importance of being a good interviewer, and having a second officer as backup during an interview. allowing for nuances to be picked up on, and progression in cases being made.

This advantage was further supported by other respondents. Some respondents discussed the importance of the right mentality of detectives working on cold cases. These respondents discussed the importance of detectives actively and thoroughly reviewing and investigating cold cases, and the ability of such detectives to spend a long time focussed on reviewing cases.

"It is very much specialist work. It is analytical work. You must have the mood for it, you must have the heart for it."

Another success factor mentioned by a respondent is that of properly structured cases. This respondent pointed to the advantage of properly ordering and structuring cases, meaning they may be easily reviewed and analysed at a later date, when new evidence arises.

"What I'm really thankful for is that people during the nineties, [...] kept everything really structured and up to date. Where I immediately have overview over who was heard as a suspect [...] and what the elements were at that time. So for that I'm really thankful."

4.3 Retroactive Social Control Theory

In this section I will discuss my findings related to the retroactive social control theory (Innes & Clarke, 2009). In this theory Innes & Clarke (2009) that suggests society constantly redefines its own social system, causing events, rules and institutions to be redefined over time. Related to cold cases this theory implies that reviewing cases at a later date or by others, can result in new leads and findings.

I found that all respondents directly or indirectly pointed out to specifically avoid the use of detectives who had previous experience with a specific cold case in the reviewing process. The majority of the respondents explained that they deliberately avoided the involvement of detectives who had previous experience with a case to avoid the tunnel vision.

One respondent here stated *"and the point being; sometimes just kicking up a case when someone called and looking at it again, we may see something the original detective did not see."*

A different respondent mentioned inviting a variety of people, internal and external, such as behaviour experts, students, interns, forensic experts and more to brainstorm. These people would then receive small amounts of information on the case and asked to give their thoughts on the data. This ensured that outside of the cold case squad, there was an even larger group that could interpret the evidence in their own way.

Another respondent mentioned the involvement of an external expert at a forensic level to look at a cold case. Overall respondents state that those who are unrelated to cases provide a fresh look and are not subject to tunnel vision.

"Equate it to this. if you write something, a letter. You can proofread your own letter a hundred times and you may miss the same mistake because you wrote it. You think you are seeing something there that may not be written. But if you give it, that same letter, to someone else to read. They will find your mistakes quicker than you will."

In addition, several respondents mentioned reviewing all their cold cases on an annual basis, reviewing these cases for new evidence and attempting to find new leads. The respondents that did not review all their cold cases on a regular, did not do so due to the large amount of cold cases available.

Overall my findings fall in line with the retroactive social control theory by Innes & Clarke (2009).

4.4 DNA and other Technology

In this third section I will first discuss the findings on the use of DNA and other forensic technology and the rapid development of said technology as a driving force for cold cases, as suggested by Leiden & Ferwerda (2006). I will in addition discuss the digitalization of cold cases in conjunction to the theory of the digital divide (Sheptycki, 2004). The digital divide suggests that the difference between different electronic databases and storage systems (on paper) can cause linkage blindness (Sheptycki, 2004). I will lastly discuss other technologies that were considered useful when approaching cold cases.

4.4.1 DNA and Forensic Technology

In the following paragraphs I will discuss the influence and importance DNA and other forensic technologies have on the approach towards cold cases. Other forensic technologies may involve technologies such as fingerprints and material analysis.

All respondents acknowledge the importance of DNA and other forensic technology. While a small amount of respondents state the lesser importance of DNA and forensic technology compared to other detective methods, the majority see DNA as the biggest and most important factor when solving cold cases.

“We are just very dependent on that. [...] If you look at the difference between what we could do twenty years ago and what we can do now, then that is gigantic.”

This conforms to the importance of DNA and forensic technology in cold case mentioned by Allsop, (2013) and Leiden & Ferwerda (2006). In this regard above half of respondents state that DNA and forensic technology are responsible for solving the most cold cases. Where's fewer respondents refer to the importance of incoming leads from tips that come in.

Overall all respondents consider the factor of technology an important one that is part of the daily approach towards cold cases.

“That's just the technology. The forensic evidence, the developments.”

