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University of Glasgow

NETWORK FAILURE: DIGITAL TECHNOLOGY IN SPONSORED SEARCH ADVERTISING

By

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Philosophy

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Abstract

The current study advances understanding of sponsored search advertising (SSA) by exploring failures in networks of SSA tools and human actors. SSA represents a novel form of information technology-bound marketing practice that has rapidly proliferated marketing over the last 25 years. The confluence of search technology and advertising has redefined how contemporary marketing is practiced, causing significant redistribution in marketing spent, advertising activity and the emergence of new actors. These shifts have attracted significant interest with rapidly growing number of studies addressing matters around SSA strategy, including various SSA features and functions.

In radical departure from mainstream SSA literature, the current study adopts a practice-based view to provide a more nuanced understanding of how the networks of human and technological actors emerge, are stabilised and fail in SSA. By casting SSA as networked practice, the study highlights social construction and the dynamic, multiple and fluid nature of SSA. Actor network theory (ANT) theoretically frames failure in SSA and the networked nature of human and nonhuman actors that contribute to it.

The study adopts a qualitative research design, where the data was collected through a 7-month ethnography and the data set includes semi-structured and in-situ interviews, day-to-day (participant) observations, images, field notes, secondary data and a detailed research diary. The data is anchored on events made up of relations – the principal units of analysis.

The findings are presented as a set of ethnographic stories from problematised events. They show how SSA dynamism, fluidity and multiplicity can only be acknowledged accurately enough if human and nonhuman actors in networks are followed in their attempts to build heterogeneous relations. This enables enactment of several new actors, intentions and roles from the Google advertising practice in

a specialised SSA agency. The findings provide novel insights that address several gaps in the marketing literature.

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“And I have seen it again and again and again that what our parents had told us really is true – that if we get our education, we can get anything. We can lift ourselves up to the heights we could never imagine. We can pay forward all the love and support our family poured into us. And we can truly be builders of a new day.”

This is our work.

(Michelle Obama, 2020).

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And I will be forever grateful.

Author's Declaration

“I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.”

Signature: Aleksandra Bavdaž

Printed name: Aleksandra Bavdaž

Abbreviations

SSA – Sponsored Search Advertising

SEO - Search Engine Optimisation

ANT - Actor Network Theory

CPC – Cost per Click

CPA – Cost per Acquisition

ROI – Return on Investment

AD - Advertisement

Chapter 1: Introduction

1.1 Problem statement

Contemporary marketing practice has been advancing in the light of its digitisation (Yadav & Pavlov, 2014, Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Kannan & Li, 2017, Liu-Thompson, 2018, Yadav & Pavlou, 2020). This study aims to explore SSA advertising practice through networked relations between human and nonhuman actors. In the increasingly post-humanist world (Adams & Thompson, 2016, Geiger & Gross, 2017), objects have become equally as important as human actors, which defines marketing practice as bundled and full of powerful heterogeneous relations (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017). Digital marketing technologies are mostly built on information, interfaces, rules and prescriptions, which are digital, invisible and hard to capture (Lammes, 2017). Therefore, SSA technology requires an internal and micro momentum examination, which enables a detailed and accurate understanding of what the unpredictable technology is if understood through practice (Callon, 1998, 2010, Knorr-Cetina & Bruegger, 2000, Law, 2009, Geiger & Gross, 2017, Michael, 2017). The current SSA marketing literature puts across the significance of studying this quickly evolving arena, which importance is justified with the latest statistics showing significant impacts of it on some of the world's biggest economies, the US and the UK (The World Bank, 2019).

SSA being at the heart of digital marketing advertising, includes activities of search engines displaying ads on the search engine results page (SERP), where advertisers place bids, with the aim to increase the advertiser's brand awareness and/or sales (Jones, 2014, Liu-Thompkins, 2018, Kannan & Li, 2017). Google is one of the leading search engines with 92% market share (Statcounter, 2021), and as an object in a network, causes a redefinition and reconfiguration of marketing practice (Beunza & Stark, 2002, Geiger & Gross, 2017). This is on a micro, internal level (Knorr-Cetina & Bruegger, 2000). While the SSA scholars are trying to keep up with the SSA advancements, they are missing on several understandings of the digital technology built on mostly invisible backend mechanisms (Roscoe & Chillias,

2014). Problematised events enable the invisible features of the SSA technology to come to the foreground, where they get materialised through action and this way enable a much more developed understanding of its currently hidden and fragmented digitality (Roscoe & Chillas, 2014, Geiger & Gross, 2016, Quinton & Simkin, 2016, Lamberton & Stephen, 2016 Michael, 2017, Yadav & Pavlou, 2020). A strongly developed momentum, inside analysis, which considers socio-material interactions through successful and failed interactions, is in interest of market studies' scholars to build marketing knowledge through powerful and networked practice (Callon, 1998, MacKenzie & Millo, 2003, MacKenzie, 2005, Roscoe & Chillas, 2014, Gond et al, 2016, Geiger & Gross, 2017).

1.1.1 Research Gaps

Digital shift in marketing practice caused increasing interest in studying SSA. Up to date several marketing scholars have addressed the SSA technology through its advancements (e.g., Ghose & Yang, 2010, Yang & Ghose, 2010, Katona & Sarvary, 2016, Jeziorski & Moorthy, 2017, Brennan, 2018).

A closer look into the marketing literature reveals a gap between the powerful and networked SSA practice and the academic treatment of it. The evolution of SSA makes it apparent that SSA tools such as the Google Ads, its functions and features, are continuously evolving and causing innovation and ongoing reconfigurations of marketing practice (e.g., Fein & Pedersen, 2006, Jones, 2014, Geiger & Gross, 2017, Yadav & Pavlou, 2020, Morton & Dinielli, 2020). However, the dominant analysis of SSA in academic research present the SSA technology as homogeneous, with the emphasis on objects (Goles & Hirshheim, 2000). Moreover, the current SSA studies present its technology as "stable" through studying it from the outside (Knorr-Cetina & Bruegger, 2000). As much as the current SSA research is relevant, that much it needs a further and more detailed understanding of how the SSA technology happens in practice, through social construction (Callon, 1998, Latour, 2004, Law, 2009). This is especially important, as the SSA technology is mostly non-physical and the impact it has on the marketing practice, can because of the invisibility of its attributes, get missed out (Geiger & Gross, 2017). Such

treatment does not give an accurate enough understanding of the SSA technology (Brownlie, 2010, Rust, 2020) and leaves it undermined (Latour, 2011, 2019).

Are there alternative ways of capturing technology-practice nexus that enable closer attention to technology and that are capable of coping with technological change? A rich tradition exists in performativity (e.g., Araujo, 2007, Kjellberg, 2010, Venter et al, 2015, Jacobi et al, 2015, Storbacka & Nenonen, 2020), a practice-based approach in market studies. This research speaks to market studies scholars, which mostly already acknowledged the equal importance of objects and subjects through socio-material networks (Callon, 1998, 2010, MacKenzie, 2004, Pollock & D'Adderio, 2012, Roscoe & Chillas, 2014, Gond et al, 2016). As the mentioned research is based on ANT principles, this research upgrades its networked analysis with power, control, failure and resistance (Callon, 1984, 1998, Latour, 1988, 2004, Mol, 2000, Law, 2004, 2009, 2019). ANT theoretically frames this study and enables a momentum analysis (Knorr-Cetina & Bruegger, 2000), which is carried out from the inside, on a micro level, as opposed to externally, where the invisible features of the technological objects tend to get missed out (Yadav & Pavlou, 2020, Rust, 2020). ANT analysis is used to provide a completer and more holistic, rather than quickly outdated and fragmented understanding of the SSA technology in practice (e.g., Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017).

Through reviewing the SSA marketing literature, three main gaps were identified. First, SSA marketing literature is lacking a critical understanding of the SSA technology (Law, 1992, 2009). In this relation ANT will address SSA technology as built of several smaller attributes and trace and understand how them from heterogeneous associations (Shove, 2003, Law, 2009). Second, the current SSA marketing studies usually examine the SSA objects through an "outside" and macro perspective, rather than on the level of an individual actor, such as a digital actor and a marketing manager (Geiger & Gross, 2017). An "inside", micro analysis brings more insight and detail for understanding the SSA (Latour, 2009, Nimmo, 2011, Adams & Thompson, 2014, Corman & Barron, 2017). Third, performativity, compared to ANT, seems to employ an overly broad analytical approach to capture the significant details of marketing objects and practice. Given the quick digitisation of the marketing practice, an upgraded performative analysis is needed. This is

such, that considers both successful and failed materialisations of heterogeneous relations, and is capable of tracing highly unpredictable, multiple, fluid and severely dynamic technological objects (Murdoch, 1996, Thompson, 2012, Roscoe & Chillias, 2014, Lammes, 2017, Geiger & Gross, 2017).

1.1.2 Research questions

This research is exploring Google advertising practice highlighting Google Ads, as a digital tool that shifts, turns, skips between networks and gets established through social construction (Callon, 1984, Callon, 1998, Latour, 2005, Law, 2009). Given the importance of Google technology, ANT is an appropriate methodological tool to show many opportunities for its more accurate understanding (Brownlie, 2010, Rust, 2020). These will be put forth through the following research questions:

1.How is a network created in SSA practice?

2.What relations make a successful network and how do the actors influence success?

3.How do networks fail?

The above research questions will be expanded and discussed through the theoretical lens ANT and a research design fitting with the lens – ethnography.

1.1.3 Theoretical approach

ANT was chosen as the most appropriate approach to explore Google advertising practice. This was because ANT is a method, which analytically gives equal importance to both technological objects and human subjects (Michael, 2017). Using ANT for its exploration, SSA and its technological advancements do not happen on their own but are rather an outcome of continuous use of the SSA technology in practice (Law, 2009, Callon, 2010, Geiger & Gross, 2017, Michael, 2017).

ANT belongs to the family of material semiotics (e.g., Latour, 2005, Law, 2007, 2009, Michael, 2019) and it addresses practice and technology through heterogeneous associations (Callon, 1998, Law, 2019). ANT scholars believe that heterogeneous associations enact reality through the process of translation and when relations are temporarily stabilised in actor networks (Callon, 1984, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007).

In order to understand the Google Ads as complex and dynamic, this study focuses on problematic events, where the process of translation fails to complete (Callon, 1984, Akrich, 1992, Latour, 1992, Lammes, 2017, Geiger & Gross, 2017). This is perfectly fitting with the unpredictable digital technology in marketing, which tends to mutate and turn out incompletely (Knorr-Cetina & Bruegger, 2000, Geiger & Gross, 2017). Failure therefore brings interesting details of the invisible attributes of digital technology, where it overpowers the user and takes away his control (Galloway, 2004, Law, 2009, Lammes, 2017, Law, 2019). More power on the tool's side come from the invisible part of the digital technology, which cannot be understood if studying it externally (Lammes, 2017, Lammes & Wilmott, 2020). This makes the Google Ads a participant that speaks back and resist the co-creation and change (Thompson, 2012, Lammes, 2017).

The aim of ANT in this study is to trace how human and nonhuman actors interact in their networks and how they successfully and unsuccessfully create reality through the process of translation (e.g., Latour, 1992, Akrich, 1992, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007). This brings several important details and insights about the quickly developing and shifting digital technology, its rules, prescriptions and interfaces, which are the main driver of innovation and reconfiguration of marketing practice (Knorr-Cetina & Bruegger, 2000, Geiger & Gross, 2017).

1.1.4 Research method

This study uses ANT-informed ethnography as its design (Nimmo, 2011, Corman & Barron, 2017) and deploys a technique of following actors when collecting the data (Latour, 2005). There human and nonhuman actors are traced in forming

heterogeneous relations in the process of translation and shifting power (Callon, 1984, Law, 2009, 2019).

ANT analysis, which aims to trace actors' actions in the situation, teases out a variety of small details and insights about Google advertising practice and the Google Ads. Those details enable a more accurate understanding of how Google advertising issues happen, why they happen and how they are solved (Brownlie, 2010). The ANT-informed ethnography therefore enables collection of rich data and advances the current SSA research with a significant level of insightful detail, which span beyond visible into information-based (Beunza & Stark, 2000, Geiger & Gross, 2017).

This ANT-informed ethnography uses several methods to collect the data – (participant) observations, interviews, images, field notes and a researcher diary. A combination of these methods is crucial to provide enough rich data for ANT analysis.

1.2 Research context

The context of this study is an organisation, specifically, a small Scottish digital marketing agency based in Glasgow. The aim of this ethnography was to provide a more detailed and accurate understanding of the Google advertising practice and its main tool Google Ads.

The agency was small, operating in the tourism sector, initially employing 7 marketing managers. The agency as a research setting enabled a detailed exploration of many complexities of Google advertising practice (Law, 2009, Thompson, 2012) and tracing the actors was often expanded beyond its local borders. This enabled a more holistic exploration, as it uncovered Google Ads as fluid, multiple and dynamic, while shifting between the networks (Law, 2009, Hind & Lammes, 2015, Lammes, 2017).

1.3 Potential contributions

Contributions of this research will be threefold. First, this study will contribute theoretically to the marketing literature. Current SSA marketing literature is largely lacking a more critical examination of its technology in practice. The SSA marketing scholars in their studies provide an interesting array of research, which mostly externally, rather than through micro detail, studies the SSA objects. As the SSA scholars continue to strive to capture all the advancements of the SSA as they occur, they are producing fragmented knowledge and missing out on the relational significance of those technologies (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017). Such treatment misses out on several opportunities for a more detailed presentation of the SSA technology (Latour, 2005, Law, 2009). Through a radical recasting of SSA as technological practice this study contributes to the marketing literature by providing a more critical understanding of the SSA technology in networked practice (Thompson, 2012, Lammes, 2017, Michael, 2017, Geiger & Gross, 2017).

Second, this study will contribute to the literature methodologically, where the main theoretical approach - ANT will strengthen the currently used practice-based approaches in market studies' literature (Callon, 1998, 2010, MacKenzie, 2005). The socio-material momentum analysis, suitable to study unpredictable digital marketing technology, will significantly contribute to the accuracy of the current practice-based knowledge creation (Brownlie, 2010, Lammes, 2017, Geiger & Gross, 2017). The upgraded ANT analysis includes not only the successful interactions between human and nonhuman actors, as it happens in situation, but also the failed actor networks, which are filled with the resistance of digital marketing technology (Beunza & Stark, 2002). This includes acknowledgement of the notions of power and control, which have so far been overlooked by market studies' scholars (Callon, 1998, 2010, MacKenzie, 2005, Roscoe & Chillias, 2014, Gond et al, 2016, Geiger & Gross, 2017).

Third, the study offers a broader contribution to understanding the SSA technology in practice also in MOS (e.g., Barrett et. Al., 2012, Yoo et. Al., 2012, Mazmanian & Orlikowski, 2013, Orlikowski & Scott, 2016), IS (Hind & Lammes, 2015, Lammes, 2017, Lammes & Wilmott, 2020) and Education Studies (Thompson, 2012). This study contributes to MOS by adding more detail to the micro-level socio-material

analysis, where the focus is on tracing practice reconfigurations (e.g., Barrett et. Al., 2012, Yoo et. Al., 2012, Mazmanian & Orlikowski, 2013, Orlikowski & Scott, 2016). Second, IS scholars studied digital technology with the emphasis on power and control, however, with minor emphasis on failed actor networks (Hind & Lammes, 2015, Lammes, 2017, Lammes & Wilmott, 2020). This is an important addition for more accurate understanding of phenomena. Education studies' scholars will also benefit from a well-developed momentum analysis, by being able to explore the education-related digital technology through successful and failed heterogeneous interactions (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Roscoe & Chillias, 2014, Geiger & Gross, 2017).

1.4 Outline of the thesis

This thesis is made up of seven chapters: Introduction, Literature review, Conceptual lens, Methodology, Findings, Discussion and Conclusion.

Chapter two - the Literature review chapter synthesises the SSA marketing literature. This along with the market studies stream of literature and performativity. The aim of the chapter is to identify the gaps of that literature.

Chapter three - the Conceptual lens presents the ANT method, which provides the theoretical framework of this thesis. This will enable to explore the SSA tool – Google Ads through the details of heterogeneous associations and the process of translation.

Chapter four - the Methodology chapter discusses philosophical underpinnings of this study, the research aims, the research design, the research context and the role of the researcher, the research questions and the research methods.

Chapter five - the Findings chapter presents several problematic events through which the actors were followed by the researcher. Events were organised by commensurability. Heterogeneous associations were traced through the process of translation, stabilisation, success and failure.

Chapter six – the Discussion chapter includes discussions of theoretical and methodological contributions of this study. The chapter also presents the future research agenda.

Chapter seven – the Conclusion chapter makes the final conclusions of the study, including the summary of the research questions discussions, the gaps and contributions, managerial implications and it also states the limitations of the study.

2 Chapter 2: Literature review

2.1 Introduction

This chapter reviews the literature on Sponsored Search Advertising (SSA) in marketing. It follows its journey from the SSA establishments in 1994 until today. The chapter analyses the extant literature from several perspectives - their topic, aim, treatment of technology (singular/multiple), perspective (macro/micro) and research design (quantitative/qualitative). These perspectives are embedded in theoretical framework of this research which is ANT. The early direction within theoretical framework helps unfold and strongly establish the gaps, where the chapter already indicates how the currently undermined SSA examination could be advanced and proliferated.

2.2 Evolution of SSA

It has been almost 25 years since the ecommerce has commenced its development fostered by the proliferation of the internet. The advancements in search engines technology underlined these developments (Hoffman & Novak, 1995, 1996). SSA, emerged shortly after the search engines were established (Singel, 2010), as a means of enabling monetisation of the internet traffic. SSA as a concept appears in several literature reviews about digital marketing, where scholars are warning that rapid change in technological trends needs special attention and alertness (Yadav & Pavlou, 2014, Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Rust, 2020). The sections below will present SSA and how it advanced over the years.

Digital advertising has been rapidly evolving since its establishment in 1994, when first banner ad was placed online (Singel, 2010, Liu-Thompkins, 2018, Pritchard, 2021). From then on, digital advertising has been growing at an exponential pace (Liu-Thompkins, 2018, Marketing Statistics, 2021). Now it has come to the point when in the present time digital advertising is the largest and quickest growing industry making more than half of all the revenues in advertising in both the UK and

the US (Morton & Dinielli, 2020, p. 1). SSA, with Google search engine dominating, is one of the main types of digital advertising. It makes more than one half of all the revenues from advertising in both the UK and the US, which are some of the most successful world markets according to % GDP (The World Bank, 2020, Morton & Dinielli, 2020). The latest statistics released by E-marketer are as follows and based on the example of the US: compared to 2020, when the growth of SSA was 3%, in 2021 the growth was 35% (E-marketer, 2020, 2022).

Broadly speaking, digital advertising has developed in three directions – banner or display advertising, video advertising and search advertising (Morton & Dinielli, 2020). First, display advertising includes banner ads in various forms such as text, animation, video, which aim to attract the user to click on it and land on the advertiser's website (Morton & Dinielli, 2020). Display advertising presents 40% of all advertising and is based on the data about the device user (Morton & Dinielli, 2020). Second, video online advertising is a type of digital advertising that is plays before, after or in between the streamed video content (e.g., YouTube, Instagram) and works according to the display advertising principles (Mathews, 2019, Morton & Dinielli, 2020, Choi et al, 2020). Lastly, sponsored search advertising includes ads that show on the top or the bottom of a search engine (e.g., Google, Yahoo, Bing) and their display is driven by searcher's search inquiry with keywords (Kannan & Li, 2016, Liu-Thompkins, 2018, Morton & Dinielli, 2020). Keywords are terms that present the content of digital ads and the content of brand's website (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Jeziorski & Moorthy, 2017).

The key element of SSA is therefore a keyword. Initially, websites used meta tags with keywords based on the site's content to increase relevance when people performed searches (non-paid) (Fain & Pedersen, 2006). With evolvement, each sponsored link started to be related to a keyword and advertisers could add more than one keyword to one sponsored link. This is when the cost-per-click (CPC) system got introduced (Fain & Pedersen, 2006).

In time, rapid growth of SSA brought automation, which included the development of the search engine algorithm mechanisms. Slowly, pricing models like Cost per acquisition (CPA) and cost per click (CPC) bids started to be established by various

companies, one of them being Google (in 2001) (Fain & Pedersen, 2006). Other features and metrics, such as impressions and the number of times an SSA ad is shown on SERP, were getting introduced as the SSA evolution continued (Hoffman, 2000, Google, 2021).

Google first introduced search advertising in 1999 and Google AdWords system in 2000 (Jones, 2014). The latter was mostly based on CPC features and metrics. However, when the company re-launched their AdWords system in 2002, they upgraded their ranking rules from CPC only, to CPC also including the CTR (click through rate) feature (Fain & Pedersen, 2006). CPC and CTR analysis are the roots of today's Google advertising algorithm (Fain & Pedersen, 2006). Such metrics are important for the Google algorithm's work of sorting billions of websites to find the most useful ones and place them on SERP accordingly (Google, 2021).

The development of SSA continued with advancement of bidding from generalised first price auction¹ introduced in 1998 and general second price auction² introduced in 2002 by Google (Jansen & Mullen, 2008, p. 119). They are important in the development of the Google algorithm mechanism, which is an important compartment of the SSA, which this study aims to capture as socially constructed (Latour, 2005, Law, 2009).

The next advancement concerned quality-based bidding³, when advertisers started competing in who offered the highest amount per the ad keyword used and simultaneously, they started investing time in producing good-quality ads (Jansen & Mullen, 2008, p. 119). In 2005 Google introduced mechanisms for fraud prevention and a tool called Google Analytics for tracking ad performance (Jones, 2014). In 2007, Yahoo, Google's competitor, added generalised second price bidding to the concept of quality-based bidding. In 2008 Google advanced its quality-based bidding with a feature called "quality score", which aimed to improve general searcher's experience (Jones, 2014). Following that, the Google AdWords tool -

¹ The bidder who bids the highest wins the top position (Jansen & Mullen, 2008, p. 119)

² The bidder who bids second highest wins the second top position (Jansen & Mullen, 2008, p. 119)

³ Bidding means deciding about the highest amount of money the advertiser is willing to pay per every click on his/her ad (Milestone, 2021)

another tool by Google, which enabled and advanced the setup of Google advertising campaigns and their management, was introduced (Jones, 2014, Google 2022b). This was in line with the option of remarketing⁴ and product listing in 2010 (Jones, 2014). In 2015 Google announced, “call only campaigns”, which enabled advertisers to target mobile devices with their ads and in 2016 Google placed ads instead of on the right side, to the top and bottom, in 2017 the company introduced “shopping ads” (Carr, 2020), which enabled the advertiser to put their products in front of the shoppers in the Google “shopping” section (Google, 2022a). In 2018 Google offered the option of blocking Google ads with their tool “Ad blocker” and Google AdWords was renamed to Google Ads (Carr, 2020).

As a result of the intense evolvement discussed above, today Google is a dominant search engine offering SSA services and contributing to the SSA industry development. Its main mechanism, Google algorithm, keeps control over the advertisers’ actions, through frequently updating requirements about the ad and the landing page quality (Rust, 2020). This impacts ad’s position on the search engine result’s page, the CPC and ad’s eligibility, based on the predominant goal of Google to improve its searcher’s experience (Rust, 2020, Milestone, 2021).

The complex evolvement of SSA shows an intense redefining of marketing practice in digital advertising over the past 25 years. Marketing practice has been rapidly changing and the illustration of the milestones on the way of the SSA evolvement, provides an understanding of its growing complexity. This offers a strong starting position for understanding SSA as networked, powerful and prone to failure (Beunza & Stark, 2002, Geiger & Gross, 2017), which will be further discussed later in this chapter.

2.3 SSA research in marketing

⁴ A way how to target or interact with the same people, who have interacted with your website or your ads before (Arya et al, 2019)

Unsurprisingly the rapid advancements of digital advertising technology SSA, drew scholars' attention to produce meaningful knowledge. The interest to study this type of technology and its practice, continues, and offers arrays of opportunities for marketing scholars to add to its understanding (Porter, 2021, Pritchard, 2021).

Several scholars discussed SSA in their studies (see: Ghose & Yang, 2009, Yang & Ghose, 2010, Kannan et al, 2016). Some of the first studies on SSA explored how the keyword characteristics (e.g., popularity), ad rank and landing page quality impacted the click behaviour (also: buying behaviour), CTR and conversion rate (Ghose & Yang, 2009, Yang & Ghose, 2010). As time progressed, studies began to follow distinct lines of enquiry. By now, SSA represents a vibrant field of interest in marketing, which addresses matters like search engine algorithm, ad rank, brand prominence and click behaviour (Lu & Yang, 2017, Jeziorski & Moorthy, 2017), explores various impacts on SSA keyword management decisions (Amaldoss et al, 2016, Shin, 2015) and ways of how SSA can impact buying behaviour (Chan & Park, 2015, Yang et al, 2015, 2016). All this, to provide marketing managers with sufficient tools for SSA decision making.

2.3.1 Key themes and research questions

The SSA marketing studies are currently focused on the interplay between keyword management decision making and understanding the SSA based buying behaviour. To help marketing managers, make strategic SSA decisions, SSA scholars build several quantitative models to enable them to do so (e.g., Bradlow & Park, 2007, Yang et al, 2014, Shin, 2015, Chen & Park, 2015).

Therefore, one way of categorising the marketing SSA literature is by the way SSA technology impacts managers' decisions and conversely how it impacts buying (search) behaviour. Marketing scholars are currently focused on distinct material features, tools, and functionalities of SSA technology, by studying them externally, with little internal insight (Beunza & Stark, 2002, Roscoe & Chillias, 2014). Moreover, SSA scholars mostly focus on keywords and the effects of metrics such as CPC and CTR on ad rank (e.g., Ghose & Yang, 2009, Lu & Yang, 2017). As well as on various settings and functions of SSA technology, such as broad keyword match or phrase keyword match (e.g., Amaldoss et al, 2016).

The Table “Main SSA studies” in Appendix D, summarises the main papers in the SSA marketing literature – their topic, aim, treatment of technology (singular/multiple), perspective (macro/micro) and research design (quantitative/qualitative). The treatment of technology refers to the way in which the SSA scholars explore the SSA technology. For example, practice-based approaches, such as Actor Network Theory (ANT), use actors, actor networks and relations to explore the construction of reality in a detailed and insightful way (Callon, 1984, Mol, 2000, Law, 2009, Latour, 2009, Michael, 2017). Research perspective refers to the scale on which the SSA technology is currently explored through – micro or macro. And research design refers to the assumptions on which the current SSA technology studies are based on – quantitative or qualitative (Easterby-Smith, 2015). The three types of characteristics are focused upon, to synthesise the SSA literature and to show the gap in this literature. Below, the SSA literature in marketing will be synthesised.

One of the key SSA strategies is bidding strategy, which marketing managers build to inform their SSA activities (Bradlow & Park, 2007, Yang et al, 2014). There, bidding is a process, when a bidder (advertiser) places a bid for a certain keyword and this way decides for the maximum amount of money s/he is willing to pay for that keyword (Agarwal et al, 2006). Bidding strategy is therefore the starting step of SSA and strongly impacts the SSA performance (Yao & Mela, 2011, Berman & Katona, 2013, Yang et al, 2014).

Some scholars discuss how advertisers can bid on search engines based on different types of auctions (e.g., Bradlow & Park, 2007, Shin, 2015, Zhu & Wilbur, 2017). Those are for example bidding “per click” and “per impression”, which advertisers can decide between for the best bidding strategy (Bradlow & Park, 2007, Zhu & Wilbur, 2011, Jerath et al, 2011, Chen & Park, 2015). Also, the studies discuss how a limited budget for advertising (Shin, 2015) and keyword competition (Yang et al, 2015) can impact bidding strategies and decisions. Shin (2015) builds a quantitative model, with a macro focus on how the limited budget can affect the SSA manager’s decisions about SSA advertising. And Yang et al (2015) build a quantitative model to measure the impact of the firm’s competition on the content of

the SSA ad, keeping the macro focus and the singular and not multiple treatment of technology (Mol, 2000).

As mentioned above, keywords are a significant element of bidding, and some marketing scholars specifically focus on the keywords' characteristics (types of keywords) and their effects on the managers' decisions, buying behaviour and profitability of SSA campaigns (Ghose & Yang, 2009, Klapdor et al, 2014). Such types of keywords are intrinsic (e.g., length) or extrinsic (e.g., broad match, exact match) (Ghose & Yang, 2009, Klapdor et al, 2014) and branded or non-branded keywords (Rutz & Bucklin, 2011, Rutz, Bucklin & Sonnier, 2011). Rutz & Bucklin (2011) discuss the spill-over effect from generic searches to brand searches and vice versa on the profitability of the firm and the study results in building a quantitative model. There SSA technology is treated as singular, rather than multiple (Mol, 2000), fluid, dynamic, constantly shifting and mutating (Beunza & Stark, 2002) due to its digital qualities.

Various keyword characteristics and/or brand prominence induce different effects by the SSA competitors, for example, the effect of poaching. This is when brands steal other brands' (competitors') branded keywords (Sayedi, Jerath and Srinivasan, 2014, Desai et al, 2014) or when brands copy competitors' non branded keywords (Lu & Yang, 2017). Lu & Yang (2017) discuss the advertiser's decisions about the keyword selection, which can be based on the competitor's selection of keywords. The scholars developed a quantitative model, which measures the probability with which the advertiser will be influenced by the competitor's keyword selection and vice versa. Again, the SSA technology is not treated as socially constructed (Latour, 2005, Law, 2009, Michael, 2017) and the focus of the study is based on the advertising activities on the macro level - the level of the firm as a whole (Michael, 2017).

Managers' decisions around the SSA strategy (e.g., bidding strategy) impact the SSA performance and reconfigure the SSA marketing practice (Beunza & Stark, 2002, Gond et al, 2016, Geiger & Gross, 2017). Scholars discuss the effects of such decisions, those being reflected through the fundamental SSA metrics like CPC (Cost per click), ROI (Return on investment) and CTR. These metrics are the

indicators of how an SSA ad performs, which depends on many factors, such as the ad's content and its overall quality (Abou Nabout & Skiera, 2012, Haans et al, 2013, Yang et al, 2015). The way SSA metrics are favourable or unfavourable to the advertiser also depends on various keyword characteristics (Klapdor et al, 2014, Lu & Yang, 2017), a combination of different advertising channels used along with SSA (Sayed et al, 2014), SEO (a way to which a landing page is optimised) (Berman & Katona, 2016) or the position of the ad (Chan & Park, 2015). The scholars provide decision making tools for managers to gain a better understanding of how searchers click on SSA ads depending on their 'Search Engine Results Page' (SERP) position.

As previously mentioned, marketing managers can use more than one type of advertising, one of them being part of the SSA practice. In such a case, when a company engages more ways of digital advertising, it is important to build a strategy on how SSA ads' credits will be decided. This can be through tracing all the touch points until the consumer makes a purchase (Xu et al, 2014, Batra & Keller, 2016, Kannan et al, 2016). Across the SSA marketing literature two ways of doing that are emphasised. These are direct and indirect attribution strategies (Rutz et al, 2011). The direct attribution model considers landing on the brand's website through the standard process: seeing the ad - clicking on it - landing on the website. This is measured through standard metrics like CPC (Rutz et al, 2011, Kireyev et al, 2016). However, it is also likely that the customer makes a purchase indirectly - through a memory-based process (remember the brand's name from an SSA ad s/he clicked on some time before) which includes two steps: searching for the brand directly and landing on the website. Regardless of the latter process not including clicking on the SSA ad, full credits, based on the indirect attribution model, can still be assigned to the SSA ad (Rutz et al, 2011). Rutz et al (2011) therefore built a quantitative model, which focuses on attributing credits of a website visit to SSA, in case it is likely the visit was a result of previous landing on the website via an SSA ad. The treatment of SSA technology in the study is singular and explored externally (Beunza & Stark, 2002).

Related to managers' decisions around SSA, some scholars discussed SSA technology modifiers, such as broad match and phrase match modifiers (Agarwal et al, 2011, Haans et al, 2013, Klapdor et al, 2014, Narayanan & Kalyanam, 2014,

Amaldoss et al, 2016, Jeziorski & Moorthy, 2017). Broad match modifier can be understood as follows:

“If an advertiser chooses the keyword chocolate and adopts a broad match, then its advertisements may be shown on related searches such as dark chocolate, white chocolate and possibly even cocoa. Yet if the same advertiser adopts a traditional exact match its advertisements will be displayed only when consumers search exactly for chocolate” (Amaldoss et al, 2016, p. 260).

The broad match modifier, which for the advertiser means automatic bidding (instead of manual bidding) positively incentivises SSA managers to do more SSA advertising (Amaldoss et al, 2016). Amaldoss et al (2016) researched how the brand match modifier impacts the advertiser’s (manager’s) SSA strategic decisions based on a potentially lower cost of SSA, this being due to an automatic bidding system. The SSA technology is descriptive and not presented in detail as emergent in practice (Thompson, 2012, Michael, 2017), while the perspective the study takes is the perspective is general and based on the final effect of the SSA advertising of a firm.

To improve the SSA ads performance, marketing managers need to consider the SEO as part of their SSA strategies. Working together, SEO and SSA can significantly impact the SSA performance, as many scholars have discussed (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Berman & Katona, 2016). The reason for that is the fact that a well-optimised web page (website) positively impacts several SSA prices and metrics such as CTR, CPA and Conversion rate (Ghose & Yang, 2009, Yang & Ghose, 2010, Berman & Katona, 2013, Haans et al, 2013). For example, Berman & Katona (2013) built a quantitative model, which measures how SEO impacts satisfaction of searchers and the ad rank.

In relation to SEO, some SSA marketing scholars discuss the transparency of search engine algorithms and how this impacts the price and choice of keywords in the bidding process (Dhar & Ghose, 2010). Others aim to provide a possibility for predictive data that help marketing practitioners build successful bidding strategies based on ad rank and changes in performance metrics (Yao & Mela, 2011, Chen et

al, 2009, Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). For example, Katona & Sarvary (2010) built a quantitative model which considers the bidding patterns and measures the effects of those on the ad rank. Furthermore, the way the search engine algorithm impacts the actions of marketing managers using that model for their decision making in practice, how its rules and requirements cause problems due to their poor understanding, how it enables good SSA performance and how this is practically achieved (Latour, 2005, Law, 2009), could be of an additional value and provide valuable understanding of the SSA marketing practice reconfiguration (Beunza & Stark, 2002, Roscoe & Chillas, 2014, Geiger & Gross, 2017).

Understanding the search engine algorithm and the impacts of SSA decisions can be difficult for the SSA advertisers (marketing managers). This particularly if they are not SSA specialists. Following that, brands sometimes hire specialised digital marketing agencies to build their SSA strategies and manage their SSA ads (Sayedi et al, 2013, Skiera & Nabout, 2013, Abou Nabout et al, 2014, Klapdor et al, 2014). For example, Abou Nabout et al (2014) built a quantitative model, which compares CPC in SSA across 15 industries in 6 countries. The scholars research how the mentioned relate to each other globally. The study emphasises implications from the findings for the advertising managers, who are appointed to manage clients from various different countries. This is another quantitative model, which is based on measuring various SSA metrics on a macro level. The metrics are focused upon in a rather singular way, which is different from them being studied as part of a networked environment (Michael, 2017). Furthermore, the ANT scholars argue, that a way of examination, where the phenomenon is studied individually and not closely embedded with its practice, could result in understanding that object at face value (MacKenzie, 2005, Thompson, 2012, Michael, 2017, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). The next chapter will expand on the subject matter of face-value (Law, 2009, 2019).

The above sections synthesised the SSA literature considering the aim of this thesis. The literature review is structured and done in a way that is useful and relevant for identifying the gaps in the literature, as well as to serve as a foundation to draw upon when formulating contributions in the final chapters of this thesis. The following

sections will focus on building the gap in the marketing literature, emphasising the treatment of the SSA technology by scholars, the perspective and the research design.

2.3.2 Research gaps

2.3.2.1 Treatment of SSA technology

As the Table “Main SSA studies” in Appendix D, shows and as it was discussed in the previous sections of this chapter, the extant marketing literature examines the SSA technology mostly as singular and static, moreover, with a fixed and constant character (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Katona & Berman, 2016). This statement refers to the ways in which the scholars study SSA technology (e.g., Yao & Mela, 2011, Kireyev et al, 2015).

Momentum analysis based on ANT aims to study objects through the process of translation and heterogeneous interactions (Callon, 1984, Beunza & Stark, 2000, Law, 2009, 2019). As such, it will proliferate and advance the current understanding of the SSA technology, which provides significant detail about the innovation that technology causes to marketing practice. ANT analysis will provide a dynamic, fluid and multiple understanding of the subjects and objects they research (Callon, 1984, Latour, 2005, 2011, Law, 2009, Michael, 2017). The upcoming sections and the remainder of this chapter will build on ANT theoretical assumptions, while considering the review of the SSA literature, to formulate the research gaps of this thesis.

In ANT terms, multiplicity refers to the ways in which objects are understood as through various forms and many versions of reality created, that based on the objects' participation in practice-based events, situations and relations (Mol, 2000, Law & Singleton, 2005, Law, 2009). The treatment of objects as fluid in multiple spaces means those naturally dynamic and fluid objects can easily skip between the actor networks (Lammes, 2017). Scholars, who base their research on ANT foundations refer to the mentioned production of understanding as “production of reality” (Thompson, 2012, Hind & Lammes, 2015, Lammes, 2017). The treatment of

objects as fluid and multiple is of particular significance in the case of digital technology. There the fluidity is intensified because of the generally dynamic nature of digital objects (Thompson, 2012, Lammes, 2017). Further, due to the digital nature of objects, like SSA technology, understandings of such technology is added relevance through following the effects those objects make in different places at the same time, this including different users using that technology simultaneously.

With the above practice-based assumptions of ANT object treatment in mind, the SSA technology in marketing literature, is currently presented as static and singular rather than as dynamic and multiple. SSA marketing scholars mostly focus on the outcomes and the results of what could potentially be the presentation of the socially enacted SSA technology (Latour, 2005, Law, 2009). A group of marketing scholars called market studies' scholars, research market-related objects as constructed by human action (e.g., Araujo, 2007, Kjellberg & Helgesson, 2010, Kjellberg, 2010, Jacobi et al, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). Such ways of doing research significantly expands the understanding of those objects and the ways in which these digital objects are conventionally studied. Regardless of an eminent opportunity for a more accurate and thorough understanding of the SSA technology through the way it emerges in practice (Thompson, 2012, Michael, 2017), SSA marketing scholars currently adopt the limited and static views of that technology and take it as an outcome rather than as emergent in practice.

The SSA scholars, for example, explore the impact of keyword characteristics and other features around the SSA performance (Ghose & Yang, 2009). This, with no particular emphasis on who are the users of the SSA technology, how do they use it or what the environment where the technology is used, is like. Those are the details ANT, as one of the practice-based approaches, enables to capture (e.g., Mol, 1996, 2000, Latour, 2000, Law & Singleton, 2005, Latour, 2005, Law, 2009, 2019). This allows an insightful way of understanding such technological objects in practice.

Digital technology is made of numerous invisible rules, interfaces and prescriptions, which are the attributes of digital that have been pointed out by scholars as being

likely overlooked (Mackenzie, 2005, Thompson, 2012, Sam & Lammes, 2015, Lammes, 2017). Given that invisible part of the digital technology, the ANT group of scholars claims such technology could as well overpower its users (e.g., Thompson, 2012, Sam & Lammes, 2015, Lammes, 2017). Next chapter will expand on the matter of power between actors in ANT networks. In SSA, for example, the rules and prescriptions refer to requirements of the Google algorithm, which were included as part of several SSA marketing studies (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Yao & Mela, 2011, Katona & Sarvary, 2016, Berman, 2018). Those studies tend to take Google algorithm for granted, singular and with limited potential for it to be captured in various situations and relations. The SSA marketing scholars mostly emphasise the existing and fixed reality of the Google algorithm (Yao & Mela, 2011, Chen et al, 2009, Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). However, understanding those direct impacts in more depth and detail, could further help marketing managers build successful bidding strategies. There are therefore notable potentials for additional understandings of Google advertising features and elements, such as Google algorithm. Capturing those using practice-based research approaches, will disrupt the conventional theoretical understandings of that technologies and will provide significant contributions to marketing practice, as well as to the marketing practitioners (Callon, 1998, 2010, MacKenzie, 2005, Law, 2009) .

Parts of digital technologies like search engine algorithms, interfaces and codes are mostly directly invisible to a human eye, therefore, those technologies tend to be treated as taken for granted by scholars (Adams & Thompson, 2016). Such pieces of digital technologies significantly shape and define that technology, yet still they are still not properly captured as part of practice (e.g., Lu & Lu, 2014, Lu & Yang, 2017, Jeziorski & Moorthy, 2017). Several scholars pay attention to the increasingly interesting and growing way of advertising and its SSA technology; however, it is crucially relevant to capture those agents also in their natural and situational environment. Failing to do so leaves out several opportunities for more accurate understanding of the marketing practice and the way it evolves and enables the construction of its SSA technological elements. The concept of agents getting constructed in and through practice has also been a building theoretical block by several market studies scholars (e.g., Araujo, 2007, Finch & Acha, 2008, Kjellberg,

2010, Jacobi et al, 2015, Venter et al, 2015, Finch et al, 2015, Cluley, 2018). Although performativity is a substantial approach to produce a more complete knowledge in marketing, the dynamic nature of SSA technology might benefit more from an approach that is more structured and detailed such as ANT. ANT will therefore bring a more in-depth and accurate understanding of SSA the marketing literature and significantly methodologically add to the current performative analysis in marketing (Law, 2009, Thompson, 2012). The ANT lens will be discussed in Chapters Three and Four of this thesis.

The invisible SSA features, such as search engine algorithms, tend to hide several interesting, but most importantly, significant conceptions if they are not uncovered through their practice (Latour, 1991, Singleton & Michael, 1993, Law, 2009, Suchman & Suchman, 2007). Doing so makes such digital technology even more dynamic (Thompson, 2012, Storbacka & Nenonen, 2021) and potentials for the growth of such understandings become an ongoing journey (Quinton & Simkin, 2017). This thesis addresses further potentials for understanding of the SSA digital technology through failure and how marketing managers handle and resolve that failure. Examining also the invisible parts of digital technologies in marketing practice therefore enables an additional accuracy to the current understanding of the SSA technology (e.g., Ghose & Yang, 2010, Yang & Ghose, 2010, Katona & Sarvary, 2016, Jeziorski & Moorthy, 2017, Brennan, 201). This is especially because rules and prescriptions of digital technology tend to cause issues and problems, which reveal the complex technology-dense marketing practice (Akrich, 1992, Latour, 1992, Lammes, 2017).

A way of studying SSA technology, which separates practice (marketing managers using it) from its material features caused many interesting understandings of SSA technology to be left uncovered, “taken for granted” and static (Latour, 2005, 2011). Not considering SSA technology, tools and features as part of practice, points at determinism/dualism (Goles & Hirshheim, 2000), which prevents us from many possible understandings of SSA complexity (Kjellberg, 2008, Bajde, 2013). To better understand SSA practice, tools and features, should be considered as socially constructed rather than as individualistic (Law, 1992, Callon & Law, 1997, MacKenzie, 2004, 2005, Adams & Thompson, 2011, 2016).

The disconnect of SSA objects from its context analytically means treating objects and subjects separately. This is in contrast with ANT's principles, where an object is always part of practice and gets constructed through it and by it (Law, 2009). For example, a visible technology, a delete button, is not only an object with its own boundaries and contained within itself, but rather it is "more than a tool" (Thompson, 2012, p. 355). This means that such objects need people and practice to get enacted. Lammes (2017) studies digital maps in their practical context to uncover several additional understandings of them. For example, the user of digital maps would convey meaningful insights about them, which would if not treated as part of practice, mostly remain hidden. The map user is the actor, who opens the complex technological black box by performing several actions upon the technology, such as entering the direction of a journey, selecting the preferred way depending on the traffic conditions and overall, by tailoring the maps to their own needs and plans (Lammes, 2017). The specifically mentioned examples of research are a relevant representation of how digital tools and technologies can take on various different meanings, connotations and understandings, based on the networks in practice they find themselves in and they build (Callon, 1984, Latour, 2005, Law, 2009).

Several literature reviews in marketing literature study digital technology, including SSA technology. This thesis claims that the digital technology of marketing practice is under-researched, and additional knowledge needs to be more coherent and connected (Yadav & Pavlou, 2014, Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020). The full digital marketing reviews listed by their authors, aim to recap the existing digital technology in marketing, to show its scope and several additional and alternative ways of exploration of that technology. Most of the studies conclude that digital marketing practice is a journey, rather than a destination, and that technology should therefore be given an opportunity through practical involvement, to be understood as part of marketing managers using it and dealing with its resistance.

Furthermore, the literature reviews in digital marketing (Yadav & Pavlou, 2014, Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020) claim that digital marketing technology studies, this including the SSA

studies, have been trying to keep up with all the technological advancements in SSA as the advancements have been occurring (Quinton & Simkin, 2016, Kannan & Li, 2017) and this produced a severely fragmented literature. Marketing scholars have been trying to capture all the digital marketing advancements, as they are arising and Wierenga (2002) claims that even if marketers would be “aware of all the existing principles and generalisations about objects in marketing, this would still not be sufficient enough for relevant decision-making” (p. 356). Therefore, without relying on “social relations, institutional practices and technological instruments to become reality” (Gross & Mikko, 2018, p. 1172, also: Mason, Kjellberg & Hagberg, 2015), we cannot produce a relevant enough understanding for making accurate decisions (Brownlie, 2010).

Current SSA studies therefore follow the SSA technological advancements. However, the scholars only minorly study the ways in which SSA happens in practice (e.g., Zhu & Wilbur, 2011, Jerath et al, 2011, Yang et al, 2014, 2015, Chen & Park, 2015, Jeziorski & Moorthy, 2017). Some scholars in digital marketing already started to acknowledge that it is not only digital technology that should be studied on its own, but rather the interactions between the technology and its users are the ones that give additional understanding of the technological advancements (Yadav & Pavlou, 2014, Yadav, 2018, Pavlou, 2018, Yadav & Pavlou, 2020). SSA technology therefore needs a more practice-based and critical way of examination. Such that can capture this technology the way it happens in practice and trace the ways in which it is constructed through use daily (Jaworski, 2011, Wedel & Kannan, 2016). Looking beyond the conceptualisations that the current SSA marketing research provides, will be of significant relevance and will markedly add to that literature and will support SSA strategic decisions (e.g., Zhu & Wilbur, 2011, Jerath et al, 2011, Yang et al, 2014, 2015, Chen & Park, 2015, Jeziorski & Moorthy, 2017).

Further, Quinton & Simkin (2016) claim:

“Technicalisation and the fragmentation of marketing were discussed openly at the 2013 AMS Global Marketing Congress as a cause of concern when looking to the future of marketing. There was stated to be the need to

encourage marketers to take a holistic view of marketing again, to avoid perpetuating the fragmentation into specializations and sub specialisations that has occurred.” (p. 467).