Advantages mentioned by respondents include the use of smaller samples, better recognition of fingerprints, affiliation research, the recognition of usable DNA samples in mixed profiles and lastly the overall higher precision of DNA and other forensic research. These advantages and advancements in technology fit well with the theory on the importance of DNA and other forensics by Caglia, Stefanoni & La Rosa (2011), Leiden & Ferwerda (2006) and Lord (2005)

“Then there's the changing of science, science is so much further ahead [...] with current techniques you can research it again for hundred times better results. You have so many more techniques, they have improved so much. I'm talking about DNA now, but it counts for almost everything.”

The importance of DNA by being capable of being stored for years as further mentioned by Leiden & Fewerda (2006) is in some occasions also given as an argument by respondents to display the importance of DNA and other forensics.

“For example a murder weapon from 15 years ago. [...] a weak DNA profile came out of it. You can investigate that again and then you get a strong DNA profile from it.”

Various respondents mention resubmitting old evidence in cold cases as an important factor in cold case approaches. This important role and the longevity DNA and other forensics hold is further mentioned by some respondents in as so far that the existence of potential forensic evidence in cold cases is seen as a first step towards deciding to open a cold case.

Respondents mention that the lack of forensics is often enough to completely disregard the case further. Another respondent mentions prioritizing cases based on the type of murder, stating that when *“the shooter was ten feet away [...] There’s really no expectation of any evidence transfer in that case.* Thus resulting in a lower success rate to solve the case.

I’ve also found that some respondents mention the importance of forensic evidence in the courtroom. Forensic evidence is stated to weigh much heavier in the courtroom compared to other evidence such as eye witnesses. This finding is in line with the findings of Durnal (2010) who refers to the CSI-effect, resulting in forensic evidence holding a higher value in the courtroom than other types of evidence. Outside the CSI-effect one respondent in addition mentions the decreasing value of witnesses over time compared to physical evidence.

“Anything where we have actual physical evidence that can be directly attributed both to the offender. The problem I would have with utilizing witness accounts that were, you know somebody that would come forward today that didn’t come forward ten years ago. Not only there would be a problem in court with that, you have to be able to back that up and collaborate with the person saying.”

Overall DNA and other forensic technologies play an important role for cold case teams, acting as a major success factor. Forensic evidence further acts as a filter in some cases to pick out promising cold cases or as a requirement needed to even review a cold case.

4.4.2 Digitalizing

Next I will discuss the use of digitalization around cold cases. Digitalization involves the processing of otherwise written documents into an electronic format. This is typically done through the use of scanners, but may be done by hand.

Almost all respondents mentioned making use of the process of digitalizing cold cases in some way or another. The actual amount of cases digitalized however varies strongly among respondents. In addition several respondents mention different lengths to which their cold cases are digitalized. Where’s few respondent had almost completely digitalized all their cold case files the majority only had done so partially. Here I found the existence of the ‘digital divide’ as mentioned by Sheptcyki (2004). Sheptcyki (2004) explains the digital divide as the conflicts that arise between different storage systems, including databases and communication systems files. An issue that may result in data being lost or scattered over a large area. The existence of the digital divide is confirmed by the majority of respondents. A variety of respondents for example speak about the existence of spread-out case files and other information among various locations.

“Because the perfect image of how it is on TV, where everything is in one box and in a very nice archive, that isn’t true. Because files and especially leads, pieces of conviction. Those are often, you have to find those. At various old office’s, or teams that aren’t suitable you know.”

Some respondents in addition mention older databases which still contain cold case files that are not available in newer systems. In addition some respondents mention the use of different databases and police-systems in varying parts of the country. An issue that may result in linkage blindness, ensuring that two related cases aren’t linked due to existing in two different databases.

One of the respondents who recognized the issue of digitalizing cases mentioned that *“We are still very dependent on well yes, physical case files [...]”* but argued that the act of digitalizing isn’t achievable for them *“ [...] That digitalizing is unbelievably important. But we don’t really have capacity for it.”*

The process of digitalization is not seen as a completely beneficial process by all respondents. A minor amount of respondents mentioned limitations, or even drawbacks around digitalizing cold cases compared to physical case files. One respondents made an interesting statement stating that *“if you for example speak about forgery, that also tends to happen in a specific type of case files [...] If you digitalize those, you can’t recognize it.”* Arguing that digitalizing cold cases could potentially lead to linkage blindness. This also suggests the existence of non-recording and non-reporting Sheptcyki (2004). Another respondent in addition stated *“That possibility exists here too, however we opted not to do this for this file, because it was so bulky, it is a giant case. Also because the original investigators at the time kept track in a simple way. That is why we opted not to do that here.”* Seeing no additional benefits to digitalizing a case file that was already well organised on paper.

Overall respondents see the process of digitalization as beneficial towards the cold case approach. In addition the findings support the concept of the digital divide mentioned by Sheptcyki (2004). The majority of respondents consider digitalization as helpful and time saving.

4.4.3 Other technologies

Digitalization on its own isn’t everything. I will now discuss the use of other technologies such as the use of databases, filter systems, (social) media and other tools.

Respondents have mentioned the use or need of several other technologies that may be used in the approach towards cold cases. Several respondents mentioned the use of the media to approach cold cases. These respondents noted using the media to both give attention to a case and to allow them to gather new leads on cases that have gotten stuck.

“What I’m doing is, I’m doing short videos, two or three minute video clip, of a particular case and I’m sending that video out through regular media and then through social media and hoping it would generate new information, people come forward that sort of thing.”

Some respondents mentioned the use and need for a tracking and search database. Respondents stated the use of such a tracking system to quickly locate specific data needed and save large amount of time. In addition one respondent mentioned the use of a note system and stated the usefulness of a tracking database to see what other detectives are doing, preventing his team from doing work twice. One respondent provided an argument pointing out the future advantages his work today would bring.

“It will help the office ten years from now, when I’m not here, when other officers are coming in. they can easily see what’s done on a case. So you are not duplicating or redoing things that have already been done years ago. That’s a big advancement for us in terms of focusing our time and being more efficient and utilizing our investigative time and what to look at. That is building forward into the future.”

One interesting find is a respondent explaining the existence of an independent smart database. This database allows for the recognition of patterns through the use of an algorithm. This algorithm then is capable of finding patterns within a large amount of both current and cold cases. The database in addition allows users to filter cases on search criteria and proceed to search for patterns themselves.

“Right now we've got hundreds of matches. [...] its looking for patterns that are anomalous. So indicative of where most of the search criteria, so victims, methods, year, city, weapon are consistent over a long period of time that suggest a singular offender.”

5. Conclusion

In this thesis I have investigated international best practices in the selection of promising cold cases through fifteen international interviews in a total of five countries. This research focussed on answering several questions. The main question of this research was gaining insight in how international best practices could aid the selection process of cold cases in The Netherlands. It in addition carried the goal of gaining an understanding in how cold cases are selected and which cold cases carried the highest chances of being solved when selected.

The findings of this thesis partially support the theoretical framework in this research. The theoretical framework consists of three aspects namely, institutions and culture, the retroactive social control theory and technology. I will first shortly discuss the related theories and factors to these aspects, after which I will discuss the conclusions on this thesis.

5.1 Theory

Expectations and factors were derived from three different aspects related to the process of cold cases. The first section is that of institutions and culture. In this first section the concept of linkage blindness is central. Sheptycki (1998) explained the concept of linkage blindness as the failure of analysts to recognize connections between and within cases. Sheptycki (2004) further provided several factors that may cause linkage blindness in police organization. First is the aspect of noise, which is the lack of vital information and the addition of useless information occurs when processing raw information (Sheptycki, 2004). He suggest a second aspect of non-reporting and recording, which may occur when police personnel skips performing certain procedures.

Den Boer and Doelle (2000) suggest that the occurrence of organizational flaws occurs widely among various police forces in Europe. Sheptycki (2004) further describes the existence of sub-cultures within police organisations, while describing friction between these cultures due to their different job descriptions. This indicates a specific type of culture exists within police organizations.

Hofstede et al. (1990) provides a variety cultural dimensions which type a culture. Some of which may be related to the factors mentioned above. Hofstede et al. (1990) lists the dimension of work structure, which indicates the structure, discipline and seriousness of an organization. He also lists the dimension of a local and profession culture. Hofstede et al. (1990) explains a professional culture as the existence of different sub-cultures based on a job description, while a local culture points to one single culture in the organization. Lastly there is the openness of a culture, indicating in how far an organization is willing to cooperate with external parties (Hofstede et al, 1990).