The above quote summarises the current state of the digital marketing practice and urges scholars to take actions towards making the marketing practice whole again. Regardless of several attempts to do so, unfortunately, not much has changed in the area of digital marketing, and specifically in SSA, since 2013 (as in the above quotation). From then, recent SSA studies continue to add to the fragmentation of knowledge through its ordinary considerations (e.g., Jeziorski & Moorthy, 2017, Lu & Yang, 2017, Berman, 2018). This thesis is aiming to closely identify the gaps in the marketing literature and is taking SSA practice and its technology to take the steps towards a more holistic examination and presentation of marketing.

Looking beyond the SSA technology as singular and fixed, therefore, examining its smaller elements, will help with addressing the problem of the fragmentation of the digital marketing literature. This will allow for the newly produced SSA knowledge to make the research more complete and more holistic. This is especially relevant for an accurate presentation of SSA technology and its advancements through the way it happens in practice.

2.3.2.2 Research designs in SSA

Referring to the table “Main SSA studies” in Appendix D, the predominant research design in the SSA in marketing is currently quantitative. The majority of the SSA marketing scholars developed models based on the quantitative assumptions to help marketing managers make SSA-related decisions (see: Sayedi, Jerath & Srinivasan, 2014, Jerath, Ma & Park, 2014).

In the current marketing literature, scholars built and presented several models to help marketing managers take SSA strategic decisions. Those decisions have an impact on the allocation of credits to advertising channels (Rutz et al, 2011, Li & Kannan, 2014, Narayanan & Kalyanam, 2014), SSA campaigns’ effectiveness and reacting to competition’s actions (Lu & Lu, 2014). The models mostly help with predicting metrics from SSA advertising (Abou Nabout et al, 2014), help understand

impacts of keyword characteristics, help build effective ad content (Haans et al, 2013, Klapdor et al, 2014) and help predict the ad rank based on several factors (Ghose & Yang, 2009, Yang & Ghose, 2010, Xu et al, 2011, Rutz & Bucklin, 2011, Rutz, Bucklin & Sonier, 2011, Abou Nabout & Skiera, 2012, Desai et al, 2014). The models as the scholars built them, also aim to help managers understand the online-offline spill over effect on SSA performance (Chan et al, 2011, Dinner et al, 2014). This moreover means the ways in which other types of advertising of the same brand, which are not SSA advertising, impacts the effectiveness of the SSA advertising (Rutz & Bucklin, 2011, Chan et al, 2011, Dinner et al, 2014).

Most of the understanding about SSA is currently based on the external examination of the SSA objects (Beunza & Stark, 2000). This is useful to help marketing managers make predictions about SSA and to establish an understanding about the SSA marketing practice and its technologies. However, the current ways of research, mostly consider SSA technology and its features at face value, while missing out on further understandings of the SSA practice and its potential multiple outcomes (Law, 2004, Latour, 2005). ANT approaches furthermore enable the portrayal of SSA technology the way it emerges in practice (Law, 2009, Thompson, 2012, Michael, 2017). In contrast to that, the currently mostly objective treatment of digital SSA technology, leaves out what its practice could produce if explored through networked interactions (Ribstein et al, 2009, Kochan, 2010, Thompson, 2012, Latour, 2011). These are such interactions, which are between objects like SSA technology and tools, and subjects like their users in their daily practice. Such critical ways of exploring objects and subjects, like ANT, mostly investigates the qualitative approaches of studying phenomena and goes beyond objective principles to underpin the exploration of these phenomena. This way of structuring and understanding the world around us, enables to generate relevant additional insights about technology, especially digital technology like SSA. Understanding SSA through how it gets produced in practice, is principal to add to the marketing literature with understanding the marketing practice (Nimmo, 2011, Corman & Barron, 2017, Hammersley & Atkinson, 2019).

Qualitative, longitudinal approaches to explore marketing practices and objects are in fact almost “required” to provide insights for instrumental knowledge creation in

the social sciences (Ottesen & Gronhuag, 2004, Mason, Kjellberg & Hagberg, 2015). Furthermore, ethnographic mindset is naturally close to considering objects in their contexts (Law,2004). And as such, ethnography is claimed to be the most relevant approach to capturing the dynamics and complexity around digital technologies (Mintzberg, 1970, Czarniawska, 1998, Czarniawska, 2004, 2008). Presentations through stories bring to fore the small details that are crucial to understand the ways in which SSA knowledge is useful to both academics and practitioners (Latour, 1991, 1993, Law, 2009). Stories enable a more critical understanding of the relationships between objects and practices (Finch & Acha, 2008, Thompson, 2012, Mason, Hagberg & Kjellberg, 2015, Michael, 2017).

Ethnography is used by some scholars in market studies. For example, Simakova & Neyland (2008) use ethnography to present matters around “radio frequency identification” (p. 91). Jacobi et al (2015) uses ethnography to explore how the practice of marketing advertising planning happens through advertising planners’ actions (Jacobi et al, 2015). And Venter et al (2015) explores marketing segmentation practice through various marketers (“organisational actors”) actions and techniques using a longitudinal approach (Venter et al, 2015).

One of the most useful methodological approaches to study technological objects in practice, as multiple and dynamic, as claimed by the performativity and ANT scholars, is ethnography. Ethnography, informed by ANT principles was used to collect the data in this study. It will be discussed in the chapter of Methodology.

2.3.2.3 Research perspectives

The Table “Main SSA studies”, in Appendix D, analysed the SSA marketing literature. The distinction between micro or micro perspective, can make a significant difference in the depth of understanding of phenomena. Macro perspective studies researching objects and subjects on a larger scale (Cambridge Dictionary, 2021), such as on the scale of an organisation. However, the micro perspective, looks at the objects and subjects in a more detailed, granular and insightful way, therefore on a smaller scale (Cambridge Dictionary, 2021). An example of this is a networked analysis of heterogeneous relations, which equally

considers both the technological object and the human subject (Callon, 1998, 2010, MacKenzie, 2005, Law, 2009).

The current SSA marketing literature mostly studies the SSA on a broader and larger macro level (Ghose & Yang, 2009, Yang & Ghose, 2010, Katona & Sarvary, 2010, Yao & Mela, 2011, Shin, 2015, Lu & Yang, 2017). The SSA scholars build quantitative models which are relevant for managers' decision making, however, their main emphasis is on the effect on the level of the whole marketing department or the whole organisation. For example, Ghose & Yang (2009) examine the effect of various SSA features on SSA campaign performance, which is a macro effect. This is in contrast with the micro perspective on technology, which is on a level of a manager (Czarniawska, 2004). Implementing such perspective of study, which this thesis is aiming to do, will enable the details and insights that add to the current understanding of the SSA. Thinking of a micro actor, such as a manager, or an SSA tool, as part of the constellation of a company, this can open up the very hidden and often missed details that help understand the core of the SSA practice. For example, taking some of the SSA features, such as keywords, as actors in the practical network, will enable to explore the ways in which managers' decisions are made within that network, how they evolve, how this is impacted by the way SSA technology works and is resistant, however, as well, what an effect this has on the organisation as a whole. In Actor Network Theory (ANT) micro level therefore represents relational actions between human actors (managers) and nonhuman actors (technology) and the interactions that happen between the mentioned, form an actor network or a set of connected actor networks (Callon, 1984, Czarniawska, 2004, Law, 2009, 2019, Latour, 2005, Serres, 2007). The ways in which a researcher can study actors in real life, to understand the situations as blends of people and technologies, will be discussed in more detail in the next chapters.

For a more critical and detailed treatment of SSA technology, the micro perspective will be crucial to bring an additional, but overall, a more accurate understanding of how the SSA technology is established in SSA practice through social action and doing (Michael, 2017). Through ANT, understanding on the micro level usually leads to the understanding of practice on a macro level (Shove, 2003, Czarniawska, 2004, Law, 2009, Czarniawska, 2008). This study is aiming to examine the SSA technology on its micro level, the level of a marketing manager and follow the actors'

when they expand and apply the micro-outcomes on the macro landscape of a company.

2.3.3 Summary of the chapter and closing the gaps of the literature

This chapter synthesises the literature of SSA in marketing and the way marketing scholars currently assess the SSA practice. Several key themes and research questions were analysed, and the gaps of the marketing literature were identified based on the discussion of the treatment of the SSA technology, research design used to explore the SSA technology and its perspectives.

The evolution of the SSA, presented at the start of the chapter, shows quick progression of SSA between 1994 (the first display ad is introduced) (Singel, 2010) and today. However, in SSA marketing research there is little evidence of a holistic progression and understanding of the SSA practice (Kannan & Li, 2017, Yadav & Pavlou, 2020). Therefore, there is little evidence of the particular marketing practice being assessed beyond only the provision to marketing managers' decision-making process. Regardless of a wide range of the SSA studies available in the marketing literature, SSA remains to be researched in a fragmented way and several aspects of it stay hidden and blackboxed. Analytically, SSA technology has not been researched by being given an opportunity for an additional understanding of it. Up to date, the scholars have followed the same stream of thought by using similar ways of research and tools to study the SSA and its technology. The SSA therefore resumes with making the knowledge in the SSA marketing literature less holistic and more fragmented (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017).

Marketing scholars mostly present SSA technology as fixed, static and singular, rather than embedded in practice and empowered by socio-material relations and interactions (MacKenzie, 2004, 2005, Law, 2009, 2019, Michael, 2017). SSA and its features, such as Google Ads or Google algorithm (e.g., Jerath et al, 2011, 2014, Kireyev et al, 2015, Lu & Yang, 2017, Berman, 2018) are currently presented as fixed outcomes (MacKenzie & Millo, 2003), rather than as part of the SSA practice they create. SSA attributes and features (keywords, algorithm, metrics, strategies)

would benefit from being more tightly embedded in marketing practice they are part of. This would enable more accurate understanding of the SSA phenomena, from various situational angles (Callon, 1986, Latour, 2011, Michael, 2017). The latter being currently left out of the wide array of the SSA studies causes a big miss on the opportunities for additional understandings of the SSA (Thompson, 2012, Lammes, 2017).

The extant SSA literature does not consider SSA technology as emergent from practice, where it would be tracking the way the socio-material interactions and relations evolve and create understanding (Latour, 2011, Michael, 2017). However, ANT is a tool that opens ways to recognise the actors and the relations the actors get engaged with and closely identifies the process of interacting within actor network to create SSA practical reality. Given that, SSA technology does not need to stay black-boxed and partly hidden forever (Michael, 2017). As soon as the researcher looks at the SSA and its objects through the lens of interactions and relations between human and nonhuman actors, the specific objects take on many different dimensions, within the social worlds around them (Latour, 1996, Callon, 2007, Ren et al, 2009). The SSA technology, as progressively interesting and one that will see even more significant evolution in the near future, has, by using a tool like ATN to study it, got a massive potential to become more fully and holistically understood as part of its practice. Aiming to understand the SSA technology as multiple, fluid and dynamic (Law, 2009, 2019, Law & Joks, 2019), this study will join the debates of the practice-based research circle of scholars belonging to the market studies area of literature (e.g., Jacobi et al, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Neneon, 2021).

This chapter identified and analysed several SSA studies that consider the SSA marketing practice, pointing at the SSA technology and the ways to assist marketing managers with their decision-making process. Marketing managers, who are currently part of the SSA marketing practice are equipped with the several quantitative models for decision making. The chapter thoroughly reviewed the marketing literature to be able to precisely and accurately emphasise the main gaps in the SSA marketing literature. First, SSA marketing literature keeps the SSA technology black-boxed and studies it as taken for granted for the part, where its

invisible features like SSA tools' interfaces stay hidden. With the marketing practice, specifically in advertising, the world has moved to digital, and several new ways of understanding the digitised SSA advertising practice and its tools are desperately calling for more accurate and holistic understanding of them (e.g., Quinton & Simkin, 2016, Kannan & Li, 2017). Such advancements, which by nature are rapidly changing and impacting the practices around them, should be better assessed. This includes the resistance and failure of the SSA through use, which this research will use as a base to seize additional opportunities for the SSA understanding. Several marketing scholars, who synthesised the evolvement of digital in marketing over the past years, call for approaches where SSA technology would be treated as multiple, fluid and emergent as part of practice through powerful relations (Simkin & Quinton, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020, Rust, 2020). One of the approaches that would be able to study the SSA like that, is ANT. There the attention will be paid to the ways marketing managers take actions around SSA tools and features to make networked decisions (Latour, 2005, Law, 2009). Second, the currently dominant performative approach of studying objects and subjects in practice in market studies is lacking a more detailed examination of those objects and subjects. Currently the practice-based approaches have been used to study marketing practice and phenomena (e.g., Araujo 2007, Venter et al, 2015, Jacobi et al, 2015, Storbacka & Nenonen, 2020). However, in contrast to those approaches, ANT will enable a more detailed and insightful way of exploring the marketing practice and phenomena, such as SSA practice and its technology. Third, the 'market studies scholars' debates this research is joining, only minorly consider the digitality of the marketing literature. Despite the fact that marketing practice has been majorly digitised in the past decade or two (e.g., Fain & Pedersen, 2006, Kannan & Li, 2016, Liu-Thompkins, 2018, Morton & Dinielli, 2020), the practice-based approaches have mostly not yet been enabling better understanding of that digital side of marketing. And fourth, the majority of the SSA marketing studies present SSA technology from a macro perspective (organisational level), however, viewing it from a micro perspective (marketing manager level), will open opportunities for a much more detailed understanding of the SSA marketing practice and its technology.

The following chapter will discuss the theoretical framework of this thesis.

3 Chapter 3: Theoretical lens

3.1 Introduction

This chapter presents the theoretical lens of this study. It establishes the theoretical basis, on which this thesis builds on, and presents the ANT studies this thesis is taking from, and the scholars in market studies, which it is speaking to. This chapter starts with presenting the evolution of Actor Network Theory (ANT) - from classical ANT to material semiotics, in order to present the parts of the evolution, which the thesis will benefit from, using ANT as an analytical tool. The chapter blends ANT elements with performativity, specifically for the part, which is based on ANT (e.g., Callon, 1998, 2010, MacKenzie, 2005). This to understand how ANT discussions inflicted practice-based approaches of market studies and how they are relevant to help build the contribution of this.

The chapter emphasises the material semiotics principles of ANT, which help to unfold digital technology and its dynamic nature. The notions of power and control are considered as dominating for adding relevant understanding of several hidden features of digital technology. Furthermore, the concepts of digitised practice, where the relations between objects and subjects tend to fail are core to help add to the currently black boxed side of digital in marketing (Akrich, 1992, Latour, 1992, Lammes, 2017, Michael, 2017). The modern world is mostly built on data and information, which are in a digital format, which is a big stretch from what marketing has been used to so far (Quinton & Simkin, 2016, Yadav & Pavlou, 2020). In the modern world, innovation comes from within and with the postmodern thinking, objects got a much bigger importance in practice, than they used to have it (Callon, 1998, Beunza & Stark, 2002). With this, evolution and innovation, which is a natural way of how digital marketing technology grows, can only properly be understood through the ways socio-material relations evolve in practice (Callon, 1998, Latour, 2005, Law, 2009, 2019). In the now, digitised world, technology, which used to be much more predictable (Geiger & Gross, 2017), now becomes dynamic and fluid, and shapes markets, which are initially made of bundles and relations of humans and nonhumans (Callon, 1998, Knorr-Cetina & Bruegger, 2000, Beunza &

Stark, 2002, Geiger & Gross, 2017). Notions like communication, interaction and space get a different meaning than before, where now marketing objects are significantly more involved in the mentioned and even overpower the humans as the actions happen (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Law, 2009, Geiger & Gross, 2017, Michael, 2017). The momentum analysis, which is one that is done in situ, as the actors move between the relations and interact with others, enables an understanding of digital objects that goes beyond the physical, through to non-physical and invisible (Beunza & Stark, 2002). In the post-humanist world, which we have moved into, a socio-material examination of phenomena is needed (Knorr-Cetina & Brugger, 2000, Adams & Thompson, 2016). Using ANT, which enables analysis through powerful relations in action, importantly proliferates the current understanding of the SSA in marketing, which has so far been presented descriptively and externally (Geiger & Gross, 2017, Michael, 2017, Lammes, 2017). Studies that support failed and successful examination of networked relations, are the ones this thesis is specifically based on and have been noted as the ones that most open the black box of digital and redefines marketing practice (Roscoe & Chillas, 2014, Gond et al, 2016, Geiger & Gross, 2017).

By drawing on the ANT principles, this including tracing and tracking actors in their situational environment, actor networks are established by following material and human actors in their ways of evolvment through the marketing practice (Knorr-Cetina & Brugger, 2000 also Adams & Thompson, 2016). Drawing on several examples of ANT-based research, this chapter provides a foundation for understanding how powerful actor networks are established in practice, how to most efficiently use them in this research to build a strong contribution to knowledge. The efficient use refers to how ANT principles are used to be able to capture the most relevant parts of the SSA practice, this also by “cutting” the networks where necessary, and how the understandings from network interactions enable an opportunity for additional perspectives to decision making within the SSA digital marketing practice. The cutting of networks in digital worlds is important, as it enables the researcher to study the hotspots and highlights of the phenomena, however, pull out when things become too crowded and overwhelming (Beunza & Stark, 2002). The latter is a trap the researcher needs to recognise, when studying a quickly evolving digital marketing technology. However, most of the marketing

scholars have so far not realised that, and tried to research every single evolution of the SSA technology, however, from the outside, and not from where it actually happens (Geiger & Gross, 2017).

Most significantly the chapter reveals how using ANT as a tool to collect and analyse the data of this research, can unravel the invisible attributes of the SSA technology, such as interfaces, rules and prescriptions that usually remain hidden as the research is done in marketing (Yadav & Pavlou, 2014, 2020, Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Rust, 2020), also, to discuss whether and how does the SSA technology matter for solving problems in an organisational environment and how the digitality of them drives change (Callon, 1998, Beunza & Stark, 2002, Roscoe & Chillas, 2014). The second chapter of the thesis aims to provide a foundation for understanding how to track an actor network, where to cut it, how, where and when to follow actors in a business setting, how to spot digital change by understanding significant ANT concepts such as durable network, immutable and mutable mobile, multiplicity, power, networked relations and dynamism. The mentioned concepts, based on the ANT principles that have passed through several thinkers, who gave analytical attention both to material and social (e.g., Callon, 1998, 2010, Roscoe & Chillas, 2014, Gond et al, 2016), will be revealed to uncover the SSA technology as part of its practice.

3.2 The principles of ANT

Actor network theory (ANT) is a methodological approach that refuses to individually analyse either social relations or social processes. The approach strives for positioning material actors with equal importance as social actors. In fact, ANT refuses to treat the objects and/or subjects as external to the networks, but rather it treats it as socially constructed (Michael, 2017). ANT is interested in the “how” of the networks, therefore how do the objects and subjects come together, how do they interact and what are the outcomes of those interactions. This results in detailed additional understanding of the changed materially dense practice (Latour, 1987, Thompson, 2012, Lammes, 2017). Not only Sociology, but also many other disciplines use ANT as a tool to analyse and gain better understanding of objects in

practice – Management and Organisation studies (MOS) (Czarniawska, 1998, 2004, 2008, Shove, 2003, Alcadipani & Hassard, 2010, Hull, 1999), Market Studies (e.g., Araujo, 2007, Kjellberg, 2008, 2010, Jacobi et al, 2015), Education (Thompson, 2012, 2015), and Information Systems Studies (Walsham, 1997, Doolin & Lowe, 2002, Lemmas, 2016, Mwenya & Brown, 2017). Several of the mentioned contributed to the evolvement of this thesis and helped understand how SSA technology, which is usually taken for granted, when applied in practical context, importantly contributes to the configuration of SSA marketing management strategies.

Although the name suggests ANT is a theory, ANT is rather a philosophy, a method or a toolkit (Thompson, 2012, Michael, 2017), which is used to better understand messy objects and practices (Law, 2019). ANT is therefore a method (Michael, 2017) that we use to analyse (Law, 2019) practices and relations those practices create. The reason why ANT is not a theory lies in the very foundation of it – ANT does not aim to explain why things happen, but it is rather interested in how something happens. Moreover, ANT is a way of thinking and understanding objects through practice (Law, 2019). Law (2009) provides ANT definition as follows:

“Actor network theory is a disparate family of material-semiotic tools, sensibilities, and methods of analysis that treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located. It assumes that nothing has reality or form outside the enactment of those relations.” (p. 141)

In essence, ANT argues that wherever there are realities (situations) they need to be handled (Law, 2009). Moreover, the definition about the phenomena or theories of practice on its own are inadequate to provide wholesome understanding of materiality and thus needs “an engagement with material semiotic approaches” to do that properly (Evans, 2020, p. 340). Following that, ANT is looking to create stories about those heterogeneous relations that create realities (Law & Singleton, 2000, Law & Singleton, 2005, Law, 2009, Czarniawska, 2004, Czarniawska, 2008).

But theories about objects and the way objects are socially constructed usually differ from each other. This is in the depth of understanding and possibilities for further complexity (Law, 2009). For example, Law (2009) uses an example of economics, which is different in theory than in practice. In practice, economics is enacted in different forms as a result of different practices of heterogeneous relations (also see: Callon, 1998). And as social worlds are made of actions, exploring objects as part of those actions only leads to more actions and more relations that create more realities and thus more complexity (Shove, 2003, Law, 2009). Furthermore, such way of understanding the world does not allow for the material objects to simply exist out there, but they rather need to be produced as part of the practices they are surrounded with (Law, 2009).

Following Law, this thesis is most interested in the part of ANT, which is based on the principles of *material semiotics* (Law, 2007, Michael, 2017, Law, 2019). The latter draws on feminist material semiotics that was mostly politically oriented (Haraway, 1989, 1991, Singleton & Michael, 1993, Singleton, 1998). Based on material semiotics, ANT is about heterogeneous relations that enact reality through practice (Law, 2019) the way objects like SSA technology and tools trigger changes in marketing practice like SSA. On a daily basis, new understandings about the SSA come to live, as an outcome of the interactions, particularly for this thesis – interactions that tend to fail due to the shifts in power between the actors (Callon, 1984, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007).

Actor network is therefore a unit of research made up by various actors (Law, 1994, Latour, 1999) and relations, where their nature is not pre-given and where the network emphasises heterogeneousness and action in practice (Law, 2009). Moreover, an actor network is a constitution that can explore the black-boxed technologies via socio-material interactions (Callon et al, 1986, p. 93).

The aim of an actor network is to stabilise networks via the process of ordering (Law, 2001) and materialisation. Materialisation is through the process of translation, moreover, through tracing and studying heterogeneous relations (Latour, 1986, Licoppe, 2010, Kjellberg & Helgesson, 2007, p. 144). This includes negotiations, displacement of actors and places where new capacities and understanding are

formed and the result is potentially a stabilised network (Ren et al, 2002). The way the ANT thinking has been changing will be presented in the following chapters. The ways in which this is relevant for this thesis is through how several fundamentals of material semiotics lean on the classical ANT, and how examples such as Callon's scallops (1986) provide structural inspiration of ANT analysis of this thesis. As well, the evolvement of ANT is relevant to align its progression with the progression of the digitisation of marketing practice and the way using concepts like asymmetry will greatly enable further and more detailed understanding of the SSA. As well how the SSA is presented and researched in marketing at the moment. Moreover, to understand the roots of constructivism (Wortelboer and Bischof, 2012, Davis, 2015) as one of the underpinning philosophical assumptions of this research.

3.3 Development of ANT

ANT originates in socio-technical studies (STS) and it started between 1978 and 1982 in Paris (Law, 2009). The roots of ANT can be detected in the social studies of science, in various traditions, disciplines and empirical domains (Michael, 2017). For example, some ANT scholars like Law, Latour and Callon, take from social constructionist traditions (emphasising social processes) and are influenced by Foucault, Serres, Whitehead, Gremais and others (Michael, 2017). The process of translation represents one of the most important building bricks of ANT and enables the understanding of phenomena (Latour, 2005). The notion of translation started to gain attention with the influence of Serres (1974), who established the term that is used up to date.

Several concepts of ANT this thesis uses in their developed form, are rooted in some of the earliest and fundamental studies of ANT. For example, the *Laboratory Life* by Latour & Wooglar (1979) caused rapid evolvement of the ways of exploration the social and material (Michael, 2017). The authors of the essay clearly showed interest in details of action, although heterogeneity there was not always possible, as the objects, like texts were studied centrally in one laboratory, rather than overlapping across various networks. There the process of translation was then not yet established, and the reality was only presented in a single way (Michael, 2017).

This was opposite to where ANT later advanced, which is towards multiplicity (Latour, 2004, Law, 2004, Law, 2009, 2019). Callon (1986) presented an example of electric vehicles, where the actors' roles were assigned to both human and nonhuman actors, who created successful or unsuccessful actor networks. Moreover, the new role introduced was the role of a *spokesman*, who spoke on behalf of Electricite de France (electric vehicle producer), the government and others to translate their interests and this way through activities such as conducting surveys, writing reports, articles and such (Micheal, 2017). The emergence of roles was related to translating interest of actors of the network (Michael, 2017).

Following the evolvment of ANT, Law (1984, 1987) discussed the notion of heterogenous engineering through the example of the Portuguese in India. There, Law looked at the events around the 15th and the 16th century related to Portuguese expansion to "secure the global mobility and durability of their vessels." (p. 234). This included people, texts and devices which together or separately played an important role in in keeping control at a long distance (Law, 1984,1987). The point of the latter was to show that technology cannot be reduced to compartments such as social, technological and scientific, but should rather be understood as an irreducible combination of them (Frickel, 1996). Other research was produced on the way of the ANT evolvment – for example, the *Pasteurization of France* (Latour, 1988), where Latour reviewed Pasteur's life through the impact of society around his work. In the essay, the context the phenomena expanded from the previously internal space (laboratory) (Latour & Wooglar, 1979) to both internal and external space working together, enabling the actors to move between them. The networking of actors expanded from micro to macro, where the impact of anthrax was seen over the whole nation of France (Latour, 1988). Microscopes, anthrax, microbes, farmers, milk-drinkers all joined together, which resulted in an immense way of preventing disease and distracting behaviour of French people (like spitting and mal hygiene). In the study, the objects were not treated as the ones causing change, but rather as the ones transporting messages from one place to another (Law, 2002). However, the process of translation was still weak (Michael, 2017).

In the relation of the circulating messages, Callon (1991) discussed the distinction between intermediaries and mediator, where an object as a mediator was supposed

to contribute to change of the social world through associations (Latour, 1992, 1999, 2002). However, later Latour (2005) changed the meaning of *intermediary* and *mediator*. Latour (2005) claimed that the notions of mediator and intermediary were distinct. The two notions can be associated with the mutability and immutability of the actors in a network, where a mediator is unpredictable and may become complex, thus making the network complex, while an intermediary (also immutable mobile) is predictable and stays unchanged and constant (Latour, 2005). Latour (1990) presented the concept immutable mobile on an example of a map, where La Perouse travelled the world to achieve his goal of bringing to the French King a better map. The study explicitly contrasts with mutable mobile and is a constant actor, that keeps its shape and travels between the networks unchanged (Latour, 1987, Lammes, 2017). To be able to transport the map back home, La Perouse needed the map to be immutable and mobile, which he achieved by drawing it in his notebook. The notions of mutability and immutability triggered further development in thinking about the power of relations (Callon, 1984, Callon, 1998, Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017, Law, 2019). There the objects are shifting control and power to oneself and the users tend to fail to be successful in using those digital technologies and tools (Law, 2009, Lammes, 2017). Such way of thinking was used in studying some of the digital tools in the Information Systems studies (Lammes, 2017), however, leaving out the focus on successful and failed creation of reality.

Given the above examples, the classical version of it, ANT has been predominantly focused on stabilisation and destabilisation, therefore the symmetry between actors in a network (Callon & Latour, 1981). Symmetry is related to how human and nonhuman actors in a network are equally powerful in the process of stabilisation (Lammes, 2017). There stabilisation is a stage in the process of translation in actor networks, when the enactments from heterogeneous relations become temporarily visible (Latour, 2005, Lammes, 2017). Destabilisation is when actors again get in the process of acting and translation (Latour, 2005). In contrast with the classical version of ANT, many scholars believed that symmetry focus left out important concepts of *fluidity*, *multiplicity* and *performativity* (Murdoch, 1996). As a response to this criticism, scholars started building their own versions of ANT, which better developed the concept of translation and were less focused on symmetrical

stabilisation of networks (for example Haraway, 1991, Mol, 1996, Mol, 2000, Latour, 2000, Law & Singleton, 2005, Singleton, 2008). This enabled a more detailed way of studying objects being socially constructed in their context (Michael, 2017).

As opposed to the agonism in the relations, more emphasis started to be put more towards collaboration between different spaces. Moreover, scholars, like Fujimura (1992) started to put emphasis on coordination of more social worlds at the same time (Michael, 2017). Fujimura claimed that it was possible for more spaces (networks) to work together simultaneously (Michael, 2017). This way of thought progression works really well with the immensely complex digital marketing world, specifically the world of the SSA.

This thesis draws upon some of the classical ANT notions, such as the power of relations and how the asymmetry between actors in networks can cause both successful and unsuccessful outcomes from heterogeneous interactions. In line with the modern world developments failure of relations is significant when unpacking and opening the black boxed technologies (Geiger & Gross, 2017). Moreover, the well-researched ways in which the roles of actors, such as the role of a spokesman can open the hidden interfaces behind the visible SSA technology, are increasingly helpful with capturing the mutability and/or immutability of actors passing between several actors, even being part of several actor networks at the same time (Law, 2009, Lammes, 2017).

3. ANT of this research

Fundamentally, SSA, as discussed in Chapter Two of the thesis, is a practice, that includes various SSA tools and technologies. However, the SSA tools are not acknowledged as part of the practice and as equally as important to human actors that drive action, but are rather pushed to the background, as its digitality evolves fast-pace (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Quinton & Simkin, 2016, Lamberton & Stephen, 2017, Geiger & Gross, 2017). Practice-based

performative approaches are relevant for analysing how such technological objects get enacted through social action – by people using it as part of their day-to-day activities (e.g., Araujo, 2007, Kjellberg, 2010, Jacobi et al, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). There is a rich tradition of practice-based approaches to study technologies in marketing, which spans various disciplines and various technologies, such as performativity (e.g., Araujo, 2008, Kjellberg, 2010, Jacobi et al, 2015), socio-materiality (e.g., Barrett et al, 2012, Yoo et al, 2012) and ANT (e.g., Callon, 1984, Latour, 2005, Law, 2009) to capture and understand marketing phenomena better. For example, Gond et al (2016, p. 6) divide management performativity of phenomena examination in four ways – doing things with words (Austinian performativity), searching for efficiency (Lyotard performativity), constituting the self (the performativity of Butler and Derrida), sociomateriality mattering (performativity of Barad, Orlikowski and such) and bring theory into being (performativity of MacKenzie, Callon).

Going back to the initial roots of performativity, this study is based on some of the most relevant core principles of ANT as discussed above, using ANT as a tool, and adds to current performative approaches of market studies. Furthermore, this study focuses on the social construction of technological objects through use and provides insights about how those objects emerge in practice through human and nonhuman actors' interactions (Callon, 1984, 1998, Latour, 2005, Law, 2009). The study focuses on bringing theory into being (Roscoe & Chillas, 2014, Gond et al, 2016), firstly building from Lyotard (1984 (1979)), who started researching technological markets. Further this study is joining the debates of MacKenzie and Callon, where material matters as much as social. In a digital world, however, the research needs the upgrading in the initial performative thinking, to make sure that also the invisible compartments are captured in the analysis.

Digital technology is, broadly speaking, a complex phenomenon and has got an immense number of opportunities for understanding it in a more detailed and accurate way (Law, 2009, Brownlie, 2010, Thompson, 2012, Lammes, 2017). Specifically, its invisible features are the ones that are currently under-researched, with the world moving almost completely towards digital. There a significant part of that technology is invisible to a human eye (Lammes, 2017). Here this study is taking

from the afore-mentioned 'Information Systems' studies, where some digitality has already been attempted to be analysed (Lammes, 2017, Lammes & Wilmot, 2020). Also, some of the 'Market Studies' papers (Roscoe & Chillas, 2014) study digital tools through performative practice-inspired approaches, specifically leaning on the essays of Callon (1998) and fellow scholars, while the digital marketing measures (Cluley, 2018) are inspired by the technical performative turn and sociomateriality (Pollock & D'Adderio, 2012, Gond et al, 2014).

Using practice-based approaches, which capture the parts of digital technology that cannot be easily seen, enables that technology to be understood more dynamically, constantly evolving and more holistically as part of marketing practice. However, this nature is often missed out, as the SSA technology is often presented without its interfaces, rules and prescriptions behind it (MacKenzie, 2005, Thompson, 2012, Michael, 2017, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). In order to capture digital technology, such as SSA in a holistic way, this research enables additional perspectives and understandings of the SSA by bringing to light both visible and invisible attributes of the SSA technology.

As much as the current performative market studies are helpful to add to the conventional understanding of marketing phenomena, markets are not analysed through a detailed enough way and from various perspectives to understand them completely. The process of actors joining together in interactions and the process of translation towards stabilisation is significantly more detailed in ANT compared to what the markets studies scholars currently use (e.g., Latour, 2005, Law, 2009, 2019).

The ever-increasing complexity, that being based on the immense opportunities of digital SSA being changed almost instantly, requires an approach that is easily adaptable to such situations. In the post-humanist era (Adams & Thompson, 2016, Geiger & Gross, 2017), the ways in which digital technology redefines marketing practice, can be understood from the networked inside, where the objects drive innovation (Beunza & Stark, 2002, Geiger & Gross, 2017). Using ANT to spot and capture the hidden, and so far, black boxed attributes of SSA, which drive change, will enable a more holistic understanding of how SSA changes marketing practice

and such networked analysis will contribute to a significant knowledge construction (Callon, 1998, Latour, 2005, Law, 2009, Roscoe & Chillias, 2014).

The below sections will briefly present the evolvement of performativity, in order to understand the roots of where this research is joining the performative debates of marketing scholars.

3.4 Evolvement of Performativity

Several scholars, especially in the stream of market studies, have used performativity to study marketing phenomena (e.g., Araujo, 2007, Jacobi et al, 2015, Venter et al, 2015). This study is joining and aiming to contribute to the current debates of the marketing scholars using practice-based approaches to studying markets. Therefore, it is crucial to understand which were the relevant milestones in the performative journey, which will be important to either draw upon or add to.

Performativity starts with Austin (1962) and was used in several fields, including socioeconomics (MacKenzie, 1996, Callon, 1998, 2007), gender studies (Butler, 1988,1990, Barad, 2003), philosophy (Derrida, 1979, Lyotard, 1984) and market studies (see: Finch et al, 2015, Jacobi et al, 2015). There were two main performativity streams this thesis draws attention to - Austinian performativity and Callonian performativity. Sometimes Lyotard's (1984 (1979)) way of performative thinking is named effective performativity (MacKenzie, 2006, Roscoe & Chillias, 2014).

As already mentioned in the above sections, Austinian performativity was based studying the power of language (Austin, 1955, Derrida, 1979, Hall, 2000) – “doing things with words” (Austin, 1962, Hall, 2000, p. 184). A common example of linguistic performativity is “I pronounce you husband and wife” (Hall, 2000), which aims to show that there is always more to an understanding of a situation, than just words – it is about the context of where they are voiced (Worthen, 1998, Parker & Sedgwick, 1995). Further, Butler (1988) denied any pre-discursive identity and focused on the discourse and gender as a result of repetitive discourses. Sedgwick (1993) argued that phrases, words and sentences change society, while introducing

the notion of black box through an example of a theatre and marriage, focusing on studying gender and an ongoing play of changing and transforming the boundaries of social worlds (Worthen, 1998).

Further, Lyotard's (1984 (1979)) work counts as one of the first performative studies of the modern world, his research focusing on studying the world as changing based on the evolvments of "technology, globalisation and capitalism" with the emphasis on efficiency (Locke, 2015, p. 250). Lyotard (1984 (1979)) was specifically interested in how modern advancements change social worlds and how technological devices are "extensions of the human body and mind to complete the tasks involving data input and output that were not sullied by human emotion and labour" (Locke, 2015, p. 250), with the elements of problematisation. Studying digital SSA technology, its nature can relate to the early interest of the research in general technology, modern world changes and efficiency in that world (Roscoe & Chillas, 2014), by Lyotard.

As a progression from Austinian performativity, based on ANT, Callonian performativity considers the interplay between the language, artefacts, actions and practices to perform social realities (MacKenzie & Millo, 2003, MacKenzie, 2005, Callon, Millo & Muniesa, 2007). Callon (1998) claimed that economy can only be brought to being and can be properly understood if it is enacted by its human and nonhuman actors (e.g., weights and measures, the laws of market, investments, property rights, money). If we want to understand economy we need to speak of "economization" ("marketization"), which implies an on-going action through saying, doing and iteration (Callon, 2010) and how social worlds are constructed through a network of relations between objects, subjects, features. If complexity of economy is not understood through smaller elements, which we can analyse, the knowledge is fragmented and even incomplete (Callon, 2010).

Callon's (1998) thinking influenced several performativity scholars. For example, MacKenzie & Millo (2003) also focused on both material and social actors – how the elements of Chicago Market Options Exchange, like financial derivatives, trade options, government, prices, culture and people's actions all work together and create reality. The so-called market therefore comes to being through the engagement of actors in their context based on the pricing theory models. Through

such examination of the history of Chicago Market Options Exchange, economists could better understand why the theory of options was so successful (MacKenzie & Millo, 2003).

Some other more recent performative studies study various objects and subjects as performative (e.g., Jacobi et al, 2015, Storbacka & Nenonen, 2021). For example, Jacobi et al (2015) study how markets are built through “socio-technical configurations” in market advertising practice (p. 55). This by using marketing tools and methods. Whilst Storbacka & Nenonen (2021) study the enactment of market configurations in a B2B context through marketers through and the power of mental and business models of the actors (p. 241). And Cluley & Nixon (2019) study how a public space can turn into an advertising medium through positioning it in the context of decisions, policies, values and other material artefacts.

Callonian way of viewing the world through giving importance to both human and nonhuman connects performativity and ANT. Several performativity scholars realise that the modern world complexity needs consideration of both material and social artefacts (MacKenzie, 2004, 2005, Callon, Millo & Muniesa, 2007, Callon, 2006). Technology, for example, is therefore not just a set of devices or a contained within itself materiality, but rather a big part of the society within the same space (Kochan 2010). This implies practice or performative turn (Callon & Law, 1997), as well posthumanist turn (Pickerling, 1993), where society is not only made up of human relations, but rather technology starts to be an important compartment of those relations. This way, Callonian performativity is in proximity with material semiotics (Law, 2009) and states that markets will be performed differently and in various forms if part of different events and places (Michael, 1996, Latour, 1999, 2005, Law, 2009, Adams & Thompson, 2016).

Granovetter (1985) claims that it is not problematic to implement networks into performativity analysis as per its early connection with ANT – Latour (1987) (MacKenzie & Millo, 2003). In fact, a plethora of market studies performativity scholars use actors and actor networks to explore objects and subjects (e.g., Araujo, 2007, Kjellberg, 2008, Kallinkos, 2010, Jacobi et al, 2015, Venter et al, 2015, Cluley, 2018, Storbacka & Nenonen, 2021). This fits with the analysis of actors and actor

networks in ANT studies. For example, Finch & Acha (2008) explore market making through exchange in the context of the oil B2B industry. The scholars focus on an oil field (as an actor network), which is not only single, but multiple, through the practice of exchange between buyers and sellers and valuations of the oil field produced.

Callonian performativity being less linguistic than Austinian performativity, considering a combination of practice and material artefacts in the production of reality (Callon, 1998, MacKenzie & Millo, 2003), enables understanding of what is happening around us and with us. As one of the practice-based approaches to study objects and subjects, performativity is significant to providing better understanding of the marketing practice phenomena. This research will join the market studies debates that stand on performativity principles, however, it will make the enactment of reality more detailed using ANT analysis. The next sections will discuss which are the gaps of the literature and how this thesis will address them.

Even though this research is not based on the linguistic identity and exploration, some learnings can be taken from the linguistic performativity. For example, the notion of context, which enables the space where the interactions happen and further understanding of phenomena is created. Or Lyotard's performative ways of studying technology through modern world's advancements. As well the practice-based ways of understanding how material and human actors create options through the process of exchange (MacKenzie & Millo, 2003), based on the core principle of the consideration of both the human and material actors (Callon, 1998). This research is interested in adding to the mentioned notions in performativity, specifically ones started by Callon (1998, 2010) and the scholars that drew on him and focused on action, doing and practice (Roscoe & Chillias, 2014, Gond et al, 2016), while using the ANT principles of analysis. This brings different perspectives about SSA technology and understanding of how it redefines marketing practice through rapid evolvments (Geiger & Gross, 2017). Law (2019) states: "*The object is everywhere, part of every practice*" (p. 14) and such thinking enables understanding the world as multiple and portrays its complexity the way it deserves to be portrayed, especially while marketing practice is prone to constant change and

reconfiguration (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gros, 2017, Michael, 2017).

The next sections will present ANT in relation to SSA digital technology, which is also the main topic of this thesis. Basing that on the above discussions and relevant studies to help uncover digital SSA, the below sections will point out specific concepts that are useful for the ANT analysis and forming the research contribution of this thesis.

3.5 ANT principles and Digital technology

The following sections will discuss how ANT can be used to more fully understand the complex, digitised social worlds. The sections will discuss several concepts of ANT, which will help to explore the SSA of this study, including fluidity, dynamism, multiplicity, durability of networks and success and failure of actor networks (Thompson, 2012, Lammes, 2017, Geiger & Gross, 2017, Rust, 2020).

A suitable theoretical framework for this study is therefore such that can cope with intense digitality that is never a final destination, but rather an ongoing journey (Quinton & Simkin, 2016). The aim of ANT is to trace how human and nonhuman actors interact within their networks, which enables the detailed learnings of how they create reality through the process of translation (e.g., Latour, 1992, Akrich, 1992, Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007, Geiger & Gross, 2017). Due to the fact that digital technology is prone to intense changes, Google Ads, Google algorithm and other SSA digital tools as actors, have a high tendency for constant shifts within and between actor networks. (Callon, 1984, Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Lammes, 2017).

One of the core concepts of this study is the power of the networked relations (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002). This includes the powerful relations between objects and subjects in actor networks (Thompson, 2012, Hind & Lammes, 2015). There the power of relations often tends to shift from the user of

the SSA technology to the technology itself (Lammes, 2017, Lammes & Wilmott, 2020). The latter makes the Google Ads a participant that speaks back, which is voiced by the spokesman user (Callon, 1984), and sometimes even refuses the use to its user (Thompson, 2012, Lammes, 2017). The way this happens, why it happens and how difficult situations are resolved by the managers within the networks, will be discussed in the following sections of this chapter.

3.5.1 Dynamic digital technology in an organisation

Dynamic is the opposite of fixed, which means dependency on *a priori* roles and characteristics of objects or subjects (Michael, 2017). In the post-human world, actions by objects become greatly important, as they are not any longer predictable, but rather occur unplanned and even as constantly mutating, changing and shifting between networks incomplete (Knorr-Cetina & Bruegger, 2000, Roscoe & Chillias, 2014, Geiger & Gross, 2017). For example, organisational practice and its objects are never *a priori*, but rather a different enactment shaped by different practices of organising (Czarniawska, 2004, 2008). Digital technology, with a strong dynamic nature, can therefore never be seen *a priori*, as this keeps it black-boxed and not understood to its best potential and accurately (Lammes, 2017). The way the current SSA marketing studies mostly treat the SSA technology is *a priori* and externally, which disables many significant opportunities that come from the interfaces of that technology, when materialised through practice. The practice-based scholars claim aim for an internally-based, networked and socially-material bound examination of the world (Callon, 1998, 2010, Knorr-Cetina & Bruegger, 2000, Roscoe & Chillias, 2014, MacKenzie, 2005).

For example, we can place digital technology in an organisational context and there it can only be accurately understood as an outcome of the practice of organising through heterogeneous relations (Knorr-Cetina & Bruegger, 2000, Roscoe & Chillias, 2014). This enables organising to become wider and more complex as a result of the use of technology by its users in various roles (Callon, 2010, Law, 2019). In the management and organisation (MOS) studies several scholars study phenomena in the context. For example, one of the leading scholars in MOS, adopted ANT in her studies (Czarniawska, 2000, 2004, 2008, Lindberg &

Czerniawska, 2006) and there researched the practice of organising as a whole, rather than its objects individually. In the ethnographic study of Beunza & Stark (2002), the importance of the vividly presented context of where objects and subjects interact, is emphasised as one that enable the reader to imagine the roles of actors and their statuses. Czarniawska's work is significant for understanding the way practices in organisations are enacted. The scholar claims that everything, including intentions, should be a result of the process of translation (Czerniawska, 2000, 2004, 2008, Lindberg & Czerniawska, 2006). This study aligns with that thinking and takes the mentioned scholar's ideas relevant for the wider context, where the networks get created within the SSA practice (Gond et al, 2016, Geiger & Gross, 2017).

Furthermore, some scholars in MOS, part of the afore-mentioned material turn (Gond et al, 2016), analyse digital technology at work (Barett et. Al., 2012, Yoo et. Al., 2012, Mazmanian & Orlikowski, 2013, Orlikowski & Scott, 2016). The specific performative strand of literature called sociomateriality rather than on practice focuses on material and the ways digital technologies are constructed through heterogeneous associations.

As part of the practice turn, the focus is on how the practice changes, due to its objects and subjects interacting with each other (Schatzki, 2006, Gond et al, 2016). This research joins the scholars, who pay attention to how markets and marketing practices are changing as a result of the socio-material interactions (e.g., Araujo, 2007, Kjellberg, 2010, Venter et al, 2015, Jacobi et al, 2015, Storbacka & Nenonen, 2020). The process of translation enables those relations to come to the foreground. This means that what was before taken at a face value, without an option to look beyond the visible parts of the SSA technology, now becomes with an immense option for understanding. At the same time the digitality of SSA technology advances the conventional understanding of the actor networks, which are stabilising at a "normal pace/non-digital" (Callon, 1984, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007). With digital technology as one of the actors, the process of stabilisation is paced up to an extent where the durability of actor networks becomes significantly less, whereby actors either shift between the networks very rapidly, are in multiple networks at the same time (Thompson, 2012,

Lammes, 2017, Lammes & Wilmot, 2020), or the networks are deemed successful or failed with new opportunities for network creation, where problems need solving.

To better understand what the durability of actor networks, means, Michael (2017, p. 156) defines it as follows:

“Durability is the continuation of a network through a variety of means, notably the movement of intermediaries continuously and faithfully repeating a given message and in the process of replicating, normalising and perhaps standardising roles, associations and their distribution” (Michael, 2017, p. 156).