Aside of institutional and cultural factors, the retroactive social control theory suggests society constantly redefines its own social system, causing events, rules and institutions to be redefined over time when viewed (Innes & Clarke, 2009).

Lastly Leiden & Ferwerda (2006) suggest that technology is the driving force behind solving cold cases due to the constant development of new and more advanced technologies, allowing for the progression of cold cases that could once not be solved. Sheptycki (2004) here also points out the concept of the digital divide, which causes linkage blindness due to the difference between different electronic systems and files still stored on paper.

5.2 Conclusions

5.2.1 Structural, Institutional & Cultural Factors

I found my expectation of re-processing old evidence to have little support. The provided theoretical reasoning considered the aspect of noise, the addition of useless or lack of important details in evidence. Noise however was never mentioned as a reason to look at old evidence and re-filter old evidence. However respondents actively re-processed old evidence and actively send in forensic evidence to find new leads and matches.

I only found partial confirmation for a strict work structure. Most respondents did report a set of rules and approaches to adhere in their work. However some cold case squads offered their detective full independence to approach cases as they wished. Respondents typically followed set rules but still had an amount of freedom inside these rules. I in addition found only partial support for the non-reporting and non-recording for data. Only some respondents reported issues regarding the non-reporting of information in case files. What I did find was the issue of case files being spread out over various locations. In additions some respondents mentioned the loss of case files

I found all respondents to be actively cooperating. While the intensity of cooperation varied among respondents, all respondents reported to cooperate actively with both external and internal partners. Respondents reported no issues to approach external or internal partners and some respondents actively stated to participate in conferences and other meetings. In addition some respondents actively involved themselves with the public and media. I therefore found almost no support for the existence of institutional friction and no support for a professional culture among respondents. This means that the culture among respondents appear to be more of a local culture. I can conclude that the police carry a more open culture than I first suggested.

I found the majority of respondents to reply or otherwise interact with families of victims and to respond to their requests. However some respondents considered this to be an interruption of their work, while others stated to give less attention families of victims. This overall supports the notion that the majority of police forces are costumer oriented. In some cases respondents reported to actively interact with families of victims and the public in general.

5.2.2 Retroactive Social Control Theory

I found the overly majority of respondents to make use of the opinions of others and to actively avoid the involvement of those who previously worked on a cold case. In many cases respondents provided the argument of avoiding tunnel vision this way. Respondents in various occasions in addition reported that the use of the opinions of others could result in new insights and allow them to discover new leads in cold cases. Overall this provides strong support for the retroactive social control theory, showing the progression of cold cases when event is re-interpreted by a different actor.

5.2.3 Technology

All respondents state to make active use of technology. A large amount of respondents in addition considers forensic evidence to be vital in selecting cold cases. Some respondents in addition filter cold cases based on forensic evidence or factors that affect the amount of forensic evidence such as the distance between the victim and the murderer. All victims in addition make use of a variety of computer systems and databases. Respondents further mention the use of tools to track changes in documents, link documents and to keep track of each other's work. Two respondents in addition reported the use of a smart database capable of detecting potential links between cases through the use of an algorithm. Overall these

findings are in line with the expectation and theory on the importance of technology. Technology appears to be a driving factor in solving cold cases.

I can also conclude that the act of digitalizing is beneficial to the selection of cold cases. Respondents have shown that the act of digitalizing has helped bring structure to their work, whereas a lack of digitalizing increased the difficulty of their work. Support for the theoretical reasoning found for this was two sided, while the act of digitalizing and the creation of universal databases helped reduce the digital divide, digitalization also allowed the use of technological tools in the form of filters, databases and internal communication.

5.3 In Summary

In summary to answer the main question of this thesis: *How can we improve the approach towards cold cases by gaining insight in cold case approaches and international best practices?*

Is as follows: The approach towards cold cases can be improved by further cooperation between cold case squads and other partners, more extended use of technology and through re-visiting cold cases by other actors. International best practices can aid these approaches by providing best practices and giving examples on policies and methods that are used internationally.

Overall many things are done right in the approach towards cold cases, but many things can still be learned and improved by cooperating with, and observing international cold case squads and their approaches.

6. Discussion

There are several points of attention that came up in the writing of this thesis and the gathering and processing of data. I will discuss these below.

6.1 International approach

This thesis made use of data gathered on an international scale. This brought with it several complications. First of all this complicates the aspect of data saturation. One aspect of gathering qualitative research data is that of data saturation (bron). A researcher typically stops collecting data when a level of saturation is reached. However due to the nature of scale related to gathering international data, certain aspects, such as the approach, varied in every participating country. Fortunately criteria related to the selection of cold cases turned out to be similar across participating countries, allowing for saturation to be reached at these points. However some approaches remained unique, such as the use of specific types of technology.

Another point related to the gathering of international data is related to its difficulty. Gathering data at an international scale proved to be a tiresome and lengthy process. Non response rates were high, communication difficult and slow. This eventually resulted in a reduced amount of interviews that could be completed.

Poor and slow communication in addition has resulted in a selection bias. All participating countries either speak the English or Dutch language. An unfortunate side-effect that resulted from the language barrier.

Despite these difficulties, gathering international data is one of this research its strongest points. In this explorative research the collection of international data provided unique best practices that did not exist outside the country that was interviewed. Data which would never have been gathered if this research were to be performed at a national level.

A different advantage related to the international approach is the ability to generalize some of the findings of this research. Some of the findings in this research have gotten support from the majority of respondents, at an international scale. This shows that the some of the findings in this research may be generalized internationally. However some caution is to be taken here, as the participating countries consisted of only western English speaking countries.

6.2 Qualitative research

For this thesis qualitative research data was gathered, a choice which can be seen as one of the strong points of this thesis. Qualitative research data offered the much needed flexibility that was required due to the international nature of the data that was gathered. The use of interviews in addition offered respondents to tell their own stories and refer to aspects they themselves found especially important, aspects they considered to be best practices. This allowed the somewhat explorative nature of this thesis to come to bloom. The use of a quantitative method would not have allowed for such flexibility and would have left many best practices unmentioned. Overall the qualitative approach allows this research to offer an array of findings around different aspects that may be further explored by future organisations or researchers.

6.3 Validity and Reliability

Both strong and weak points in this research can be found in the validity and reliability of this research. Respondents were anonymized, consent was given and interviews were planned carefully. Interruptions were in addition kept to a minimum.

However not all interruptions could be avoided and interviews were not always perfect. In some instances, the concept of leading was present, resulting in subjects being influenced in their answers. Use of alternative wording could prevent this in the future. In

other instances some topics were not always discussed with every respondent, due to either time constraints or a chaotic flow of the interview. This may have resulted in missing results or influenced responses. In addition there is the issue of reliability. As is mentioned by Innes & Clarke (2009) in the retroactive social control theory; events given a definition today, may be defined differently tomorrow. Data gathered may no longer be reliable in the near future.

Another point worth discussing is that of saturation. In this thesis only 14 interviews were held. One could argue that this is not enough to achieve saturation. However saturation on the majority of topic points occurred very quickly. This is likely a result from the selection bias that took place when selecting respondents. Due to the very low response rate and language barrier, all respondents were either from English or Dutch speaking countries. In this sense reliability is much higher. However due to the international scale of this thesis, full saturation is simply not realistic to achieve. Regardless the reliability in this research is seen as a strong point as all steps of the data collection were recorded and saturation was achieved quickly on several topics in the interviews.

This thesis had an explorative nature, exploring and finding best practices on an international scale. However as mentioned, only a select amount of countries and respondents were interviewed. I would recommend future research to retain this explorative nature, but instead focus on a different set of countries that have less relation to the current set of countries in language and culture. Recommended countries include South Korea, Japan and China. I believe that the 'exotic' cultures of these countries could lead to unique results in approaches towards cold cases or another subject.

7. Policy Recommendations

In this final chapter I will discuss the recommendations of this research. Recommendations have been split based on the three different theoretical aspects that play a role in the cold case approach. Each recommendation is provided with argumentation.

7.1 Structural, institutional & Cultural Recommendations

7.1.1 Digitalization

I recommend the digitalization of all cold cases. Digitalization offers structure and can be seen as an important step towards the use of a variety of other technological tools that greatly improve the solvability of a cold case. Examples of such tools include databases with tracking tools and case-linking algorithms.

Digitalization is a time consuming task that is easily neglected. Volunteers, interns or even a civilian clerk could be used to help digitalizing cold cases. Active detectives may then focus their time on more pressing tasks.