Stabilising relations therefore means an effect from a heterogeneous relation, which gets a form that is visible (Latour, 2005, Law, 2009, Michael, 2017). As the complexity of a network increases, therefore, more actors join or the process of translation is happening in multiple networks simultaneously, the process of translation continues, otherwise, the object is simplified enough (Michael, 2017). This means that the object, like SSA technology, has been broken down into enough details through micro-relations and interactions, and the process of translation has achieved its purpose (Michael, 2017). The micro-understanding of phenomena, therefore, brings a more detailed general understanding of markets as a whole (Evans, 2020).

If all the actors in one network can form relations and harmonise with each other, then this is a network called durable. This means that the power of heterogeneous relations enables materialisation of powerful things like the effect of vaccination on the whole nation (example Pasteur: Latour, 1983). In the example of the salmon (Law & Joks, 2019), the new rule for prevention of salmon catching in the river materialised unsatisfied fishermen. Action of the rule-makers therefore impacts the relation between local fishermen, river and fish that becomes non-existent because of that policy. This is what durability traditionally means and how immutable mobile creates relations in space and time (Michael, 2017).

Due to the quickly changing and widening social and organisational world, like Czarniawska (2000, 2004, 2008, 2017) claims, an object can often be at different

places at the same time. This is even more intensified with the rapid advancements of digital technology (Lemmas, 2017). In MOS, Brose (2004) discusses the short-term span of actions in an organisation, due to the generally increased dynamics in the social business worlds. This produces an opportunity for a more complex unit, such as when for example the employees are sent to various other organisations for a short-term deployment, where every such deployment can become more complex in an expanded context. This reflects the rapidity, speed, acceleration and therefore dynamics of the modern and globalised world (Shove, 2003), which started to be considered in the early research of (1984 (1979)). Such dynamics causes simultaneity, where the level of accessibility and connectedness are extremely high. Such connectedness even further increases the complexity and messiness (Brose, 2004).

Following the complex organisations' environments, Czarniawska (2004), had to adjust the way of data collection and the dynamics of the research she carried out in such spaces. Due to the fact that organisations are often times made up of several departments, as opposed to only one, the researcher has to come up with ways of collecting the data that are easy to adapt to such expanded spaces. For example, through shadowing the participants (actors in her networks), Czarniawska was able to explore the dynamic and quickly changing economic translation processes as part of different networks (she calls them *action nets*), highly mutual, complex and thus creating practice with several other actors all the time.

Through networks and relations social worlds are materialised and get their shape temporarily (Law, 2009). The shape symbolises what for instance the invisible part of the Google Ads tool is, when used by a marketing manager. This can change every time the manager uses the tool. For example, rules of a game show how the game looks and is done practically through the players playing it (Serres, 2007). Or in the interface of Google maps is materialised through the user pursuing his/her goals and visions of the journey (Lammes, 2017). The shape of the digital map is there only temporarily, therefore only temporarily stable and durable, as every time the user changes his final destination, the looks of the map (the display, the route, the directions and instructions for the use of where to go) will change as well. The durability of the network of relations is ongoing until the situation lasts and until the

actors, such as the features of the Google map and the user are interacting, and the goal is being pursued.

As the example above show, durability is achieved differently when it comes to digital worlds, as opposed to non-digital ones. Digitisation of technologies and the process of translation related to them might not imply any space at all (Fuller, 2005). Such digital “space” is sometimes called the *geographies of nowhere* (Kupfer, 2007, Auge, 1995). Digital technologies create multidimensional virtual spaces, which go beyond the one-dimensional spaces created by non-digital. The one-dimensionality represents a flat surface that is mostly fixed and stable or such that does not change very often, while the multidimensional spaces are dynamic and changeable (Hind & Lammes, 2015, Lammes, 2017). Such spaces are formed of heterogeneous relations that are changing and shifting all the time, in fast, rapid and in unlimited ways (Latour, 2005).

3.5.2 Rules and prescriptions – Invisible digital technology

As part of the analysis of digital technology, it is the technology’s invisible artefacts that make it dynamic and changing. In the modern world, full of information, the physicality is not the most important any longer (Geiger & Gross, 2017). The world has entered an era, which is full of incompleteness and actors making impact without us even noticing (Geiger & Gross, 2017). This is where analysis through failure becomes crucial (Lammes, 2017). Such invisible elements of digital technology are its interfaces, rules and prescriptions, and they will be presented below.

The terms rules and prescriptions have been used by some scholars to describe the invisible part of digital technology, this including its interfaces and algorithms (Roscoe & Chillas, 2014, Lammes, 2017, Lammes & Wilmot, 2020). The visible artefacts are usually the attributes of digital technology which we can see, and invisible artefacts are parts of digital technology that work from the background and are hard to see with a human eye. Such invisible elements of digital technology are for example data, software, interfaces and algorithms (MacKenzie, 2004, 2005, Thompson, 2012, Lammes, 2017). On its own, the invisible technological artefacts

could only be described, predicted and taken at a face value (Roscoe & Chillias, 2014, Geiger & Gross, 2017). However, this is not the most accurate way and reduces the opportunity for several understandings of those invisible features. As the users interact with the visible parts of digital tools, this trigger additional relations formed between the users and the invisible digitality as well and gives those invisible parts a role of a co-creator of understanding (Hind & Lammes, 2015). For example, digital camera, as a co-creator, acts as:

“a visual documenter and archive, inviting the researcher to take multiple photographs, the opportunity to review these snapshots at the field site, and, later, to transfer them to her research computer for storage, organisation, and import to any number of possible pieces of software” (Thompson & Adams, 2016, p. 345).

The above association between the camera user and the camera invites the user to follow some of the engraved features of the camera and the photographs themselves (invisible) and change some of them (through settings and the ability to transfer the photos to a software). This translates into many possible ways of understanding the camera also through the parts of it that normally very few researchers would pay attention to. Potentially such digital camera, based on invisible rules and prescriptions can stop working as its user would desire and this can prevent the user from doing his/her job with it (Lammes, 2017). This disrupts the network and prevents relations from materialising and then such relations are “provisional and compromised” (Murdoch, 1998, p. 362).

Other scholars from various disciplines adopt ANT approach to study objects and various digital technologies (MacKenzie, 2005, Thompson, 2012, Lammes, 2017). For example, Thompson (2012) explores how the delete button transforms digital practices in the context of online learning. There, the delete button is presented as fluid through several self-employed workers using it, which creates new roles and new understanding of the deleting practices. Another example by Lammes (2017), who explores digital mapping practice and how digital maps on Google get changed as part of this practice. The scholar explores how digital maps, compared to analogue maps, are equally relevant participants in the process of translation, as

are the people using it. Not only that, but the digital maps also change from being immutable to mutable by its users personalising them according to their intentions. Therefore, the part of the map that the user interacts with, and changes is mutable, this is also called multidimensional reality, as several networks and relations can produce several understandings of the phenomena. However, the flat reality is one that equals the immutability and represents the part of the map that stays as it is and does not change as part of the interactions (Lammes, 2017).

3.5.3 Immutable and mutable digital technology

Immutable mobiles have many different functions in material semiotics. First, to keep long-distance control (Law & Singleton, 2005, Law, 2019). An object can only be explored in multiple networks at the same time if something like an immutable mobile is helping maintain its stability (e.g., shape) and relations through circulating through those networks. This is how networks can be loosely connected even across the globe (Law & Singleton, 2005). Murdoch (1997, also see: 1998) in his papers discusses the geography of translation and claims that ANT analysis of heterogeneous relations never only stays local, but it also considers distant action (Michael, 2017, p. 111). This means that even far apart, like in Africa and the Netherlands (de Laet & Mol, 2000), the network should be held together (relations enabled/possible because of such an object). Murdoch (1997) explains a distant action in such a way that past actions that are de-localised play a role in stabilisation of present and local relations. For example, technologies have been changed at a distant place, in a distant social world and now as such they participate in the local translation processes.

Second, since ANT tends to deal with many invisible objects such as disease (Mol, 2000, Law & Singleton, 2005) or digital maps (Lammes, 2017), immutable mobile is of great significance when it comes to keeping the shape of those (Mol & Law, 1994). The shape of those invisible objects means that the researcher can better see, understand and most of all take a grip of the interactions with invisible actors in actor networks. Immutability therefore enables the materialisation through the process of translation; therefore, it enables to grasp upon the ways the reality of objects and

subjects' changes. This is also called mutability of phenomena (Lammes, 2017). Immutable actors work together with other actors of the network in such a way which enables stability of a network and brings the invisible features of the objects to live and into being (Law & Singleton, 2005). As part of network relations, Law & Singleton (2005) emphasise how a disease such as liver disease is an abstract phenomenon, hard to *point at* and thus invisible to a human eye, however, visible in a laboratory or as part of heterogeneous relations. The association relates to digital technology, which is abstract until it is interacted with (Michael, 2017, Lammes, 2017). In Law & Singleton (2005) study, the liver disease (otherwise non-physical) gets more meaning and understanding through the process of translation, therefore through relations and stabilisation. A fluid object, like liver disease, travels between networks and changes every time it forms a relation with a human. The same is with digital technology, like a digital map (Lammes, 2017, Lammes & Wilmott, 2020) or SSA technology. With digital objects it is especially important to keep the immutable mobile in consideration, because only focusing on invisible parts of the tools could cause the incompleteness of understanding of the tools and difficulty explaining and presenting the tools as a whole and as physical. Losing the physicality of the phenomena, it becomes hard to grasp upon the invisible parts of digital tools, which we are researching (Lammes, 2017). Also, the fact that the same digital can be used by more people at the same time – for example the Google algorithm will impact advertising by more managers at the same time, requires an organised and a more solid way of making sense of that technology. Thompson (2012) explains digital as “*constantly changing*.” (p. 358). This increases its dynamism and how many different meanings, situations and relations digital has the potential to establish. However, that dynamism should still be kept under “control” through seeing it together with the immutable - visible features of that technology, which gives it more stability and enables the researcher to better present it (Lammes, 2017).

3.5.4 Multidimensional including a flat ontology

The refusal of single realities drives thinking about multiple realities (Haraway 1989, 1991). As an extension to multiple realities, Haraway (1991) claims that knowledge

is situated and it is an outcome of relations and practice (also: Law, 2007, Michael, 2017, Law, 2019).

The evolvement of ANT went from the focus on the reproduction of relations, to transformability (Michael, 2017) and thus making relations more complex through multiple networks (Latour, 2005, Law, 2009). In an actor network, every actor can bring characteristics from another network (Cordella & Shaikh, 2003). This gets even more complex, taking flat production of reality to the multidimensional level (Thompson, 2012, Hind & Lammes, 2015, Lammes, 2017).

With analogue technologies, heterogeneous relations are usually formed as part of flat ontology or seen as “*flat representations of space*” (Lammes, 2017, p. 1021). Such representations are linked to immutable mobile, which keep their form and shape mostly constant, while with the multidimensional tools and spaces, including digital technologies, it is only the surface, which the researcher sees and pays attention to, but it is what is hidden beyond that surface. The invisible interfaces of digital technology, which expand beyond the surface level of understanding, can this way be given meaning through social construction and socio-material interactions (Nimmo, 2011). There heterogeneous relations get formed, and with digital technology, the user becomes a co-ordinator, participant or co-producer of that technology if the analysis is done using ANT as a tool to do that (Hind & Lammes, 2015, Lammes, 2017).

Lammes (2017) in her study of digital mapping contrasts one-dimensional and multi-dimensional translations, where in the first case, flat ontology of the Google map at the same time presents the tool as an immutable mobile, which is the map’s surface and what is directly visible to the human eye. In opposition, the codes beyond the surficial level of the map are the mutable mobile, which are invisible and there the understanding through relations enables that invisible part to become more physical and materialised (Callon, 1984, Law, 2009). In the multidimensional analysis, relations are added depth through the user’s co-creation of digital technology with actively engaging with it through use and intentions (Lammes, 2017). The intentions often times, through co-creative actions, result in changes of the digital technology, which can simultaneously trigger “resistance of digital”. The way digital tool can

resist the users is through refusing to perform action the user would expect them to perform, and this is analytically related to the notion of power (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). The latter will in the mentioned example, be on the tool's side, as opposed to the user's side.

Resistance of digital technology is an opportunity for the increase of the complexity of networks and an opportunity for a better understanding of the invisible and overall technology, like SSA. This enables the understanding of phenomena in a more holistic way and enables the researchers to keep better track of the series of advancements of digital technology (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Lammes, 2017). ANT analysis can also provide opportunities for understanding and solving problems around the SSA technology.

3.5.5 Failed/Successful networks

From the perspective of power and power relations, the immutable part of digital technology is less easy for the user to control (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017, Lammes, 2017). This for example includes rules and prescriptions in form of codes, software and algorithms, controlled by the technology "owners" (Google managers/technicians). However, once the user starts to interact with digital technology more in-depth, on a multi-dimensional level, then this makes the technology more mutable (Lammes, 2017). Initially, the immutable mobiles, help the researcher keep the physicality of the object, when it is unfolding through powerful relations, while on its own the digital objects have completely lost their physicality (Geiger & Gross, 2017). Lammes (2017), understands the technological tool as both mutable and immutable, where the mutable part of it is one that the user has control over, while the immutable part is the one that resists to be changed in the process of translation. Power in socio-material relations is the main concept within ANT this research is framed with in order to uncover the hidden parts of the SSA technology.

Foucault in his works focused on the notion of power and the "apparatuses of control" (Foucault, 1980, Callon & Latour, 1981). Through evolvement these have been replaced by the networks of control (Galloway, 2004), which are far more

dynamic and can distribute power differently.” (Lammes, 2017 p. 1029). There, power stems from relations and practices and creates knowledge about both individuals and even the state (Michael, 2017). Power comes from heterogeneous relations, where both the human and nonhuman need to be involved in the process of translation and creation, it is equally distributed in non-digital networks. Through problematisation many roles of humans and nonhumans are established. For example, the role of a spokesman, which was used in the example of Scallops (Callon, 1984), which is a relevant building brick of this study as it highlights the notion of power of relations, when the scientists had to persuade the scallops to act in certain ways in order to create reality (Callon, 1984).

Discussions about failed relations started in the context of non-digital, thus less dynamic technology (Latour, 1992, Akrich, 1992). Akrich (1992) for example, presented photoelectric lighting kits, which contained batteries that kept cutting off without a notice to the user. This was a distraction to the relation and something the user could not impact/repair. The user of technology had no control and power over it and the relation failed (Latour, 2011).

Out of ANT on object is contained within itself, individual and so black-boxed (Michael, 2017). Through an analytical lens, an event directs attention to the details of the object, which portray it in its context. Several opportunities for further understanding this created through relations, knowledge should not be seen as absolute, but rather as an outcome of various situations (Ren et al, 2009). If there is no materialisation, then knowledge fails to have an impact and phenomena stay black-boxed (Latour, 1993).

Problematising is significantly related to black boxing, which is a term that signifies simplification of networks (Michael, 2017). Therefore, through the process of translation and stabilisation, associations are formed, which “satisfies” the intention of the network. When the intentions from the network are satisfied this makes networks stabilised or made “*obvious – black boxed, to the point where they cannot be problematised anymore*” (Michael, 2017, p. 33).

Latour (2011) describes analysing technology in the context as follows:

“At first, it looks contained within itself with well-delineated edges and limits; then something happens, a strike, an accident, a catastrophe, and suddenly you discover swarms of entities that seem to have been there all along but were not visible before and that appear in retrospect necessary for its sustenance” (p. 797).

The complexity of networks becomes more through failed networks, however, through solving the problems, the networks are getting simplified, and phenomena understood better (Michael, 2017). For example, Callon's electric cars solve the problem of polluting the air, which simplifies the network, however, when Renault starts competing trying to achieve the same thing as Electricite de France, the network starts to produce many more associations and grows in its complexity again (Callon, 1984).

One of the main aims of ANT analysis is to understand the taken for granted systems, practices, processes, objects (Latour, 1999). Through the simplified reality from actor networks, it becomes much easier to talk about the shaped objects in their practice (Michael, 2017).

In non-digital worlds, power tends to be equally distributed between the human and the nonhuman actor (Serres, 1982, Latour, 1983, Latour, 1990, Latour, 1996, Law, 2009, 2019), however, with digital technology, actor network relations have become asymmetrical (Lammes, 2017, Wilmot & Lammes, 2020). Seeing power in an asymmetrical way drags the analysis away from the actual foundation of it – translation and relation formation (Lammes, 2017). However, changing the meaning of power in ANT does not mean that digital technology is impossible to keep stable for long enough to uncover it through the ANT analysis. The researcher, using several ANT techniques, including following actors, and moving beyond the conventional, non-digital ANT analysis, can significantly contribute to the understanding of that technology as a whole. This is through tracing and comprehending the ways in which the invisible parts of the digital technology work together in actor networks and between networks through problematic events (Callon, 1984, Lammes, 2017).

With complex rules and prescriptions, digital technology restricts full control over it. The relation between the user and digital technology is mostly asymmetric, which means that the researcher should never expect that technology to be fully fixed, stable or completely under control. This kind of a nature of digital technology can be well recognised through its natural evolvement (e.g., Fain & Pedersen, 2006, Liu-Thompkins, 2018, Morton & Dinielli, 2020), which causes the marketing scholars to fail to capture it fully and less fragmented (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Rust, 2020, Yadav & Pavlou, 2020). In the case of digital in marketing, one can only speak about more/less asymmetry there or more or less power the user has to co-create digital technology (Lammes, 2017). In the case of digital maps (Lammes, 2017), the user can choose to change and edit the map to his/her wishes or use it on a basic level (scroll through and not deeply engage with it). Such empowered actors in networks, which cause failed relations, show that specifically digital, in an even more intense way, is causing humans to be “exceeded by what we create” (Latour, 1992 p. 237).

The way the user has less control over digital marketing causes disruption of the process of stabilisation in actor networks (Akrich, 1992, Law, 1992). This means that the process of translation does not proceed as usual, but rather the conventional ways of creating reality and understanding of a phenomenon, get interrupted due to the power that the technology resists the actions of its user. The process of translation and stabilisation are interrupted, and this causes opportunities for an even more complex network of relations, as the interruption is getting resolved by the marketing manager (Michael, 2017).

A failed network is therefore one, where the human actor has less control over digital technology. This means that digital technology can either break and the user cannot prevent that, or the technology dis-allows the use through rules, prescription, codes, algorithms that the user cannot use (Lammes, 2017). However, not all digitally intense actor networks fail. The successful network in a digital context is one, where the human actor has “more” (or enough to be able to make changes) control over the otherwise mostly immutable digital technology. This means, that power is distributed more to his/her side, and he can change and edit that technology and

this way make it more mutable (Lammes, 2017). Such ability to change means the power of the relations to stabilise and enact additional understanding and knowledge (Star, 1991, Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020).

So far, ANT scholars have mostly been focused on success, rather than failure of relations (Hind & Lammes, 2015). Only a handful of scholars acknowledged failure in the analogue world (e.g., Akrich, 1992, Latour, 1992, 2000, Kitchin et al, 2013) and some of the scholars emphasised the importance of understanding failure through relations in the digital world (e.g., MacKenzie, 2005, Lammes, 2017). Given that digital technology is made up of invisible codes, software, algorithms and interfaces, which cannot be fully controllable by marketing managers, it is very likely for that technology to cause disruption to the practice it is embedded in. Problematised events enable acting of the network and therefore the shaping of the practice (Callon, 1984). When a problem occurs, an actor network is formed and there are instantly several actions and enactments that will happen around that problem in order for the manager to solve it. Further, resolving a problem potentially leads to a successful network, which means more understanding of phenomenon (Michael, 2017). Problematisation consequently enables a closer, more detailed look at the network of associations between entities and thus what they do, how they do it and why (Callon, 1984). Problematic events therefore tend to produce opportunities for interesting events to happen and understandings from those events and looking beyond only the successful translation in actor networks, is essential.

This study aims to fully capture the SSA technology by adopting ANT, as an analytical approach that enables the researcher to look beyond the invisible to the human eye. The performativity principles blended with ANT enable a holistic examination of what is immensely evolving and limitlessly interesting in the world of advertising – SSA technology.

The next sections will discuss data collection approaches that best fit the ANT method of exploring digital technology.

3.6 Research designs in ANT

ANT researchers have used a variety of qualitative research designs, where ethnography is the dominant approach of tracing the process of translation between human and nonhuman actors (e.g., Latour & Wooglar, 1979, Law, 1990, Mol, 2002, Law & Joks, 2019). Ethnography is also the fundamental methodology of this study.

Ethnography is claimed to be one of the most suitable approaches for collecting the data of an actor network (Law, 2005, Nimmo, 2011, Corman & Barron, 2017). Nimmo (2011) defines ethnography related to ANT as follows:

“Ethnography has often been the natural method of choice for ANT-influenced researcher and for a good reason. It is a deliberately messy methodology, putting its faith in the interpretative competence of the researcher when immersed in a social milieu in all its complexity. Rather than seeking the security of pre-conceived analytic categories, ethnographers typically steer a far more inductive course by cultivating an openness to the multiple and overlapping phenomenological worlds of their subjects” (p. 112-113).

Ethnography is therefore an approach through which an ANT researcher can capture day-to-day practice and understand how they are enacted (Jaworski, 2011, Wedel & Kannan, 2016). This is essential to provide a presentation of digital marketing that is more accurate (Brownlie, 2010, Law, 2009). Presenting events through a narrative that is formed from ethnographic insights, shows small details of those events that usually get unnoticed (Latour, 1991, 1993, Law, 2009). The details captured in such events enable an understanding of invisible artefacts of digital technology (Lammes, 2017).

By following actors, objects of the network become co-producers of reality (Adams & Thompson, 2016, Lammes, 2017). This is justified by certain ways digital technology acts, which some digital ANT scholars describe as “talking back” (Thomson, 2012). In such a relation, the human actor is a spokesman, who verbalises the reactions of resistance of digital technology, when it is tried to be operationalised by the user (Lammes, 2017). At the same time the human

participants co-produce the technology based on their intentions with it (Thompson, 2012, Hind & Lammes, 2015, Lammes, 2017). Understanding the socio-material interactions of actor networks like this, enables researchers to decompose digital technology into smaller elements, which bring holistic understanding (Law, 2005). This can be done through following actors in a setting (Czarniawska, 2004), which is a technique of collecting data as part of the “ANT-informed” ethnography.

3.6.1 Following actors

Following actors means following how they relate together with other actors in heterogeneous relations, and what happens as part of the process of translation, also what is the outcome and when the relations become stabilised. Following actors means using various data collection methods to track the process of translation and thus the process of temporary emergent practice.

The start of following an object in its setting (Pickerling, 1993) can be a problematised event (Callon, 1984, Law, 2009). From the moment when the object is spotted in its environment the researcher pays attention to see and hear “the invitational quality of things” (Adams & Thompson, 2016, p. 334). This means that the researcher needs to pay such attention when following actors to notice the socio-material relations that get formed and get released in the process of the actor network failure and/or resolving of that failure within the network (Callon, 1984, Law, 2009, Thompson, 2012, Joks, 2019). This study mostly focuses on understanding the SSA technology as a whole, from the perspective of its invisible attributes. Therefore, the data collection in the setting focused on the relations in a network related to the invisible interfaces of that technology and how they get constructed in practice.

Latour (2005) claims:

“Object and subject might exist, but everything interesting happens upstream and downstream. ... Follow the actors themselves or rather that which makes them act, namely the circulating entities” (p. 237).

As invisible features of the SSA technology, that are least researched in the current marketing literature, are hard to capture in a setting, it is significant for the researcher to notice the actions and interactions with that technology and around it. Capturing the relationships and the ways in which they evolve in their networks, enables to capture the details of those interactions and helps understand what the invisible part of the SSA technology is, when performed in marketing practice.

There are several events and relations that are possibly not of interest of the researcher and in line with the aim of the research. Therefore, the researcher will always have to decide which events and relations to follow and where networks have to be cut (Chris & Hassard, 2004, Suchman & Suchman, 2007, Adams & Thompson, 2016). Cutting networks means that the researcher has a strong focus of which actors to follow around in the setting and out of the setting through their acting in and between their networks (Latour, 1999, 2005).

3.6.2 Gaps in the literature and research design

The Literature Review of the thesis discusses the SSA practice and technology as it is currently studied in marketing, and it identifies gaps of that literature. Following that, an appropriate theoretical foundation to fill those gaps and frame this research was discussed in the current chapter. The below discussion connects the framework, gaps of the literature and the methodology used in this thesis. A more detailed methodology discussion will be held in the Methodology chapter.

First, the current SSA marketing literature relies on the quantitative approaches of studying the SSA (e.g., Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017, Berman, 2018). Given the fact that the practice and its technology of focus, are digitally based, therefore, their nature being dynamic and rapidly changing in the modern world full of information (Geiger & Gross, 2017), it is crucial to ensure a completer and more accurate SSA understanding, which practically contains minimal physicality (Geiger & Gross, 2017). In the past decade or two, marketing scholars have mostly been focusing on the production of knowledge that considers SSA technology at its face value (Law, 2009, 2019, Latour, 2011), which means SSA technology has been studied the way we see it, leaving out the fact that

most of that technology is invisible (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Jeziorrski & Moorthy, 2017, Berman, 2017). Such way of knowledge creation undermines the digitality of SSA and the way this significant part of the SSA technology changes markets. By considering what the SSA technology is mostly made up of, through seeing interfaces emerging in SSA practice in various situations, this enables a more accurate understanding of SSA (Brownlie, 2010, Rust, 2020). Ethnography enables an insightful look beyond the visible parts of the SSA technology and provides an opportunity for un hiding that these through various spaces and situations (Beunza & Stark, 2002). It is significant to capture those situations, and make sure that various ways in which the SSA acts, reacts and resists are captured, to ensure the complete presentation (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Rust, 2020). The so-called black box of the SSA technology is studied through powerful socio-material relations, where these have a possibility to either succeed or fail (Galloway, 2004, Law, 2009, Lammes, 2017). This research is focusing on the failed relations, as the problematic events that might cause the networks to fail, are the ones that tend to increase the opportunities of understanding the phenomena in practice (Callon, 1984, Akrich, 1992, Michael, 2017, Law & Joks, 2019). In digital, tracing relations through problematic events enables to uncover and simplify the hidden and invisible interfaces of the SSA technology (Thompson & Adams, 2013, Lammes, 2017). The existing marketing literature describes the rapidly evolving SSA technology, however, not in its context, which further widens the gap the SSA technology being fully analysed as part of markets-creation. The currently singular treatment of SSA misses out on several opportunities for understanding SSA technology and its practice through the multiple roles the SSA technology takes on, as well as the multiple roles that the users adopt (Callon, 1984, 2010, Law, 2009, 2019), when they interact with the SSA technology and its interfaces on a daily basis.

Second, within marketing, scholars use practice-based approaches to study phenomena and to understand the phenomena as part of their practice and through relations (e.g., Araujo, 2007, Kjellberg, 2010, Venter et al, 2015, Jacobi et al, 2015, Storbacka & Nenonen, 2020). This study takes from the practice-oriented scholars (Schatzki, 2006, Gond et al, 2016), who are based on ANT principles (Callon, 1998,

2010). Following that this study adds to the market performativity studies, building from the ANT approaches and making the current methodology used to studying markets richer and more adjusted to its constantly and rapidly changing digital objects (Kannan & Li, 2016, Liu-Thompkins, 2018, Morton & Dinielli, 2020). Practice-based market studies therefore need to add to their current methodological approaches in order to be able to follow the digitality the world is racing towards (Roscoe & Chillias, 2014, Geiger & Gross, 2017, Cluley, 2018, Rust, 2020). ANT-informed ethnography is a strong example of methodology to use to provide a more complete understanding of phenomena.

Third, the approaches used in the marketing literature are currently focusing on the macro perspective of SSA technology (Ghose & Yang, 2009, Yang & Ghose, 2010, Jeziorski & Moorthy, 2017, Berman, 2017). This means that the SSA is studied in less detail to also in detail cover the micro features of the SSA technology, which by their nature do not have physicality, but are rather invisible, due to being digital. Initially studying such phenomena as macro, leaves out important understandings of the SSA through detailed powerful relations. The ANT approach of studying those objects will eventually lead to a broader, macro understanding of the SSA effect (Czarniawska, 2004, Michael, 2017), however, the micro detail of analysis and therefore building from relations in actor networks, will provide a more holistic presentation and understanding of the marketing practice (Czarniawska, 2004, Law, 2009, Michael, 2017). The SSA being a very quickly and rapidly changing technology, this will require a deep way of studying and analysing that technology in various spaces and actor networks at the same time. This spans beyond local to external and distant places, also out of the original ethnographic setting (Gellner & Hirsch, 2020).

Following the above gaps in the literature, ANT-informed organisational ethnography is the most useful research design for this study for several reasons. ANT-informed ethnography enables studying both people and tools in their natural environment on a day-to-day basis (Nimmo, 2011). Through being positioned away from positivist assumptions, ethnography studies people and technology through practice and powerful socio-material interaction (Corman & Barron, 2017), where studying objects and subjects in actor networks brings an insightful understanding

of markets (Gond et al, 2016). The more problematic events we study the SSA technology, the more complex, but at the same time simplified as a result of following those actors, the SSA is becoming. The more we are able to unfold the black box of the SSA and its technology through ethnographic approach, the more we understand it as sometimes more and sometimes less mutable, sometimes more and sometimes less durable (Law, 2009, 2019, Thompson, 2012, Lammes, 2017, Michael, 2017). This is starting to respond to several scholars calling for a less fragmented examination of the SSA (Thompson, 2012, Quinton & Simkin, 2016, Lamberton & Stephen, 2016).

3.7 Summary of the chapter

As digital technology has become extremely connected to social worlds it is impossible to leave those objects out marketing practice when exploring the SSA (Adams & Thompson, 2016, Roscoe & Chillias, 2014, Gond et al, 2016, Geiger & Gross, 2017). Furthermore, the digitality of the modern marketing as we have seen it evolving in the past decades (Morton & Dinielli, 2020) requires a different approach of examination that marketing scholars have been used to (e.g., Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Ghose & Yang, 2010, Yang & Ghose, 2011, Yao & Mela, 2011, Roscoe & Chillias, 2014, Katona & Sarvary, 2016, Geiger & Gross, 2017). Digital, such as SSA technology, requires the exploration of its mechanisms and interfaces beyond of what we can see with a human eye (Roscoe & Chillias, 2014). Using ANT as a tool, basing the analysis on the concepts of ANT, such as actor networks, powerful relations, resistance, mutability and immutability, is a way to go forward to enables a less fragmented knowledge production of digital marketing practice in the future. Using ethnography that follows ANT principles, therefore, the methods such as following actors (Callon, 1984, Czarniawska, 2004, 2006, Law, 2009), are the most appropriate ways of capturing the digitality of markets.

This chapter made a strong foundation for the analysis of the data of this thesis through considering ANT's main concepts, notions and various ways in which digital technology (Google Ads) can analytically be understood as socially constructed

through marketing practice. The chapter discussed ANT and its principles, the foundational concepts this research is building upon, presented the performativity approaches used in marketing for studying phenomena and the most appropriate way of collecting the data in a networked setting. Ethnography is strongly believed to provide enough insight and closeness to the actors in networks and between networks and will ensure a more accurate understanding of a complex phenomenon like SSA. Ethnography as the main methodology of this study will be further discussed in the next chapter.

4 Chapter 4: Methodology

4.1 Introduction

This chapter outlines the methodology of this research. The chapter opens with the research philosophy and its place in-between objective and subjective philosophical assumptions, then explores the features of the chosen research design: ethnography. Furthermore, several types of ethnography are acknowledged, considering the aim of this research and its theoretical lens. Then, the chapter defends the chosen research design and methods in the light of the gaps in the literature.

The second part of the chapter outlines details of data collection including the practicalities of ethnography and access. It provides details on the setting, the participants, data collection strategies and the amount of data collected. Finally, the chapter presents what the methods of data collection were and why they matter. At the end, the chapter presents the plan for analysing the ethnographic data.

4.2 Research philosophy

Philosophical positioning of research connects collected data with the research questions (Easterby-Smith, 2015). In social sciences three traditions underpin that - ontological, epistemological and axiological. Research with a strong philosophical position will be of better quality and potential for further development.

Lincoln & Guba (1994) claim that a philosophical paradigm defines the role of a researcher in the world and the world's nature. Ontology, as Easterby & Smith (2015) note, includes "philosophical assumptions about the nature of reality" (p. 47). Therefore, "how things are and how they work in reality" (Guba & Lincoln, 1994, p. 108). And epistemology is defined as "the study about the nature of knowledge" (p. 51).

Even though it seems that due to its flexibility, actor network theory (ANT) might take the philosophical stance of interpretivism, this should not be so. Neither interpretivism, nor realism are its philosophical underpinnings, but rather a combination of them, which is between objective and subjective ends of the spectrum. The latter means that objective object is joined in association with a subjective subject (Pickerling, 1995, Nimmo, 2011).

4.3 Research philosophy

This study is grounded in ANT and its ontological traditions. ANT assumes that reality is produced as an effect of socio-material relations formation. Furthermore, past studies have built on these foundations to develop a broad range of philosophical assumptions ranging from realism to interpretivism. The below table shows the extreme positions of objective and subjective and their ontological and epistemological assumptions for knowledge.

Table 1. "Assumptions about the nature of social science" (Goles & Hirschheim, 2000, p. 252)

	Subjective	Objective
Ontological assumptions	Reality is interpreted by the individual. It is socially constructed (nominalism).	Reality is external to the individual. It is a "given" (realism).
Epistemological assumptions	Knowledge is relative. Researchers should focus on meaning and examine the totality of a situation (anti-positivism).	Researchers should focus on the empirical evidence and hypothesis testing, looking for fundamental laws and causal relationships (positivism).
Assumptions about human nature	Humans possess free will and have autonomy (voluntarism).	Humans are products of their environments (determinism).
Methodological assumptions	Understanding of the world is best done by analysing subjective accounts of a situation or phenomena (ideographic).	Operationalizing and measuring constructs, along with quantitative analysis techniques and hypothesis testing, will uncover universal laws that explain and govern reality (nomothetic).

Scholars, who position their research within one to another philosophical end of spectrums presented in the table, treat phenomena as ontologically separate. However, in ANT terms this means that the mentioned scholars make a divide between an object and a subject, while such boundaries should only be possible in a network (Law, 2019).

Following the objectivist end of spectrum, thus positivist philosophy, the latter sees reality as constituted in an objective way, quantifiably (Easterby-Smith, 2015). However, going to the other side of the spectrum, thus beyond objectivity, qualitative underpinnings state that the research is equally valid if the facts are made dependent on a particular theoretical window (Lincoln & Guba, 1994). In other words, the same data and facts can have different use and meaning if a different theoretical framework is used.

Therefore, if we use the same data underpinning the analysis first with the objectivist assumptions and then with subjectivist assumptions, the knowledge produced will be different (Michael, 2017, Law, 2019). If we, for example, decide to use a theoretical lens or approach that belongs to the positivist side of the spectrum, like the Literature Review Chapter Two discusses, we will probably present SSA technology as static and taken for granted. However, if we choose a theoretical lens or an approach that is more towards the interpretivist side of the spectrum, or right in the middle, like ANT, it is much more likely, that we will present this technology as more dynamic and as it happens in practice (Thompson, 2012, Lammes, 2017). The former and the latter are therefore two different kinds of outcomes we get if we move left and right across the spectrum between positivism and interpretivism.

Taking an approach that sits between objective and subjective assumptions to study digital technology such as ANT, means going beyond individualistic and pre-defined boundaries of objects and subjects. The latter enables studying digital technology objects like SSA, through relations and acknowledge what those relations produce (Pickerling, 1993, Ruppert, Law and Savage, 2013, Law, 2009, 2019). This way, objects and subjects can be seen as a collective that has the power to potentially establish objects and subjects with boundaries through the process of their enactment (Law, 2009, 2019).

ANT analysis therefore makes material objects an effect of heterogeneous relations through being positioned between the subjective and objective assumptions (Cordella & Shaikh, 2003). There, actors do not pre-exist but are rather formed as an emergence and an enactment of those relations between actors in the network (Law, 1999, Law, 2009).

Heterogeneous relations therefore enable objects and subjects to emerge (internally, as part of actor network and its relations) and temporarily stabilise as a result of power relations (Galloway, 2004). There, ANT denies realistic philosophical positions, as well as interpretivism (Latour, 1987, 1999). In interpretivism, phenomena come to life in the interpreter's mind (Burrell & Morgan, 1979), while in ANT the phenomena come to life as part of a network and for a shorter period of time (in the case of digital technology, which is very dynamic, this time of stabilisation is even shorter). There, in networks, actors interact with each other separately from the researcher. The researcher cannot interrupt the effects of that enactment with his/her interpretation, but s/he can follow the actors as they are and as they happen (Latour, 1999, Crowther et al, 2017, Van Manen, 2014, Adam & Thompson, 2016).

Moreover, realities as an effect of ANT analysis are socially constructed with a pragmatist perspective. Goldkuhl (2012) claims that interpretivism and pragmatism share the feature of understanding the phenomena, however, pragmatism's understanding is always seen instrumentally, that is in relation to another entity (Dewey, 1931). While understanding in interpretive approach is "seen as a value of its own' (Goldkuhl, 2012, p. 12). Through relational analysis, this research is aiming at producing instrumental knowledge, thus useful for both the academics and managers in practice (Ottesen & Gronhaug, 2004).

Table 2. "Pragmatism vs. interpretivism: ideal-typical differentiation": Goldkuhl (2012, p. 12)

	Pragmatism	Interpretivism
Ontology	Symbolic realism	Constructivism
Empirical focus	Actions and changes	Beliefs (socially constructed cognition)
Epistemology (Type of knowledge)	Constructive knowledge	Understanding
Role of knowledge	Useful for action	Interesting
Methodology (Type of investigation)	Inquiry	Field study
Data generation	Data through assessment and intervention	Data through interpretation
Role of the researcher	Engaged in change	Engaged in understanding

For many years there have been wars between two different paradigms of positivism and interpretivism, however, Gole & Hirschheim (2000) claim that now the paradigms have finally reached a state/stage when they can co-exist. This middle ground including social constructivism (Davis, 2015) and pragmatist perspective signifies that knowledge production never ends. This is especially true for digital contexts, where due to high fluidity, analysing heterogeneous relations leads to more complexity and more relations to analyse with ANT (Shove, 2003, Law, 2009).

This research is therefore underpinned by critical constructivist philosophy and has a pragmatist orientation. The first is justified with the fact that the unit of analysis of this research is a collective. This means that the unit of analysis that constructs

reality is not only social, but also material. In addition, in ANT, subjects and objects can only be seen as with pre-defined boundaries and thus as individuals when they are temporarily stabilised. This happens as a result of acting of heterogeneous actors within associations they join into (Michael, 1996, Peci & Alcadipani, 2006).

In contrast with critical constructivism, social constructivism focuses on constructing reality by people only. The latter seems to be distinct from the performative nature and storytelling approach of studying objects in practice (Law & Singleton, 2001, Bajde, 2013). In fact, social constructivism makes boundaries between social and material and claims that objects are *only* a result of the practice, therefore humans are the only ones acting to enact the objects (Peci & Alcadipani, 2006, Law & Singleton, 2011). And this fits with classical ANT. However, more critical ANT (Latour, 2005, Law, 2009), has progressed to the point when it is both the human and nonhuman actors that participate in reality production. Such a way of thinking makes a difference and enacts something that is revolutionary and matters (Law & Singleton, 2001).

Constructivism in relation to ANT is therefore social, but in a weak sense, such that enables construction of networks and relations (Detel, 2001). Moreover, critical constructivism sees material and social as one, with no pre-defined boundaries and an understanding not through only social, but both material and social – collective instead of single knowledge production (Latour, 1999). This therefore joins together the objective and subjective into one, and reality is translated, enacted or constructed this way.

The above suggests that both human and nonhuman need to be treated with equal importance, as a collective and as inseparable, for the purposes of the analysis of data (Michael, 1996, Latour, 1999). Critical constructivism is therefore a good fit for the ANT analysis, but to be complete, it as well needs pragmatic orientation (Wortelboer & Bischof, 2012, Davis, 2015).

Furthermore, pragmatism is associated with change and action and opens a possibility for more/alternative options. It started with James, Pierce and Dewey in the late 19th and the start of the 20th century. Dewey (1938) tackled the matter of

what it meant to know something and how alternative possibilities of understanding phenomena were revealed (Mason, Kjellberg & Hagberg, 2015). In ANT studies, scholars use pragmatism to study practices in real and concrete situations. And the way pragmatism fits with ANT comes from Dewey's (1927) discussions on Western democracy, whose main problem was taking the public for granted (Faries & Mutzel, 2015, p. 525). The latter pointed in the direction that the public could not be understood with pre-defined boundaries and ignore the relations to issues around it (Latour, 2005). Public as such was rather about the context in which it happened, including its materials context (Mason, Kjellberg & Hagberg, 2015). This is in line with what this research is aiming to achieve.

Enactment of (digital) technology is therefore a social process enabled by heterogeneous actor-networks, which also shows through material-semiotic thinking (Law, 2009, 2019). A combination of social constructivism and pragmatism as philosophical underpinnings were used in the management and organisation studies (Czarniawska, 2008). Czarniawska (2000) for example, studied the financial department in one of the companies through financial planning. And in a different study Lindberg & Czarniawska (2006) studied work in a Swedish health care centre and how its three units were connected to each other through action, laws and its members. The context – organisational and relations – units of analysis, as used by the mentioned scholars, well relates to this study.

4.4 Research questions

Research questions are the reflection of the gap of the literature and aim to guide the data collection and analysis of the research. The gaps extracted from the literature in this study are mainly two. First, as established in Chapter Three, the marketing literature is majorly taken for granted and is lacking a more critical evaluation of the SSA. And second, the current practice-based oriented stream of studies in marketing is mostly focusing on non-digital and thus lacking examination of digital technology, such as SSA technology in practice. The marketing practice-based stream of scholars mostly uses performativity to unpack the objects through practice (e.g., Araujo, 2007, Kjellberg, 2010, Jacobi et al, 2015, Venter et al, 2015), however, this research claims ANT is a more appropriate way to do that. Also,

currently the SSA is studied from the macro perspective - an organisation as a whole, however, a micro perspective might bring a more detailed understanding of it. The gaps of this research were discussed in Chapter Two and the research questions are listed below.

Specifically, this study is aiming to explore how Google advertising comes to being, highlighting the Google Ads tool, through the process of heterogeneous translation. This means, the study follows and traces the effects of the relations of humans and nonhumans through their production of reality. The following research questions will be taken as a guidance for exploration of the Google advertising practice and its technology:

1.How is a network created in SSA practice?

2.What relations make a successful network and how do the actors influence success?

3.How do networks fail?

The following section will discuss the research design of this thesis.

4.5 Research design

Research design is a framework or a strategy that builds a bridge between the research questions and the way the research is executed in a logical and coherent way (Durkheim, 2006, Morgan, 2013). Moreover, the research design is about organising one's research and activities within that research in a way that takes in appropriate methodology and data collection, embedding these with a matching philosophy (Easterby-Smith, 2012). The following sections will present ethnography as a design of this research and an approach of how to best write about the kind of ethnography that will be used in this research. This will be through contrasting the traditional ethnography with ANT-informed ethnography, which was used to collect the research data.

4.5.1 Ethnography

This study uses ethnography as a research design. Traditionally, the purpose of an ethnographic design is to study people, their actions and their thinking in a holistic way. Such conceived ethnography provides descriptions about people in a naturally occurring way (Brink & Edgecombe, 2003). Although ethnography takes many forms (Pink et al, 2016, Corman & Barron, 2017, Gellner & Hirsch, 2020) it is almost always a way of collecting the data in social research about how people make sense of day-to-day things in their natural settings (Hammersley & Atkinson, 2019). Therefore, the tasks of an ethnographic researcher are to observe what people do and what they talk about, to write notes and to ask questions and collect secondary data and do that for a longer period of time (Hammersley & Atkinson, 2019).

There are many types of ethnography depending on the subjects and objects of the study - digital ethnography (Pink et al, 2016), organisational ethnography (Neyland, 2007, Corman & Barron, 2017, Gellner & Hirsch, 2020) and “ANT-informed ethnography” (Latour, 2005, Law, 2009, Nimmo, 2011, Corman & Barron, 2017). First, digital ethnography is such that includes an array of new methods available for the researcher to use in the digital world – video, online interview, websites, blogs and make those digital media part of storytelling (Murthy, 2008, Underberg & Zorn, 2013, Pink et al, 2016). Second, organisational ethnography is ethnography that follows business activities in organisations on a day-to-day basis (Neyland, 2007, Gellner & Hirsch, 2020). Third, ANT-informed ethnography was used in this study to collect its data. It is an ethnography that uses some features of the organisational ethnography and some features from ANT to become an approach that treats both human and nonhuman participants equally in the process of data collection (Corman & Carron, 2017).

The following sections will present organisational ethnography, how it differs or is common with ANT and how ANT can inform the organisational ethnography to make it a research design that has a potential to collect data in such a way that makes a difference (Brownlie, 2010, Thompson, 2012).

4.5.2 Organisational ethnography and ANT

Organisational ethnography is a methodology to collect the data which follows people in a business environment in their daily work activities (Neyland, 2007, Gellner & Hirsch, 2020). Organisational ethnography collects data “through the social practices of people” (Smith, 2006, p. 34), where the researcher plays an active role in this collection through interacting with participants (Smith, 2006).

Given the purpose and theoretical lens of this study, its ethnographic approach needs to go beyond only the organisational ethnography features in order to understand the networked and fluid world (Law, 2004). Traditional ethnographies, including organisational ethnography, are claimed to be inadequate for ANT type of data collection and analysis (Czarniawska, 2004). Moreover, a study that uses ANT as a theoretical lens, needs a data collection methodology that provides a more open way of collecting the data and captures objects and subjects inside the networks and between them (Czarniawska, 2004). An organisational ethnography informed by ANT principles is therefore crucial to capture the details of social construction of technological objects in an organisation (Law, 2009, Brownlie, 2010, Michael, 2017).

The below sections will discuss what ANT and organisational ethnography have in common and where do they differ. This is important to understand in order to be able to use the two approaches combined.

There are many things that ANT method and organisational ethnography have in common. This is for example the focus on practices or what people do as part of their day-to-day (work) lives (Nimmo, 2011). Moreover, studying practices on a daily basis means paying close attention to various elements that enter and leave those practices, thus join into associations, enact as part of those associations and then leave them for further acting (McNaughten & Urry, 1998, Nimmo, 2011). Mol (1998), furthermore, claims:

“These disparate elements encompass objects and environments, materials and techniques, taxonomies, categories and symbolic systems, which are

inextricably intertwined within practices so that any absolute distinction between subjective and objective or social and natural dimensions is rendered non-essential” (Mol, 1998, p. 31).