7.1.2 Cooperation

I recommend increased recommendation with external partners. Police forces have shown to typically cooperate with both internal and external parties. However more can still be gained by increasing the amount of external cooperation. Such cooperation does not necessarily have to be involving assistance on a specific case, but may be used to lessen the strain on cold case squads.

Cooperation Suggestions

Listed below are several actors that may be beneficial to cooperate with.

1. Involve The public

Curiosity for cold cases has remained high over the years. The public can provide a large amount of help at solving cold cases through the provision of tips or an alternate look. I recommend the creation of a monthly short movie clip (2-3 minutes) or article on one or two cold case files. These may then be listed in a newspaper, on television or on social media.

2. Attend a yearly conference

Yearly conferences on crime or cold cases exist in a variety of countries. These yearly conferences allow the discussion of methods, tips and best practices. In addition one may discuss specific cases with other cold case squads if preferred. I recommend the attendance of at least one conference per year to ensure one is up to date with the latest tips, tricks and tools.

3. Cooperate with a cold case society

Cold cases are popular among the public, resulting in the creation in a variety of blogs, forums and even clubs focussed on cold cases. Cooperation with such groups may provide an excellent source of volunteers, information, extra eyes and even new initiatives.

7.2 Retroactive Social Control Theory Recommendations

7.2.1 Case Reviewing

I recommend the frequent reviewing of cold case files. Through the frequent reviewing of cold case files, new leads and links may be found. I recommend to be reviewed at an annual basis or alternatively at a bi-yearly basis if the time allows as such.

7.2.2 Alternating Focus

I recommend the involvement of fresh eyes and opinions when viewing cold cases. The use of a fresh pair of eyes does not only avoid tunnel vision, but in addition provides an alternate interpretation of an event. This can lead to new leads and links to be found. Second perspectives could be found in interns, colleagues, external experts or even students.

7.3 Technological Recommendations

7.3.1 Smart database

I recommend the implementation or use of a national *smart* database. Technology is the driving force of cold case investigations and typically responsible for solving the majority of cold case investigations. The implementation of a *smart* database allows for the interlinking of existing cases, easy tracking of changes and easy filtering of digitalized cold cases. A *smart* database could in addition contain an algorithm capable of recognizing cases potentially related to one another. A *smart* database may in addition offer limited functionality to the public, allowing those interested to view featured case files and provide tips to the attached cold case squad through the use of a tip form.

Existing projects for *smart* databases already exist. It may be worth exploring for existing projects and collaborating. Existing projects may be set up by enthusiasts, students and other police departments.

8. Self Reflection

In this last chapter I will provide a self-reflection on the international approach that was used in this thesis.

I initially found great difficulty in connected with both international and local police organizations. I first attempted to connect through given connections and a small amount of phone-calls and personalized e-mails. My expectation was to make use of the snowball-method and ask respondents to link me to other respondents. However the response rate for this approach was very low. I found some difficulty in moving past the initial reception of police organizations, being pointed to contacting by e-mail instead in the form of a general enquiry. Unfortunately the use response to e-mails was low as well and e-mails often remained unanswered or were refused. In addition the interviews I did held did not lead to any form of new respondents.

As time passed I adopted a new strategy I came to call ‘carpet-bombing’ which I compared to the idea of spam-mail. Spam mail typically consists of thousands of e-mails send to various existing e-mail addresses. An attempt at spam-mailing is considered a success if even one of these e-mails responded. My approach was similar to this and included one standard e-mail which was then sends to all potential e-mail addresses I could find. I searched the internet using search machines and located e-mail addresses in blogs, forums, news articles and on police websites. I simply send e-mails to these addresses with the hope to receive at least one response. This approach turned out to be far more successful, resulting in the majority of the interviews of my thesis.

What is interesting to note is that e-mails send directly to addresses of cold case squads were proven to be far more successful than those send in as basic enquiries. In my eyes contact through such e-mails addresses was preferable.

I also found a difference between countries in the form of responses and willingness to cooperate. I for example found Canada to be the most open to interviews, often inviting me to contact them right away. I found the United States to be less receptive. However those who did respond typically did so with enthusiasm. I found my encounter with Belgium to be especially interesting. I was pleasantly surprised to find the Belgium police organization to consider aiding students in their thesis’s or internships as a requirement of their work. Lastly I found contact with the Dutch police organization to start slow at first, but eventually resulting in a large amount of respondents as I could snowball to various cold case squads in the Netherlands. A result that was only possible after directly contacting a cold case squad through their e-mail.

I would also like to note the issue of the language barrier. I found encounters with some countries to be more difficult due to the lack of, or poor skill, in speaking English. This inhibited proper contact with these countries and is one of the main reasons my interviews well all conducted with either English or Dutch speaking countries.

If I had to recommend those who wish to make contact with a public organization such as the police at an international level, they would best do so through process of mass-emailing potential e-mails, or ‘carpet-bombing’ as I enjoy calling it. I will in addition recommend that the process of making international contacts is a slow one, and its successfulness may be strongly dependent on the country being contacted, the persistence and some luck. For some countries it may even be necessary to make use of an Interpreter, or a colleague capable of speaking its native language.

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10. Attachments

10.1 Interview Topic List

Below one can find the topic list for all interviews. The actual flow of the interview may differ; respondents are invited to tell their own stories and are not strictly guided through the topics listed below in the listed order.

Opening and introduction

- Goal interview
- Anonymity
- Possibility to stop at any time without reason
- Recording of the interview – Recording begins after this point
- Introduction respondent
 - Department/function

Cold case team structure

- Cold case team structure
 - Cold case squad?
 - Ad hoc/temporary/permanent
 - Funding/given tools
 - Do you find that a certain structure matters?
 - Expertise in squad
 - Specialized
 - Young/old/pensioned – why?
 - External/internal (different department?)
 - Do you find cooperation between departments/third parties is important? (has it resulted in the closure of cold cases?)
 - Do you find that a varying expertise matters?

Case approach/procedure

- Can you tell me in your own words how your team typically approaches a cold case?
 - What causes a cold case to become interesting to look at?
 - What is the main reason a cold case is re-opened?
(Internal (detectives)/external (media/family) pressure, Information (new witness etc), detective techniques, technology, case expiration)
 - .. and which reason do you feel bears the highest chances of success?
- How often do you look/review at cold cases?
 - How does this review process work?
 - Is this performed by detectives previously related or un-related to the case?
 - Do you feel this is of any influence on the success of the case?
 - Is old evidence (such as old recordings) reprocessed?
 - Does this reprocessing lead to new evidence/leads?
 - Do you feel reviewing cases often leads to finding new links/leads?
 - Has recent improvement in technology (such as new databases or DNA related technology) caused success in solving cold cases?
 - Have you digitalized any cold cases, and has this brought any success?
 - Have you found any new detective methods over the years that have helped solve cold cases?
- What do you feel are the biggest reason for the successful closure of cold cases?
- What do you feel are the biggest success factors when it comes to solving cold cases?
- Overall, what is your opinion on the current approach towards cold cases?

- Overall, how would you improve the current approach towards cold cases?

10.2 Code Tree

Below the code tree can be found that resulted from the coding process in this thesis.

	Sources	References
➤ Team structure	13	40
○ Experience	10	25
○ Permanency	10	14
○ Specialism	11	26
○ Size	13	23
○ Cooperation	13	20
▪ External	9	18
▪ Internal	9	11
○ Final decision	8	9
➤ Other technology	12	27
○ Digitalizing	11	21
○ Tracking system	4	5
○ Databases	5	8
○ Social Media	3	3
○ New techniques	2	2
➤ Approach	11	60
○ Interesting cases	8	20
▪ DNA	6	7
▪ Improvements in technology	7	7
➤ Review	9	16
○ How often do you look at cold cases	2	5
○ Who reviews these cases	9	11
➤ Standardized format usage	5	6
➤ Method and Selection	9	33
○ Case Selection	11	25
▪ Free time	1	1
▪ Internal/External pressure	4	5
▪ Other	11	16
▪ Random	3	3
▪ Solvability	3	5
▪ By law	3	3
○ Method	13	33
▪ Reprocess evidence	7	16
➤ DNA/Forensic Importance	12	33
○ Better results	6	7
○ Solves most cases	7	7
○ Forensic first step	4	5
○ Case to case linking	2	2
➤ DNA revaluating	8	23
➤ Success factors	13	16
➤ Improvements	13	20