The claim by Mol (1998) as above means that human and nonhuman, while acting, cannot exist as individuals, but they need to become inseparable to produce adequate knowledge and understanding.

In addition, both ANT and organisational ethnography move away from positivist assumptions to give priority to practices over principles. They both use multiple methods for data collection, such as for example observation or interview (Amis & Silk, 2008, Corman & Barron, 2017) and the latter enables for the research to better address research questions and the collected data to be richer (Fendt, 2007, Amis & Silk, 2008).

However, ANT approaches and those found in organisational studies differ in substantive ways. For example, in contrast to ANT, organisational ethnography focuses on how various concepts (for example gender and race) are produced through human relations (Corman & Barron, 2017). However, ANT, as mentioned before, studies concepts, objects and practice through not only human relations, but through both human and nonhuman (Corman & Barron, 2017). Furthermore, organisational ethnography may study both objects and subjects but tends to give unequal attention to them (Corman & Barron, 2017). This means that both humans and nonhumans can be the focus of attention of an organisational ethnography, however, one or another will be given more attention (Corman & Barron, 2017).

Conversely, ANT method treats human and material equally (Law, 2007, 2009, 2019) and focuses on how the mentioned actors produce reality through associations and how practices and objects temporarily emerge from heterogeneous associations (Corman & Barron, 2017). By contrast, organisational ethnography predominantly focuses on how people are held together and how they create organisation through actions and discourses (Corman & Barron, 2017).

Organisational ethnography also tends to fail to acknowledge the wider context and focuses on local knowledge production (Gellner & Hirsch, 2020). Opposed to the latter, ANT expands local production of knowledge as well to distant and external spaces (Suchman & Suchman, 2007). This is significant for studying digitised practices, where virtual cannot stay fixed in one place, but is by its virtual nature in more places at the same time (Lammes, 2017).

It seems that ANT and organisational ethnography can join in a relevant research design (Corman & Barron, 2017), which will have the ability to produce accurate knowledge (Brownlie, 2010). Up to date, there is a plethora of ANT-informed ethnographies in the literature (Latour & Woolgar, 1979, Law, 1990, Law, 1994, Mol, 2002, Law & Mol, 2000, Latour, 2010, Czarniawska, 2004). This study followed such organisational ethnography informed by the ANT principles to collect rich data.

4.5.3 Telling stories

Key to ANT ethnography is enactment of reality through heterogeneous relations, which can be presented in many ways, but storytelling prevails (practice (Law & Singleton, 2001, Law, 2005, Bajde, 2013). Storytelling involves rich presentations of multiple and fluid objects and practice (Law, 2004) and therefore fits well with ANT and has the capacity to provide the smallest and most intimate details and insights, which are important to understand the reasons/consequences and ways that human and nonhuman actors relate together (Latour, 2009, Adams & Thompson, 2014).

The storytelling facilitates the upstream and downstream presentation of reality, which contrasts the abstract definitions and descriptions that are focused directly on the phenomena and not on the phenomena in its context (Faraj & Azad, 2012). Such presentation of reality, which sees objects and subjects as part of the context, can open new roles, understandings and provide solutions to problems (e.g., Callon, 1984, Latour, 1996, Pinch & Swedberg, 2008).

4.6 Getting access and negotiating the role

The researcher knew from the very start of her PhD that gaining access to a business environment to conduct a day-to-day ethnography would not be the easiest goal to accomplish. The below sections will present the researcher's process of gaining access to the setting where she spent 7 months collecting the data through various ethnographic methods.

After ten months of attending various events, the access was provisionally agreed by three organisations. Two of the organisations were used as preparation for the main ethnography and were therefore pilot ethnographies. The first organisation was a Scottish charity based in Glasgow, which was organising training and employability for less able people. And the second organisation was a Scottish start-up, based in Glasgow, which is providing market analysis for companies. The first pilot ethnography lasted for 2 weeks, and the second pilot ethnography lasted for 6 weeks.

This study therefore undertook two pilot ethnographies before the main ethnographic data collection. Regardless of being very beneficial, pilot ethnographies are usually under-discussed and under-utilised in academia. Sampson (2004) for example claims that:

“Pilots can be used to refine research instruments such as interview schedules they have greater use still ethnographic approaches in foreshadowing research problems and questions, in highlighting gaps and wastage in data collection and in considering broader and highly significant issues such as research validity, ethics, representation and researcher's health and safety” (p. 383).

Collecting pilot ethnographic data was a learning process for the researcher, which played a significant role in enhancing the researcher's ethnographic skills, this being useful for the main ethnographic data collection. The efficiency of the main ethnographic data collection was additionally a result of several other activities the researcher undertook. For example, the researcher held many conversations with

scholars from various disciplines, in and out of the Adam Smith Business School, who had experience with using ethnography as their data collection (researchers from the University of Essex, several graduates from the University of Glasgow business school and several University of Glasgow staff members, who led workshops and seminars on ethnographic data collection).

The researcher also took part in several ethnographic events, one of them being the Ethnography symposium (Portsmouth, 2019), where the main speaker at the symposium, Mr Paul Atkinson, gave her advice on best practice of the ethnographic data collection. Dr Atkinson is an author of several books and papers on ethnography as methodology (see Atkinson et al, 2000, Atkinson, 2014, Hammersley & Atkinson, 2019). The researcher also met with Ms Erin Taylor, the founder of a consulting agency for ethnographic data analysis, based in Amsterdam, Netherlands, who gave her advice, “hacks and tricks”, on how to collect the richest ethnographic data.

The ethical approval, which was granted by the College of Social Sciences of the University of Glasgow covered the pilot ethnographies and the main ethnography of this study. It is attached under the Appendices of the thesis.

The following sections will present the data collection strategy of this research.

4.7 Data collection

This study’s ethnography uses multiple methods of data collection, such as observations, interviews and fieldnotes, which it will answer questions such as “what counts” and “how what counts is framed” (Latour, 2005, p. 187). This enables tracing how heterogeneous associations are formed, what the process of translation includes and what materialises from that (Latour, 2005, Nimmo, 2011, Corman & Barron, 2017). All this is enabled through a technique called “following actors” that will be presented in the below sections.

4.7.1 Data collection strategy

The data collection at the digital marketing agency (ATM) started with generic observations and non-structured interviews. Those were around “digital technology” that marketing practitioners at the agency used at the time of the data collection. This step helped the researcher to get familiar with the new setting and new people. Spending some non-focused time at the agency enabled the researcher to set her focus right for the future 7 months in the setting. From the very start the interest of ethnography was in the relations of digital technology and practitioners, however, as ethnography progressed, that interest became more specific and focused on Google practice and its main tool Google Ads.

In the course of the ethnographic data collection, the participants wondered whether they were providing the researcher with enough relevant information to satisfy the intention of the research. The fact that the participants rarely fully followed the aim of the data collection progression, but mostly carried out their daily activities undisturbed, was beneficial for the ethnography. It enabled the data to be richer and larger, as participants did not intentionally try to provide the researcher with information (Hammersley & Atkinson, 2007).

Negotiating conditions for the main ethnographic data collection wisely, enabled the researcher to be present at many expected and unexpected events at the agency, which enabled her to trace several heterogeneous relations in actor networks (Knox et al, 2015). This for example included several internal and external meetings at the setting, which provided significant insights about how Google advertising happens in practice.

The following sections will present various ethnographic methods that were used to collect rich data as part of this research.

4.7.2 Following actors

It is crucially important for the research to have a clearly identified unit of analysis. Using an ANT-informed ethnography to collect the data in this research, makes the research unit a heterogeneous association between a human and a nonhuman

actor. Furthermore, a well-known ANT technique for collecting the data around such units, is called following actors and will be presented in the next sections.

Harman (2007) describes the act of following actors as below:

“We cannot discover the nature of a thing by looking into its heart but must follow the blood that circulates from that thing through all its arteries and far-flung capillaries” (p. 44).

Given Harman’s (2007) claim, following actors is a technique that goes beyond focusing directly on an object and considers the context which such object is part of (see also: Faraj & Azad, 2012).

The technique of following actors was used in this study’s ethnography and allowed the researcher to trace how heterogeneous relations were formed and how they brought reality to being (Chris & Hassard, 2004, Suchman & Suchman, 2007, Adams & Thompson, 2016). Following actors therefore allows us to trace not only what objects and subjects are as individuals, but rather how they come to being through participating in the enactment of each other through various actions, responses and even issues as part of the practice.

In the ethnographic data collection, the researcher had to answer several key questions such as “When and where to start following actors?” and “When and where to stop following actors?”. These, to be able to carry out the ethnography in the most useful and efficient way. It was obvious that the researcher could not capture all the relations formed in the overwhelming networked setting and therefore had to decide which events to take into the focus (Suchman & Suchman, 2007, Michael, 2017). The events were organised according to the issues (Callon, 1984, Latour, 2005, Law, 2009) related to Google advertising practice and by commensurability or thematic fit (Latour, 2005, Suchman & Suchman, 2007).

As mentioned, in the complex networked environment, it can be challenging to choose when and where to start and stop following the actors. Some scholars claim that any moment is the right moment, and any timing is the right timing

(Czarniawska, 2004). This relates to an organisation, which needs to deal with things in the moment of when they happen and not before or after (Law, 1994, Czarniawska, 2004). At the agency, the researcher was not hesitant about collecting the data whenever she thought was relevant in order not to miss out anything significant and she aimed to keep a good balance between the “kairotic time” and chronological time” (Czarniawska, 2004, 2008). The first mentioned is the time that is right now, and the researcher needs to decide whether the moment is relevant for the research or not and the second mentioned type of moment is when the researcher follows a certain order of events.

The next sections will present how much data was collected through the seven-month ethnography and using various ethnographic methods.

4.8 Choice of setting

This section presents the context of this research - digital marketing agency. For the purposes of data analysis, the researcher came up with a pseudonym for the digital agency where this ethnography was conducted. The name ATM will be used throughout the thesis to signify the research setting of this study.

The ethnographic setting of this research was a small Scottish digital agency in the tourism sector, operating within the destination marketing organisations (DMO) industry. This setting was chosen for two main reasons. First, it enabled a space for the data collection, with a potential to follow the actors also beyond their local environment. Second, it enabled a satisfying agreement with the CEO and Director of Marketing of the agency. A favourable for the researcher agreement for data collection was important, as part of negotiating the role of a researcher. The agreement covered the time of the data collection and broadly the type of access in the agency. The latter included access to most of the secondary data, meetings and conversations, which gave the researcher a reassurance to be able to collect enough data and data matching the aim of the study. Access to as much data as possible is significant for a good ethnography (Nimmo, 2011).

At the time of ethnography, the digital marketing agency provided digital marketing services for destination marketing organisations (DMOs) across the globe. DMOs are organisations causing development of a certain destination by organising tourist activities at that destination (Tripsavvy, 2020). ATM provided digital marketing services to DMOs, with the emphasis on both Sponsored Search Advertising (SSA) with Social Media Advertising and Search Engine Optimisation (SEO). At the time of the ethnography the agency also carried out other digital marketing services such as competitor analysis, marketing strategies, web audit, graphic design, copywriting and blogging, brand development and web design.

ATM was founded in 2017 and it is a restructured company from a website developing company. ATM was founded by CT- Director of the agency and is one of the top destination digital marketing agencies in Scotland. It initially employed 7 people, but during the time of ethnography, ATM had to cut costs and some participants were made redundant.

Table 4 below shows ATM's employees with descriptions of their roles, their tasks at the agency and their time spent at the agency when the ethnography was carried out. Those details inform this ethnography.

Table 3. Research Participants

Participant's name	Role at ATM	Tasks	Time at the agency

Je	Managing director, full-time	Led the team and all the meetings, planned and organised agency's tasks and built strategy, this including sponsored search advertising strategy on various search engines. Used several project management tools to communicate with the team and clients. As well used Google Ads for the tasks of account management.	2 years
Rob	Account Manager, full-time	Managed clients and worked with Cam, Pan, Dan and other account managers. Used Google Ads for the account management purposes and several project management tools to communicate with the clients and organise tasks and activities of the clients.	1 year
CT	CEO/Graphic Designer/Account Manager	Managed clients, led Google advertising strategy for the agency (ATM), worked closer together with Cam, Isa, Rob and Je.	2 years
Isa	Account Manager, full-time	Managed clients and worked with Cam, Pan, Dan and other account managers. Used Google Ads for the account management purposes and several project management tools to communicate with the clients and organise tasks and activities of the clients.	2 years

Cam	SSA Manager, full-time	Was responsible for several clients' Google adverts creation and management, as well for creating Google advertising reports. Mostly used Google Ads tool and other supporting tools to create and manage Google campaigns.	2 years
Dan	SEO Manager, full-time	Was responsible for the search engine optimisation (SEO) activities, such as keyword analysis, website optimisation level assessment. Overall worked with Cam to collaborate on the planning activities of Google advertising, as well with the account managers to collaborate on SEO strategy development for clients. He used Google Ads for the keyword analysis.	2 years
Pete	Copywriter, part-time	Was responsible to write a copy. The latter sometimes included selecting relevant keywords for Google ad creation, as well as participating in SEO activities relevant for successful Google ads.	1 year

Table 5 below shows the organisational structure of the agency. CT, as the CEO of the agency was the leader of the team and the business, right below him was Je, as the Managing director of the agency. Below Je in the Table are Isa and Rob, who were the Account Managers and Cam, Dan and Pete, who were the SSA Manager, the SEO Manager and the Copywriting Manager.

Table 4. Agency's organisational structure

		CT		
Je				
Isa, Rob				
Cam		Dan		Pete

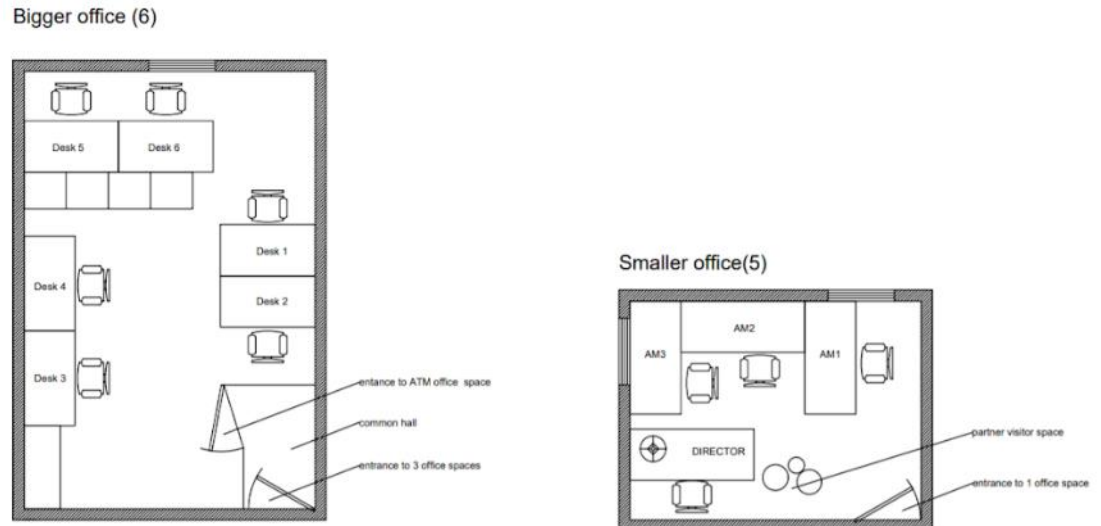
Tables 4 and 5 illustrate who were the users of the Google Ads tool as part of Google advertising practice in the digital agency. The participants' roles presented above are their official roles at the agency. However, analytically, their pre-existing roles were not used as part of the data analysis but were left to emerge as part of the process of translation in actor networks. This is presented in Chapter Five of this thesis.

At the start of the ethnography, the agency was renting two offices - one big and one small. The big office could take a maximum of six people with desks and a couple of others if a client came to visit. The downstairs office was the smaller office, with the desk capacity of three and a coffee table with two chairs. At the earlier stages of the ethnography the agency was renting a meeting room, which was smaller in size, with a table for six to seven people with no technological equipment. In that meeting room, the team would have regular weekly brainstorming meetings, meetings with clients or occasional daily subject-specific meetings between smaller teams of people. Those were the spaces where the ethnographic data collection took place.

Two months into ethnography the CEO of the agency decided to cut costs due to the agency's poor financial situation. The reorganisation mostly included letting go of two rooms and two employees. In the end only the big office remained.

Image 0.1 shows the floorplan of two staff offices the CEO of the agency was hiring at the start of the ethnography. The floorplan shows that the office desks were positioned in such a way that enabled the participants to easily communicate with each other without having to change their original sitting place. Such desk positioning enabled the researcher to easily observe and listen to relevant conversations and participated at relevant events. Every desk in the two offices below had a screen and a laptop. This enabled participants to manage multiple general tasks as part of the Google advertising practice at the same time.

Image 0.1. An image of the offices. Desk 1 - the researcher's desk, Desk 2 - Isa's desk, Desk 3 - CT's desk, Desk 4 - Cam's desk, Desk 5 - Dan's desk, Desk 6 - Dan's desk, AM1 - Je's desk, AM 2 - Rob's desk, DIRECTOR - CT's old desk



The following sections will present the role of the researcher in the research setting.

4.9 The role of a researcher

The role of the researcher in the setting was twofold. First, the researcher at the agency collected the ethnographic data and second, the researcher occasionally participated in the agency's tasks.

The researcher never directly worked on any of the Google advertising tasks during the time of the ethnography. The researcher never practically used the Google Ads tool or its functions (Google keyword planner, Google Ads editor, Google Ads analytics), which are the focus of attention of this research. The researcher was, however, involved in using other tools and practices that were complementing the Google practice, such as search engine optimisation practice (SEO). For example, she sometimes had to do SEO audits and she as well helped with the keyword research.

This direct participation at the SEO and keyword research tasks contributed to the richness of the data collection. This was through the researcher being part of the agency's team and while executing her tasks she was present with other relevant Google advertising activities that were going on at the same time. The researcher's involvement with actual agency's tasks enabled her to get to know the ways in which the team worked and collaborated. For example, this helped the researcher learn which practices around Google advertising were most relevant, how the problems happened and who was responsible for solving them.

Moreover, participation in tasks at the agency helped the researcher get closer to the participants in the sense that they started trusting her more and this made the data collection more efficient (easier, quicker, more relevant). Therefore, if the researcher "wished to grasp a group's deepest knowledge, she must have communed with its members" (in Jules-Rosette, 1975, p. 8).

4.10 Problematic situations and actor network creation

There were several opportunities for relevant data collection in the setting. The researcher had to find a way of how to set the focus right to pay attention to the relevant events and follow the right actors, in line with this study's aim (Latour, 2005). The chosen events in the setting were around Google advertising problems and those problems were organised by their commensurability (Latour, 2005). Problematic events in the setting were related to the failure of the process of translation and were a foundation for actor networks to grow in their complexity (Callon, 1984, Akrich, 1992, Michael, 2017, Law & Joks, 2019).

In the setting, the researcher had to observe and wait for the interesting problematic events around Google advertising to happen (Adams & Thompson, 2016). Such an event was a failed relation of reality construction, therefore the intention of the relation or the actor network was not achieved (Lammes, 2017). However, as a result of that, the actors joined together in relations to solve the Google advertising issue. Then the process of translation started (Callon, 1984). When the problem was solved, the process of translation stabilised and stopped for a short period, when the produced reality became visible (Callon et al, 1986, Law, 2009).

4.11 Research methods

As already mentioned in the previous sections, ANT-informed ethnography can benefit from using multiple methods of data collection (Amis & Silk, 2008, Corman & Barron, 2017). The section below presents the ethnographic methods used in this research.

4.11.1 (Participant) observations

Observations were the main method of data collection. Observations enabled the researcher notice problematic events and temporary connections between them (Latour, 2005, 2017). In addition, they facilitated how to cut the network (Suchman & Suchman, 2007).

Observation is a useful mean to collect data. Handriana et. al. (2013) claims that the “development of science always starts with observation.” (p. 465). Furthermore, “experience and observation are a basic source and the main foundation of human knowledge to the world.” (Hunt, 1991, in Handriana et al, 2013, 465). This was used by the researcher to collect the rich and relevant data from the setting.

Law (1994) claims that observation is:

“What ethnography - and I think, any form of learning - is about. It is about seeing, hearing, noticing, sensing, smelling and then ranking over what has been noticed and trying to make some sense out of it. And to be sure, also recognising the non-sense in it. And then it is about the process of seeing, sensing and the rest, and going over it all again. And so on. And so on” (p. 50).

As per Law (1994)’s claim, through observations, the researcher followed the actors getting in and out of heterogeneous associations and the process of translation (Latour, 1987, p. 258). This enabled the researcher to follow the Google Ads in its dynamic way of acting, which included coming in and out of relations with human

actors and changing actor networks in the Google practice. The researcher observed the events and followed the actors, which enabled her to spot interesting moments and ask questions, make fieldnotes and schedule semi-structured interviews when she wanted to find out more about certain events (Corman & Barron, 2017).

The majority of this ethnography was spent sitting at the centre of the office, observing and making fieldnotes focused on how the issues in Google advertising happened, how participants reacted to those issues and how they went about solving them. The desk in the agency's office was assigned to the researcher from the very start of the data collection and there she could work on the tasks she was given and collect the data. Had the research been sitting somewhere in a corner to observing the participants, it would have been obvious she was collecting the data. However, having been assigned her own working desk in the office, was helpful to stay unnoticed, which did not disturb the participants in the situation. Having had the participants being spontaneous and natural in their day-to-day activities enabled the researcher to collect data about events as they usually happened.

At first, the researcher was just an observer, however, as the ethnography progressed, she started taking on various tasks and sometimes she became a participant observer. Those tasks were, as mentioned above, not directly related to Google advertising, but were part of practices that complement Google advertising such as SEO or keyword research. As a result of being "a member of the team", the researcher had several opportunities to conduct observations at all times. Hammersley & Atkinson (2007) claim the latter is a great benefit of a researcher being a participant observer.

Some scholars call participant observations "going *native*" in the setting. This is sometimes criticised as it may lower the objectivity of the data collection process and the narrative (Coy, 1989). However, other scholars have rejected a strict distinction between objective and subjective in a setting (Tedlock, 1991). Many times it is rather beneficial to participate in the settings' activities, as this is when the true knowledge and understanding begins (Jules-Rosette, 1975).

Since the start of the ethnography the researcher was comfortable (and allowed) to move between participants, sit next to them at their desks and participate in meetings with clients and the team. The researcher's confidence and permission to do the mentioned, came from the conditions that the CEO, the marketing director and the researcher agreed on in the agreement they signed at the start of the data collection.

Observations as part of this ethnography were conducted across 7 months over the whole length of this ethnography. The observations included 7 (5 in the end) marketing managers, also clients (the agency had approximately 61 clients at the time of ethnography) were included in the observations, whenever they were part of the agency's day-to-day work activities.

4.11.2 Interviews

As part of the data collection, two types of interviews were carried out – in-situ interviews and planned semi-structured interviews. In-situ interviews meant listening to conversations between participants spontaneously and in real time, while semi-structured interviews were planned and retrospective. Both mentioned types of interviews brought relevant details of the Google advertising practice and how it happens highlighting Google Ads tool.

Pilot studies provided an opportunity to develop interviewing skills. Interview is a craft to be mastered (Jaber & Holstein, 2003) and the researcher (interviewer) should get experience in interviewing first in order to start collecting relevant data. The researcher got experience with interviewing through her pilot ethnographies, where she conducted 5 semi-structured and approximately 30 in-situ interviews and from that she learned which approaches worked best to collect the richest and most relevant data from interviews. This concerned both the in-situ and semi-structured interviews.

In the case of semi-structured interviews, as part of the pilot ethnographies, the researcher gained experience in how to write the interview guides and how to

conduct such interviews in order to collect the richest data. And in the case of in-situ interviews, the researcher learned how to observe, without interrupting and how to interrupt with a question when she felt it was relevant to do so.

For the study data, the semi-structured interview guide was prepared several days before the interview took place. As the observations went on and until the actual interview took place (Bendassoli, 2013), the researcher kept adding or editing the questions from the interview guide in order to have them as accurate and focused as possible. A lot of the times, the researcher was amending the interview guides, while she was in the situation conducting those interviews and she asked additional questions or left some initially planned questions that were answered through the participant's discussions. Every good interview will include follow-up questions, seeking further clarifications, such as: "Can you tell me more...?", "Could you explain further?" (Sandberg, 2005). to support the researcher asking additional questions and amending the interview guidelines based on the situation when the interview took place, the question should be prioritised over the answer, as the more focused the question, the better and more insightful the answer (Gadamer, 1994). The analysis of data started at the stage of forming the interview guides.

There were 10 semi-structured interviews conducted, each lasting between 30 and 60 minutes. This amounted to 7 hours of semi-structured interviews altogether and approximately 25.000 words of transcripts. In all the planned semi-structured interviews participants were open enough to provide the researcher with rich insights. They were always very talkative and happy to describe events and relations with others (team members, clients) in a lot of detail. All the semi-structured interviews were recorded on the researcher's phone and then transcribed with an application called Otter.

In addition to semi-structured interviews, the main source of data for the study are in-situ interviews. They were conducted during the time of the observations, when the researcher at the same time as observing, listened to participants' spontaneous conversations. When the researcher wanted additional explanation to what she heard, she asked in-situ questions (Easterby & Smith, 2007).

There were many opportunities to perform in-situ interviews, such as when the researcher was sitting with participants and doing observations. Not only that, but the researcher was also present at many team discussions and internal meetings and meetings with the clients. On such occasions the researcher would ask participants questions which helped her better understand events of Google practice. Through in-situ interviews the researcher could trace the process of translation and understand participants' work and how translations were happening as part of following actors' interactions (Sandberg, 2005). The researcher would for example ask questions such as *"How did you solve the tracking issue?"* or *"What would the client need to do to allow you to use this function?"* to understand how the human and nonhuman actors act in their relations in a network.

The researcher recorded most of the in-situ interviews and every time before recording any conversations, the researcher let the participants know she was about to start recording. At the start participants paid attention to that, however, soon they became used to it and took the researcher's notice for granted. The in-situ interviews were, as well as semi-structured interviews, transcribed in the application called Otter.

Sometimes when the in-situ conversations happened to quickly, the researcher always had a pen and a notepad to make notes and not miss out anything relevant which could contribute to the understanding of the SSA. Participants never expressed any hesitation or disapproval towards such note taking.

There were approximately 150 hours of in-situ interviews recorded, with approximately 350.000 words of transcripts from those interviews. The transcriptions of both the semi-structured interviews and in-situ interviews were mostly done several days after the initial interview was conducted. This allowed the researcher to follow-up with participants if any remaining questions or unclarity remained. This contributed to a rich and accurate data collected.

4.11.3 Fieldnotes

Fieldnotes are another data collection method of this ethnography. Conducting fieldnotes the researcher was aiming to record the insights, and witness events and situations (Peneloza & Cayla, in Belk, 2006). The researcher had an organised way of taking fieldnotes in an Excel document.

Taking field notes was not overly challenging for the researcher, as she was assigned a desk in a location in the main office, which enabled her to be automatically present at most of the events and conversations. First, having been assigned her own desk was crucial, as taking notes was not obvious to the participants and they did not get disturbed by it. The participants were mostly not aware of the researcher typing the notes on her laptop on the desk, as she could have been doing many other things, this including the tasks she was assigned for. Second, having a desk in the centre of the office (most of the ethnography was conducted in the main office) was convenient, as the researcher was in control of almost everything (conversations, meetings, issues) that was happening at the agency without having to ask for the permission for these information.

There were two ways the researcher captured and organised the fieldnotes. First, this was manually, using a pen and a notebook. And second, this was in an Excel file she created. The Excel file included a separate sheet for every single day the researcher spent at the agency. Moreover, every individual sheet included two tables. The first table consisted of rich descriptions of Google advertising activities, tasks and participants involved in those activities. And the second table included key dimensions of observations (space, actors, activities, objects, acts, events, time, goals and feelings) (Spradley, 1980, p. 78) the researcher filled in every day at the end of the day and were shorter in length.

Such an organisation of fieldnotes helped with keeping masses of collected data organised for the researcher to easily be able to get back to it at any point of time (throughout and after the ethnography, at the data analysis stages). The detailed descriptions in a form of fieldnotes were helpful for the researcher be more transparent in her ethnographic writing in the later research process (Peneloza & Cayla, in Belk, 2006).

There were approximately 140.000 words of fieldnotes, this including both the hand-written fieldnotes (after the researcher organised them and typed them in a Word document) and fieldnotes in the Excel document.

In addition to the fieldnotes, the researcher was writing her research diary. The diary was an extension to her field notes and included several additional interpretations, difficulties in the process of the data collection, reflections of the situations and such, as well as researcher's feelings about events, participants and things. Regardless of its subjective inquiry, a research diary can be of utmost importance to identification of that subjectivity or identification of the lack of researcher's distance towards participants in the setting (Walford, 2009). This was relevant for re-setting her position as a researcher in the setting (Burgess, 1981). The research diary also included an analytic touch which helped the researcher raise important questions that guided the data collection, data organisation and later the data analysis (Burgess, 1981).

The researcher kept her researcher's diary in a digital format. There were approximately 20.000 words from the researcher's diary as part of this ethnography.

4.11.4 Images

Taking photos and screenshots was another relevant type of data collection of this ethnography. The images were significant for an in-depth understanding of how Google Ads happen as part of Google Advertising practice. Furthermore, the relevance of taking photos as well lies in images being "*social representations constructed by researchers in learning about particular phenomena.*" (Belk, 2006, p. 282).

Two types of "photos" were taken in the setting – photos taken by the researcher's phone and direct shots of the screen. Both the images and the screenshots were taken either by the participant when the researcher asked him/her to do so or by the researcher when she wanted to document a relevant point in the secondary data, she had access to.

First, the researcher always had her phone at hand and available, to document relevant events. Moreover, taking pictures enabled the researcher to capture the process of translation in the sense of capturing interactions between the marketing manager and Google Ads (or another immutable tool). This was significant because of the “*effects that images are able to manifest on those who encounter them*” (Smith, 2003, p. 11). Taking images of anything the researcher thought was relevant was important for many further interpretations of the process of translation, stabilisation and reality creation in actor networks. Taking pictures was therefore a very powerful data collection method, especially because of the “direct presentation of the situation (subjects/objects or both) that is objective and because of the ability to see beyond that presentation” (Smith, 2013, p. 15).

Every time before taking an image, the researcher asked for the consent to use that image for the purposes of research analysis and thesis writing. It never happened that any of the participants would hesitate to let the researcher take images. This enabled the researcher to capture several relevant moments which helped her remember details of those events when analysing the data or she used those images to enrich presentations of events in Chapter Five.

Second, the researcher used two types of screenshots, which were very relevant for building knowledge of the Google advertising practice. First, the screenshots taken as part of a relevant situation were a building brick for understanding and remembering better particular situations (such screenshots were complementary to the researcher’s field notes). Second, the screenshots of secondary data were aimed to help the researcher understand the Google practice better through the past evidence. The screenshots of secondary data were retrospective, and the researcher took them when looking through past emails and documents she had been given access to. They were significant as they enabled the researcher to document what she came across and found relevant for understanding Google advertising practice and the Google Ads. There were around 150 images and screenshots taken in the setting at the time of this ethnography.

Participants of the ethnography were always happy to take screenshots of their screens whenever the researcher asked them to do so. They knew that all of the collected data would be used in anonymity. The following sections will present a type of events that enabled the researcher to collect relevant and rich data – meetings.

4.11.5 Meetings

Meetings were significant for data collection. This is because many relevant details were discussed between the team members internally and many relevant details were discussed with the clients externally. Both internal and external meetings contributed to better understanding of SSA.

Two types of meetings usually took place at ATM. Internal meetings between the participants and meetings with the clients. The internal meetings included three types of events – stand-up morning meetings, weekly meetings regarding the clients and spontaneous as a result of some unplanned events that happened in the setting. The team's stand-up meetings (took place every morning to review the task completion of the previous day and share plans for the current day) were easy to attend and no special agreement was needed for the researcher to attend them. For the weekly meetings, participants usually discussed general problems related to specific clients or Google advertising strategy of those clients. And the spontaneous meetings usually happened as a consequence of unplanned events and issues.

The second type of the meetings were meetings with clients. They were different from the internal meetings in terms of the permission the researcher had to ask for attend them. There were usually two implications for the researcher regarding the latter. First, sometimes participants forgot that the researcher would benefit from attending meetings with clients. In this case, the researcher constantly had to remind the participants to include her as a meeting participant. And second, if the meeting was planned around a specific issue as part of Google practice based on the specific client, then the researcher's presence was taken as disruptive. Sometimes the account managers automatically scheduled meetings in a separate room and the researcher usually checked whether she was allowed to participate at the meeting

or not. But sometimes meetings with clients were planned in the main office, where the researcher was allowed to be present and was never asked to leave the office for the time of the meeting. Most of the meetings with clients were done online.

Sometimes, the researcher questioned participants after the meetings to get additional clarifications. When possible, she also asked questions at the meetings. This was easier to do at the internal meetings. Moreover, at internal meetings, the researcher also took pictures. This was relevant especially when the team was visually presenting issues of Google advertising practice. The researcher did, however, not take any pictures at the meetings with clients not to disrupt those meetings.

The researcher participated in approximately one meeting per day over the course of a 7-month ethnography. This amounted to approximately 130 internal team meetings and meetings with clients of various lengths. Some of the meetings were recorded (with the consent from participants) and those recordings were transcribed.

4.12 Internal and external agency communications

As presented above, the researcher collected the data from both the internal and external communication on several communication channels. The internal and external communication was through various channels such as email, Slack (communication tool), Breeze and Trello (project management tools). The researcher was granted access to all the mentioned tools, which enabled tracing the process of translation and reality creation in real-time or retrospectively.

For this tracing, the researcher could observe (read) participants' discussions around Google advertising issues in a team chat on the main communication platform (Slack) in real-time. This was relevant to keep the researcher up to date with the Google advertising issues related to clients and helped the researcher trace the details of how the Google advertising "happened" in practice (participants and Google Ads). Having the knowledge and understanding about Google advertising

issues, enabled the research to collect more details about certain events and relate those events to other matching (commensurable) events.

In addition, through internal communication, participants sometimes became spokesmen of Google Ads, and this enabled the researcher to trace many relevant details of the nonhuman participation in acting in the networks. The latter included both the successful and unsuccessful attempts of humans and nonhumans interacting with each other.

The researcher had access to project management tool conversations between the team (Project management tools allowed for both organisation of tasks and communication around those tasks on the same tools). It was not only the main communication platform that participants used to communicate with each other, but also the project management tools (Breeze, Trello) that were used for internal communication and exchange of information. Communication with the clients was mostly through software that enabled online video communication (Skype) and through email. The researcher had unlimited access to the mentioned conversations. However, the researcher did not get access to private internal conversations between individual participants, nor to email conversations with clients.

At the start of this ethnography, the researcher got set up a new email (agency's email), through which she could communicate with the team and have access to some of the agency's communication tools. Her own email was important for the researcher to access Google Drive with all the documents concerning Google advertising and clients. This enabled the researcher to access many information she might have missed during the real-time data collection.

Overall, the researcher had access to five main pieces of software participants were actively using daily at work. These included project management tools: Breeze and Trello, internal communication tool: Slack, Google tools: Google Ads, Google email and Google Drive.

4.12.1 Historical data

At the beginning of this ethnography the researcher was given access to the agency's Google cloud (Google Drive), where she could access all the real time and historic data related to clients and the agency itself. The cloud was integrated with several project management tools the account managers were using and anything the managers transferred through those project management tools got automatically saved to that cloud. This way the researcher was able to access several documents such as reports from Google search campaigns, Google advertising research strategies, advertising procedures, agency's rules and strategies, reports from issues with Google Ads. The access was over the course of the 7 months when the researcher was at the agency. The researcher had access to approximately 2200 files on Google Drive.

4.12.2 Data set

Table 3 below presents a summary of the study data. The research ethnography adopted in this research uses several methods to collect the data. These include: the method of semi-structured interview, in situ interview, participant observation, field note taking, images, secondary data, and participation in internal and external meetings. The below table provides a numerical overview of the collected data.

Table 5. Numerical overview of the collected data

TYPE OF DATA COLLECTED	NUMBER
Ethnography length (months)	7
Team members	7 at the start, 5 at the end
Number of clients	61
Files (with access, that can be found on Google Drive)	2196
Access to software (Slack, Breeze, Trello, Google Email, Google Ads)	5
In situ interviews (hrs)	150
Length of in situ interviews (words altogether)	Appx. 300.000
Images taken (incl. phone camera and screenshots)	150
Meetings attended (incl. Internal and external meetings)	130
Semi-structured interviews (number)	10

Semi-structured interviews (hours)	7
Semi-structured interviews (words)	20.000
Fieldnotes (words)	140.000 (original Word document and written notes combined)
Researcher's diary (words)	20.000 (original Word document and hand-written)

The above table shows the types of data that were collected through various methods of ethnographic data collection and the amount of that data (e.g., number of words, number of interviews, number of months of the data collection). Not all the collected data was used in the analysis of this research, but rather the researcher left aside the data, where the actors were not acting and producing reality (Corman & Barron, 2017).

4.13 Data analysis

This section presents the plan of how the data of this research was analysed. Starting almost in parallel with the data collection, it is important to keep the data analysis plans close to the research design and data collection methods as presented above. Given that ANT informed the entire data collection, it is crucial to connect ANT, the data collection and data analysis (Corman & Barron, 2017) as the below sections will do. This gave a strong base for a detailed and insightful way of writing the ethnography through telling stories.

The researcher wanted to stay close to the data throughout the data collection process and therefore the transcription of data and partly its analysis, was mostly in parallel with the data collection. This gave the researcher an idea whether the ethnography was focused enough or not. If not enough relevant data was collected given the aim of the research, the researcher had to change something – for example, ask more questions, follow different events and actors or arrange more access to meetings, tools or conversations.

ANT informed the data collection from its beginning and the researcher had to decide which actors to follow in the setting and when and where to follow them. This was in fact the kind of a decision the researcher had to keep making daily, given the complexity of the Google advertising practice. In order to keep the focus, the research had to make sure that the networks were appropriately cut (Suchman & Suchman, 2007), therefore that the relevant events and actor relations were chosen to explore.

Cutting the networks was done through choosing relevant problematised events (Callon, 1986, Latour, 2009) as the guidance for following the actors. And then through organising those events according to commensurability (Latour, 2005). This means that when the effects of heterogeneous acting (use of Google Ads and actions around Google Ads as part of the Google practice) were visible and stable for a short period, then the researcher organised events thematically, by the type of problems (Latour, 2005). The events and actors the researcher followed were both inside the setting, but they also expanded to the outside of the initial setting. This was possible due to the multiple, fluid and dynamic nature of the Google Ads tool.

Many data collection methods helped the researcher explore the Google practice as above, such as (participant) observations, taking field notes, asking questions and making interviews, taking pictures and writing a researcher's diary. Using the rich data, Google advertising practice was analysed as a pattern of relations within many established actor networks (Latour, 1991). Those networks were collectives of actors that aimed to get temporarily stabilised, which brought to being the intentions, roles and overall created new opportunities for understanding the SSA. This was possible as Google Ads tool was understood as part of its social environment (Callon et al, 1986).

For the data organisation and later the data analysis, the researcher did not use N'Vivo or any other similar data management software. Instead of using specific software to organise the data, the researcher therefore built her own system using Excel tables and sheets, the software Otter, where the researcher transcribed her interviews and organised them by date, time and name. As part of the data organisation also Google Drive was used, where all the collected data was neatly organised by folders (images, documents, fieldnotes, researcher's diary).

The analysis of the data was done manually. First, the relevant events were selected from the data set. The relevant excerpt from the interviews, the relevant images, screenshots and excerpts from the research diary and fieldnotes. Then the researcher identified relevant actors in the selected problematic events in the data, where she traced the relations between human and nonhuman actors, traced how

those evolved and what kind of roles, intentions and reality were enacted from those relations. The researcher had first done the analysis on a piece of paper and when all the relevant problematic events were exhausted for opening the black box of the Google Ads, the researcher started to write about the data.

For writing about ethnographic data, the researcher selected the storytelling approach where she could trace and present the details of how the Google Ads tool was socially constructed through Google advertising practice. Several events were included such as when the agency's managers were denied full access to the Google Ads tool or when the client interrupted the Google advertising practice with his/her intervention. Telling a story about such ethnographic data allowed the researcher to include the detailed process of translation and therefore how the Google Ads was used as part of the Google practice. Through storytelling the researcher was therefore able to include the insights about how heterogeneous associations were formed and how they came apart when they temporarily enacted a visible outcome. Moreover, telling stories enabled the understanding of how heterogeneous relations succeeded and failed as part of the acting of the technological and human actors.

4.14 Summary of the chapter

This chapter presented and discussed the research methodology of this study. This included positioning the research in terms of the study's philosophical assumptions including the critical constructivism philosophy with pragmatism orientation. The chapter also emphasised three research questions to guide the research design of this research, which is ANT-informed ethnography. Several commonalities between ANT and organisational ethnography were discussed, along with the research design. This was followed by the presentation of practicalities of the research ethnography such as getting access and negotiating the role of the research in the setting and data collection strategy. Furthermore, all the methods for the ethnographic data collection were presented in the context of the identified research ethnography, alongside with the quantitative orientation of how much data was collected over the 7-month period for as long as the ethnography in the agency was conducted. Also, the participants of the ethnographic setting were briefly presented

and the role of the researcher in the ethnography. The chapter finished with the plan for the data analysis.

5 Chapter 5: Findings

5.1 Introduction

This chapter presents findings from ethnography in a digital marketing agency. Using the lens of ANT, the findings are organised around actor networks which focus on problematic events. The focus is drawn to 7 such networks. Each of them follows naturally unfolding events and situations, where the outcomes are either successful or unsuccessful. The unsuccessfully stabilised networks tend to trigger more events that follow the failed situations in order to resolve that failure. As the socio-material interactions in actor networks reveal, the invisible part beyond the visible Google Ads tool becomes interesting and more powerful as the failure happens (Lammes, 2017, Geiger & Gross, 2017). The storytelling approach to presenting the ethnographic insights from the digital agency setting, enables to analytically capture the ways in which Google Ads co-creates its practice, but also resists to do so (Akrich, 1992, Latour, 1992, Beunza & Stark, 2002). On the other hand, the subjects of actor networks are the ones that are pursuing their intentions and analytically taking on several roles, such as a role of spokesman and a role of a co-creator of SSA digital tools.

5.2 Approach to presentation of findings

The data was analysed through the lens of ANT, which enables to capture situations where Google Ads is constructed as multiple, fluid and dynamic in many situations and events (Shove, 2003, Law, 2009, Lammes, 2017). The chapter is structured thematically by networks, which follows the principle of commensurability of ANT (Latour, 2005). This enables the data to be analysed with more structure and enables the events to be presented in a story (Law & Singleton, 2001, Law, 2005, Bajde, 2013). The 7 networks capture events that happened in the agency on a day-to-day basis, with the focus on failed events. Therefore, every network includes a problematisation, which can result in both successful and failed materialisations from heterogeneous relations (Latour, 1993). The analysis of such relations provides the insight and detail about Google Ads, and this enables better understanding that goes beyond what a marketing manager can see with a bare

eye. The following sections will present thematically divided actor networks and interactions that happened in those networks. The networks are a set of socio-material interactions, where the power is sometimes more on the side of the marketing manager, but other times more on the side of the technology (Callon, 1984, Law, 2009, 2019, Lammes, 2017). This enables materialisation of Google Ads through practice and enables access to a more accurate and complete understanding of the SSA technology and practice in marketing literature (Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Yadav & Pavlou, 2020, Rust, 2020).

Every actor network in the Findings chapter of this thesis is given a title that is a reflection of the general topic of the actor network. Then each network starts with an excerpt from a real situation in an agency, which is usually a dialogue between two or more human actors in the setting. After this the dialogue is put in a context (Faraj & Azad, 2012), which is a presentation of the event and the situation around it. Following that, comes the analysis of the series of interactions between heterogeneous actors, which leads towards simplifying the technological black boxes (Latour, 1991, Singleton & Michael, 1993, Law, 2009, Suchman & Suchman, 2007).

5.3 “Stupid” access

The researcher:

“What are you up to today?”

Cam:

“Same old, same old. We have Google Ads set up here (he is searching on the list of clients on Google Ads tool), but I bet we don't have stupid access to it and if we don't, we cannot do a thing! This always happens!”

Many clients run their own Google advertising, through using Google Ads, before reaching out to the agency. And the incapability of the clients to manage Google campaigns successfully on their own drives the clients to contact the agency for

assistance. Once the agency has taken on the job of the set up and management of Google advertising campaigns, managers' initial intention becomes to increase client's brand awareness or/and to increase conversions. This depends on the client's aims with Google advertising. Brand awareness means targeting the kind of keywords that increase the level of brand familiarity of the searcher (Alamsyah et al, 2021). While brand conversions can mean anything from the searcher clicking on the Google ad, filling out an online form on the website or making a purchase from the client's website (Pan et al, 2019).

The aim of the agency's manager is to have Google Ads tool available with as much access to it as possible. Access to Google tools means the ability to tackle any kind of problems straight away as they happen, this including both the visible, but as well the invisible interface part (MacKenzie, 2004, 2005, Thompson, 2012, Lammes, 2017). The interfaces are visually presented as settings and features of the Google Ads, from the switch button for changing clients' accounts, to the selecting various settings to improve campaigns' performance. When those are impossible to use, this presents resistance of the Google Ads towards the managers. This meaning restricted access to the tool. Opposite to that is limitless access to the Google Ads, where the managers can access and manipulate also the backend of their advertising. For the SSA manager Cam the tool should allow him limitless use of all its settings and functions to be able to check where the campaign issues come from, solve them or pass on the issue to the IT team. And for the account managers Google Ads should allow logging into the client's account and making the tool ready for the SSA and SEO managers' use. For the SEO manager Dan having enough access to Google Ads means the ability to access and perform keyword research. Enough access and greater mutability of the tool enables users' participation in the production of Google Ads (Law, 2009, Lammes, 2017). Solving the issues, contributes to the success of Google advertising.

Google Ads is built in a way that enables a hierarchy of usage. This means there are several types of users that the account owner – the client – can allocate. For example, the client will have limitless access and use to the tool's functions, while the client might at the same time not enable the same level of access also to the digital agency. The client is therefore usually the one who can manipulate the so-

called setting to give full or limited access to ATM's managers. Having full access, the managers have limitless possibilities to co-create Google Ads by changing, editing and solving problems, however, if not, the relations between the tool and the manager will be more powerful towards the tool (Callon, 1984, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007).

The researcher:

"But you've got collaborate access?"

Cam:

"Yes. So that gives us little parts so we can kind of go into and change but... you don't want that in order to really do what we want to do..."

Je:

"Okay. But have we had access to their AdWords (Google Ads)? Because this was on hold because we didn't have access. Can you check and then see if we can get that? Yeah, no, I don't think they are running anything."

Cam:

"No, but like, even if they were I wouldn't be able to know because I do not have enough access and their Google Analytics is not connected."

The above conversation between the researcher, but mostly between the SSA manager Cam and the account manager Je, demonstrated some of the Google Ads disabled access related issues. Not having full access this consequently means that the team cannot fulfil their intention to help the client increase the brand awareness and/or conversions. For Je access to Google Ads translates into reassurance that Cam can do his work as an SSA manager appropriately and she organises activities around the manager and the clients in such a way that the access is eventually granted. This means that Cam can interact with Google Ads according to his intentions with it, one of them being integrating Google Ads with Google Analytics,

where the latter is a tool to track activities on the website related to the Google advertisement.

When the agency's managers do not have full control over the setting in Google, the setting in Google Ads, which enables or disables full access is called an immutable mobile (Law, 2009, Lammes, 2017). The same setting to enable access is, however, more mutable (Callon, 1984, Law, 2009) for the client, who has more control over it and can enable various kinds of access – collaborative, manager, edit, and can therefore change the tool.

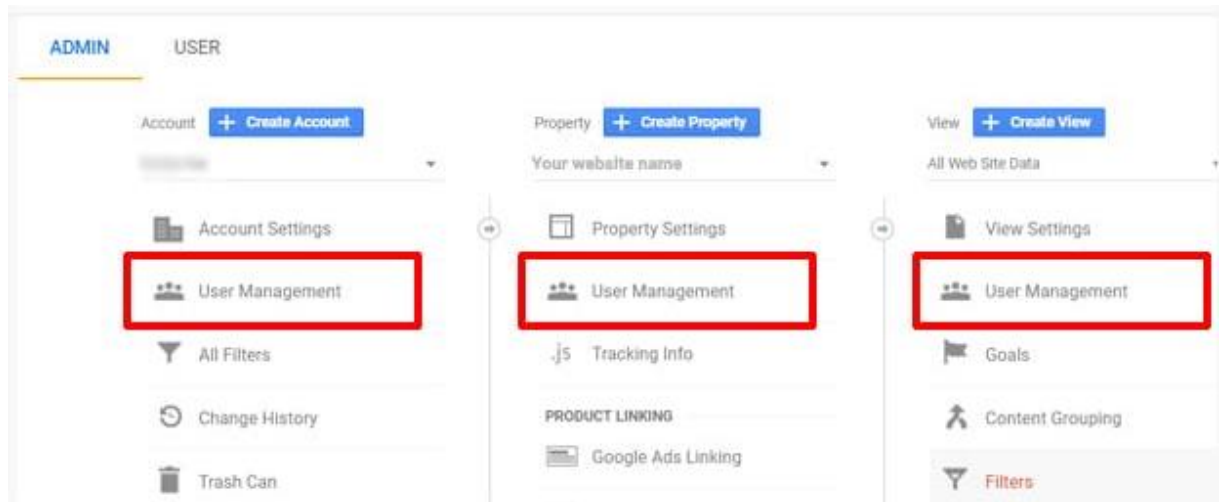
There are two ways in which the first conversation with the client can go. First, the client had never before ran any Google advertising and therefore has not Google Ads set up. And second, the client had run Google advertising before and is already the owner of the Google Ads account. When the first meeting between such client and the agency takes place, the agency's managers lead the communication the way it guarantees them most possible access through requesting at least the login details to Google Ads. At the same time the team presents to the client the importance of changing the access setting in Google Ads in such a way that will allow the marketing managers to work undisturbed. After the client and CT have signed the final collaboration agreement, the team of the agency's managers officially takes over Google advertising. The next steps of working with the client include the standardise process of data collection. There two steps are most important:

1. The account manager sends out a standardised questionnaire to find out important details about the client (Google Ads log in details, buyer persona - target audience, type of access to Google Ads, website details, other)
2. After the account manager receives the form back from the client, s/he sets up Google Ads if it has not been created before

The client usually does not mind giving the Google Ads log in detail to the managers. However, enabling full access to the managers is usually more problematic. The specific setting in Google Ads therefore enables several types of control of the tool

to the agency's managers and the client can either give full access or less access to the agency's practitioners. The first is called managers' access and the second are other types of access such as read only, which does not give full permission for use to the third person. As the client can make several permission-related decisions within Google Ads means that the client decides whether in future situations through advertising work, the managers will be enabled to have more power over the tool, or the tool will be the one which resistance to getting changed will win (Lammes, 2017). Consequently, the managers will be able to co-create the tool as planned or will face resistance which will momentarily make the Google ads less mutable and thus less prone to get changed (Latour, 1990, 2005).

Image 5.1. "Settings to enable/disable full permission to the ATM's managers" – Cam is showing the researcher which (and where in Google Ads) are the settings that the client needs to enable for Cam to be able to use Google Ads fully



The setting to enable different kinds of permissions to the third user (e.g., ATM's managers), as seen on the image above, are enabled/disabled by the client, who takes an action with the click (Thompson, 2012, Hind & Lammes, 2015) on the button. This is where interactions between human and nonhuman actors of this network begin. The client and Google Ads therefore open the network. Then the client is in full control of the tool when using it for the purposes of enabling/disabling access to the managers. These relations are the starting focus of the network and have the potential to get more complex as the network evolves further (Suchamn,

2007, Adams&Thomson, 2011). Further development of the network means one relation leading to another, where Google Ads is an actor, who fluidly skips between relations and even networks (Murdoch, 1996, Law, 2009, Michael, 2017, Lammes, 2017). This enables further insight into the tool and how it works (Michael, 2017).

The access of the tool, if enabled by the client, is the setting turned on that allows the marketing managers to do their work of managing Google advertising campaigns for the client. If full access is enabled, then the SSA manager Cam will be able to solve many potential issues that might occur as part of Google advertising. Problems are usually part of Google advertising, as Cam claims, however, they can only be solved if Cam is able to investigate those problems. This means that a problem not solvable in the moment might cause a failed relation between the actors, while this has the potential to lead to a formation of a wider actor network, with even more opportunities for simplification of the understanding of the tool (Michael, 2017). Cam being in control of the tool, by having been given access, this enables him to achieve the main intentions of the network - to increase the campaign's performance, to increase client's brand awareness and to increase the conversions from campaigns. However, if Cam is not given full access to Google Ads, then he will potentially fail to provide an unsatisfactory Google campaign performance, and this will be a failed attempt at achieving the intention of the network.

The client is in charge of deciding whether s/he will enable the "manager permission" setting to the agency's manager or not. The client opens the Google Ads on his/her device and logs in with his/her details, the s/he clicks between access options in the tool's backend. As the client has control over the settings and can change them in the managers' benefit or obstacle. The client's action and the relation that is formed between the client and Google Ads user permission setting, translates into an enabled or disabled full use of the Google Ads tool for the SSA manager Cam and therefore into a potentially successful or failed relation between Cam (the team) and Google Ads. If the relation is failed, then Cam will not be able to fulfil the main intentions of the network, however, if the relation materialises then this potentially means a well performing Google campaign.

When the network continues, its complexity and the potential for better understanding of what is behind the visible part of it, grows (Suchman & Suchman, 2007, Michael, 2017). Isa, Rob and Je are the account managers, who are the first to access the client's Google Ads account, once given the log in details. Most of the time, ATM's marketing managers make sure that the new client's Google tool is logged into correctly and it is ready for the SSA manager Cam to use it. This provides the context to the Google technology to evolve as part of practice (Law, 2004, Michael, 2017) and enables to capture the dynamic complexity of the Google tools (Mintzberg, 1970, Czarniawska, 1998, Czarniawska, 2004, 2008).

Isa has just received back the questionnaire response from the client, and she is scanning through the client's answers in order to be log into the client's Google Ads account and to be able to provide feedback and request any additional information. Once she finds the username and the password of Google Ads, she enters that in the designated boxes on the visible part of the tool, when Google Ads offers her that option. When she has successfully logged into the client's account, now the Google Ads account is added to the list of clients that ATM already is working with. The agency uses their own Google Ads account as the basis, and this includes all the clients' accounts in the drop-down menu on the primary Google Ads page. Every time Isa or another (account) manager wants to work on a particular client, they pick his/her account from the drop-down menu in Google Ads, and this immediately takes them to the client's information, data and settings. Isa is one of the account managers, who prepares Google Ads accounts when clients come on board. Isa logs into the account, checks previous Google advertising activities and other information to report to Cam and overall, she makes the tool ready for him to use it.

From several powerful relations it participates in, Google Ads comes forth as multiple and dynamic, as well as fluid, because its invisible digitality enables it to be in several places at the same time (Murdoch, 1996, Mol, 2000, Law & Singleton, 2005, Law, 2009, Lammes, 2017, Lammes & Wilmot, 2020). Several places offer context for the formulation of actor networks and their materialisation (Latour, 1983, 1993, Law, 2001, 2009, 2019, Thompson, 2012). In the above relation between Isa and Google Ads, Google tool is inviting Isa to use it and change it as part of her task of logging into the client's account and having a quick look through it to make it

ready for Cam or other managers. This extent of use makes Google Ads mutable, as Isa has full control and power over it (Lammes, 2017). The relation appears symmetrical (Callon & Latour, 1981, Lammes, 2017). This means that given her intention with the tool (to log in, check the details), Isa can perform several edits and changes to personalise and co-create Google Ads according to her needs and the tool will not resist. For example, Isa can enter the text into boxes to log in or she can switch between different functions on the tool to read through the historical data to learn about the past performance of the Google campaigns. In the specific situation, Isa does not need any backend control, as her intention with the tool, based on the task she needs to perform, does not expand that far. The relation between Isa and the tool is therefore stabilised successfully (Callon, 1998, 2010). As Isa can log in and out of the tool with the client's login details, she can scroll through the client's account and the relation between Isa and Google tool represent a successful start of the actor network including main actors such as the SSA manager and the Google Ads with its features, as well as the assisting participants in the network that stay constant and provide an extent of physicality to enable a more meaningful analysis (Law, 2001, 2009, Lammes, 2017). The actor network is themed around creating and managing Google advertising campaigns for the client. Isa is working with the questionnaire tool, which is an immutable mobile and enables the relation and thus the translation between Isa and Google Ads to happen. The immutable mobile is an object that stays constant, while the other participants in the actor network are changing and co-creating each other (Law, 2009, Lammes, 2017). There are also other such devices, for example the computer Isa is performing her task on, the mouse, the keyboard and the message in the email she uses to check client's information for her task. These enable some level of stability, to ensure the potentially completely unstable, dynamic digital tool like Google Ads, is given enough physicality and potential for expanded understanding. This would be impossible only keeping it black boxed through the invisible codes and interfaces (Mackenzie, 2005, Thompson, 2012, Sam & Lammes, 2015, Lammes, 2017).

There are several instances when the managers use the Google Ads tool while Isa is still simultaneously on different devices and even for different purposes. For example, while Isa is still scrolling through the client's account, Cam at the same time starts building a campaign in that same account. This very clearly shows the

tool's multiplicity and fluidity, which is possible due to its digitality (Law, 2009, Thompson, 2012). The digitality enables several ways of use in practice, however, often times the same feature prevents the scholars to get a complete understanding of the tools should they use conventional analytical approaches to study them (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020, Rust, 2020).

The network continues with Cam looking at his screen, performing several tests on the client's account to make Google advertising decisions about best ways forward. In the situation, Cam is looking at the client's Google Ads analytics, when he spots an issue and attempts to solve it. At the same time, the rest of the team is working on their own Google advertising related tasks, with their headphones on. The researcher notices the confusion on Cam's face and initiates the conversation by asking a question. The researcher believed that teasing outspoken explanations about his interaction with the tool might bring more understanding about the way the tool approves or disapproves its co-creation by Cam.

Researcher:

"You look confused, Cam, what is happening?"

Cam's is still turned towards the screens, when he answers.

Cam:

"Their Google Ads isn't connected to their Google Analytics either, so I don't know where the hell their analysis is going to."

As part of managing Google campaigns, Cam does A/B testing on Google ADS, to make sure the campaigns are working aligned with the client's requests. As he does that, he faces an issue on the tool, which prevents him to continue the testing as he planned it. The testing task always works smoothly for Cam, as he explains to the researcher, but this time, the error notification he sees in the screen in front of him, prevents him to continue the work as usual. He thinks that the issue that occurred might have to do with him not having the right level of permission to use the settings

of the tool. The tool therefore resists to be changed and further used, which shifts the power more towards its side (MacKenzie 2005, Law, 2009, Lammes, 2017).

As Cam explains to the researcher, the tool disallows him to access the backend of the client's Google Ads account, as the agency has not been granted complete access to that account. The problematic event has to do with the integration of Google Ads with another Google tool for tracking traffic - Google Analytics. In the same actor network, therefore more actors are joining the existing interactions, and the network is growing in complexity, but at the same time in the potential for simplification of the core tool Google Ads (Michael, 2017). Related to Google Analytics, tracking is an activity which allows the managers to understand where the clicks and impressions from Google ads are coming from (Zhu & Wilbur, 2011). This means that Google Analytics enables Cam to track the running ads traffic and understand which ads are performing better and which worse (Yao & Mela, 2011, Chen et al, 2009, Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). Also, which ads are solely responsible for conversions, and which cannot take full credit due to other types of advertising the client is running at the same time as Google ads (Xu et al, 2014, Batra & Keller, 2016, Kannan et al, 2016).

In the above event, Google Ads is immutable for Cam. The heterogeneous relation between Cam and Google Ads fails to materialise what Cam wants to pursue - go to the backend of Google Ads and check what went wrong so that Google Ads is not integrated with Google Analytics in order to make sure the Google campaign is correctly tracked. Google Analytics is not the focus of this network (Suchman & Suchman, 2007, Michael, 2017), but is its immutable mobile. It translates into an additional way to check (test) if Google campaign clicks, and conversions shown on Google Ads match the Google clicks and conversions on Google Analytics. Checking if the numbers between the tools match, enables Cam to understand whether the tools are integrated with each other.

Also, Google Ads tool includes analytics feature on every account. This enables Cam to compare the metrics between the tools, where all the metrics should match between Google Ads and Google Analytics. As this is not the case, the integration between the tools has not been done properly. The comparison of metrics between

the tools, enable Cam to confirm his suspicions about the integration issue. Solving that issue is significant, as it enables the regular A/B testing Cam performs. The network in this case fails to successfully stabilise (Latour, 1992, Akrich, 1992, Law, 1991, 2009, 2019, Latour, 2005, Serres, 2007). Analytically Cam's role is not only of the user of the Google Ads, but also of the spokesman, as well as the fixer of the issue. Being a spokesman (Callon, 1984, Michael, 2017), Cam voices the issues he comes across and this presents the Google Ads as resisting the change Cam intends to perform on it through the actions of A/B testing. Due to not having full access to Google Ads, Cam cannot access the backend settings of the tool, which he believes would solve the integration issue. Having had sufficient access, in the Google Ads' settings Cam would check why the tool fails to integrate with Google Analytics.

The immutable mobile, such as Google Analytics tool, would normally hold the network together to enable its temporary stability (Law, 2009). This is a job of an actor that does not actively participate in the creation of new reality. However, in the case of the Google Analytics and Google Ads integration issue, it is not only Google Analytics that is immutable, but with the resistance Google Ads is acting with, it also appears highly immutable itself. Such immutability of the nonhuman actor of the analytical focus, prevents the process of translation to successfully complete. This is mainly due to the lack of control the human actor Cam has got over Google Ads (Latour, 1987, Fujimura, 1992), as he tries to investigate the issue when it appears.

The same actor network continues and grows in complexity, when Cam takes a different approach to solving the occurred issue. He sends a message to the account manager through the agency's main communication platform and explains to her that the specific client did not grant the sufficient level of access to Google Ads. The standard timeline of events in such case is that the account manager of the client receives the feedback from Cam and passes the information on to the client directly via an email or a live telephone chat. As part of the process, the account manager tries to get as many details about the issue as possible from Cam, to be able to firmly request further access to the tool from the client. Sometimes Rob would go through the issue with Cam. In the exact situation, Rob is sitting with Cam at his desk, looking at Cam's screen when Cam is presenting the issue to him.

Occasionally Rob looks at his screen, and scrolls through Google Ads settings he can access, in order to better understand the issue. Again, the fluid and multiple nature of Google Ads is clearly visible, as the two managers are using it at the same time, performing different actions on it (Law, 2009, Hind & Lammes, 2015, Lammes, 2017).

Some time later, Rob moves to his own desk, to check the issue further, He is navigating through the client's account Google Ads settings on his own. After a while of scrolling up and down the tool and clicking between various features to figure out what kind of an access the client has enabled the agency, he is ready to get in touch with the client. Rob wants to make sure that Cam has not missed anything out, and the issue really lies in the access as opposed to another setting, he has forgotten to switch on or change. Rob is at the same time also checking the chain of email messages between him and the client in order to ensure all the information has been taken in and considered while attempting to solve the integration issue.

The relation between the account manager Rob and Google Ads is successful as per his task - to check and scroll through the Google Ads' settings to ensure that all the functions of the tool that the managers could re-visit have been re-visited. This is, moreover, to get a better idea about Cam's request. This socio-material interaction translates into a source of information, based on which Rob can write an adequate email for the client. The process of translation that happens between the actors is how reality gets enacted and therefore how the tool is analytically constructed through humans' actions (Latour, 1992, Callon, 1998, Law, 2009, 2019, Latour, 2005, Serres, 2007). Having information on his hand will enable Rob to request the right kind of access for the settings Cam needs check in the tool to find out what the reason for a failed integration between Google Ads and Google Analytics is. Google Ads is therefore mutable for Rob, based on the intention he has with it. However, Cam, who cannot change the settings of Google Ads to enable the integration between the tools, cannot enable the tool to evolve the way it could evolve if the resistance was not there, which makes the tool more immutable in more powerful than Cam. How the tool can at the same time appear as mutable and immutable, shows multiple sides of it, this is multiple ways we can understand it

better, if we continue to follow the actors as they move across the network (Callon, 1984, Law, 2009).

The email and Cam's message are immutable mobiles that translate into a source of information for Rob. The email serves to check if Rob already had the conversation about the access with the client via the email. And Cam's message serves to inform Rob's actions with Google Ads "research" and developing the understanding of the issue.

The below image shows a reply Rob received from the client, as a response to his inquiry. When he received the email from the client, he posted it in a project management tool, which the team is using for internal organisation of tasks and communication.

Image 5.2. "Project management tool card screenshot" - Isa posted a reply from the client in order to make everyone from the team aware about the situation with Google Ads tool access, October 18th, 2019

ADWORDS ACCOUNT REPLY (NO ACCESS)

Posted by [redacted] on Fri, Oct 18, 9:22am. 🗨️ In list [ACCOUNT INFO](#).

Hey [redacted],

We do not have access to the old Google Adwords account because we did not manage it and the campaign that was created didn't work either way. You have access to the accounts that we use.

[Edit description](#)

People assigned

[\[redacted\]](#)

Time tracking 5m

Oct 18 5m [redacted] ADMIN

[Log work](#) [Start timer](#)

Estimates

- [Status](#)
- [Color](#)
- [Tags](#)
- [Files](#)
- [Assign](#)
- [Link](#)
- [Due date](#)
- [Estimate](#)
- [Size](#)
- [Subscribe](#)
- [Custom fields](#)
- [Archive](#)
- [More](#)

When the acting and the process of stabilisation continues, the client enters the network again after receiving an inquiry from Rob. As a response to Rob's enquiry, the client uses Google Ads to check whether he had enabled full user permission to the agency. As the copied email from above reveals, the client had already enabled access to the Google Ads tool (calling it Google AdWords, which is the old name for Google Ads, however, the team and the clients still use the old name to communicate). And Rob and Cam comment that it is strange Cam could not access the settings in Google Ads when he was doing the testing. When Cam starts to check Google Ads again, trying to discover why he could previously not access the Google Ads settings, the complexity of the network and relations starts to grow again (Michael, 2017). Due to the situations growing in the number of actors, and thus the number of interactions happening at the same time, the opportunities for the simplification of the Google Ads, and its understanding from various different angles, increase (Callon, 1984, Mol, 2000, Michael, 2017). New roles get established, such as a new role of Cam as an "explorer". This role of an explorer is referring to discovering the reason why Cam could not access what he wanted to access previously and what could be the next steps in the process of solving the integration

issue. Such roles that the actors take on, help with the understanding of the invisible parts of the Google tool (Michael, 1993, 2017).

Several socio-material interactions, loaded with power, are again created. One to emphasise is the interaction between the client and the tool, which translates into a source of information for the client to report back to Rob. The email (the message Rob received from the client) serves as an immutable mobile to maintain the relation stable for a short time (Law, 2007, Michael, 2017). Also, the project management tool is an immutable mobile that translates into a platform to inform the whole team about the access-related issue. This is useful for Cam to be able to progress with solving the issue about the integration of Google Ads with Google Analytics. As well the message on the project management tool is useful for the rest of the team to be aware of the situation with the access in relation to the specific client for whenever they have to join the network with their input.

The message, moreover, reveals that the setting on Google Ads for full access to the agency was already enabled by the client. Therefore, the initially failed relation between Cam and the Google Ads intending to solve the integration issue, grows in complexity, when Cam is having another look at Google Ads' settings. The process of translation between Cam and the tool continues and will potentially materialise new reality of a solved problem (Callon, 1984, Latour, 1993). This is given the new circumstance and the fact that Google Ads should be more mutable to use for Cam (based on the fact that full permission for use was already given by the client).

5.4 Clients, who know absolutely nothing

Isa:

"We've got clients that know absolutely nothing. Client X for example still confuses Google ads with Google. And they are like...I want to do Google. And

then I think to myself...ok cool, you know nothing. I spent two hours trying to explain in a very simple way to this woman what Google was and what PPC (SSA) and eventually she understood."

A lot of the time ATM clients come on board not knowing what Google advertising is, what it does and what is the aim of it. This causes lack of understanding of why specific type of information or permission to use Google Ads tool fully is relevant for the marketing practitioners to work undisturbed. It happened many times before that the client failed to coordinate with Google Ads in such a way that would enable full access to the tool for the SSA manager, the agency's account managers decided to put in place a new policy. This was aimed at bringing the Google advertising practice closer to the client to increase his/her understanding of it. The new actor network is organised around the topic (Latour, 2005) of client training. Again, the network begins with another client reaching out to the agency seeking help with Google advertising campaigns in order to increase the conversions and/or to increase the brand awareness. After this event, the network continues as below.

Isa and Rob are sitting together and discussing the potential advertising strategy of the client that just came on board. They talk about how they had already sent out and received the basic information from the client through the standardised form (Google Ads login details, competitors, type of product offered). The basic information about the client is therefore received, however, Rob is afraid that the client does not understand why the account managers will potentially require more information and support when the Google campaign is created and running. When the researcher gently interrupts the conversation and asks what kind of "other support" the team might require, Rob explains that such support might include "manager permission access" (greater access that was initially given to the agency) and gives a couple of examples when this was needed previously.

The account managers have many experiences with clients disrupting Google campaign or the processes around it. Some of such examples includes cases, when the clients disrupted or even completely disabled efficiency in managing Google advertising campaigns by the agency's managers. Efficiency or success in ANT

vocabulary means creation of heterogeneous associations in such a way that will temporarily bring into being the main intention of the network (Latour, 2005, Law & Singleton, 2005). And the disruptive events that Isa and Rob are already familiar with have caused the need to put a new training-related policy in place. This includes preparing a presentation or a plan to enable the client a better understanding of the Google advertising practice.

The account managers Rob and Isa continue their situational conversation, sitting in the bigger ATM office. Cam, Dan and CT are around as well. Their desks being positioned across the space, Isa and Rob not far away from them, the rest of the team can easily listen in to the conversation and join whenever they feel they can contribute to it. Rob and Isa are with their laptops in front of them, while Isa is clicking between the PowerPoint document and having a look at some of the Google Ads functions. She is trying to think of all the things she can include in the presentation for the client to make it long-term beneficial for both sides.

The team regularly faces poor knowledge their clients have about Google advertising. What matters to the agency's managers is that the clients understand what the agency's Google advertising service is and what kind of support from the client is needed for this service to function as planned. Not understanding at least, the basics about Google ads can cause unnecessary confusion and even disruption of campaigns by the client. This results in inefficiencies on the side of the agency when creating and managing Google advertisements for this client. There the reason for inefficiencies lies in many repeated conversations, explanations about Google advertising to the client.

The socio-material relations formed are between Isa and Google Ads when she is trying to figure out what to include in the client's presentation. This relation translates into a source of information and into a reminder of what about Google advertising and its tool Google Ads to include in the presentation. Her intention to provide the client with information to enable him/her a better understanding of Google Ads, is based on her previous experience, where she had to use Google Ads to communicate many issues that occurred around the tool. The presentation about Google advertising on PowerPoint is an immutable mobile that translates into a

source of information about Google advertising and Google Ads for the client. As immutable mobile, PowerPoint adds to the stability of the Google Ads, which is very fluid between the networks and as well dynamic (Law, 2009). The presentations help with the translation of the tool and enables a less disturbed Google advertising work for Cam and the rest of the team in the stage of campaign creation and campaign management. The translations including all the constant, as well as the fluid objects, helps to demystify the hidden backend of the Google Ads (Law, 2009, Hind & Lammes, 2015, Lammes, 2017, Lammes & Wilmott, 2020).

The network continues when Isa explains to the researcher she likes to spend as much time as needed putting together presentations for the clients. This time she is creating presentation for the client based on the questions like “What is Google advertising?”; “What is a Keyword planner?”; “Why is the keyword planner important?”, “What is Google?” or “What are Google’s tools?”. Keyword is an essential element of the Google advertising practice and Keyword planner is a function in Google Ads. Moreover, Keyword planner enables the SSA manager Cam to do the keyword research for the keywords he will use when creating a Google advertisement.

The questions (and their answers) that Isa builds the presentation for the client on are immutable mobile (Law, 2009). Like the map of La Perouse, the questions from the presentation remain constant, keep the shape to add to the stability to the invisible object actor (Law, 1990), and translate into client’s better understanding of Google advertising and Google Ads. For Isa, Google Ads’ functions used for the purposes of creating a presentation as above, are mutable. The tool allows the manager to scroll, click, and navigate between the functions in order to remind herself what to include in the presentation and why this is important. The power is on Isa’s side, at least for the part where she is able to be the co-creator of the tool, by using it according to her intentions (Lammes, 2017). The tool therefore turns out to be more mutable for Isa and this enables a successful materialisation of the interactions and its outcomes (Latour, 1992, 2005). As Google Ads is an extremely fluid tool, it can hardly be captured in one place and one situation only (Thompson, 2012, Lammes, 2017). As Google Ads can be used by several managers at the same time, sometimes causing problems, other times, not resisting to the use at all,

the stabilisation as the outcome of the translation, is only temporarily stable (Latour, 2005, 2017, Lammes, 2017). Given the quickly shifting and changing Google Ads, this is a short-lasting reality.

While sitting in her usual place in the office, in front of her laptop, Isa says that the client having at least the basic understandings of Google advertising, can save a lot of time for the team. This includes account managers' time potentially spent on additional communication with the client, SSA manager's and SEO manager's time spent on fixing unnecessary problems around Google Ads. While creating the presentation, this time Isa is also using an additional screen, not only her laptop as usually. On her second screen she has two windows open. On one the researcher can see the client's Google Ads account and in the other, parallel to the Google Ads, is a blog with the most recent Google algorithm updates. Isa notices the researcher scanning the screen and she says:

Isa:

“So, for instance, today we created such document for SEO related to PPC (Google advertising) just to give an example (such a presentation), we created a document where we explain what the keywords are, how they are going to be distributed within the piece of content on the website or a blog, and then how it will be beneficial for them (The client) for the traffic and the growth of the company. In that way. They don't need to have all the details, but they need to understand the big picture.”

“Understanding the bigger picture” by the client, enables the team to ensure they can accomplish the narrower intention of this network - better understanding the Google practice by the clients. Moreover, to ensure they can create and manage Google advertising campaigns successfully. Support from the client in ANT terms means client's interaction with Google Ads settings (e.g., permission settings) in such a way that enables undisturbed work of the agency's managers. This is either by giving full access to Google Ads from the very start or whenever the agency's managers require more access.

The explanations and presentations Isa is creating, are based on her long years' experience with working as an account manager using tools like Google Ads. She knows how the tool works and which part of the practice needs to be most emphasised to achieve best understanding of Google advertising on the basic level. The interaction between Isa and Google Ads is established when she searches for features in the tools to remind herself what to include in the presentation to the client. The client is an actor that will coordinate with Google Ads at the point when the managers need him to. Thus, he will enable Google Ads more mutable for the managers. At the same time the interaction between the client and the tool is successful and the power of the relation is on the client's side, when the client will have the understanding and the ability to grant the access of the tool to the agency.

When putting together a presentation, Isa uses different functions on Google Ads tool, such as Keyword planner or Google Ads analytics. This in order to be able to include the most important and basic information for the client about the tool. This in-depth translation makes the tool multidimensional (Lammes, 2017). This is because the translation does not stay only on the surface of the tool, but Isa changes and edits the tool with clicking in it, entering its settings, its functions to make the best use of the tool as per her intention with it. Because Google Ads "enables" Isa to change it in the presented way, this makes the tool more mutable for her (Law, 2009). Isa therefore has enough control over the Google Ads and is invited to use it to such an extent that the relation between her and the small invisible functions of the tool are fully established. The presentation, the Google blog, the laptop and the screen help in the process of translation and materialisation from the interaction. The relation produces materiality and understanding successfully, as the purpose Isa had with the tool was accomplished successfully. The tool did not resist to any changes Isa performed on it (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). The tool collaborated to the extent that the presentation with meaningful information for the client WAS created and successfully sent to the client.

The network continues with the team meeting one of their clients online. The intention of the meeting is to provide a better understanding of the Google advertising practice for the client. The intention emerges through the network, when previously failed relations between Cam and Google Ads created the need to

educate the client better. This includes information about the main goals and functions of Google advertising. Meetings with clients are usually introductory meetings, emergency meetings or regular meetings. The below meeting was an introductory meeting with the client.

Rob is the one who called the meeting with the new client. When a meeting with a client is introductory, CT usually sends to the client an online brochure, so the client can study it prior to that meeting. The brochure aims to very simply explain and illustrate the basics of Google advertising as below:

“Google ads (Google advertisements) are a little like the stock market. You must watch your campaigns at least every few days to make sure they are generating a good return. We will manage your Google ads campaigns each month, making sure they are converting. We will provide you with reports on your ROI.”

The above portrayed success with Google advertising the agency has had, is a result of CT's experience with Google advertising. The description in the brochure was written by CT and is an immutable mobile, which aims to illustrate to the clients that just came on board what the agency is able to provide to them in terms of Google advertising. As much as the brochure and its content are not directly related to the Google Ads itself, it is significant to understand that the tool cannot be reduced to single compartments or as single (Michael, 2017, Lammes, 2017). Full understanding comes from the tool's embeddedness with the constant objects and subjects around it that make it complete (Law, 1984, 1987). The description in the brochure aims at portraying Google advertising as a very powerful tool for increasing conversions and brand awareness. In the specific case, the interactions between the tool and the users are successful (Callon, 1998, Lammes, 2017, Michael, 2017). The historic relation between Google advertisements, as part of Google Ads tool and CT (from his experience) translate into a potential for the client to benefit from running Google advertising campaigns with the agency. This means future successfully established and stabilised relations between Cam and Google Ads tool. Which consequently brings reality to being through increased conversions and increased income from Google advertising. CT's experience is an immutable mobile,

which stays constant in the process of interacting, and also adds to the durability of the network (Latour, 1983, Michael, 2017).

The client interacts with the Google Ads tool before the meeting with the agency and the meeting gives him/her an opportunity to ask questions about the Google advertising service. For the client, using Google Ads to prepare for the meeting (check its functions and settings), is a fully established relation with relatively equal power on both sides – Google tool and the client (Law, 2009, Lammes, 2017). This means that as per the intention the client has with the tool – to scroll through its functions and settings to get the basic idea about it, Google Ads shows no resistance to the user and allows a certain level of editing on the flat surface of it (Lammes, 2017). The tool is therefore mutable for the client. The mentioned heterogeneous relation translates into the client being prepared before the meeting and is ready to ask questions in relation to the agency's Google advertising service (Google practice). The interaction with the Google Ads further produce a list of questions that the client puts together to ask at the actual meeting with the agency's managers.

The meeting starts with the team sitting around Rob's laptop. Everyone introduces themselves and they welcome the client on board. Shortly after the client is invited to ask questions. The questions concern a variety of topics around the Google practice and its tools. In the situation, as the client asks questions, Pete quickly adds:

Pete:

"It took me far too long to understand a lot of this stuff, so I am quite good at explaining it. And so, if you need any help... You know, it's very specific stuff we're doing that let us change the website and set up the PPC (Google ads) campaigns accordingly. So, it is a lot to it, a lot to start with for us and a lot to understand for you, it's very top heavy. But it's worth it to do a good job..."

Above Pete is trying to comfort the client offering help with any additional explanations regarding Google advertising that the client might need in the future. Each of the team members has a laptop at hand, so they can always refer to the data or functions and settings from the Google Ads tool if the client asks specific

questions. As Pete explains to the client how the communication usually works, he is looking at the client's website and the client's Google Ads account, which are opened in front of him. He is prepared for any questions the client might ask that would require additional support directly from the tool. Pete scrolls through the tool, clicks on the Keyword planner tool, goes back to the main settings, checks the client's ID on Google Ads and so on. At the same time, Rob, who is the account manager of the client and at the same time leads the meeting, does the same. He also wants to fully participate in the conversation between Pete and the client and is therefore scanning through the client's Google Ads account and is occasionally clicking between different functions. Je, who is also participating at the meeting, is working on several other tasks at the same time. Her laptop is full of tabs, while she time to time jumps on the Google Ads account of the client to help her thought process as she listens in.

The above situation shows how Google Ads is simultaneously used by three, four or more participants of the meeting. Not only that, but the tool is also part of different actor networks at the same time. The networks expand beyond only internal spaces of the agency, to the external environment of the client's organisation (Latour, 1988, Law, 2002). As the managers follow the conversation between Rob and the client, they use the visible part of the Google Ads, where the tool lets them a level of use that matches their intention with it. In contrast with others, Pete interacts with the tool more actively - he clicks between the functions to source the information the in-situ conversation requires of him. He sometimes also changes settings in the back of the tool, following the client's requests from the meeting. His emergent role in the situation is the role of an "information provider" from Google Ads as well as the spokesman (Callon, 1984). Being a spokesman, Pete presents the interest of the tool, which is nonhuman participant and can rarely voice that interest (Callon, 1984). Other managers take on the roles of "followers", as they are less active in using the tool in the network. The interactions with the tool are still present, however, with less opportunities for deeper, multidimensional understanding of Google Ads invisible features (Lammes, 2017). Leading very busy schedules, other managers of the agency like Je, listen in to the meeting, but at the same time carry on the work with other clients using Google Ads for another client. As the use of the tool is happening at the same time, this again shows fluidity of the Ads. With so many uses of the tool

at the same time, it is hard to control its dynamism and the way it is passing through and between the relations (Thompson, 2012, Lammes, 2017). Given such invisible skipping between actor networks, it is significant to put the tool in context, with other less mutable objects, which enable some physicality to Google Ads, as the process of translation is ongoing (Law, 2009).

The actor network continues with the account managers organising Google advertising activities for the client in such a way that will enable the client to have full understanding of them. The most prior thing includes organising team's tasks in the project management tools and creating a timeline for the client to know the order of the tasks and the time needed for each of them. A client, who understands the aim of Google advertising practice should be supportive, rather than disruptive for the team's Google advertising-related work. However, this is not often the case, and several additional problematic events unfold (Callon, 1984, Latour, 2005, Law, 2009).

5.5 We just want bookings

Isa explains that whenever a client comes on board, she would look at what the client's needs are, map out the tasks and create a work timeline. After that, she would schedule a meeting with the specialist manager on the team to work on polishing the plan. As part of the new situation, the new client participant of the network already used Google advertising before he joined the agency. Isa therefore issues a request for the access to the client's Google Ads. There she is planning on checking the historical data from the advertising the client did before. That information will help her with more accurate planning of the roadmap and timeline for the new client.

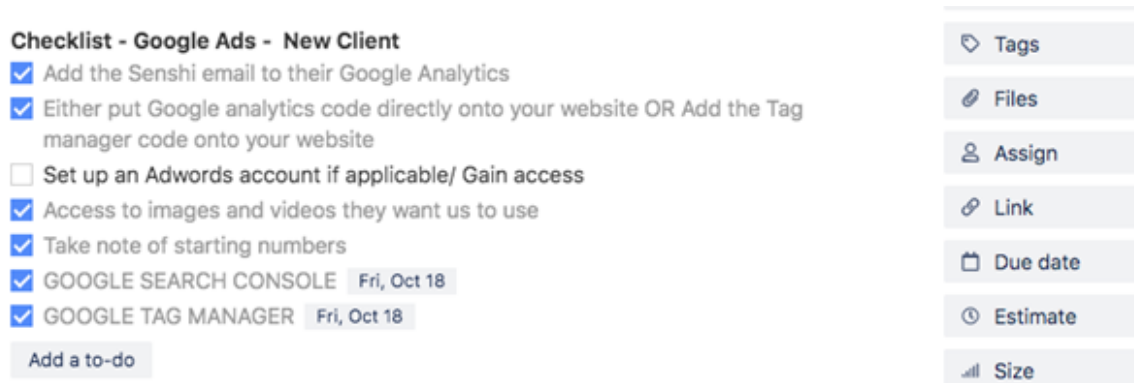
When creating a roadmap, Isa works with the client's Google Ads open, as well she has the notes from the meetings on the side. On one screen there is Google Ads and the project management tool, and on the other screen she has the emails from the client. The emails are important for the time when Isa is creating roadmaps for clients to make sure she considered all the information the client provided her with. The heterogeneous relation between Isa and Google Ads translates into a source

of information and a guidance for her that she uses to create a map of what are going to be the tasks for the client. She is in control of Google Ads given the, in the network emerged intention of collecting the data from the tool. The relation between Google Ads and Isa is therefore successful and materialises a road map with the tasks and time frames to accomplish those tasks for the client. Another successful interaction is relevant for the contextual understanding of the tool, as well it portrays the social construction of the tool in marketing practice (Law, 1992, Callon & Law, 1997, MacKenzie, 2004, 2005). The email, the screens and the project management tool are an immutable mobile that stay constant through the creation of the map. The email is another technology of the network, however, because it is not the focus of attention to the researcher, it is used as a constant and immutable object, which helps add shape to the Google Ads (Lammes, 2017, Lammes & Wilmot, 2020).

The roadmap includes information about Google advertising that will enable the client to oversee each step of Google advertising that the agency's managers take. This should develop better understanding for the client to coordinate with the tool in such a way that will enable the agency's managers to do their job without the client disturbing their tasks. The roadmap is an outcome from the socio-material interaction between the account managers of the agency and the Google Ads tool. The roadmap should increase the client's understanding about the Google advertising practice and prevent the temptation to disturb the agency's managers' work.

The roadmap is created in a project management tool, which shows in the image below. The map includes all the tasks the agency's managers plan to perform for the specific client. The tasks are on the tool are associated with the practitioner responsible for each individual task. Client can also get direct access to his project management account to keep the track of everything related to Google advertisement creation and Google advertisement management. Image 4 shows a screenshot of tasks that the account manager needs to tick off first to be able to begin his/her work.

Image 5.3. “Checklist for Google advertising” - Isa set up an account on the Project management tool for all the starting steps of the SSA practice, November 20th, 2019.



The list of tasks in a project management tool also includes Google search console and Google Tag manager as significant tools to participate in Google advertising. These tools are immutable mobiles in the actor network. They serve as a support system to the team when using Google Ads supplying several additional information about the keywords – characteristics (Google search console) (Klapdor et al, 2014), as well as tracking activities around Google advertising, such as clicks on the advertisement or other (Google Tag manager).

The list of tasks is an immutable mobile which helps with the stabilisation of the relation between Isa and Google Ads. There Isa keeps control of what needs to be done, also there she can make sure the client is aware of all the tasks going on related to his account. The purposes Isa uses the tool for are again such that Google Ads does not resist to. The interaction between the actors is therefore asymmetrical, however, with the power on the side of the manager (Murdoch, 1997, Lammes, 2017). With such recognised asymmetry, the invisibility of the tool can be significantly better acknowledged (Murdoch, 1997). Isa being the powerful user and in control of Google Ads, her plans with the tool do not get disrupted, as she is pursuing her intentions (Callon, 1984, Michael, 2017). The flat ontology prevails, however, still enables to see the tool in the context and in the process of social construction (Law, 2009, Lammes, 2017). The heterogeneous relation is successful (Latour, 1990), and it translates into a well-informed client, a satisfied client, a client

that trusts the agency with the job of creation and management of Google advertisement campaigns.

Following the above, this network enabled the shaping of the Google advertising practice in a way that ensured the client's understanding of the Google advertising and how it would be performed on the agency's side. Seeing the technology through performing actions, enables several meanings of the Google Ads and brings coherence (Laemms, 2017, Simkin & Quinton, 2016). In the situation Google Ads allowed marketing managers to use it to the extent that caused powerful relations being inclined towards the manager, giving her more power (Galloway, 2004, Lammes, 2017). Google Ads is a mutable mobile, which enables Isa to edit and change its analytics function. As the manager checks through the past data about the client's Google advertising activity, this contributes to the overall satisfaction of the client and to the success of Google advertising for the client. Consequently, with the client having more understanding of the Google advertising practice and a better idea about its steps through the roadmap, project management tool report, presentations and meetings, the client will potentially stay away from disrupting Cam's and team's Google advertising work.

The network continues with Je explaining to the client what a roadmap is and what positive impact does the roadmap have for the relation between the client and the agency. In effect, what impact does the roadmap have for the success of the Google ads practice. She says:

Je:

“So, this is just like the way that will logically...the process that will take place. And as the team, the PPC (Google ads) team here, the way we normally work we send you what we call the specification of the campaign with all the details about the campaign. So, you will be always involved in any decision in terms of budget for instance, we will give you recommendations, and then and we will wait for your sign off to basically start to run into campaigns. So, just want to make sure that you know, at this stage that everything will be checked from yourself as well just in case.”

The roadmap as described above puts the client in charge of the Google advertising activities. Not only Je, but also other managers contribute to creation of such documents. For example, Rob and Cam are working on getting an approval from the client to start working on the Google advertising tasks. The latter includes a proposal for activities around Google advertisement content and design. This was an in-situ moment that the researcher captured:

Cam sits in his usual position, while Rob is on his left. Both are with their laptops, Cam as well with the additional screen. Cam is clicking between the two screens – on the laptop Cam opens his Google Ads and in front of him, on the bigger screen, is a Word document with the advertisement's design and content (Haans et al, 2013, Yang et al, 2015). Cam is clicking between different functions on the tool. The manager enters the Keyword planner to remind himself which keywords should be included in the proposal. The researcher is sitting behind Rob and Cam, when Rob laughingly says:

Rob:

“Like me and Cam are doing today...we sent over the ads (a document with the ad proposal) yesterday, you know, that could have been fine. And then that would have been that done but they sent it back as they were not happy with that. So, we spent another day doing that. So, it's quite difficult...”

The above signifies how planning ahead and keeping the client familiar with the plans is significant for bringing to being the client's understanding of the Google advertising practice and its tasks. This triggers a series of successful materialisations from heterogeneous interactions between the tool and the managers at the agency. Making sure the client understands which tasks are included in Google advertising for the client well, is Rob's intention of this network. This enables better efficiency of Google advertising activities. From the above situation, Rob and Cam are the human actors of the network. They are the users of the technology, who are in control of the Google Ads (Law, 1988). The tool allows the managers to use them for the purposes of Google advertising planning. In this case, the tools are a mutual mobile, enabling a fully established relation and materialisation of a proposal as below.

The proposal is an outcome of Rob's and Cam's work with Google Ads. The information they are getting from the Google Ads account of the client are immutable mobile, which translates for Rob and Cam into a reminder of what to include in the client's proposal. As per their intention of creating the proposal for the client, this relation is successful and happens on a multidimensional scale (Lammes, 2017). This means that Google Ads is inviting Cam and Rob to perform actions on it, to search in it, change settings, delve deeper on the backend level on the tool to perform actions there as well (Adams & Thompson, 2016, Lammes, 2017). This makes Google Ads more mutable as the managers interact both with the functions of Google Ads in-depth, as well as with the tool on its surface level (Lammes, 2017). Having the mutability, more change can be made to the tool, as opposed to the tool being more constant and resisting co-creation (Callon, 1984, Law, 2009). Cam and Rob can therefore personalise Google Ads according to their needs by clicking through various functions and by changing settings, as well as they can interact with the tool on the level visible to anyone. Such surface level does not allow for the actual changes of the tool. The current digital set up of the tool that is invisible to the human eye, is done in a way that does momentarily not cause problems to the managers (Lammes, 2017). As all the learnings from actors are only temporarily stable, the mutability of the Google Ads will potentially very quickly change as well (Latour, 2005, Law, 2009, Corman & Barron, 2017). In the network, the client's wishes are immutable mobiles. They serve as a reminder or a source of information for what to include in the proposal to the client. Je is an informer of the client, where her previous experiences positively impact her current actions with Google Ads tool. Je, being an account manager, is daily in touch with the tool and its functions. Isa knows what to emphasise to the client to give him the sense of control over what the team does as part of Google advertising practice. This is in order to prevent the client disrupting the Google practice.

Below is a proposal or a "PPC Timeline", which includes the time frames of Google advertising tasks tailored to the client. The timeline also includes the types of Google advertising tasks and the expected outcomes of those tasks. The document below is an outcome of the translation from the interactions between the managers and the Google tool. The proposal is an immutable mobile, which translates into a source

of information for a better organised work for Cam when using Google Ads tool (setting up Google ads campaign accordingly) (Thompson, 2012).

Image 5.4. “Cam creates a Word document - an SSA timeline for the client” (secondary data) - the Timeline is to be sent out to the client to sign it off before the SSA work begins, February 25th, 2020.

PPC TIMELINE

Stage	Week	Actions	To do	Goal / Metrics
Ads Pre-launch campaign	<ul style="list-style-type: none"> 11/03/2019 	<ul style="list-style-type: none"> Competitive analysis Audience definition Campaign settings Keyword research Setting budget 	<ul style="list-style-type: none"> Pedal Salon to setup remarketing tag 	Bookings <ul style="list-style-type: none"> > Click Through Rate¹ > Conversion Rate² > CPC³ > CPA⁴

Ads Campaigns Setup	<ul style="list-style-type: none"> 20/03/2019 	<ul style="list-style-type: none"> Group keywords in ad groups Set match type Ads creation Ads extension Determine bids 		
Ads Campaign launch	<ul style="list-style-type: none"> 25/03/2019 	<ul style="list-style-type: none"> Budget: 16.66 \$/day per campaign, so a total of 500 \$ /month. Targeting: city of Houston Demographic targeting Device: desktop (add mobile at a later stage if needed) Extensions: Sitelinks, callout, call extensions, promotion extensions. Bidding: Enhanced CPC enabled, and ads set so that they optimise for conversions. Once you receive at least 15 conversions over a 30-day period, we will then switch the bid strategy to ' Maximise 		

		Conversions' or 'Target CPA'. <ul style="list-style-type: none"> Demographic: +10% bid modifier on 25-34 age group 		
Campaign monitoring	25/03/2019 to No deadline - depending on performance	<ul style="list-style-type: none"> Keywords checks Campaign performance analysis 		
Ads Monthly reporting	25/04/2019 25/05/2019	<ul style="list-style-type: none"> Review performance data Feedback on landing pages Adjust audience & Geo-targeting 		

The network continues when one of Rob's clients decides, without consulting the agency's managers, to start another Google campaign. This is additionally to what ATM is already running for that client. The client therefore creates a "20% off (discount) on their initial tour campaign" according to how Cam describes the problematic situation. The additional campaign the client had created is counteractive and causes the competition between the two Google campaigns working on behalf of the same brand. Rob adds that such interventions by the client prevent the agency's managers from doing their Google advertising work successfully. To resolve the issue and explain to the client what the additional campaign is causing, Rob schedules a meeting with the client the next day. The conversation continues with Cam providing more explanation of how the client's action is impacting the Google campaign he initially created:

Cam:

“Keywords. So, the keywords in the 20% off campaign, some of them are a bit more generic and not necessarily what we're looking for, which then converts including stuff like Bridgerton (street around one of the client's locations). This is basically just the street so it might just be people looking for what's on Bridgerton, not necessarily looking for a bike tour or bike bar tour (Cam is while explaining looking at their Google ads account and reading from it). Not necessarily meaning much. Stuff like bicycle bar Bridgerton. All that stuff's fine, but in the same way where we're targeting that in the other campaign, so we're competing with ourselves because we're joining the auction, and Google will think that we're two separate things competing for the one, so we'll boost both of the prices for both campaigns.”

A lot of the time clients are neither aware what the term *keyword* in Google advertising means nor they understand what impact certain keywords have on a Google campaign. Given such poor understanding the client sometimes takes actions which tend to intervene with Cam's Google advertising work for that client. For example, the client might create additional Google campaign and use keywords that will compete with the existing Google campaign created for him/her by Cam. Moreover, using irrelevant keywords in a Google campaign can cause irrelevant clicks on the Google advertisement, which results in unnecessarily increased expense for the client. In this case, the interactions have moved outside of the agency and the client's organisational environment, where Google practice is performing effects on the Google search engine result page, by searchers clicking on the Google Ads. The dynamism and fluidity of the tool comes to forth even more, where the heterogeneous interactions are happening at the same time in at least three separate spaces without physicality (Auge, 1995, Kupfer, 2007). This shows that the Google Ads is far beyond single and is simultaneously creating understanding in many different situations and many different spaces at the same time (Callon, 1984, Law, 1990).

The client will be directly charged all the Google campaign charges (the clicks and other costs) and the client will additionally pay the management fee (the cost of the managers' work on the Google campaign) to the agency. SSA marketing scholars discuss two basic approaches of digital agencies charging their clients for the SSA services (Abou Nabout et al, 2011). First, charges by conversion and second, charges by a fixed monthly amount where the management fee and expense of the Google campaign are both included in the tariff for the client. ATM uses neither of the mentioned approaches but prefers a fixed management fee and the client paying for all the Google expenses directly to Google.

Not only the incorrect keywords, but also the incorrect Google Ads settings used when creating a Google campaign can cause failure that Google campaign. Such settings are for example the exact keyword match or the phrase keyword match (Agarwal et al, 2011, Haans et al, 2013, Klapdor et al, 2014, Amaldoss et al, 2016). If the client does not understand how to use the mentioned modifiers, s/he could potentially create a Google campaign that works against himself/herself (raise of irrelevant clicks, higher cost per click). SSA marketing scholars discuss the effects of exact and phrase keyword modifiers (Narayanan & Kalyanam, 2014, Amaldoss et al, 2016). The scholars claim that the use of broad match modifier can result in Google advertisement showing for searches misaligned with the advertiser's product or service. And the exact match modifier use might potentially enable a more accurate alignment with what the searcher is searching for (Amaldoss et al, 2016).

Given the fact that the client, in the above example, did not use any of the exact/broad match settings, the relations between those settings and the client are non-existent. This will likely result in an increased cost of the Google campaign for the client and will consequently cause the Google campaign to be less successful. As per his intention of creating a more successful Google campaign than the initially created campaign by Cam, the client has major control over the Google Ads tool. However, when it turns out that the additional campaign started causing problems for the initial Google campaign and did not perform well itself, it becomes evident that the relation between the client and the Google Ads tool turned unsuccessful. The temporary control the client had over Google Ads campaign manager functions,

disappear in the new socio-material interaction and the tool becomes more immutable. The change of the situation shows the dynamic nature of Google Ads, as it suddenly gets more powerful and gains more control over the user (Law, 2009, 2019). This is when the client realises, he does not know how to use the tool properly and accurately enough to bring result. As this includes functions of Google Ads such as phrase and exact modifiers, the multidimensional interactions fail to happen successfully between the client and the tool (Lammes, 2017). The keywords are immutable mobiles, and they translate into a source of information for Cam. With that information Cam is able to provide a strong argument to the client why the additional campaign needs to be cancelled.

The Google Ads functions of the phrase match and exact match are mutable for Cam, who understands their purpose for the creation of the Google campaigns. When Cam (from the researcher's observations) clicks the buttons to enable or disable either of the settings, he acts based on his experiences. Not only does he act within his initial role of a manager, but he analytically also takes on the role of a spokesman (Callon, 1984). As such, he voices the cooperation of the Google Ads tool, when he presents to the researcher the edits, he makes in the tool. If undisturbed by the client, the created Google campaign, based on the correctly selected modifiers, should translate into an increased conversion rate for this client. Then the process of translation between Cam and the phrase/exact match modifiers is successful, which makes Google tool overall more mutable for Cam. This means he has the power to change Google Ads as per his initial intention of the network. It becomes very clear that Google Ads can at the same time enable one user to pursue the intentions, while disable that to the other user at the same time. Furthermore, the multiple nature of the tool becomes very apparent, in contrast to the way it mostly gets presented by the marketing scholars – as single (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Jeziorski & Moorthy, 2017). The interactions of the network between the managers, client and Google Ads, unfold the tool beyond abstract as it gets socially embedded and involved (Michael, 2017, Lammes, 2017).

At the meeting Cam provides the client with a strong argument of why the particular Google campaign in question (as above) did not perform well:

Cam:

“So, the difference between ours and yours (Google ad campaigns) is the way that you've set it up, as you've said it was the maximise clicks, but you didn't set a maximum CPC (cost per click) bid. So sometimes you're spending like \$5, \$6 on a click and that's not necessarily what we're wanting to try and do. So, if you're...if this other campaign's obviously wanting to spend, whatever, whatever it has to in order to win the click, then obviously it's going to win out. So, on the terms in which we have in the other campaign, that's probably why it didn't pop up because you're spending \$6 on these clicks... whereas we're trying to spend less...”

The client interrupts Cam, trying to explain the reason why he did not use any of the settings and functions to limit the spend from the keyword clicks:

Client:

“If it costs us \$5 or \$6 \$7? I know that's not ideal. But if it gets us a booking, as opposed to, you know, the other competition of booking that was kind of the reasoning behind that. I couldn't figure out a way to, I guess, budget, other keywords and not competitors. So, if you know how to do that, that would be, that would be huge. I'm not sure if there's a way to do that, though. At the same time.”

The dialogue between the client and Cam shows that the client first seemed to have control over Google Ads tool, however, learning more about how Google Ads works, he realised his actions were unsuccessful. The cost per click (\$5, \$6 or \$7) are the outcomes of an unsuccessful Google campaign management, which shows failure to fulfil the initial of the Google practice including actors like the client, agency's managers and Google Ads with its functions (Latour, 1988, MacKenzie, 2006). It is clear that the mentioned actions of the client, while consequently the interactions between the managers and the tool, enable progression of impact of efficiency of the Google practice from the micro to the macro level. On the macro level, successful management of Google campaigns impacts the overall success of the

agency, but as well enables reaching the goals of the client's organisation (Lyotard, 1984, Latour, 1988).

CPC, bid, click, booking, budget, keywords, competitors are immutable mobiles that hold the relations between the client and Google Ads and Cam and Google Ads together. For example, CPC translates into relevant information for Cam to provide the client with the explanation of why his campaign did not perform as he expected. The maximum cost per click setting enables Cam to control the cost the client is paying per every click on his ad. Cam's relation with that setting translates into a well-controlled Google campaign that will potentially bring positive outcomes for the client. Many SSA marketing scholars discuss metrics like CPC as standard metrics for measuring SSA campaigns' success (e.g., Rutz et al, 2011, Kireyev et al, 2016).

In tourism, booking is one type of a conversion that Google advertising can result in. Booking is therefore an indicator of success, and it is also an outcome of a successful translation between Google Ads and the campaign creator. It signifies Cam's control over the tool and its functions or/and settings. If there are no bookings (conversions) as a result of a Google advertising campaign, this signifies a failed attempt of controlling the campaign creating/managing tool. This means that either the client as in the above example, or the manager, like Cam, have less power over Google Ads. The tool's invisible part is resisting to let the users use it the way they would prefer to achieve result. The current actor network and the set of events and interactions showed that the failure was due to the client's poor understanding of the features and functions of Google Ads. While the Google Ads is mostly immutable for the client, it is mostly mutable for Cam. He causes the mutability of Google Ads through the changes he carries out in the Google Ads tool (Lammes, 2017).

The network continues when Cam, as part of the same meeting, proposes an idea of how to fix the issue and its effects the client caused by creating an additional Google campaign:

Cam:

"Yeah, so I'll go in (Google advertising campaign), make a bunch of changes within the editor (Google Ads Editor) and let you know what changes I'm

making so that you guys can approve that first and then we keep one campaign because there's no point in having both Fort Worth campaigns because the terms (keywords) that are in one and the other one as well. So, I think if we pause the one that we've got that we set up, pause that one and then make some edits to the one that you guys have set up at the 20% then just try and get maximum visibility through using broad match terms and stuff."

Cam makes a clear proposal to the client including his plan to resolve the issue that the client caused. The proposal will result in Cam getting back the initial power over Google Ads. This will be due to the fact that Google algorithm, therefore the invisible part of the Google technology, will stop working against the managers, as they manage their initially established campaigns. This will enable Cam to again act in his role as a co-creator (Lammes, 2017). Cam will be able to make changes to both the initial and the additional campaign, while pausing them. The "maximum visibility" that plays a role in the network, enables a more visible materialisation of the relation between Cam and the Google Ads tool. It means a successful turnover from the Google ad campaign as per the initial intention of the network (Latour, 1988).

The network continues when Je prepares an email for Isa to make her aware of the communication, she had with the client. Je is aiming to get advice from Isa on what decisions to make around a "difficult" client that constantly intervenes in the agency's managers' work and does not listen to anything any of the managers say. The email goes as follows:

*"Hi Isa,
Basically, xx (a pseudonym) have been a very difficult client from the start, they don't tend to listen to our advice and haven't put much emphasis on e-commerce tracking which has made our job harder. They have also gone into the account and made multiple budget changes, on average 3-6 days apart with no data to actually back up a budget increase.*

They recently asked us to stop the Google Ads campaigns, Cam left the brand one running as it was doing well. They are questioning us on the CPC (Cost per click or pay per click). What makes things more complicated is that they

have another website that they run PPC (Google ad campaign) for themselves (142-797-7123, we have access to their account - Account code) the entire time that we have been running ads so they've been competing with themselves, and they run discounts so people will clearly book through that GL website not the one we are targeting.

They have no Analytics, no conversion tracking etc, but they're telling us that they have had 200+ bookings from AdWords and are wondering why our ads aren't performing as well as theirs.

Can you have a look and see if there is much that could be done with this account?"

The email indicates that the team, including both the SSA manager and the account managers, has been taken away control over the client's Google advertising campaign. The client started intervening in the team's work "aggressively", and Cam could no longer successfully manage that campaign he created for the client.

The client was constantly joining the actor network (Lammes, 2017, Michael, 2017), rather than leaving the Google advertising job to the marketing managers as agreed initially. He took charge of the Google Ads tool and started changing campaigns according to his own understanding of Google advertising and Google Ads settings and functions. The client's interventions mostly included changing the budget setting in Google Ads. There the client amended the maximum amount per click (to less) he would pay every time somebody would click on his Google ad on SERP. This made the setting (maximum budget) immutable for Cam, who, as per the agency's policy, always needs to first get permission from the client in order to make any additional changes to clients' Google campaigns. However, the budget setting as part of the tool was mutable for the client when he was amending the campaign. The relation between the client and the Google Ads tool at first impression translated into a successful Google campaign. However, the agency's managers knew that client's actions only hindered the initially created campaign, which would in a long-term cause a lot of damage to that campaign. A set of unsuccessfully materialised

relations from the example of the client would potentially have an effect on a bigger scale - either client leaving or a failure of Google's campaign.

The website and the code are immutable mobiles that translate into Je's realisation that the client is competing with himself and thus making both Cam's and his own campaign unsuccessful as per the initial intention of the network. The additional Google campaign the client created at first looked like a successful turnout. The client could control his changes and edits to the Google Ads tool and thought he was creating a campaign even more successful than Cam's initial campaign. However, as per Je's email the client failed in his actions completely. As per his understanding the client was in complete control of the settings and functions of the Google Ads tool. However, according to Je and Cam, based on their previous experience with the tool, Google Ads was working against the client and was, in fact, more immutable for him.

5.6 Empty card

The network again started by the client reaching out to the agency to get support with creating and managing Google advertising. When the agency takes on the job of managing the account, the intention emerges from the network. Just like the technology, through practice, the intentions temporarily get their meaning as part of the social social action (Callon, 1984, Callon, 1998, Latour, 2005, Law, 2009). Another network success is guided by the client's aim with Google advertising to increase the conversions and/or brand awareness.

The network continues with the client using the Google Ads tool to create an additional Google campaign alongside Cam's campaign. The researcher sits next to Cam when he opens the client's account on Google Ads. As he opens the tool, he immediately notices some unusual activity. He turns to Isa with an annoyed expression on his face, shortly after telling her that the client "decided to compete against himself". Cam previously explained to the researcher that when the same keywords are used for two different Google advertising campaigns from the same client, this means the campaigns are competing, regardless of the fact they are from

the same client. When one keyword is used in several campaigns then its price will increase. (Yang et al, 2014, Lu & Lu, 2014).

Given the situation of the client setting up an additional Google campaign, Cam first wants to discuss the occurred issue with the team to figure out what would be the best next step. Only once he has spoken with the team and then with the client, he will know how to act. Since the policy of the agency is to change the existing Google campaign only when the client has approved that, Cam needs to wait until the meeting with the client takes place. The client is always in charge of their advertising activities and Cam should not do anything without the client's approval, not even pausing the initial campaign before getting the approval for this. As well, Cam says, any changes he would do to the client's Google account and its initial Google campaign would probably cost more money because the client created an additional campaign. The tool is at the same time present in an external environment, while also causing problems in the internal environment at the agency. Again, the fluidity of the digital tool is apparent, as the tool is skipping between the spaces – from interactions with the client to interactions with the agency's managers (Law, 2004, 2009).

As Cam is left with little power over Google Ads, the heterogeneous relation between him and the tool fails. The newly created campaign by the client is an outcome of the interaction between the client and the Google Ads. While creating an additional campaign, the client used many functions and tools to do so. For example, Google Ads contains several internal tools, one of them being Google Ads editor. There a Google campaign can be created. Using the editor according to his intentions with it, the client is in control of the that tool (Law, 2019). He initially aims to create a "better" campaign than the one that was created by Cam. This makes Google Ads more mutable for the client, as he is invited by Google Ads to change the tool and edit it the way he believes is the best to increase conversions (Lammes, 2017). In the client's mind, the newly created campaign satisfies the goal of achieving a better result compared to the initial campaign created by Cam. The client's power to use Google Ads without the tool resisting that, at the same time makes the tool immutable for Cam. This translates into a call for action as will be presented below. The problematic event occurs, as the algorithm of Google Ads

starts working against Cam's initial actions expressed through his campaigns. And as Cam is not in control of the invisible and hidden algorithm of Google Ads that works in the background, with much more power than Cam has, it is impossible for him to prevent the unnecessary spend caused by the client's campaign in the given situation (MacKenzie, 2004, 2005, Thompson, 2012, Lammes, 2017).

Isa, who is the client's account manager, joins the network with proposing how to solve the issue that the client's campaigns has created. She sits next to Cam when he is showing her Google Ads Analytics graph. The graph of the initial campaign tells him that the competition for several keywords he is bidding with, has increased and therefore the clicks on the Google placement on SERP (search results page) are now much higher compared to before when the client's campaign has not been appearing at the same time. In the actor network, Cam again becomes the spokesman of Google Ads (Callon, 1984). As a spokesman Cam is describing which metrics the tool is showing him as a result of counteractive client's actions. What Cam sees on the screen is the materialised reality from the previous interactions between the client and Google Ads. The mentioned relation has successfully materialised, however for a short amount of time. For Isa, Google Ads is an immutable mobile, she does not change it nor does she edit it (Lammes, 2017). Isa only briefly looks at the screen when Cam is presenting her with the problem. The brief understanding of the problem translates into a source of information for Isa to use it when writing an email informing the client about the issue. Dan, Pete and Rob are part of the network too and the team decides to call a meeting with the client as soon as possible.

As the actor network continues, Isa has already arranged the meeting with the client. The team - Cam, Dan, Pete, Rob and Isa are sitting around Isa's laptop participating at the pre-arranged client meeting on a digital software - Skype. The idea for the meeting emerged from the above presented problematic event and its aim is to explain to the client why the newly created campaign needs to be removed or amended. The client defends himself as below:

The client:

“So, we just ran a campaign trying to replicate what we've had success within Houston (another Google campaign they did previously). We just went for that 40% off (in the campaign the client set up). And we kind of were experimenting with different keywords and different things. So, in the beginning, you know, we were doing, you know, really expensive keywords that were not really...they were yielding clicks, but they weren't really yielding any conversions. But it's still you know, it's strange because what seems to work in Houston (a successful campaign they were replicating) it's not the same as the same success rate here in Fort Worth (campaign created by the client). So that was kind of the reason why we tried to do it. We tried to duplicate that campaign that we had in Houston.”

As per the above explanation, the client used Google Ads for creating a Google campaign. The details of the problematic event, as described above, make the difference in understanding the tool through a story (Latour, 1993, 1993, Nimmo, 2011) compared to only be presented with its descriptive nature (Roscoe & Chillias, 2014). The apparent difference between a description of the tool and a narrative for the understanding of the tool is in how the same tool can act and react in different ways, when used by different people like Cam and the client. The client on one hand wanted to create a compelling campaign but was not certain how to use specific settings and functions in the tool to create a campaign that would not be competing with another Google campaign of the brand. And Cam, on the other hand, uses the tool deploying his skillset and experience, creating a potentially successful campaign, however, Google breaks the well-directed stabilisation with resistance (Lammes, 2017). At first, Google Ads for the client was a mutual mobile he could easily interact with. The relation between the client and the Google Ads was successfully established and led to stabilisation of the network (Latour, 2005, Law, 2009). However, as the campaign started to get in the way of good performance, the client realised that using function of the maximum click was not a key to increased conversions. The expensive keywords and clicks from those keywords are immutable mobile for the client (Ghose & Yang, 2009, Klapdor et al, 2014). The maximum budget setting the client used to set the maximum price for every keyword click (very high) was a reassurance for him that the campaign would be successful. At least at the start.

While the client used the tool to create an additional campaign, Google Ads became immutable for Cam. The initial Google campaign Cam created started showing increased values (metrics - e.g., CPC) and he knew that the competing campaign started impacting the performance of the campaign he had created. Cam was telling the researcher that due to the client's interventions; the initial campaign was going to be hard to "fix". He was referring to the disruption of the campaign related to the types of keywords the client chose for the additional campaign (Ghose & Yang, 2009, Yang & Ghose, 2011, Klapdor et al, 2014). Cam also referred to the settings the client did not use correctly - the exact/phrase match and the maximum budget setting. The initially successful materialisation from the relation between Cam and the Google Ads, as per the intention of the network, failed due to the client's intervention. The tool therefore shows its multiple nature, as on one side it is more powerful than its users, while on the other side it allows the use with no objections (Law, 2009). Skype is a communication tool – an immutable mobile that enables communication with the client. If the meeting turns out to be in favour of the team, Cam will use the information from the meeting to inform his further actions around the Google Ads tool. He will go back to the Google Ads editor and try to fix what has been broken or he will have to set up another campaign. One of the latter options Cam has regarding the client's initial campaign, should again give him more control over the Google Ads.

The network continues with Cam having a look at the campaign of another client. He goes to the analytics of the Google Ads where, scanning through it, the graph is showing zero activity. This means that he cannot see any clicks on the ad, nor can he see any conversions from the ad. The campaign is therefore not working according to his expectations, or it has been paused. Cam comments that the campaign was not paused by him or his team. Searching for the cause of the issue in the Google Ads tool, clicking through the functions, he quickly realises that the client ran out of money on his credit card. The advertising activity on Google is charged for directly through a credit card of the client. As the credit card, which was a source of payment on Google, has an issue, the advertising activity has stopped. Cam comments:

Cam:

“The second your card runs out; Google won't charge it because there's nothing to charge. So, you stop appearing everywhere. They (the client) haven't responded to our emails in months. And their card just doesn't work. Doesn't work since the start of the year. January time. So, I mean, obviously you can show that there's no money going. We've told them. We've emailed a lot of times. Because it's been months. I think you'd also notice that there's a payment coming up every month (ATM's management fee charge).”

The client ran out of money on his card, and this is why the campaign automatically stopped. This is how the process of translation got disrupted (Murdoch, 1998). The credit card is an immutable mobile that connects the client with Google Ads. However, the connection is not working any longer, as the money flow to Google stopped. Cam is left powerless towards Google Ads, while he cannot perform any actions to impact the backend of the tool, where the order to stop the campaigns came from. The powerlessness to fix the situation makes the tool for Cam immutable (Law, 2009). This is how Google's mechanism, as part of Google Ads, controls its advertisers and the temporary loss of control for Cam causes the network to fail. Analytically the researcher is able to conclude a failed set of interactions, based on Cam's role of a spokesman, who translates the signals the tool is giving and showing him, especially through the metrics like CPC (Ghose & Yang, 2009, Lu & Yang, 2017). The card without money is an immutable mobile that provides the context for the heterogeneous relation and “holds it together”, therefore gives it enough physicality that the researcher manages to capture the highly digital and invisible Google Ads (Law, 2009). The graph showing zero activity on Google Ads analytics is an immutable mobile that Cam uses as a source of information to take further action.

Cam continues to scroll through the client's Google Ads account and comments:

Cam:

“There's loads of tiny little things that can break, the ice stops running, so you need to keep an eye on them and let the client know...but sometimes the client doesn't get back in time. It just ruins everything.”

The team is used to having to deal with clients that do not pay attention or interact with the Google Ads when the tool requires action from them. "It just ruins everything" signifies that a non-existent relation between the client and the Google tool can result in a failed Google campaign if the client does not occasionally check what is happening on Google Ads or if s/he does not make sure there is enough money on the credit card for Google to source from it. Due to such events, the relation between the client and Google Ads stops existing or fails when Google automatically pauses the client's campaign. Google's algorithm is in full control and prevents the client (the agency) from doing any further actions on the campaign until the card will again provide enough credit. The failed relation between the client and Google Ads as well as Cam and Google Ads, translates into a potentially broken reputation of the agency, lost time of the SSA manager for setting up the campaign and managing it, as well as into potentially lost increased sales and brand awareness for the client.

At the same time the failed relation between the client and the tool calls for the action of the account managers. They get in touch with the client with the aim to resolve the issue. A restored relation between the client and the Google Ads tool might translate into a fixed Google campaign by Cam when he gains the power back to use the functions of the tool. As Cam was explaining to the researcher, once the campaign is paused, the guarantee that it will continue to work once it is put active again, is not 100% anymore. The latter means that the Google Ads functions become mutable so Cam can edit, click, create there again, however, he might need to start the work from scratch again.

Cam further explains the general relation that the agency has with the client:

Cam:

"They are not really paying attention now. Because it starts in January, we got the card back, and then stopped again. Then we got some money in February and then it stopped again. So, I'm not sure what he's doing with his cards, but managed to get a big bunch in May. And June. And then pretty much since the 22nd of June just nothing. I don't think we've heard from them."

Poor collaboration by the client results in a failed relation between the client and the Google Ads. As the client fails to interact with the tool in the sense of not being aware of the campaigns only working if there is fund provision, this leads to Google Ads holding against the client by automatically stopping the campaigns from running power (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). The problematic event opens the opportunities for understanding the backend of the tool, when the issue is tackled by the agency's managers.

The above excerpt shows that the socio-material relation between the client and the Google Ads is failing continuously as the client is not paying attention to his Google advertising activities. This majorly impacts the way Cam is able to use the tool for the purposes of managing the Google campaigns (Agarwal et al, 2006, Bradlow & Park, 2007, Yang et al, 2014). Whenever the client's credit card stops working, this is at the same time a failed relation between Cam and Google Ads. In the actor network, Cam is the spokesman of the tool, when presenting what he sees in Google Ads analytics feature. While the analytics feature in the tool enables Cam to use it, by navigating in it and selecting the metrics he wants displayed in the graph, Google Ads in general is less mutable, as the algorithm behind it automatically stops the campaigns from running. As the flatter interactions, such as with the analytics tool are successfully stabilised, the interactions on a deeper level, such as with the algorithm, fail (Lammes, 2017). This shows how Google Ads is a tool with many different angles, sometimes more, but sometimes less powerful than its user (Callon, 1984, Lammes, 2017, Law, 2019). When Google Ads has more power than the manager, such as when the algorithm is working in the background, resisting the management of campaigns by Cam, this is a micro effect, that impacts the macro level of the organisation, including the intention and the aim of the Google advertising as a whole (Latour, 1988, Callon, 1998).

The network continues when the agency's managers sit in their usual positions while attending their morning meeting. Usually, one person stands up to report about their previous plans for the day, while the rest of the team is sitting down, doing their work and listening to the person speaking. Now it is Isa's turn, and she wants to get some

opinion from the team about a request she received from one of the clients. She says:

Isa:

“He requested something...saying...you will guys obviously tell me...if he could do Fb ads (social media sponsored advertising). He is open to suggestions.”

Cam:

“Yeah, if he's got the cash for it...if he does not have the cash for PPC (Google ads), obviously, he will definitely not have it for Fb, as Fb will not give him the results straight away...”

Understanding the context, where the Google Ads is fluidly passing between various situations in actor networks, gives an opportunity to see the tool as with various dimensions and angles of use (Thompson, 2012, Hind & Lammes, 2015, Lammes, 2017). The above dialogue shows that the client dropped out of Google advertising. Isa further explained to the research that this was due to high campaign costs, which were exceeding the client's budget for advertising. The relation between the client and Google Ads becomes non-existent when the client decided to refrain from the Google advertising service at ATM. “Cash” is an immutable mobile, which signifies the Google Ads control over its advertisers. In case the advertiser (now client) does not provide enough money to supply Google's services of advertising and listing the ad on the SERP, then the client either makes a conscious decision to stop doing Google advertising or Google Ads stops all activity if the money runs out. For Cam, such failed relations become a source of information to give advice whether the client should go for another kind of advertising or not.

The network continues with another stand-up morning meeting, where the team is moving cards around on the board on Image 6. The board with cards includes columns for the tasks scheduled to be done, completed tasks and the issues with tasks.

Image 5.5. “The glass board which the team amends every morning by moving the cards around” - Isa is standing by the board leading standup meetings every morning, October 21st, 2019



The board with cards is an immutable mobile where the account managers make sure the agency's team's tasks are under control and the issues around Google advertising are solved daily. The board with the cards is an immutable mobile, which enables physicality to imagine and understand the Google Ads better (Michael, 2017, Law, 2009, 2019). The board therefore presents the complexity of Google Ads, which needs detailed organisation, careful strategy and brainstorming of the team, to be able to control the tool successfully (Galloway, 2004, Lammes, 2017). The board is a materialisation of failed, successful and on-going relations between the Google tool and its users. The cards on the board include team's tasks, where some of them relate to fixing the disruptions of Google campaigns the clients caused. However, other cards that are placed under the label “Done”, are a representation of successfully completed interactions between the managers and the Google Ads. The successful interactions are only temporary, as at the same time, as the board also shows, there are other interactions with the tool ongoing, which might or might not turn into successful (Latour, 2005, 2017).

5.7 Magic solution

The agency's managers spend a lot of time developing strategy and organising Google advertising activities. For example, the account managers spend time creating roadmaps and planning around them, while the SSA manager spends time creating SSA timelines and other documents supporting Google advertising strategy and plans. Especially Isa and Je, believe that the strategy phase, including the research, is the building block of successful Google activity. Good organisation and solid plans, help the team with managing the clients' expectations. If the Google advertising strategy and the timeline are strong and clearly presented to the client, this contributes to an overall more successful Google advertising.

However, often the client does not understand that the research phase is a crucial part for advertising success. Such mindset potentially causes disruption of the agency's Google advertising work and a loss of opportunity for campaigns to be successful. The intention of the network is again to increase the conversions and the brand awareness, and the network opens by the client, who reaches out to the agency seeing help with Google advertising.

Isa and Je believe that a more thorough brand research should be in place for every client. However, because the clients are often unwilling to spend money on the research-related Google advertising activities, the managers rarely pursue research with its full potential. Isa explains:

Isa:

"The first, the very first three months are testing phase, however, we should do a bit more testing, we should do maybe more A/B testing. And we are not doing that quite practically at the moment. And due to the resources, that we've got available, and skills as well. it would be much easier if we had that in place. Therefore, it's going to take longer to prove that what we're doing is good. It is all about managing clients' expectations".

Explaining to the client in enough detail what the importance of the research phase is, is therefore crucially important for a successful Google campaign performance. However, from when he opens the network, interacting with Google Ads, the client is not aware that in order to be able to take full advantage of the tool, the SSA manager will need research-based information. Such information will be produced in the Google Ads tool, specifically in the Google Ads editor and Keyword planner. Google Ads editor serves as a platform within Google Ads which enables campaign creation, but also activities such as A/B testing, to see which campaigns perform better. And Keyword planner within Google Ads is used for keyword research and strategy, providing the managers with information of how expensive it is to bid on certain keywords (Dhar & Ghose, 2010, Bradlow & Park, 2007, Zhu & Wilbur, 2011, Jerath et al, 2011, Chen & Park, 2015).

Regardless of the constant existence of the Keyword planner and Google editor, the clients are usually not fully aware of them. At the same time, agency's managers use the same functions properly, which brings success in Google advertising. This shows that for some users, Google Tool opens more, however, for other less opportunities to take advantage of this being based on their skillset and experience with Google advertising. Again, the tool is revealed differently based on the network it sifts into, including the types of interactions it is part of (Lammes, 2017). The more the tool is used and interacted with, the more its complexity increases (Shove, 2003, Law, 2009, Calon, 2010). Moreover, the process of translation enables more thorough simplification and understanding, this including its invisible features (Michael, 2017, Lammes, 2017).

The task of A/B testing is performed in Google Ads editor and is part of the Google advertising research phase. As part of the interaction between the tool and Cam, Cam changes settings in Google Ads differently for each of the testing campaigns. The SSA manager says that many testing campaigns mean many alternatives to the original campaign, which enable him to understand how favourably or unfavourably they react based on the changed settings. In the situation, Cam clicks between the settings of the initial campaign and the experiment version of it in the Google Ads tool. With the experiment campaign he usually sets the campaign budget higher and tries out slightly changed design of the ad, compared to the initial

campaign. When creating the experiment campaign Google Ads offers him several options, he could select to make sure the campaigns are running at the same time, and they bring useful statistics. In the process of creation of the experiment campaign, he enters the name of the campaign, the period in which he would like to have the experiment campaign running and how he would like to split the traffic between the campaigns. The split of the traffic means the proportion of audience that will see the initial Google campaign and the experiment Google campaign. Through all the actions, Google Ads is collaborating with Cam, the heterogeneous interaction runs smoothly and more power is on Cam's side, who is able to change the setting is the tool as he plans (Lammes, 2017).

Above, Cam is in the role of a "tester", setting up the experiment Google campaign which will give him an idea of the kind of a campaign that will perform best. The budget setting and the experiment campaign creation related settings are mutable mobile for Cam and therefore enable him to change the Google Ads tool according to his intentions. This makes the tool overall more mutable for him. The potential outcome from such A/B testing is materialisation that brings clarity to Cam about which of the two campaigns he will continue to run. Regardless of the testing that Cam runs being mostly invisible, immutable mobile participating in the interactions, make it easier to spot and follow the evolvement of it (Corman & Barron, 2017). For example, the screen, the mouse and the keyboard that Cam uses as he is setting up the A/B testing, enable the digital actions to be seen and understandable through being added more physicality (Law, 2009, Lammes, 2017). The process of setting up the A/B testing, triggers a series of interactions that happen between Cam and the Google Ads' functions and settings. Some of these result in a successful, however, others in an unsuccessful stabilisation (Latour, 1992, Akrich, 1992, Lammes, 2019).

Before the Google campaigns start getting traction, it takes a while. This means that Cam needs to give a certain amount of time to see which of the created testing campaigns will perform better and consequently which of these are better to keep running. However, the client often does not understand that each A/B testing is a process and takes time for it to give meaningful learnings. Given the limited budget, the client usually prefers to see the results or wants to take action immediately. As

Isa notices, the time it takes for the Google campaigns and strategy to show results and success, often appears to the client as the campaign is not working and the aim has not been achieved. The client's impatience and misunderstanding sometimes results in the client's interventions to Google campaigns or the client leaving the agency.

The network continues when Isa, Rob and Dan are discussing the length of the research phase for a client. They all agree that the research phase should last much longer than the client usually would expect or agree with. However, Isa says that most of the clients come on board when they face a drop in sales, and they need a quick fixing of that. Consequently, the team does not have enough time to perform satisfying research before the start of Google advertising. This sometimes means that the SSA manager Cam is unable to guarantee the success of the Google campaign. While the researcher, Isa and Cam are having a chat, Pete joins the conversation, saying: "*It is best to be super honest with the client from Day 1.*". The latter mostly concerns being transparent in terms of the timeframe and expectations of the campaign.

Above, the relation between Cam and the Google Ads will potentially materialise successfully, however, with a possibility to fail due to the client's incomplete understanding of the importance of the research phase as part of Google advertising. Cam not being able to guarantee the success of a Google campaign is an example of a potentially failed relation between him and the Google Ads editor, where he usually conducts A/B testing. Another face of the multiple digital tool shows, when the tool causes uncertainty for Cam (Law, 2009, Hind & Lammes, 2015, Lammes, 2017). Through the client, who does not cooperate well with the team of managers, Google Ads shows its digital, dynamic and fluid nature even more intensely. Actor networks enable to reveal the tool as unpredictable, on its invisible side of it, when the client does not provide full information about it, does not understand how it really works or does not pay full attention to the actions the team is performing around it. The short speech about honesty, that Pan voices, is an immutable mobile, and materialises the way the Google algorithm works and the speed with which it shows relevant data of the campaigns for decision making of the managers. This is the part of the tool that Pan understands, and this shows certain

level of control over Google Ads he has, which makes it somehow mutable (Law, 2009). However, in the case of the current event, this is an uncertain interaction between the managers and the Google Ads, which results in an incomplete process of stabilisation in the network (Lammes, 2017). The digital tool at the same time as it is mutable in another interaction, turns out to be less mutable and more powerful having the impact on the whole relationship between the agency and the client by the uncertainty it is causing (Latour, 1983, 1988).

The network continues with the client that just came on board. The agency's managers decide at the very start that the Google advertising strategy should be planned over a period of 6 months. This is a longer than usual time that enables the managers to plan and execute several Google advertising research activities. The introductory meeting with the new client is on Skype. The agency usually arranges meetings with their clients online, as most of its clients are internationally based. In the situation, all the team members are gathered around Isa's laptop, each of them having their laptop opened in front of them. Isa is leading the meeting, introducing the Google advertising activities the agency will be conducting for the client. And Dan, Cam, Rob, Je and Pete participate as part of the team performing those activities and they introduce their roles at the agency. While in the meeting, Dan asks the client an important question about keywords:

Dan:

"And just while the cameras are on me just another question...your keyword research in the past...so you have a list of keywords that you are targeting? I'm just looking at both of your websites from an American perspective, how you rank and what you rank for (he has done a quick keyword analysis on Google Ads - Keyword tool). These are things that you've looked into and you have information on this kind of stuff?"

Dan's question to the client is an enactment from him checking the Google Ads account of the client at the meeting. There he mostly uses the Google Ads keyword planner, which enables him to get a quick insight into what keywords the clients should be using in their future Google advertising campaigns, and what ad rank this will result in. At the same time, Dan has the client's website open on his laptop, so

he can see whether the client's website is already optimised, and which keywords the client was using to optimise it.

By looking at the website, Dan can quickly figure out if the client already conducted any keyword research on his own, and therefore has the relevant keyword list already, or not. The keyword research will be the basis of the optimisation of the website and the basis for the creation of Google advertising campaigns. The optimisation of the website is a crucial factor of the Google advertising working well. Therefore, the two mentioned correlate. The SSA marketing literature also recognises the use of keywords to impact the performance of the SSA, called search engine optimisation - SEO (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Berman & Katona, 2013, Haans et al, 2013). The SSA scholars claim that SEO should be used simultaneously with SSA in order to improve performance of sponsored search advertising. The agency's managers claim the same, emphasising the importance of keyword research as part of Google advertising. The managers usually conduct the keyword research in Google Ads keyword planner function, which based on the keywords' characteristics, results in a list of keywords that will enable the best possible performance of a Google campaign.

The above relation between Dan and the Google Ads translates into an understanding of whether the client has done any SEO on his/her website and whether s/he has the list of keywords prepared for the agency to use it. This importantly impacts the control Dan has over Google Ads, as he understands that an ad with relevant keywords based on the optimised website, will have a much higher relevancy for the Google algorithm. The invisible technology behind the Google Ads tool will therefore be much more controllable and mutable with a relevant keyword list the managers can work with (Lammes, 2017). The way the Google algorithm determines the relevancy of the ad is by matching the keywords used on the website, with the content of the ad. The algorithm will position the ad higher depending on the level of optimisation of the website (e.g., Haans et al, 2013, Berman & Katona, 2016). For Dan, the website content is an immutable mobile, which translates into a source of information for him, when he refers to it when asking questions to the client. Dan is mostly in control of Google Ads tool, when interacting with its keyword planner, when he analyses potential keywords for the

client's Google campaign. The keywords, the keyword list and characteristics of the keywords are immutable mobiles, which enable Dan to understand how much work will be needed in the phases of the research for the client. They do not change and stay constant through the process of actor network translation (Law, 2009). Keywords, keyword research and keyword characteristics potentially translate into a successful, well-performing Google campaign. Having a good quality list of keywords provided, enable Cam to follow the Google algorithm's requirements, when he is setting up Google campaigns. This makes the tool for him more mutable and more controllable. Specifically, following the algorithm's requirement of the relevance of the Google ad content in accordance with the optimised website, will enable a significantly better manageable Google campaign for Cam and therefore a successfully materialised reality from the relation between Cam and the Google Ads (Lammes, 2017).

After the meeting everyone leaves to their usual positions in the office. The size and the organisation of the office enables the team to continue with the discussion from the meeting. Looking at his laptop screen, Dan is checking the client's website once again and he is sharing his thoughts about it with the rest of the managers. Him being the SEO manager, an evaluation of the client's website, combined with the evaluation of the client's Google Ads account (scrolling through it or using the keyword planner function), usually gives Dan an idea of the level of optimisation of the client's website and how much work the agency will need to plan for this task. When Dan shares his ideas about the client's website and the Google Ads, this informs account managers' work as well as the SSA manager's work.

Dan can easily scroll through the Google Ads account of the client and collect the information he needs for the estimation of the time the agency will need for specific Google advertising tasks for the client. For the particular intention Dan has with Google Ads, to check through the client's account and get familiar with it, the tool is mutable for him, and he is in control of it. The client's website is an immutable mobile that translates into an understanding of the level of the website optimisation and the amount of time the agency will need to assign for the task of keyword research for the client.

However, the majority of the agency's clients come on board on a lower budget and the team is usually limited with the hours they can spend on the Google advertising research activities for the client. Sometimes Je, Isa and CT point out that the client is not paying enough to spend a lot of time on his/her research and consequently the client's task planning is built around the time enabled by the client's budget. As a lot of the clients' decisions are based on their budgets, it is sometimes hard for the agency's managers to "give their best" in their tasks and activities. This is because Google advertising activities require enough time to be performed properly and not having enough time to conduct the research activities for the client, gives the client more reasons for the disruption of the Google advertising activities. This causes less control over the Google Ads for Cam (potentially a failed relation between Cam and Google Ads). Little or no Google advertising research for the client might mean slower performance of Google advertisements of the client and therefore his/her suspicion about success of the Google advertising in general.

Not only the money constraint, but some clients also do not understand the complexity of Google advertising. This means that certain steps need to be completed before Google advertising can give good results. The team is aware that Google advertising results do not come overnight and require resources like time, money, knowledge and skills to properly set up the campaigns. Due to that misconception about what Google advertising service does and in what time frame, ATM a lot of the time faces impatient clients with too high expectations. This sometimes means disruption of the Google advertising activities and even failed intentions. Isa comments:

Isa:

"The clients come on board, and they have an issue. And they think that PPC (Google advertising), is because it's like, well known for being that magic solution to all the problems, going to be receiving some inquiries. And this is not the case. So, a lot of clients are just complaining - you are not reporting enough, this is not what I wanted. I'm spending lots of money and I'm not getting anything back. Also, sometimes the clients want to convey a specific message that is aligned with their brand and they don't know what the brand is about. So, it's like, okay, so you want quick, quick results and you want to

start as soon as possible. But there is a huge part of your business of your digital presence that you need to look after first - SEO, but they don't want to invest in it because they think it is not valuable at that stage.”

Google campaigns can only work if they are set up and managed well - following the Google algorithm's requests, having enough information provided by the client, dealing with the client who understands the Google advertising phases and is willing to pursue them. Google campaigns can be managed well if the agency's SSA manager is in control of the Google Ads and relations between him and the tool can be established successfully. "Magic" is the potentially successful stabilisation between the manager and the Google Ads. "Magic" that can happen as a result of a very well-performing Google campaign, can only happen if the client gives enough resources to the agency's managers to perform all the needed actions. If the necessary steps like the research phase are not included as part of Google advertising, then the Google Ads and its mechanism might work against the agency's SSA manager. This means that the agency's managers would not have enough understanding and knowledge about the types of campaign that would perform better based on A/B testing, as well not enough understanding about the brand itself. Consequently, this gives the managers less power over Google Ads, while they do not understand which types of campaigns and ad designs would perform better, and hence do not understand the backend of the tool (Roscoe & Chillas, 2014, Lammes, 2017, Law, 2019). For example, if the client does not know what his brand is, then the Google advertising research should focus on the analysis of the client's target audience. This will contribute to a more accurate selection of keywords to use in a Google advertisement and to conduct SEO (Ghose & Yang, 2009, Yang & Ghose, 2010, Berman & Katona, 2013). The accurately selected keywords are part of the phase of the research and are in this event immutable mobiles for the SSA manager Cam. They translate into a potentially successful campaign for Cam. However, Cam can never fully predict the success of the Google campaign, even if the relevant research has been carried out. This is due to the algorithm which works in the background of the tool and due to its digitality cannot be fully uncovered. This explains the power that digital technology like Google Ads has in the backend of it, which is not visible to the managers. The unpredictable part remains hidden within Google Ads and for this part the tool is immutable for the

managers (Lammes, 2017). However, the invisible part does not need to stay hidden forever (Michael, 2017), as when the interactions continue to happen and the actors are continuously followed, this further simplifies the tool.

Isa and the other account managers indirectly contribute to the network through communicating with the clients in a way that helps them understand the importance of the time spent on the research before setting up a Google campaign. Their communication potentially contributes to the clients' understanding of the relevance of the research phase in Google advertising. That understanding is an immutable mobile that translates into a successful materialisation of a Google advertising campaign.

5.8 A panicking client

Cam tells the researcher that the client often thinks Google advertising will solve all their problems – both financial (increasing the sales) and brand awareness problems. As a result of that, the client is sometimes unhappy with Google advertising phases that take up additional time or money, such as the research phase and the phase of optimising the website – SEO (Ghose & Yang, 2009, Yang & Ghose, 2010). Cam also says that the client often expects Google advertising results much earlier than the agency can provide them. Such expectations can turn into a dissatisfaction and could disable Cam to do his work properly. Some of the reasons for failed actor networks can be the client intervening with managers' work on Google advertising and directly in Google Ads. As another actor network begins, the main enacted intention of the agency is again to provide well-performing Google campaigns for the client who reached out to the agency after realising he will need help with creating and running Google advertisements.

The events in the network, thus the context it is stabilising in, reveal some of the unexpected interruptions by the client which Cam comes across (Harman, 2007) In the situation, as the researcher observes when following the actor Cam, he explains that the client paused the campaign Cam has created and has been managing, without any notice. Sitting at his desk, looking at the Google Ads campaign, Cam turns to Dan to tell him about the newly occurred issue:

Cam:

“Kimbo (pseudonym for the client) ... they paused because my thinking is that he's panicking, thinking it's not working because he's just looking at a general overview and the numbers.”

The above excerpt shows that the client does not understand that Google advertisement only starts showing results after a certain period of time. Due to this under-estimation of the length of time the Google campaign will need to start performing, the client disrupts Cam's work with intervening with the existing Google campaign on Google Ads. The client pauses the Google campaign and with that action a potentially successful stabilisation of the relation between Cam and the Google Ads is minimised. The client changes the setting in Google Ads which stops the campaign from running. He logs into his account and then clicks the button “pause”. Cam is demonstrating this to the researcher in the Google Ads. The multiplicity of the tool shows clearly, when for the client the tool is mutable for the intention he has with it, however, for Cam, the tool is temporarily an immutable mobile. This is because the agency's policy says that Cam first needs an approval from the client before he can perform any actions on the Google Ads the client had not previously signed off. This makes Cam temporarily powerless towards the Google Ads and the relation between them fails.

After discussing the newly occurred situation, Cam and Dan decide it would be best to call a meeting with the rest of the team to take further actions. It might be, Cam says, that CT will decide to stop the contract with the client, or the account managers will call a meeting with the client to once again explain the reasons why the campaign was not yet showing any favourable performance. A series of socio-material interactions between the client and Google Ads enacted a temporary paused campaign. This might potentially produce an effect on a larger scale – termination of the contract between the client and the agency (Czarniawska, 2004, Michael, 2017). The micro effect from the interaction between the tool and the manager, that reflects less control on the manager's side, therefore escalates to a macro level, which embraces two organisational environments at the same time

(Latour, 1988). When Isa, CT, Rob, Je, Dan and Cam gather up in the agency's office, Cam explains:

Cam: *"It does look like it's working for there's two campaigns, specifically. One ad group that does really, really well. Over the last two months, it's spent 700 something and it has come back 2 grands. I tried to check in as much as possible. Cause there was one thing that happened, but just one, it was a setting that I must have missed. They paid 21 quid per click which is not good, and they did not even f*** booked (he is making grimaces)."*

The above excerpt shows Cam's interaction with the Google Ads, where he is clicking through the data to understand why the client paused the campaign. Cam's role emerges from these actions, and he becomes the spokesman of the tool, as well the "investigator" of what could have gone wrong and why the client paused the campaign (Callon, 1984, Lammes, 2017). This time he is not deeply changing the tool, but he is rather clicking through the Google Ads to understand the client's decision (Lammes, 2017). This means Cam is collaborating with the tool to the extent that gives him enough information for a better understanding of client's actions, while Google Ads does not resist that (Law, 2009, Lammes, 2017). Cam is opening different sets of data in the analytics functions of the tool to see how the Google campaign was performing. For this intention Google Ads is inviting Cam to interact with it and the process of stabilising can complete successfully. This makes the tool more mutable (Law, 2009). The relation materialises into Cam's discovery of understanding the reason behind the paused campaign. The manager says to the researcher that what potentially concerned the client was the 21 pounds that the client was paying per every click on a Google ad. Through his research on the tool. Cam discovered that the managers did not notice a very high bid per keyword that was converting many clicks at a very high bidding cost (Yao & Mela, 2011, Berman & Katona, 2013, Yang et al, 2014). This, he says, was much more than him or the client would ever wish to pay per click. He further comments that the payment of 21 pounds did not even result in a booking of the client's service. One can see that Google technology has many ways it is impacting the context it works within. Understanding that seeing the Google technology as part of how and where it is used, brings to the front a more holistic understanding of it that as well includes its

invisible features (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020). The 21-pound mark is an immutable mobile, which translates for Cam into an understanding of why the client paused the Google campaign. Zero conversions from the Google campaign are an outcome from the poorly managed Google campaign, which means that Cam's interaction with Google Ads editor was not unsuccessful. The manager's work was not done pedantically enough to notice the high bidding price for a popular keyword in the tourism advertising space. Due to Cam's miss, the tool gained on power, while Cam unconsciously was losing control over the Google algorithm's actions. There the invisible technology of Google algorithm continued to do auctions at a 21-bid per the keyword (e.g., Bradlow & Park, 2007, Shin, 2015, Zhu & Wilbur, 2017), while Cam was not aware of that and powerless (Lammes, 2017).

Cam explains to the researcher that he usually sets the maximum pay per click option on Google Ads in such a way that the auctions, even if left unattended for a while, do not run out of control. Failing to interact with the particular setting will usually result in engaging with the wrong audience in the online search space, which means the click of shoppers, who are initially interested to buy something else. The importance of bidding the right amount on the relevant for the industry keywords will give a better conversion rate (Ghose & Yang, 2009, Yang & Ghose, 2010, Beman & Katona, 2013, Haans et al, 2013). In case of the client, Cam did not set the maximum budget for cost per click (CPC). The relation between Cam and the Google technology therefore failed.

As the network continues the researcher learns from the discussion between CT, Cam and Je that it is not only the function of maximum pay-per-click that the SSA manager can interact with when setting a Google campaign. Very commonly used when setting Google campaigns are also other modifiers. There are predominantly two that the SSA manager can choose from when setting the campaign – *broad match modifier* and *exact match modifier*.

When creating the campaign Cam has done his research and he knows which modifier he will be using. With a couple of clicks he is done getting this setting right, for a good long-term effect of the campaign. He is in full control of the modifiers,

using them in the best benefit of the client (Latour, 1988, Czarniawska, 2004). As the tool is not resisting his actions, this makes it more mutable for Cam, as he is deciding which kind of modifiers, he would like to use for each set of keywords he prepared the bidding strategy for.

In the context and as per the below comment by Cam, the researcher made the following fieldnotes:

“Cam is again showing me some of the competitors and is getting slightly annoyed by the fact that the wrong keywords are featured, so the client's ads are appearing also under funny unrelated websites and the client is paying high price for those keywords. This is because the competition, which is not even theirs, is high there. This is what Cam explains to me, as he is looking at the Google Ads.”

Cam comments:

“For brand awareness. To appear at the top of the SERPs (Search engine results pages) when someone searches your brand. And to stop other companies stealing your customers by bidding on your brand. Brand campaigns are just search campaigns targeting the brand name, this is why Exact match modifier will do just fine.”

This goes especially for the functionality of phrase match modifier or broad match modifier that determine which keywords the Google branded ad will show for. Cam thinks that branded campaigns should only be set for the exact match modifiers, as a brand is only what it is and there is no variation to that. For example, if a searcher will have a brand name in mind, he wants to find, he will know the exact search term to enter in Google search bar. Setting branded terms, like ATM with a phrase match

modifier, would show the ad for several slightly related terms to the brand, while this would count in people, who are not initially interested in the brand and its products. The multiple nature of Google Ads shows again, when the algorithm, if the settings are done poorly, can do things away from what the main intention of the interactions are (Law, 2009, Lammes, 2017). Following that, setting a branded campaign for broad match or phrase match modifier results in keywords like “Amazon” which are unrelated to the client’s products and/or services they advertise through Google. The “Amazon” keyword is an immutable mobile that helps enact the reality. Cam’s interaction with the exact match modifier is non-existent and therefore the relation with the Google Ads tool fails as Cam has less control over the ways in which Google algorithm works in the background. The broader impact from that is a less successful Google campaign (Latour, 1988).

The network continues when Dan and Cam are studying the benchmarks for Google advertising metrics in the industry. The managers are doing that on various websites that provide such data. From his experience, Dan knows that having an understanding how Google campaigns tend to work in certain industries, is crucial for being able to judge the performance of campaigns the agency is managing for their clients. Especially, if the client has not done any Google advertising before, the team has no data to compare their campaign performance with. The benchmarks therefore help Cam and Dan justify why Google campaigns sometimes generate more, but sometimes less traffic (Ghose & Yang, 2009). Some clients’ services are for example seasonal, and this is one thing Cam needs to understand in order to be able to justify lower performance of campaigns out of season. This is the experience and skillset that Cam builds the more clients he works with. However, the fact that the performance of Google campaigns for a specific client is hard to predict, especially when the set-up is completely from scratch. Then the Google algorithm is very unpredictable, by working in the background and sometimes causing unexpected outcomes (Law, 2009). The invisible part of the Google technology is showing its multiplicity and immutability for when the managers cannot control it (Roscoe & Chillias, 2014, Lammes, 2017). The benchmarks are immutable mobile, which increase the durability of the actor network by making its invisible features more visible and easier to take grip of (Latour, 1983, Law, 1984, 1987).

The immutability of the Google Ads shows more in the out-of-season periods, when the conversions from Google ads are expected to be lower, however, it is hard to predict for the managers how much lower, compared to the seasonal performance this would be. Knowing the benchmarks helps Cam and Dan justify Cam's work when performance of Google campaigns drops. The Ads tool again shows its multiple and fluid nature, when on one hand Cam and Dan use it to compare the campaigns' performance to the benchmarks, this at the same time producing a level of uncertainty and powerlessness. However, on another hand, the client checks the analytics of the performance out of season and requires explanations why there is a drop in performance. Double use of the tool at the same time, from different environments, where the tool is shifting between the internal and external network, shows its multiplicity (Haraway, 1991, Mol, 1996, Mol, 2000, Latour, 2000, Law & Singleton, 2005, Singleton, 2008), but more so its fluidity (Thompson, 2012, Lammes, 2017). The latter puts to the foreground the tool's digitality, which dynamism would be hard to capture, but if analytically Google technology is followed as an irreducible actor, materialised through social construction (Callon, 1984, 1998, Frickel, 1996, Latour, 2005). This enables steps towards a more holistic presentation of the SSA technology, which has so far been very fragmentedly studied (Quinton & Simkin, 2016, Yadav & Pavlou, 2020).

The actor network continues when Cam is sitting at his own desk, with the headphones over his ears and Dan is sourcing benchmark information to use them in report for the client. This time it is Dan, who is preparing the Google campaign report for the client. Dan, as an SEO manager, is skilled and experienced enough to use the Google Ads for the reporting purposes. He is checking Google campaign analytics of the client, whose services depend on the seasonality:

Dan:

"They spent 460 they got 8 conversions for 2000, which is decent. But then last month they spent 519, 2 conversions and got 700 back. So realistically they lost money last month, so it was kind of a dead month and I'm thinking maybe it's just a down month. And October is doing well. So, I think maybe just September is a bad month. The only thing I said about year-on-year data to kind of analyse...Because they did not have their ecommerce setup before,

so there's nothing to compare to. I'm sure they'll probably tell me once I get their feedback..."

The above monologue is an excerpt from a situation, when Dan is clicking between various analytics data in Google Ads analytics. He is checking the metrics such as spend, conversions and cost per acquisition – CPA (Ghose & Yang, 2009, Yang & Ghose, 2010). The analytics tool within Google Ads, is easy to use for Dan. The tool is inviting him to check the past campaigns' performance and he is able to compare this with the current campaign analytics. There Dan can change the date range, and the tool is also giving him the option to choose to read the analytics either on the graph or in the table. The heterogeneous interaction between Dan and the Google Ads analytics stabilises successfully (Law, 2009, Lammes, 2017) and translates into a source of information for Dan. The same interaction translates into a proof, that the work Cam has been doing is successful (see the below image). Benchmarks are immutable mobiles that translate into the reassurance for Cam, Dan and the client that Google advertising campaign management has been done successfully. Dan's intention with the tool, emergent from the network, makes Google Ads tool more mutable (Thompson, 2012, Michael, 2017). This is because he can use the Google Ads analytics, click between various views in the tool and change the date range in order to create a PPC report for the client. This enable a successful stabilisation of the socio-material relation, by Dan having enough control over the Google Ads tool, for him to be able to pursue the intentions he has with the tool. The benchmarks are immutable mobiles, which will be included in the "PPC report" and available for the client to read them. They will not change at any point in the current actor network, but will stay constant in its meaning (Law, 2009).

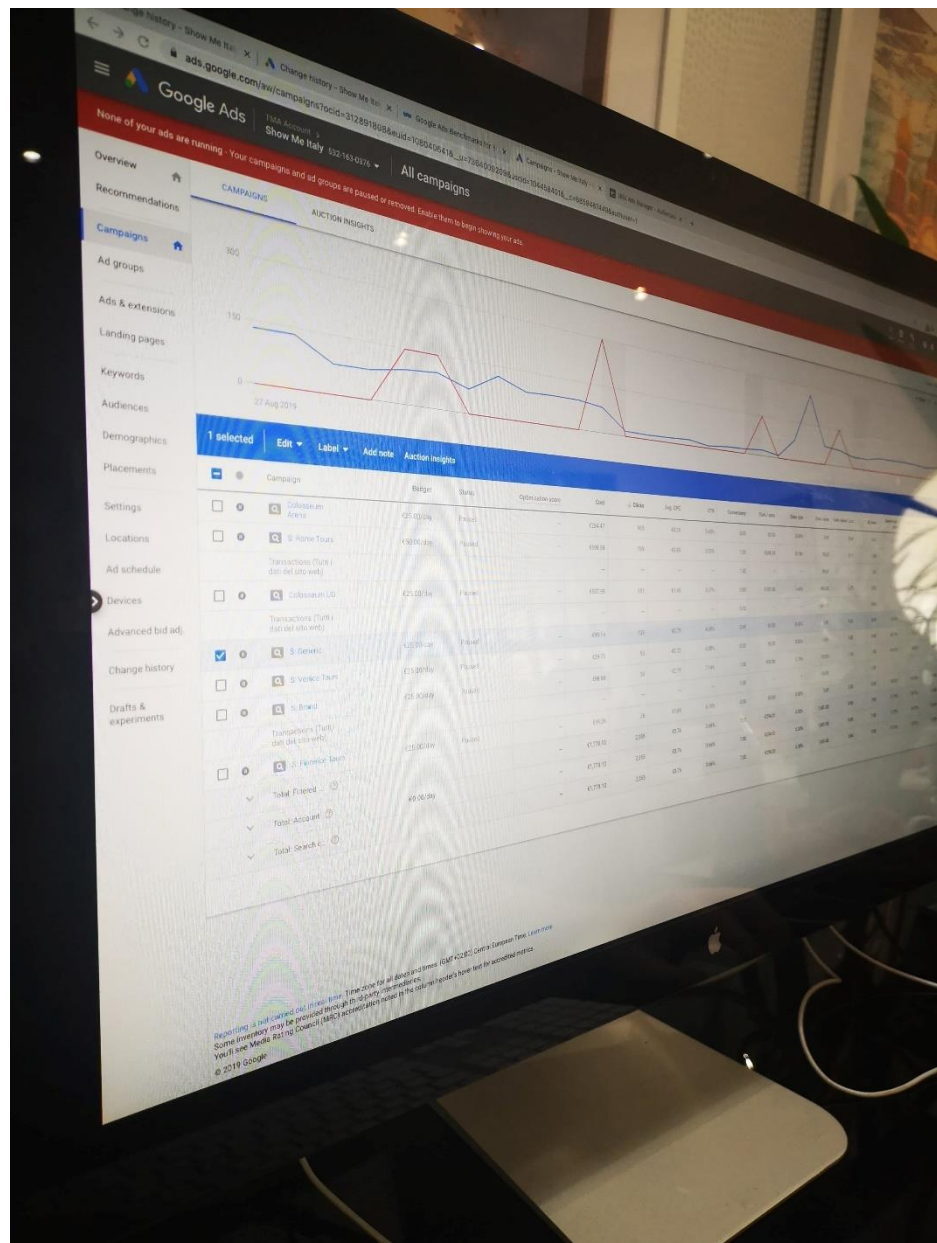
The researcher made the following entry into her research diary on the same day as the below image was taken at the agency (February 28th, 2020):

28.02.2020

"As I am organising my collected data - images, I see how important it is to take field notes along with any image I take. Even if I have a recording from the same time as the picture was taken, it is still crucial to have an illustration

of a situation in both the visual form and the form of the notes. This, to understand the situation better and have a better sense of what actually happened with all the details.”

Image 5.6. “Dan is checking Google Ads campaign analytics in a form of a graph and in a form of a table” – this is a source of information for creation of the “PPC report”, February 28th, 2020.



When Google campaigns are not showing satisfactory performance in some periods, but they show better performance in other periods, this is usually due to the

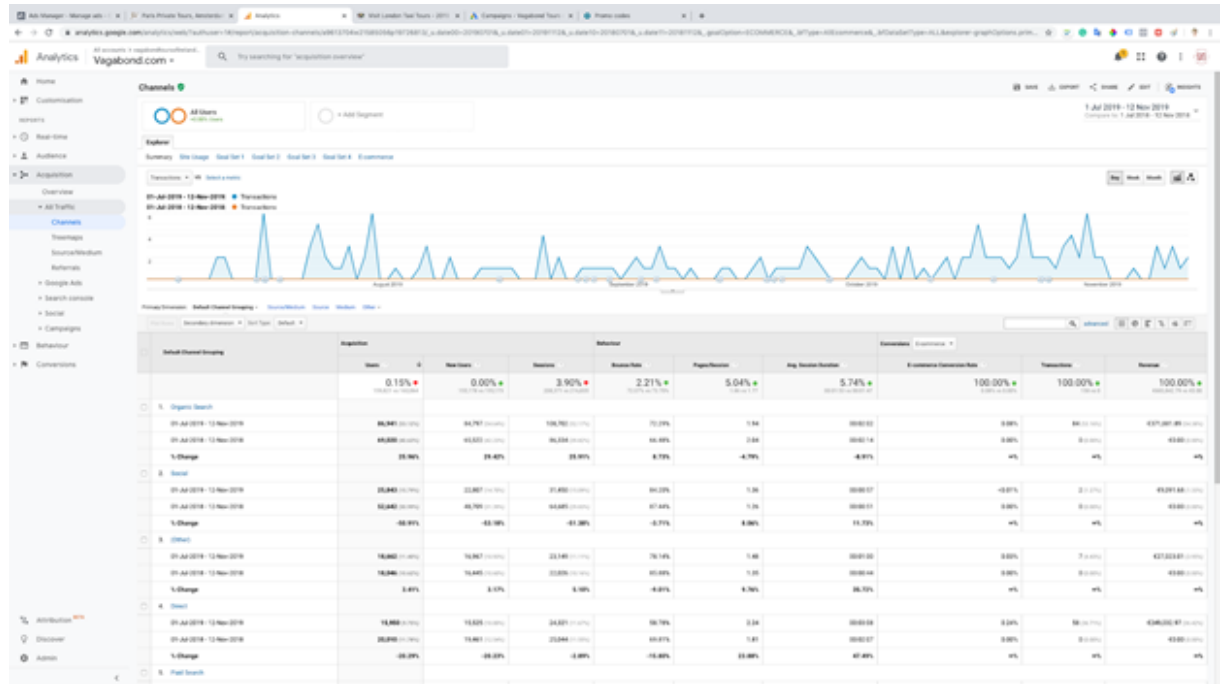
seasonality of the client's products or services. The above image is a screenshot of Dan's work, when he is researching and comparing the benchmarks to the actual campaign results to see the reason for the fluctuations in campaign performance. The screen, the graphs and the range of various analytics from Google Ads are immutable mobiles, which enable Dan to create the PPC report for the client.

The network continues when Cam is checking the performance of the Google campaign of a client, where the conversions happened delayed. The researcher sits next to Dan following the interaction between him and the Google Ads tool (Chris & Hassard, 2004, Suchman & Suchman, 2007, Adams & Thompson, 2016). The researcher is observing his clicks on the tool and comparing the conversion results from the Google Ads with the Google Analytics tool. He says that often the organic traffic from the website can be a result of a Google ad (Rutz et al, 2011). The searchers can sometimes click on the Google ad on SERP, remember the website/brand and come back to visit the website again at a later point. This is a matter of the attribution, where such organic traffic would be credited to the Google ads, regardless of not having come from the ad directly (Rutz et al, 2011). Such buyer's journey makes it harder for Cam to assign full credits for the conversion to the Google advertisement. Attribution of credits to a particular ad from a group of ads or a group of marketing channels was studied by the SSA scholars (e.g., Rutz et al, 2011, Li & Kannan, 2014, Kannan et al, 2016, Kireyev et al, 2016). The scholars' findings are in line with what Cam calls problematic to assign credits to the Google ad, when many touch points are included on the way until the conversion happens.

Google Analytics from the above event is an immutable mobile, which for Cam translates into a tool that enables him to compare the results from the Google campaign and it is also a tool that enables him to understand the many touch points on the customer's buyer journey before s/he makes a purchase or the product/service. The Google ad is an enactment from Cam's successful interaction with Google Ads. And the touch points are immutable mobiles that help Cam assign credits for the conversion. In the event, Google Ads is mutable for Cam, as he manages to pursue his intention with the tool successfully. The tool does not resist

his actions of scrolling through the tool and checking its analytics, while trying to decide on the attribution of conversions that happened organically.

Image 5.7. “Cam working on an SSA client in Google Analytics” – Cam is checking different metrics from the client’s website, November 8th, 2019.



The image above is a screenshot that presents an excerpt from Google Analytics, when Cam is working on a Google advertising report. He is comparing the ads' metrics between two different Google tools. Google Analytics is an immutable mobile for Cam. He uses it to make a comparison with Google Ads analytics to make sure Google Ads is pulling the metrics correctly. Cam figures that conversions from Google advertisement are shown delayed and if he wants to know whether the campaign was successful, Cam needs to as well use Google Analytics to check the analytics from the website. This is, how many people click on the Google ad, land on the client's website and potentially purchase client's product. The relation between Cam and Google Ads analytics is successful and this makes Google Ads more mutable as per his intention of making sure he has considered all the traffic that has happened between the Google ad and the website (Law, 2009, Lammes, 2017).

The network continues with Cam using the above data and information to create a report for the client. The policy of the company is that the Google advertising reports are created by the agency once per month. The reports are either sent to the clients directly or through the account manager. The account manager will usually review the report having in mind previous communication with the client, discussions with Cam and direct access to data through Google Ads tool. Isa explains:

Isa:

"I will read the report. Depends on the cases. But normally I will collect the data (anything special, anything issue-related), send it to Cam. The collection of the data I would say is just like an alpha phase. So, then I will read the report through. If there is something that doesn't look right to me, I'm just going to sit down with Cam and discuss what it means or maybe if there is something I don't understand."

As above, the socio-material relation between Isa and the Google Ads is established when the manager is collecting Google campaign's data to send it to Cam. She sits at her desk, having the Google Ads open on the screen in front of her and a Word document on her laptop. There she is entering in the data from Google Ads analytics. In the settings of the tool, she has picked the client's account and now she has access to all the data collected by the tool regarding the Google campaign Cam created and managed on behalf of the client.

The intention to create a Google advertising report shows whether the initial intention of the network has been fulfilled – to create and manage such Google campaigns that perform well. And this time Isa is providing evidence from good performance of the client's campaign. The tool invites her to collect various metrics, such as CTR or CPR to present it in the Google advertising report. The interaction that happens between Isa and Google Ads is a successful materialisation of the tool through a document called PPC report (as below) (Latour, 1993). Through the successful stabilisation of the relation, the Google Ads gets even more simplified, and its black box is getting opened (Michael, 2017). As Isa clicks on various metrics in the table on the Google Ads and changes the data range to such that matches

the period she is reporting on, the tool enables her to “personalise” that data the way she finds it most useful for presentation to the client (Lammes, 2017). As a human actor she is able to co-create the tool according to her intentions and this is how she is building on the understanding about the tool (Hind & Lammes, 2015). With a few clicks Isa is in the analytics function, where she is in full control of the use of the tool as per her intention. The Word document table with data, is an enactment from successfully stabilised relation between Isa and the Google Ads. The Word table is an immutable mobile, which is a presentation of the collaboration between the social and material actors in an actor network. The document enables to visually imagine the ways in which the interactions between human and nonhuman actors unfold the invisible features of Google technology.

Image 5.8. : “Cam making a report for the client” – on one screen he interchangeably uses Google Ads and Google Analytics, while on the laptop he is typing into the Word document, January 30th, 2020.



PPC
Report

WALKABOUT
TOURS

Account: Walkabout Tours
Dates: 4 Oct - 8 Nov 2019

Brand Protection:

- Spent: €458
- Clicks: 1310
- Impr: 12,652
- CTR: 10.35%
- CPC: €0.35
- Conversions: 13 bookings
- CPA: €35.23
- Conv. Rate: 0.99%
- Search Lost (Rank): 23.31%
- Search Lost (Budget): 30.66%

Report

TOURS

Bookings:

Book ing code	Tour type	pax	Lang uage	
2416 4491	1 x Milan - Free Tour (05 Dec. 2019. 15:00)			
2409 8155	1 x Milan - Free Tour (03 Nov. 2019. 15:00)			
2409 6127	1 x Milan - Free Tour (01 Nov. 2019. 15:00)			
2408 7496	1 x Milan - Free Tour (24 Feb. 2020. 10:30)			
2406 8755	1 x Milan - Free Tour (06 Dec. 2019. 10:30)			

2405 0815	1 x Milan - Free Tour (01 Nov. 2019. 10:30)			
2399 7028	1 x Milan - Free Tour (01 Nov. 2019. 15:00)	4 pax		

The campaign performance was promising, for the most part, when compared to the industry benchmarks. The avg CTR for the campaign is 10.35% which is more than double the CTR of the industry at 4.68%. The CPA of €35.23 is a bit lower than the industry average of €40.49. However, the campaign was underperforming in terms of conversions and conversion rate. This was due to the competition within the auctions on Google Ads.

Display URL domain	↓ Impression share	Overlap rate	Position above rate	Top of page rate	Abs. Top of page rate	Outranking share
civitatis.com	59.29%	70.26%	41.49%	96.67%	40.83%	32.54%
You	45.93%	—	—	97.45%	54.33%	—
getyourguide.es	35.85%	43.75%	31.24%	94.83%	26.42%	39.65%
viator.com	< 10%	10.76%	13.22%	80.01%	3.96%	45.27%

As you can see from the Auction Insights, the competition within the auctions came from Viator, GetYourGuide and Civitatis, all of whom are larger companies with a wider range

of tours, more brand recognition and more money to spend on advertising. It will always be hard to compete for bookings on these terms with the likes of Viator, as users who perform searches will know and trust these brands. The main competition came from Civitatis as Walkabout appeared within the same auctions 70% of the time, and also the outranking share indicates that Civitatis' ads were shown in a higher position 70% of the time.

Campaign Implementations:

We ran the ads for just slightly over a month, and within that time frame, we made the following changes:

- changes to keywords being targeted
- negative keyword additions
- copy changes to the ad

After he received the data from Isa, Cam created the “PPC report” as above. Once he has filled a report template with the data he received from Isa, Cam sends the report to Isa for revision. It is significant to revise and further discuss client's, as the data included needs to be accurately and clearly presented for the client to understand it.

The report is an enactment from two types of relations – the interaction between Isa and the Google Ads and the interaction between Cam and the same tool. In the current actor network, new roles of human actors are established. These are the roles of the reporters, but at the same time Isa and Cam are the spokesmen, who voice out potential issues the tool and the Google technology are causing (Callon, 1984, Thompson, 2012, Lammes, 2017). The heterogeneous relations are successfully stabilised, and this makes Google Ads more mutable for the managers. The report is an immutable mobile, translating Cam's interaction with the Google Ads tool for the period of reporting. The report includes many metrics such as CPC and CPA (Ghose & Yang, 2009, Yang & Ghose, 2010, Beman & Katona, 2013, Haans et al, 2013), which are all immutable mobiles. As Cam and Isa can access all the necessary data for report creation, and even from different devices, this makes the tool more mutable for them, for the particular tasks they do. Again, the fluid nature of the tool is apparent, by Google Ads skipping between interactions with two different managers, enabling different experiences of use.

As the actor network continues, Cam opens Google Ads and looks up the client's account. At the same time, he has the Word document open, where he is typing in the collected data about the cost spent for the campaign, ROI and other metrics. Cam says that there should be an easier way to collect such data, however, momentarily he has to follow a manual process of doing it. This time he is collecting the data to report to the team, precisely to the top management (Je, CT). The relation between Cam and the Google Ads is successful as per the intention to create a report of Google campaign performance for the internal use. Cam is clicking between the two windows – the Google Ads analytics and the Word document. The translation results in a Word document with the metrics (this one the researcher did not have access to), which is a source of information for top management decision making. The successful translation enables smooth passage of the data between various users of Google Ads (Lammes, 2017). The context the heterogeneous interactions are put into and the way the actors are followed, enables a detailed way of studying the way technology acts and reacts in various situations (Michael, 2017, Lammes, 2017).

As part of the process of the data collection off the Google tool, Cam creates another document. The excel sheet includes the clients' budgets, where Cam writes the maximum budgets that clients agreed to spend in a certain period of time. This is how he can keep the track of where and how aggressively he can support the well-performing campaigns (e.g., Rutz et al, 2011, Kireyev et al, 2016). Every time Cam creates Google campaigns, he will consider the Excel sheet to set budgets accordingly. He comments on one of the client's campaign performances, looking at the Excel sheet with budgets:

“She doesn't have a huge budget to be honest. I mean, she gets a pretty solid CTR - 13.2%, 114 clicks and 16 conversions. It (the Google campaign) does seem to be doing ok (he is now looking at the Google Analytics account of the client) ...”

To see whether the campaign is performing well, Cam looks at the analytics in both the Google Ads and the Google Analytics. The Google Analytics works as an immutable mobile and translates for Cam into a source of data to complement the understanding about the campaign performance, he gets from the Google Ads analytics. As per Cam's words the client's Google campaign does not seem to be doing what the client asked for – to increase the brand's awareness. Cam is powerless against the way the tool's algorithm works and this makes the interaction fail (Law, 2009, Lammes, 2017). The failed relation means that the power of the relation between the Google Ads tool and Cam is more on the side of the tool. Google Ads is inviting Cam to use it (to manage it well), however, he seems not to take the invitation “seriously” and so the tool becomes more powerful. This means that Cam fails to manage the campaign in a way that would result in successful performance of the campaign. Cam has therefore not had control over the tool, as much as he could. He admits that he was not giving the client (the campaign) enough attention, but this was because the client was not responsive enough and communication with her was impossible. The failure here refers to the miss on Cam's side, where he let the Google Ads to take on control and became more immutable in the interaction (Lammes, 2017). The Excel document in the event serves as an immutable mobile and as a source of information for Cam to set the

budget of the Google campaign according to the client's wishes and financial capabilities.

The network continues when Cam is sitting at his laptop on the left and is again looking at both the Google Ads and the Google Analytics account of a client on the screens in front of him. This time he is focused on the client that had been with the agency for a longer while. He is now looking at the Google Ads on the screen and saying:

*"Okay, how much have we spent in that time frame? 2 grants. This year they've made \$16,000. Honestly, they're gonna cancel, they just can't afford it. For the month of September - 148 clicks through and nothing for the conversion. I mean these guys are pretty shit (Checking the keywords). 80 quid for a f** tour...for all day (trying to say that the client's prices are high, and this might be the reason people are not booking with them)."*

The relation between Cam and the Google Ads has the potential to fail as per the initial intention for the Google campaigns to increase the client's brand awareness and increase the conversions. Cam knows exactly when the Google campaigns is spending too much budget this being through understanding the metrics such as ROI (Abou Nabout & Skiera, 2012, Haans et al, 2013, Yang et al, 2015). Cam explains that the client's quality score is bad, which is partly due to the speed of the website, as well the website not being optimised to its full potential. The interaction between Cam and Google technology fails to stabilise, as Google's algorithm works against the agency's goals, while the website the ad is leading to is not optimised. Cam is left powerless over the algorithm (Galloway, 2004). Cam explains:

"I sent them an email, but he got back to me saying, what sort of a template (for creating the website) they should buy. And this is a job of a website developer, I have no idea what kind of a template they need to buy to improve the speed."

The above excerpt signifies that the client is not synchronised with Cam and is not providing him with the relevant information he needs to run his Google campaign

successfully. Cam says that sometimes it is hard to get the client to collaborate with the agency and this is what disrupts the Google advertising practice and prevents him to work to his best potential. Too many such failed relations could lead to the failure of the agency. This shows how micro relations can have a macro effect on the organisation as a whole (Callon, 1984, Latour, 1988, Michael, 2017). The interaction between the Google Ads and Cam presents a start of a decision-making process of whether to terminate the contract with the particular client or take a different approach of how to prevent the Google campaigns from failing unnecessarily. Google Analytics is an immutable mobile, that provides data for Cam, who needs it to use it together with Google Ads. Google Analytics, despite being digital, as much as Google Ads, is analytically taken as a constant actor, which gives stability in the network (Law, 2009). The quality score is an immutable mobile and through the quality score, the Google Ads controls its advertisers' actions. In the situation, the quality score is immutable for Cam, and he cannot change it, however, long-term Cam can do many things to improve the ads' relevancy (Fain & Pedersen, 2006). By following Google algorithm's requirements for a more satisfactory searcher experience (Jones, 2014, Rust, 2020, Milestone, 2021), Cam makes Google technology more mutable, by being in more control of it (Law, 2009).

5.9 Pink shoes

Google advertising performance does not only depend on the SSA manager Cam, but as the networks above signified, as well on the way Google algorithm works. Therefore, the team always needs to keep up to date with the Google algorithm requirements. Failure to be up to date with even a minor algorithm update, could have significant consequences on the SSA performance. The statement is aligned with the current SSA literature (Katona & Sarvary, 2016, Berman, 2018). When the client gets in touch with the agency to seek support with the management of Google advertising campaigns, a new actor network is created.

The Google algorithm is a mechanism controlled by Google, which decides about ranks of the Google advertisements and presents the most relevant page results to the searcher (Google, 2021). Moreover, the algorithm determines, which position on SERP the advertiser will get and how much the cost per click will be (Abou Nabout

& Skiera, 2012, Haans et al, 2013, Yang et al, 2015). Analytically, Google algorithm is an immutable mobile that the agency's manager has an opportunity to control but is at the same time prone to be overpowered by (Latour, 1992, Akrich, 1992, Lammes, 2017, Law & Joks, 2019). Failure to study the algorithm's updates, as well as the invisible digitality in the back of the tool, might result in lower ad positions, more expensive Google campaigns and overall, lower than desired, brand awareness and missed opportunities for conversions (Ghose & Yang, 2009, Katona & Sarvary, 2010, Sayedi et al, 2014).

In order to follow the Google algorithm's requirements Cam says that the website optimisation - SEO is needed for the client to avoid paying high cost per click unnecessarily (Berman & Katona, 2016). The content manager - Pete - would usually not optimise the whole website but rather the one page that the searcher lands on after clicking on Google ad. Interacting with Google algorithm is through optimising the landing page and using the relevant keywords as part of the content of the Google advertisement. In the first example, Pete uses such keywords, relevant to the client's service or product, that searchers will potentially be searching for in Google. And in the second example, Cam uses some of the same keywords that Pete used for optimising the landing page of the client. Not only using the relevant keywords as part of the Google ad content, but there are also other ways of how to make the ad more Google algorithm friendly (Ghose & Yang, 2009, Katona & Sarvary, 2010, Sayedi et al, 2014). What Google algorithm requires is to "see" such content of the ad and of the website, which will be clear for the searcher to understand, and which will be recognised as helping with a better shopper experience (Jones, 2014, Rust, 2020).

Pete is therefore invited by the algorithm to carry out many actions around the landing page of the client's website in order to make it more algorithm friendly. Google technology, including the invisible algorithm does not resist the use by the manager, when he is aiming at having his Google campaigns work in a way that helps with the brand awareness (Roscoes & Chillas, 2014, Lammes, 2017). Not having the tool resisting him, enables Pete to be in control of the Google advertising, while being in control of the Google algorithm requirements. He can change and

add the relevant content to the client's website. This way the client's website is optimised to an extent that results in the most possible successful Google campaign performance. The optimised landing page content enables a better Google ads performance, where Pete has put himself in control of the algorithm having done the keyword research and SEO optimisation of the landing page before or while the ads have been running. The landing page is an immutable mobile, which for Pete translates into a platform, which, if optimised correctly, will successfully collaborate with the Google advertisement. If the basic requirements are met, Google algorithm will mostly not resist the managers' intentions with the ads and enable them to produce conversions from purchases or clicks on the ad. Google algorithm is interacted with by many agency's managers at the same time (Ghose & Yang, 2009, Klapdor et al, 2014). The keywords which Pete uses to optimise the landing page with, are immutable mobiles which enable the relation between the Google Ads and Pete to stabilise and materialise into effects such as higher quality score or higher ranking on SERP (Jones, 2014).

It is therefore not only the SEO, that impacts the Google campaign's performance, but also other activities that are part of the quality score, which are controlled by the Google algorithm. Such invisible features of the Google Ads, the managers cannot fully control. They can move the equilibrium of control more towards the user, however, the tool will still have more attributes that work in the background and the user cannot access (Roscoe & Chillas, 2014, Lammes, 2017, Lammes & Wilmott, 2020). Such invisible digital activity is materialised through the quality score, or which ad position the ad will be placed onto on SERP (Lu & Yang, 2017, Jeziorski & Moorthy, 2017). This directly impacts the performance of Google campaigns. Cam, in an analytical role as a spokesman describes the quality score as:

Cam:

"You can make your quality score higher. And that kind of works with SEO as well. This is the speed of the client's website (showing on Google ads), you will instantly see it's terrible, almost as terrible as it could get." He then checks

on an external free tool online and says: “*That score is out of a 100 and he got 4. 0-49 is bad so 4 is shit.*”

From Cam’s description, the Google quality score is Google’s evaluation of the advertiser’s keyword appropriateness, past Google advertising activity and optimisation of the webpage Google advertisement is linked to. The SSA scholars define the quality score in their studies, naming it ad rank (e.g., Lu & Yang, 2017, Jeziorski & Moorthy, 2017). However, the invisible part of the SSA technology is not captured in the context, thus not followed through the heterogeneous relations it unfolds and materialises through (Latour, 2004, 2005, Law, 2009).

The quality score in the situation has the power over the user in terms of determining what Cam needs to do in order to deliver a successful Google campaign to the client. Once Cam knows which requirements to follow by the Google algorithm, he gets the power back, as he can control the performance of a Google campaign through the Google Ads tool. The speed of the website is an immutable mobile that is one of the factors to contribute to a well optimised website (landing page). Once the agency’s managers understand all the Google algorithm’s requirements, they get in control of the Google algorithm and this way the relation between Cam and the Google Ads can be successful. Therefore, in terms of the intention of making the quality score of the Google advertising for the client higher, Google Ads becomes more mutable for Cam, who can, taking in the Google algorithm’s requirements, use it in such a way that will enable a well performing Google advertising campaign.

Cam further explains to the researcher, that the quality score determines the ad rank or where Google will place the client’s Google advertisement (which position). And it also determines how much the client will pay for every click (the better the quality score, the lower the cost per click) (Ghose & Yang, 2009, Katona & Sarvary, 2010, Sayedi et al, 2014).

As the network continues, Dan is once again emphasising that Google advertising and SEO need to work together. This aligns with the SSA scholars’ studies (Dhar & Ghose, 2010, Berman & Katona, 2013). Sitting in his usual position, looking at the

screen with the Google Ads open Dan participates at the team's meeting. Everyone is sitting at a round table in the meeting room, discussing the client's strategy. Isa, Rob, Je, CT, Pete and Cam are all with their laptops in front of them, either looking at the client's website or the client's Google Ads account. The tool invites each of the mentioned managers to interact with it at the same time, as they participate in the meeting. Some of them are scrolling up and down, checking the client's campaign performance on Google Ads analytics, others just have the tool open and gaze from the screen to Je, who is leading the meeting, and back to the screen. The conversation is around the quality of the client's website, based on his request for the SSA service.

Je has already done the "health-check" of the website, and she comments that the client's website is not well optimised yet. Website health-check is an activity, where the client's website is checked for various things such as the speed, content, keyword relevancy, design or colour palette. Those tests measure the alignment of the website with the Google algorithm's requirements. Through coding from red to green, where green is the best and red means the website is not aligned at all, Je is now able to advise to other managers whether the client is ready to start advertising on Google or the website (webpage) will need more work before that. The health-check report is an effect of Je interacting with the algorithm, knowing its requirements and latest updates. She uses the website, which is the immutable mobile, as a means of performing various Google algorithm's checks. Je is therefore invited to interact with Google algorithm in such a way that produces algorithm-friendly website, and the health-check report is an immutable mobile that enables her to mark where the website needs modifications and improvements (Lammes, 2017). Following the requirements of the Google algorithm, Je is in control of those, as she knows exactly which things on the website need to be changed in order for the Google campaign to be performing at its best. Je's skillset is an immutable mobile, which helps with materialisation of the invisible rules of the Google technology and helps to create the scientific character of the phenomena (Latour, 1986, Licoppe, 2010, Michael, 2017). Je's role that emerges from the relation between her and the Google algorithm is the role of a requirement follower and an evaluator of the optimisation of the webpage. Je is also a decision maker, and she makes decision about which things on the website of the client to optimise better in

line with the algorithm's requirements. This gives her power over the tool and enables the stabilisation of the network to be successful (Michael, 2017, Lammes, 2017).

As part of the same meeting, Dan first listens to Je reporting about the current level of the optimisation of the client's website. Suddenly he interrupts the presentation:

Dan:

"PPC (Google advertising) is going to be...They are going to pay through the nose, because their website is not ok. Their cost per click (in Google Ads) is going to be higher than the competition's and their website is not going to convert. So, I am telling you, it is not the best time, their website is not optimised and their cost per click is going to be very high."

In the above comment Dan takes the role of a spokesman of the Google Ads tool and this illustrates the potential scenario of the client going ahead with Google advertisement creation before his/her website is optimised. Dan's relation with Google Ads analytics translates into a certainty that the spend for Google advertising will be higher given that the website of the client is not well optimised. This consequently means that Cam, the direct account manager, will not be able to manage Google advertising in a way that provides a satisfactory outcome. In this case, the power is more on the side of the Google algorithm (Lammes, 2017). As the invisible Google technology sorts the websites according to their quality of optimisation, the client's website will likely not meet the criteria to rank the highest and achieve best rates per clicks. The power in digital interactions is quickly shifting between objects and subjects (Thompson, 2012, Hind & Lammes, 2015), this time Google technology overpowering Cam, who is its user. This leads to a temporary failed relation, where the invisible part of the Google Ads shows resistance through ranking other Google advertisers' websites higher. The CPC is an immutable mobile, which translates into an indicator of a non-optimal Google campaign performance. The poorly optimised website is an immutable mobile, which translates into an expensive advertising activity with less return. The example shows, how the invisible digital technology, such as the backend of Google Ads, can be understood in various ways, but with special detail, through resistance of that

technology and failure of relations it gets engaged with (Lammes, 2017, Michael, 2017). This gives opportunities for even more accurate understanding of that technology, when the issues such as poorly optimised website, are getting resolved (Michael, 2017).

There is rarely any meeting that goes by without Dan emphasising the importance synergy between the SEO and SSA. When it comes to Google algorithm, the managers' skills are of little importance to overpower it (e.g., Thompson, 2012, Sam & Lammes, 2015, Lammes, 2017). If the client's website, where the Google ad is click-leading to, is not optimised, the invisible technology behind it will take control over the process of advertising, positioning the ad on SERP wherever bests fits compared to the competitors. Consequently, Google will also charge a much higher CPC, when the advertiser will try to rank high with poorly optimised landing page (Ghose & Yang, 2009, Yang & Ghose, 2010, Lu & Yang, 2017, Jeziorski & Moorthy, 2017).

Dan quickly scans through the client's website, which is what he usually does to be able to make decisions about the continuation of Google advertising. Dan's decisions are translations from the heterogeneous actor network, where the current ad rank signifies more power on the Google technology side. This shows through how Dan cannot achieve the initial intention of the network, having less control over the technology, thus the technology being more immutable for him (Law, 2009). The fact that the Google campaigns are in place and running, does not completely fail the actor network, but rather decreases the efficiency of it (Lyotard, 1984) and decreases the control over it on the user's side. Regardless of Dan and Cam knowing the Google algorithm updates, an under-optimised website will downgrade their Google campaign management. In the case of Dan, who is mostly responsible for the SEO segment of Google advertising, Google Ads is mutable, when he checks the level of CPC, ROI and the rank of the ad on SERP. The tool is mostly not resisting the use and the ways Dan is tailoring the features and settings to his current intentions with it. However, for Cam, who is an account manager, aiming to have Google campaigns performing well, Google algorithm's unpredictable actions related to ranking, present resistance to cooperate (Lammes, 2017). At least two different outcomes from heterogeneous interactions between actors, show the

multiple nature of the Google technology (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). There, tracking the ways in which the actors are performing in the network, continues to open the black box of the technology, which is evolving at a rapid pace (Singel, 2010, Liu-Thompkins, 2018, Pritchard, 2021).

Usually, the primary action to produce a successful Google advertising campaign is optimisation of the client's landing page, which Google ad is linked to. The SEO manager aims for an "*attractive and relevant to the SSA ad enough for the lander to crawl it or at least to not bounce off*", as Cam explains to the researcher. In the situation, Cam is looking at the client's Google Ads account. On the second screen there is Google Analytics, where Cam is checking the traffic of the client on the landing page and how long the visitor has spent on that page. Google Analytics is the immutable mobile, which enables Cam to evaluate the level of optimisation of the landing page based on the actual data about the page performance. Being a constant actor in the network, Google Analytics enables Cam to understand the performance of Google campaigns on Google Ads tool. The constant character of the technological actor helps with materialisation of the Google Ads tool, which in this case has stabilised in a relation successfully (Law, 2009, Lemmes, 2017). This translates into a better understanding of what needs to happen next – more optimisation of the website, based on the CPC level, or continuation of management of Google advertising as planned.

When the network continues, Isa turns to the researcher and explains her that SEO is a long-term strategy and clients need to be patient to see results or they need to have a certain amount of understanding to see the importance of first having the landing page/website optimised in order for the SSA to work efficiently (Ghose & Yang, 2009, Yang & Ghose, 2010, Berman & Katona, 2013, Haans et al, 2013). Isa explains the SEO strategy to the client as follows:

Isa:

"You know SEO is something that is a long-run and you need to wait for. It's like you are a farmer... you put the seeds and then you have to wait for the results."

Due to the SEO being a long-term strategy, clients might not be able to imagine the amount of time that is required for it to start working properly. Dan comments:

Dan:

“We've never had time to set and work out SEO reports. A lot of clients I have had were a bit naive thinking that digital marketing and sales organically will happen overnight.”

Therefore, clients a lot of the time prefer not to spend too much time and effort on SEO. This can result in a failed Google advertising network, as Google algorithm overpowers the user (Lammes, 2017). Isa once more emphasises the importance of the SEO and Google advertising congruence saying:

“And if the page is not optimised then this might diminish the PPC (Google advertising) efforts.”

Cam responds to the Isa's comment:

“A site needs to look ok and work ok. And with their clients it is either that the site does not look ok and it works ok or the other way around.”

As per Cam's statement, the client's primitive understanding of the Google algorithm often results in poor optimisation of his/her website, due to the limited budget the client is willing to offer for the optimisation activities. As the client does not understand the way Google algorithm works, this relation is The client does neither directly follow nor violate the Google algorithm's requirements, however, if s/he decides not to invest in the SEO and other optimisation activities, this makes the Google algorithm for him/her more immutable. This is because the client chooses to ignore the algorithm's requirements, which also impacts Cam's work with the client's Google campaigns. The client deciding against investing money into the optimising activities, makes Google Ads more immutable for Cam, who will not be able to have as much control over the tool as he would have following the algorithm's requirements. Still, the control split between the human and nonhuman actor

remains asymmetrical (Fain & Pedersen, 2006, Liu-Thompkins, 2018, Morton & Dinielli, 2020, Thompson, 2012, Lammes, 2017).

For Cam, the optimised website plays an important role in the performance of Google advertising campaigns. This at the same time means a successful network as per its initial intention – to increase the client's sales and brand awareness. Following the rules of the invisible Google algorithm, through optimising the website, makes the website translate into a device for a more successful Google campaign (Callon, 1984, Latour, 1986, Licoppe, 2010, Kjellberg & Helgesson, 2007). The website is an immutable mobile, which helps materialise the invisible Google SSA technology (Law, 2009). Google algorithm is therefore a powerful force that enforces the actions and importantly impacts the decision-making process of the managers. If the updates of the algorithm are not followed, then the invisible mechanism behind the Google Ads tool will take its own initiatives with the running Google campaigns (Thompson, 2012, Lammes, 2017). Well management of Google campaigns requires the SEO optimisation and close monitoring of what is going on with the campaigns via metrics trends (CPC, CPA), as Cam explains to the researcher. In cases when the client does collaborate with Cam and the rest of the managers, the relation between Cam and the Google Ads can be successful, as a result of following the Google algorithm's requirements. This means a temporarily stabilised and therefore a campaign aligned with Google algorithm rules related to optimisation. However, when the client refuses to collaborate, and therefore refuses to spend money on optimising the website, this makes the Google Ads more immutable for Cam. The client's historical Google advertising is an immutable mobile, which informs Cam's decision making and is an immutable mobile that remains constant in the current network of actors (Michael, 2017).

In the above excerpt, Dan acts as Google Ads's spokesman (Callon, 1984). He emphasises and explains how Google algorithm evaluates the client's website, which consequently impacts the client's Google advertising activities. Dan has reviewed many clients' websites before, studying SEO and SSA synergy (Sayedi et al, 2014, Berman & Katona, 2016). Dan is speaking his mind about the SEO, based on the previous interactions he had with the Google Ads tool. His understanding of the Google algorithm makes the relation between him and the algorithm successful. This again does not mean a completely or permanently successful actor network,

as the invisible mechanisms of Google technology can very quickly start working against Dan and make the network under less control for him (Lammes, 2017). However, it means that in such network, Dan's Google campaigns have good performance, this resulting from his understanding of the Google algorithm. Not only Dan, but also Isa has many experiences with the Google algorithm, specifically related to keeping up to date with its changes, when planning the Google advertising activities and assisting with reporting on Google campaigns' performance. This gives her, as an actor in the network, more control and power to direct her Google campaigns aligned with her intention (Czerniawska, 2000, 2004, 2008, Lindberg & Czerniawska, 2006).

The network continues and the researcher sits next to Cam, while he is writing the Google advertisement content for the client. He needs a list of keywords the client previously used for optimising his/her website. The keyword list could come from the client directly if the client has one (has done the optimization himself), it can be done by Pete and Dan if the client has got the budget for the keyword research or Pete can quickly scan through the website and pick up keywords the client is currently using on the website particular product/service related. The best practice at the agency is to start Google advertising with a well-developed list of keywords, either provided by the client or built internally at the agency. This enables the managers to manage the campaigns with much more background and structure. The current SSA literature in marketing suggests that a good keyword research and with them optimised website, will help achieve SSA advertising goals (Kritzinger & Weideman, 2013, Berman & Katona, 2016).

Cam knows well how to build a well-performing Google campaign. However, he often faces Google technology's resistance, when he is following actions towards achieving the SSA goals (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). It also often happens that the tool at the same time causes problems to one manager at the agency, but the other manager, using the tool at the same time, maintains a very interactive and successful relation (Lammes, 2017). This points at the fluidity of digital technology like Google Ads and its invisible attributes (Shove, 2003, Law, 2009). The client, who usually refuses to invest money in Google advertising

research, this including keyword research or SEO optimisation, often takes even more control over the Google technology from the managers. Cam says that clients usually have very little experience using the Google Ads tool and therefore do not understand why Google algorithm is important in the socio-material relation. The relation between the client and the Google Ads usually does not span beyond actions such as account creation and brief checking of Google campaigns as they are running in the dropdown. With the mentioned intentions the clients are in control of the tool, when the tool would not resist the use. The way a digital tool can resist the users is through refusing to perform action the user would expect them to perform (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020).

Seeking help with Google advertising, with such partial understanding of the Google algorithm, can cause disruption of the Google practice. The client not approving of certain Google services like SEO, could prevent Cam from doing his work at a level that matches his skills and experiences with Google advertising, Isa explains to the researcher. This causes less power over the tool by Cam, who will not be able to control the campaigns as much as he normally could knowing the algorithm's requirements for good searchers' experience (Jones, 2014). However, he will not be able to follow those rules because the client might not appreciate the value of certain marketing services such as keyword research or website optimisation. In turn, for the client this will potentially be a missed opportunity for a well-performing campaign. This is a missed translation and makes the Google Ads less mutable for Cam, who would otherwise be able to fulfil the main intention of this network (Lammes, 2017, Lammes & Wilmott, 2020).

Following the above, the client can be very defensive about their budget and often s/he would tend to think s/he is always right as s/he has the best knowledge of the brand and its products. At one of the meetings, the managers tried very hard to explain to the client how Google works and how SEO and Google advertising are connected. As a response to that the client commented:

The Client:

“It's just that...I'm trying to imagine your brain (speaking to CT and Cam). I am trying to imagine how you understand Google the way I understand people on my tour (the client's service). I am thinking like okay, probably simple for him, but not for me. I find it just overwhelming.”

The above excerpt is from a face-to-face meeting with the client who came to the agency's office to discuss the Google advertising service the agency was providing to increase his brand's awareness and sales. The client initially requested the Google campaign to be set up and running right away, as he was convinced his current level of his website optimisation was sufficient for the Google advertisements to perform well. The aim of the meeting(s), however, is to provide the client with enough illustrative examples for him to understand why optimising the website (a landing page) is one of the crucial factors for success of a Google campaign. It takes the client a very long time to understand this and to finally agree to invest more time and money into the optimisation related. At the meeting Dan gives a very clear example, why it is not only Google advertisement on its own, but site optimisation that plays an important role in improving the campaign performance:

Dan:

“By optimising your website for SEO and keywords, you will increase your quality score and Google PPC (Google ads), which will bring down your cost per click. It is not about who bids the highest, it is more about the click through. It's not about paying the most, but about the relevance in the comparison with a company that offers the same product as you do. If their website is not optimised, they're paying more per click than you would not be because your site is optimised. So, again this speaks for going forward with optimising your site.”

The main actors are Dan, Cam and the client. The quality score, including the optimisation are requirements of the Google algorithm. The client is basing his opinion about not needing to optimise the website (landing page) better, on his previous experience with the Google Ads. His broad interaction with the Google Ads translated into partial knowledge about Google advertising requirements. However, the agency's managers, particularly Dan, have many more experiences with the

tool. Dan's previous interaction with the tool translates into a full understanding about what is needed for a well-performing campaign (Thompson, 2012, Lammes, 2017). A well-performing campaign therefore means a lower cost per click and a better ranking position against Google advertising competitors. Cost per click is an immutable mobile for the managers that do not follow the algorithm's rules, however, Cam or Dan can potentially make the cost per click mutable, by optimising the page the advertisement would be linked to. This gives the managers more control and power over the Google Ads tool and therefore make it more mutable (Law, 2009, Lammes, 2017). They can better collaborate with the tool, with experiencing less resistance from it, thus less problems networks (Callon, 1984, Latour, 2005, Law, 2009). This enables a smooth analytical process of translation, however, the interfaces that work behind the visible part of Google Ads, remain black boxed and is waiting for problematic situations and simplification (Michael, 2017).

When the network continues, Cam has his laptop open, while participating at the meeting with the team about a very demanding, hard to work with client. Not only Cam, but everyone is looking at their screens, while sitting at a round table, in a meeting room. On the client's Google Ads account, Cam is checking how the client's Google campaigns performed previously and who are the main keyword competitors. The situation provides a good context, where Google Ads gets embedded in (Law, 2004).

In order to be able to make the Google campaign successful, Cam, Dan and Pete need a list of keywords. This is something the agency's managers request from the client at the very start, however, if the client has never done any SEO or Google advertising, it is very unlikely that s/he will be able to provide the managers with such a list. In such case, Dan and Pete need to build a list of relevant keywords for the client from scratch. Sometimes the client would have a list of keywords s/he was using for the Google advertising before, but it is often the case that the agency's managers need to improve that list. Cam says that a good quality list of keywords is needed for two reasons – first, to optimise the website and second, to use some of those keywords for the ad creation accordingly. This is in line with the current SSA literature (Jerath et al, 2011, Zhu & Wilbur, 2011, Rutz & Bucklin, 2011, Katona & Sarvary, 2016, Berman, 2018).

Below are some of the most important things that the agency's managers need from the client when s/he comes on board. One of the conversations between the managers at the agency, after the client has come on board, goes as follows:

Isa:

"Just to sum up...we need the list of primaries and secondaries (keywords)."

Dan:

"Ask Cam as well... Cam, do you need anything else (turning to Cam)?"

Cam:

"I think that's kind of it, to be honest. The headings for pages are nice, we can see which ones those are, fine, the keywords...(talking about the SEO of the client's website)"

Isa:

"And access to Google Tag manager..."

Dan:

"(Turned to Cam) Do you have access to their Analytics (Google Analytics)?"

Isa:

"Obviously access to Adwords (Google Ads) as well."

Cam:

"I don't even know if they've got one set up."

The above represents the usual way in which the team exchanges thoughts and lists the necessary things needed for the start of the Google advertising activities. Isa's, Cam's and Dan's previous experience with the Google advertising translate into an understanding of what the client needs for his Google campaign to perform well. Managers' keeping up to date with the Google algorithm updates translates

into an understanding of what the Google algorithm requires to enable a successful Google advertising campaign. Such an understanding by the managers, especially Cam, enables them to be more in control of the Google algorithm and to have the Google Ads more mutable for their use. This means, to use the Google Ads in such a way, aligned with the Google algorithm's requirements, that will enable Cam to fulfil the network's intention. The primary and secondary keywords are immutable mobiles, which the agency's managers need to ensure an increased quality score for the client (Law, 2009, Thompson, 2012, Lammes, 2017). In the same situation, Cam is commenting on the level of the client's website optimisation. The optimised headings on the website are immutable mobiles for him and a source of information to recognise the level of optimisation of the website and how much more optimisation work will still need to be done on the client's website. The relation between Cam and the Google Ads is therefore potentially successful given the optimised headings of the landing page on the website. And given the main intention of this network, Cam believes the currently optimised level of the client's website could translate into a successfully created and delivered Google advertising campaign for the client.

In the above conversation, the managers are also listing other necessary things they will need, to start building the Google advertising campaigns for the client. One of such things is access to tools like Google Tag Manager and Google Analytics. In this network Google Tag Manager and Google Analytics are immutable mobiles (Law, 2009). The first is a tool for a more detailed tracking of the analytics from the client's website and translates into an additional source of information for Cam, when he needs to better understand how the Google campaign is performing to manage it accordingly. And the Google Analytics also translates into a source of information for Cam to understand how the campaign is doing for example, in the sense of conversions and traffic on the client's website.

The conversation between the managers from above, continues. Dan is sitting in front of his computer with the website of the client open. In the discussion with the fellow managers, he is aiming to give them additional justification why the keywords and the SEO are important for the client to sort before he starts any Google advertising activities (Berman & Katona, 2016). He is certain that the keywords the

company is currently using on their website, will make their Google advertisement more expensive than necessary. Dan thinks the team cannot go on with Google advertising activities if primary things are not done first:

Dan:

"I would try to demand that information, though, I would say (giving an example to Isa of what he would write to the client): in order for us to do PPC (Google ads) we need to know what keywords your company are trying to rank for, primaries and secondaries, so that when we are doing PPC (Google ads) we can ensure that we are trying to at least target the same keywords as you are using on your website. SEO and PPC (Google ads) can never be separate. Basically, they will be paying more."

After a slight pause, he continues:

Dan:

"I guess the information we need to know for that would be the URLs (webpages) that any potential ads will be linked to. So, what are their homepage and tour list pages, primaries and secondaries (keywords). But maybe if you ask in a way that's quite general and they come back and say fine...Maybe they don't know that Cam needs to get these ideas NOW. Without looking at their cost per click, we have no idea how much they need to budget in order to generate conversion, as you need a certain amount of clicks. We can look at their website conversion rate and say that in order to get this conversion, you need x amount of clicks...explain them."

The above instructions by Cam on what is needed to start the Google advertising for the client, are directed towards Isa, who is the main account manager for the client. Dan would like Isa to get an information from the client about what his preferred (previously used) keywords to use in the Google campaign are to use them for setting up a Google campaign. Dan would also like to get an information on which webpage on the client's website is the one to link the Google advertisement to. This information will give the team an idea on how much the client will need to pay to get one booking (conversion) through the Google ad (CPA). This is through

using the Google Ads keyword planner and the information about specific keywords the planner will provide the managers (average CPC, CPA, the level of competition, average monthly searches for keywords).

Given the nature of the conversation, the researcher can understand that Dan knows the client does not have much understanding about how the Google Ads works. The client has probably only used the tool briefly before joining the agency, and he never created or managed campaigns on his own. Given the fact that client does not understand the importance of providing the information about the URLs and keywords to the team, this means that he never interacted with the Google Ads, in an aligned with the Google algorithm, way. Cam will therefore need the information on the URLs and the basic keywords from the client to be able to interact with the Google Ads successfully. If he does not receive the keyword list and the desired landing page information or if the client will not be willing to invest money into the keyword research activities, Cam will not be able to follow what the Google algorithm requires for a well performing campaign. This could potentially result in a failed relation between Cam and the Google Ads.

Cam will therefore use the Google Ads functions to set up the Google campaign for the client. Google Ads will therefore be mutable for Cam for the purposes of the campaign creation (Law, 2009). This is because anybody can set up a campaign on Google Ads, regardless of their understanding of Google advertising. However, to achieve good performance, Cam needs to precisely follow the Google algorithm's requirements (Lu & Yang, 2017, Jeziorski & Moorthy, 2017). Not having enough information from the client, for example, the list of URLs the manager wants to link to the campaign and the list of keywords he wants to use in the Google ad, will disable Cam to improve the client's quality score. This will make the Google algorithm more powerful than him, which means the Google campaign will not perform at its best potential. Furthermore, not following the Google algorithm's requirements will make the costs of the campaign higher than usual, due to potentially irrelevant keywords used in the content of the ad and due to the poorly optimised landing page the ad will be linked to. This means the failed relation between Cam and the Google Ads, as the initial intention of the network will not be achieved (Law, 2009).

Dan puts a lot of emphasis on the impacts of SEO on the effectiveness of Google advertising. His relation with the algorithm successfully translates into the knowledge he has to be able to have a strong opinion about the significant impact of the algorithm on the Google advertising campaign's performance. Isa also understands the importance of SEO for Google advertising, and this is based on her previous experience with the Google Ads tool. Consequently, she pays close attention to Google algorithm changes (Jones, 2014, Morton & Dinialli, 2020). Isa tells the researcher that she is subscribed to receiving the algorithm's updates on her email. For Isa, the Google algorithm updates translate into a source of information, which she uses to be able to actively participate in team's conversations about SEO and quality score, as in the conversation. She also uses the Google algorithm updates knowledge with the clients, when she presents them the Google advertising practice and when she justifies additional information requests from the clients. Isa's interaction with the Google Ads and therefore the Google algorithm is based on the intention to be able to fluently communicate with the client and the team about the Google algorithm. Google Ads is more mutable for Isa, however, not necessarily for Cam, who on several occasion experiences the tool's resistance and the tool even talking back to him, when he is trying to perform actions on it (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). A series of problematic events can happen, if the client is not willing to collaborate with the agency. As a result, it is impossible for Cam to fully control the tool's actions and reaction, therefore the performance of the Google campaigns (Law, 2009, Lammes, 2017). Despite the fact that the actor network turns out unsuccessful, this gives the researcher several opportunities to follow other event, which will be around resolving the problems around Google Ads and its invisible technology (Lammes, 2017, Michael, 2017).

Google algorithm evolves often, and the agency's managers are trying to be up to date with those changes (Fain & Pedersen, 2006, Google, 2021). However, there is one thing with the algorithm that always stays the same - common sense. Common sense of the managers, which can be based on their previous experience with Google advertising, is an immutable mobile, which is in this network constant (Latour, 2005). In the situation, common sense of the manager translates into a potentially well-performing campaign. The experience from the managers enables

them to be closely aligned with the algorithm's requirements and predict which are the actions to implement in Google advertising, that increase performance. This in effect, makes the managers be in more control of the invisible Google technology.

Rob describes how Google judges the relevance of the ad content and imagery (and the keywords used):

Rob:

"If you say pink shoes, we want to see pink shoes, you don't want to see blue shoes. So, if your page has blue shoes on it, that's wrong. So, you need to optimise the website so that it has got pink shoes on and Google will reward you for doing things correctly and bring down your cost per click. So, you don't need to pay as much."

As per Cam and Rob, one of the Google algorithm's criteria for higher ranking is relevance of the ad (Belk, 2006). This is part of what Google calls the quality score (Jones, 2014). Understanding what relevance and quality score means, plays an important role in Google ad creation and is a translation of Cam's and Rob's relation with Google Ads tool (experience). For Cam, who is the SSA manager, direct experience with the Google Ads tool, like Google campaign creation, translates into an understanding about what the algorithm will require for a campaign that is to increase client's brand awareness and/or increased conversions. While for Rob, who is the account manager, following algorithm's updates and checking client's campaigns, translates into an ability to discuss important issues about Google campaigns with the team and with the client. To understand the client's Google campaigns Rob would usually log into the client's account on the Google Ads tool and then enter various functions on it by clicking on options on the list of functions. For example, he goes to auction insight's function or keyword planner tool, where he scrolls up and down to check the main metrics to be able to tell whether the campaign is doing well or not. His role is therefore a Google campaign "checker" and for this purpose he is in control of the use of the functions. This makes the Google Ads more mutable (Law, 2009, Lammews, 2017).

Based on what Rob sees when scrolling through the Google Ads he can make his own opinion about what works and what does not work in a Google advertising campaign (keywords, images, content of the ad). As per Rob's intention (getting the understanding about the campaign), the relation with the tool is successful.

The network continues when Cam is setting up a Google campaign for the client. He now has the list of keywords, prepared by Dan and Pete, to work with. Cam chooses four or five keywords from the list of keywords and then work together with Pete, who will optimise the client's website. Cam uses the chosen keywords to build the ad (the content) and Pete should use the same keywords, as Cam will use in the Google ad, to optimise the landing page the ad will be linked to. The below table (image) shows Cam's structured planning of the Google ad content.

Image 5.9. "Cam using an Excel sheet to list the keywords" - a Google ad keyword plan with included keywords, February 17th, 2020.

English		Total Characters	Character Limit	Editing Space
Headline 1	Free Milan Walking Tour	23	30	7
Headline 2	Walkabout Tours EU	18	30	12
Headline 3	Most Popular Tour in Milan	26	30	4
Description 1	Walkabout is a group of knowledgeable travelers with a passion for Italy's great cities	86	90	4
Description 2	Daily free & private 5-star rated tours. Tours in 5 languages. Certified guides.	81	90	9

Sitting in front of his screen he is carefully considering the list of keywords Dan and Pete had provided him with. Cam is supposed to use that list for creating a Google ad for a client that does walking tours in Italy. Having the list of keywords in front of him, Cam now needs to select a couple of keywords, from the list, to use them in the Google ad. The above image is an excerpt from an Excel sheet that Cam created for one of the clients. The screenshot above shows how many characters, including the chosen keywords, Cam will use in the Google advertisement (the researcher did not have the access to the exact keywords Cam was using for the ad content planning).

The above table is an outcome of translation of the relation between the Google Ads (Google algorithm requirements) and Cam. The table with keywords is also an enactment of the relation between Pete and the Google Ads tool. Pete created the keyword list Cam will use for the ad creation. The keyword list is an outcome of the previous relation between Pete and the Google Ads tool when Pete was using it in

his role of a “keyword researcher”. For doing the keyword research, Pete used one of the tool’s functions – Google Ads keyword planner, which enabled him to see the displayed information about the keywords (as per the below image). His intention was to provide relevant keywords for Cam to use them for designing the Google ad as the client requested (Michael, 2017). For Pete, the keyword planner function in the Google Ads tool is a mutable mobile as it invites him to do anything he wants to create the keyword list (Law, 2009). He can look up keyword groups, he is interested to get the information about. He clicks and scrolls through the tool and copy pastes the keywords he had chosen into a separate folder on the keyword planner. As per his intention Pete can control the tool by changing as much as he wants as per the intention, he has with it. This makes Google Ads more mutable for him (Law, 2009, Lammes, 2017).

When Cam receives Pete’s keyword list, the list is an immutable mobile for him. It translates into an ability for Cam to create a well aligned with the landing page Google ad (Thompson, 2012). Optimised landing page is in line with the Google algorithm requirements, and this enables the relation to successfully materialise (Law, 2009). As Cam follows the algorithm’s requirements with the Google ad creation and management, this enables him to achieve the intention of the network – to increase brand awareness and/or increase conversions for the client. For him, the Google ad creation function (Google Ads editor) is a mutable mobile, as he can edit and change it as per the intention of this network. Google Ads does not resist, and he does not have to say much about any of the actions that signify the resistance towards Cam (Callon, 1886). This makes the Google Ads tool more mutable (Law, 2009). The Google advertisement with the relevant keywords and imagery is an outcome of the Google Ads tool and Cam.

Below is an excerpt from an Excel sheet that Cam prepared before setting a Google advertisement and it includes data about keywords from the Google Ads keyword planner. The below keywords are in Spanish, as one version of the Google advertisement will be in Spanish, as the client requested, Cam comments. The type of service agency’s clients is offering to their consumers is tourism based and therefore the client can request various language versions of one Google ad, as per

the target audience. Being Spanish, Isa always helps when it comes to looking up keywords in Italian and Spanish.

The client that the team was making a list of keywords for, runs tours in the Spanish, English and Italian language and therefore the Google ad needs to be set in all these languages. Cam looking at the Excel table in front of him comments that it is important to set separate ads for separate languages, this is what he would do in most of the cases. Descriptions like this provide enough of the context, to be able to follow the actors in the situations part of this context (Latour, 2004). This enables the researcher to follow the naturally unfolding events and capture the digital technology as dynamically present in more networks at the same time, while these being both internal and external (Latour, 1987, Callon, 1998, Mackenzie, 2006).

Image 5.10. “Cam using the Excel sheet to list the keywords and its characteristics”, February the 20th, 2020.

Keyword	Currency	Avg. monthly se	Min search volu	Max search volu	Competition	Competition (ind Top of page bid + Top of page bid (high range)		
free walking tour milan español	EUR	N/A	10	100	Media	50	0.25	1.23
tour gratis milan español	EUR	N/A	10	100	Media	54	0.27	1.23
tour gratis por milan	EUR	N/A	10	100	Media	59	0.23	0.61
free tour milan en español sander	EUR	N/A	10	100	Media	63	0.23	1.41
tour milan español gratis	EUR	N/A	10	100	Media	61	0.24	1.01
tour gratis milan	EUR	N/A	100	1,000	Media	62	0.27	1.35
tour gratis milan español	EUR	N/A	10	100	Media	54	0.27	1.23
tour milan gratis	EUR	N/A	10	100	Media	66	0.23	1.02
milan tour gratis	EUR	N/A	10	100	Media	48	0.3	1.23
tour gratis por milan	EUR	N/A	10	100	Media	59	0.23	0.61
tour milan español gratis	EUR	N/A	10	100	Media	61	0.24	1.01

The above image shows how many times people search for a particular keyword on Google per month and how competitive this keyword is. The table also shows what is the highest amount of money the client will pay if the click happens (top page bid column). The Excel table is an outcome of Isa’s relation with Google Ads tool (Thompson, 2012). As part of this relation, she looks for the relevant keywords to use them in the Google ad and to optimise the landing page with, in Spanish. Like Pete, before, Isa uses the Google Ads keyword planner function to fulfil her intention with it. She is aiming to form a list of keywords for Cam to use it in the Spanish version of the Google advertisement for the client. The interaction between Isa and the keyword planner function of the Google Ads tool is therefore successful, and Isa was invited by the tool to interact with it at the level of changing and personalising it

(Callon, 1984, Lammes, 2017). This makes the tool more mutable for Isa, given the intention she has with it (Law, 2009). The Excel table is an immutable mobile for Cam, and it translates into a source of information for creation of the Google ad in Spanish (Latour, 2004, Law, 2009). The list of keywords aligns with the Google algorithm's requirements for ad creation and thus enables Cam to create a potentially successful ad for the client. This is a successful translation, which materialises the intention of this network (Lyotard, 1984, Michael, 2017, Lammes, 2017) – to increase the client's brand awareness and/or to increase the client's sales.

5.10 Competitor is buying us

When setting a Google campaign, Cam is careful with choosing the right keywords and excluding the ones that will not contribute to the best campaign performance. Making sure that an ad is not showing for the wrong search terms, Cam “negatives out” the those keywords, which he calls negative keywords. It is important to understand the difference between the Google ad and the Google campaign. The campaign involves actions beyond creating an ad, while a Google ad, is a design representing the brand's product, showing on SERP (Hoffman, 2000, Jones, 2014). In an actor network, setting up a campaign is represented through socio-material relations, where Cam interacts with the Google Ads modifiers (broad match, phrase match), maximum budget function, Google Ads editor and the negative keywords. In this relation, Cam comments:

Cam:

“And the point of this conversation is that one needs to be really careful with setting the right keywords so people searching for dirty things don't get those ads displayed and the publisher (the client) does not pay for those clicks which are irrelevant.”. (below)

Image 5.11. “Cam using an Excel sheet to list the Negative keywords” - a Google ad keyword plan with included keywords, February 17th, 2020.

English	English	
article	article	
articles	articles	
book	book	
books	books	
career	career	
careers	careers	
class	class	
classes	classes	
college	college	
course	course	
courses	courses	
ebay	ebay	
employer	employer	
employers	employers	
employment	employment	
film	film	
filmed	filmed	
full time	full time	
hire	hire	
hiring	hiring	
how do i	how do i	
how to	how to	
info	info	
information	information	
intern	intern	
		schools
		sex
		textbook
		textbooks
		training
		tutorial
		tutorials
		university
		work
		youtube

Above are some of the common keywords that Cam usually excludes in Google Ads editor. He uses this list as a reference for every campaign creation. Cam is looking at the client's Google Ads account and emphasises the importance of negative keywords, saying that the client's previous campaign made the advertisement appear for all the wrong searches. This was because the client did not know which is the importance of using the negative keywords in an initial campaign set-up. In the situation, Cam explains that the client wanted to use the keyword "documentary" in their ad, however, only "documentary" alone is not specific enough and Google would show the client's ad to any searches related to "documentary". Following the latter, Cam says, "documentary" keyword can also include searches related with sexuality and not only movies. Excluding certain keywords (from the list above) from the searches the ad would shows for, helps with keeping the campaign in line with the planned budget. Again, providing an understanding of how the SSA practice in context works, is crucial for comprehending what SSA technology is when used by marketing managers in the setting (Law, 2004, Lammes, 2017).

In an actor network, the table with negative keywords is an outcome of Cam's relation between the Google Ads tool based as part of his long-year experience using it (Law, 2009). Cam usually has a basic table of negative keywords ready, and copy pastes its content when creating new Google campaigns in the Google Ads editor function. This is a function inside Google Ads that is used for setting up

Google campaigns and the interaction between the tool and the manager unfolds smoothly (Lammes, 2009). Cam's intention with the editor function is to change the basic set-up of the Google campaign in such a way that makes it perform optimally (Czarniawska, 2006). Achieving an optimal PPC means that the campaign is running as a result of a successfully materialised relation between Cam and the Google Ads editor, where Cam is the leader in the relation, by having more power over the tool (Law, 2009, 2019). The negative keyword list is an immutable mobile that is constant and enables the stabilisation of the relation (Latour, 2000, Law & Singleton, 2005, Singleton, 2008). This means that the list of keywords in the table translates into an understanding of how the mechanism behind Google Ads works in favour of the advertiser, if understood properly (Roscoe & Chillas, 2014). Considering the list of keywords enables Cam to change the settings in the Google Ads editor accordingly. Cam therefore has more power over the Google Ads tool as per his intention with it (to set up the campaign with the correct parameters) and this makes the Google Ads tool more mutable – where the co-creation of the practice is successfully enabled (Lammes, 2017). In the network, Dan is the spokesman, who speaks instead of the Google Ads tool from the perspective of how Google campaigns were performing in the past. For Dan, Google Ads is an immutable mobile, which translation mobilises an understanding of how Google campaigns work and an opportunity to use that understanding to educate the other team members. This is a macro effect caused by micro relations (Latour, 1988, Czarniawska, 2006).

For setting up a Google campaign, Cam uses the features, such as phrase modifier and/or broad match modifier. This is along with the editor within Google Ads, where the advertiser can also add negative keywords. The use of the mentioned settings is crucial to keep the cost of the campaigns at the optimal level. In the situation the researcher is sitting next to Cam, when he is looking at the client's campaign keywords and settings. Cam is scrolling up and down the list of negative keywords in the Google Ads. He says that he also added the keywords like "colosseum promo code" and "promo code". This is because the client does not use any promo codes for their Colosseum tours and showing for such search terms would potentially increase the costs, however, the CTR would stay low (Ghose & Yang, 2009, Yang & Ghose, 2010). After adding those keywords to the negative keyword list, Google

Ads will automatically avoid showing the client's Google ad for these keyword searches. Cam further explains that the negative keyword's function can also be used if there are too many bidders for one keyword to avoid paying unnecessarily. When too many advertisers choose the same keyword to bid on, the cost per click for that keyword will be too expensive (as per the supply-demand mechanism) (Bradlow & Park, 2007, Yang et al, 2014).

The modifiers from the above situation, are immutable mobiles, which enable Cam to disable the Google ad to show on SERP unnecessarily. The keywords "promo code" and "colosseum promo code" are also immutable mobile and they translate into a step closer towards a successful Google campaign (Thompson, 2012). This is by excluding the irrelevant keywords from the campaign. The bidders participate in competing for SERP ad positions; but their actions are not in the direct focus of this network. However, several advertisers competing with the same keywords show that the Google Ads and its functions can be used for similar purposes, even part of the translation with exactly the same keywords, which shows their fluid and multiple nature (Callon, 1984, Latour, 2005, 2011, Law, 2009, Michael, 2017). In case Cam fails to use most of the negative keywords in his campaigns, the network suddenly changes direction towards less successful or even unsuccessful (Lammes, 2017). Then the cost of the whole Google campaign grows higher, and this is not in line with what Cam is striving for with Google advertising – optimised performance. Therefore, Cam loses some control over Google advertising, by the way the campaign is not working at the complete optimum. In this case Cam does participate in the co-creation of the practice, however, with less power over the tool and what the outcomes of its invisible features will be (Law, 2009, Lammes, 2017).

When the network continues, Cam realises that client's Google advertising campaign is competing with Amazon. This means that the two mentioned agents (the client and Amazon) are using the same or similar keywords in their Google advertisements. The agents compete with each other for the rank on SERP (Lu & Yang, 2017). Cam is confused to see Amazon as a competitor, as Amazon, being a retailing company, is not related to the services the client is selling (walking tours). The reason why Google algorithm chose Amazon as a competitor is because of the

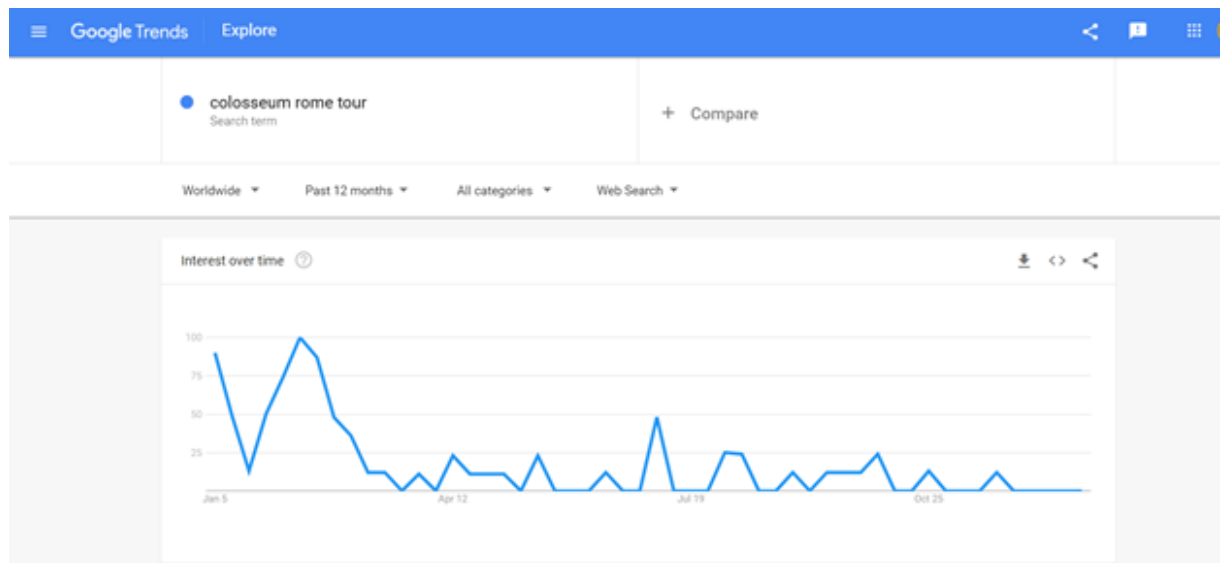
way the client initially set up the campaign. Cam says he is not sure and needs to figure this out.

In the above event, the power is on the Google Ads side, when the intention to efficiently manage Google ad campaign of the client is not fulfilled. The relation between Cam and Google Ads is not successful as per the intention of the network. Cam has less power over the tool and thus fails to realise that Google is charging the client money for clicks based on the keyword "Amazon". This keyword is not relevant to increase the client's sales and is therefore a waste of money for the client. The keyword "Amazon" is an immutable mobile, which makes Cam realise that the client is paying additional money, which is not helping him to rank at the highest SERP positions. This materialisation from the relation between Cam and the Google Ads fails to achieve the initial intention of this network. Given the fact that Cam failed to notice the specific keyword, which was causing additional expense to the client, Google Ads worked against him. This made the Google Ads more immutable for Cam (Law, 2009). However, when he realised the mistake, Cam gains the control back again with adding the keyword on the negative keyword list setting in the Google Ads, and this results in a successfully enacted relation.

The network continues when Cam is deciding which of the keywords from a group of them will enable the campaign to perform best. The researcher is observing from her desk in the office that Cam is up to something interesting, and she joins him at his desk. On one screen he has the Google Ads and on the other screen there is the tool called Google trends. Soon after the researcher joins him, Cam turns over, now facing Pete and Dan, and starts explaining them his doubts. Since Dan and Pete are experts in keyword research and strategy, Cam is asking them for advice of which keyword from a group of similar keywords to choose. Dan advises him to use Google trends tool to see what the trends for keywords are.

The picture is taken from the screen while Cam is using the Google trends tool. He is checking the trends for the keyword - "Colosseum Rome Tours", worldwide and for the past 12 months.

Image 5.12. “Cam using the Google Trends tool screenshot” - as part of the SSA practice that enacts the SSA technology, Feb 20th, 2020.



After a while of searching, Cam says he believes that “Colosseum Rome tours” might be the keyword with a good search potential. This means that the keyword could be highly searched for and thus with the potential to generate conversion (Ghose & Yang, 2009, Lu & Yang, 2017). The above Google Trends results are an immutable mobile for Cam. He will take the results to be able to decide for the right keywords to use them when creating the Google ad for the client. As per Cam’s intention the keyword trend translates into a better understanding about how the chosen keyword is likely to perform. And the keyword trend also translates in a helping tool for Cam to make a decision whether to use that keyword in his bidding strategy or not (Yao & Mela, 2011, Berman & Katona, 2013, Yang et al, 2014). Once Cam gets the results in the Google Trends tool, the keyword trend, he copies and pastes the selected keywords in the Google Ads editor, where he will use them in campaign creation. As per the intention of this actor network, Google Ads is more mutable for Cam (Lammes, 2017). Cam can change the tool through clicking in it and through creating the content of the Google ad in Google Ads editor. The Google Trends tool is an immutable mobile, as it is not the direct focus of this network, but still is holds the network together by creating its context (Thompson, 2012, Michael, 2017). Dan does not directly participate in the process of translation in the above event.

The network continues when CT and Cam discuss how the agency's name as a direct branded keyword (ATM) has been used to bid on in the US. This is the start of a problematic event, which opens the actor network. The issue of the even lies in the fact that the agency does not only run Google campaigns for its clients, but also for itself, and now someone recognised that using the agency's branded terms for its own advertising, brings more conversion to them. To solve the problem, Cam and CT are looking through the agency's Google campaign in Google Ads on Cam's screen. CT realises that someone in the US named their agency very similarly and now the competitor is using the same branded keywords to bid on. Such cases have been discussed in the current SSA marketing literature, which shows that it possible for a downstream competitor to "steal" one company's branded keywords, in order to start taking its position on SERP (Desai et al, 2014).

As the network continues, Cam comments:

Cam:

"I'll keep an eye on the auction insights as well for PPC (Google ads), in case he starts buying us (keywords for brand campaign)."

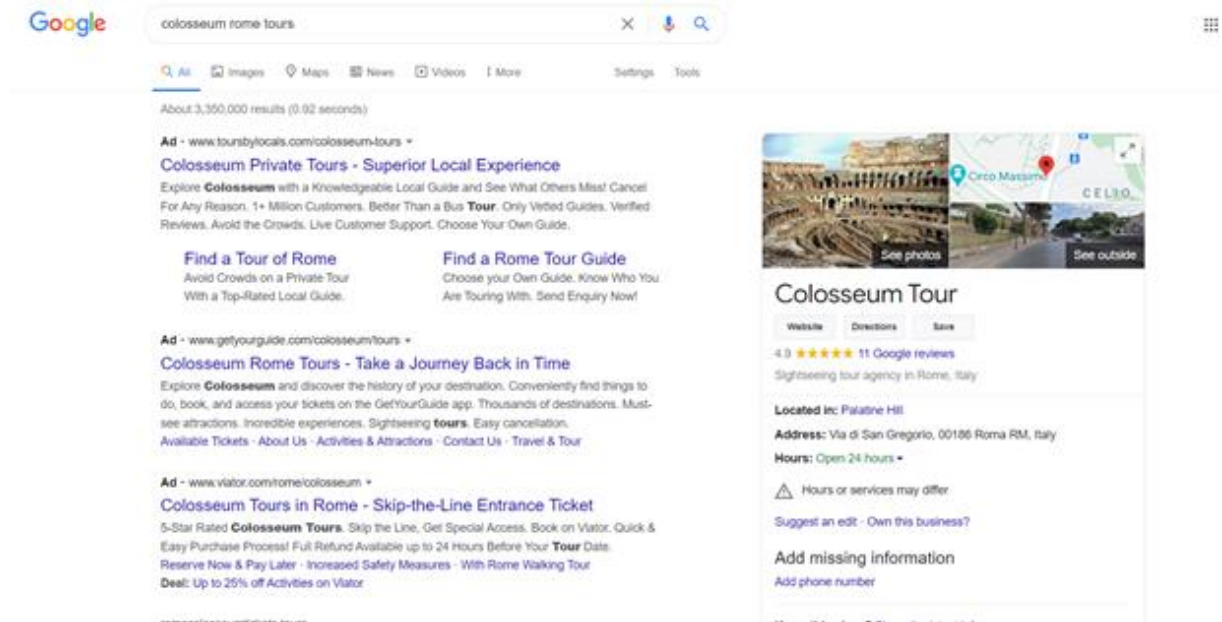
"Buying us" means that the competitor started using the agency's branded keywords (e.g., "ATM") to take advantage of the already established reputation (of the ATM agency). In case the competitor starting to buy ATM, the price of the branded keyword starts rising. This is due to the increased demand for the keyword because of at least two advertisers using that same keyword in their campaigns. Keeping an eye on the auction insights function in Google Ads enables Cam to be in control of the supply-demand system that will start acting automatically if the competitor uses ATM's keyword in their Google campaign (Bradlow & Park, 2007, Shin, 2015, Zhu & Wilbur, 2017). If this happens, Cam will be able to react in time. The branded keyword is an immutable mobile that allows Cam and CT to spot the threat of a competing campaign. However, as long as Cam keeps an eye out on what is happening with the price of the branded keyword, he is in control of the Google algorithm (Law, 2009). However, if Cam fails to follow the keyword's characteristics' changes, then the Google Ads mechanism will overpower Cam and the agency will pay a higher price for the branded keyword, which would result in a less successful

Google campaign. This would mean a failed materialisation of the intention of this relation from the socio-material interaction and a more immutable Google Ads for Cam (Thompson, 2012, Lammes, 2017). Sitting at his own laptop, watching at the screen as he speaks with Cam about the situation, CT's relation with the Google Ads is successful. CT's intention with the tool is to follow on the same Google Ads account, but on a different screen, and this is where the process of translation is successfully completed (Law, 2009, Lammes, 2017). CT scrolls up and down in Google Ads and clicks on various settings in the auction insight function of the tool. In this event, the multiplicity of the Google Ads is very evident, as the tool is used by many participants with different intentions with it, at the same time (Mol, 2000, Law & Singleton, 2005, Law, 2009).

The network continues with Cam working on the client's campaign set up. Cam explains that usually companies that have very high budget for Google advertising can bid on high on all the best keywords, in order to appear on the top positions on SERP. Cam shows to the researcher how bigger brands in the tourism sector always take over the first SERP positions, due to their high-priced bidding strategy (Bradlow & Park, 2007, Zhu & Wilbur, 2011, Jerath et al, 2011, Chen & Park, 2015). Those are companies such as Viator, TripAdvisor. This is in line with Shin's (2015) study.

As part of the same actor network, Cam is testing typical tourism keywords that the searchers could search for on Google. While checking the results in Google Ads keyword planner, he comments that the companies with the high advertising budget make a lot of money taking big provisions from companies advertising there (on platforms like TripAdvisor) and so they can invest a lot of money to keep the first positions on SERP. This "*is a pain for ATM* (the agency and therefore the clients)" Cam comments. Another part of the black box of the Google technology is open, when the socio-material interaction between Cam and the Google algorithm reveals powerlessness of Cam (Lammes, 2017). Despite the fact that Cam knows the ways to take on the first positions on SERP, he cannot act on that, due to the budget constraint. And the budget constraint takes the control away from him, as the Google algorithm continues to work the way its mechanism is set up.

Imag 5.13. “Cam and Rob checking client’s competitors on Google” - they want to see who they can compete against and who not, November 10th, 2019.



Search results from the Image 14 show that Viator ad is one of the first results on SERP when someone searches for “Colosseum Rome tours”. If Cam decided to select the same keyword to use it in the client’s Google advertisement it would be extremely hard for him to keep within the limits of the client’s Google advertising budget. Having had bid as high as Viator, Cam’s Google ad could potentially outbid the competitors. In order to avoid overspending, smaller companies need to choose long-tail keywords, which are less popular, but bring more conversion, to rank high on SERP (Yang et al, 2015).

Competitors such as Viator are immutable mobile that translate into an information for Cam if their brand is existent on SERP and therefore whether the client’s brand has a possibility to rank on the first positions for a certain keyword on SERP. The keyword “Colosseum tour”, which Cam could use as one of the keywords of the client’s Google campaign, is also used by Viator. This makes it less possible for the client’s campaign to rank on the top SERP position, which could be related to more clicks and higher conversion rate, as Cam explains to the researcher. SERP is an immutable mobile, which translates into a source of information for Cam about which keywords and competitors would rank higher with their Google ads than the client (Law, 2009). Cam’s interaction with Google Ads is successful, as per his intention to choose the keywords he thinks will make the client’s Google campaign perform

better. However, in a different scenario, when the competitor takes over the first position on SERP for a certain keyword, Cam's interaction with the Google technology is less successful. In that case, the technology is less mutable for him, as Cam cannot bid more to outbid the competitor in the auction (Law, 2009, Lammes, 2017).

5.11 Summary of the chapter

Eight actor networks were presented in this chapter. These events and situations were matched together by the type of problematisation (Latour, 2005, Suchman & Suchman, 2007). The networks are all loosely connected, where the Google Ads can act in one network only but can also be part of all the networks at the same time (Thompson, 2012). This chapter aimed to look at the events in a digital marketing agency that enacted the Google advertising practice through following actors (Callon, 1984, Law, 2009), highlighting the Google Ads tool. Such reality creation continuously happens through the process of translation. Both successful and unsuccessful interactions between the human and nonhuman actors are taken into an account with the purpose to simplify the complex Google technology (Michael, 2017). As the Google Ads contains an invisible mechanism, which works in the background (Roscoe & Chillas, 2014), the problematic events are the ones that help the researcher spot relevant and interesting relations in the network to follow them (Sandberg, 2005). The problematic events tend to open up the black box of that technology more, which enables several detailed and accurate opportunities for understanding the invisible digital phenomena, as it unfolds in practice (Brownlie, 2010, Latour, 2011, 2019, Rust, 2020). In failed materialisations Google Ads overpowered the marketing managers in the agency, and so such relations failed (Lammes, 2017). This temporarily made Google Ads immutable for its user, until another even happened – with a different user and potentially different intention with the tool (Michael, 2017). Through exploring it in its context, Google Ads, showed many faces and sides. It showed as dynamic, multiple and severely fluid (Callon, 1984, Latour, 2005, 2011, Law, 2009, Michael, 2017). With the help of the constant, immutable mobile, the materialisation was more durable and easier to spot (Latour, 1988, Callon, 1998, Michael, 2017). Exploration of the Google technology in the situation enabled to look beyond the face value of the Google Ads (Law, 2009,

2019), and enabled a micro understanding of the tool, but also comprehension of the macro effect over the digital agency (Czarniawska, 2006).

6 Chapter 6: Discussion

6.1 Introduction

This chapter discusses implications of findings for theory and methodology. It provides the background for the research questions, which is founded in performative studies based on ANT (Callon, 1998, Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Mackenzie, 2006, Geiger & Gross, 2017). The research adds to the performative market studies debates, while it takes from ANT principles (Callon, 1984, 1998, Latour, 1988, 2004, Law, 2009, 2019) to proliferate the methodology that the current performative scholars use to study marketing phenomena.

This thesis addresses several matters that enable a strong contribution to the literature, both theoretically and methodologically. First, the thesis addresses the fact that the modern era includes “connectivity, knowledge and computing” (Beunza & Stark, 2002), where the need to recognise practice not only through human relations, but also with the highlight of the objects, is necessary (Knorr-Cetina & Bruegger, 2000). We have moved from the time, where the only relevant understandings came from human relations, where interaction, space and communication are differently meaningful (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Michael, 2017, Lammes, 2017). As Lyotard (1984) starts emphasising the modern world, technology, and effectiveness, the object gets more meaning, while embedded in socio-material actions (Knorr-Cetina & Bruegger, 2000). Second, with moving to the era of post-humanism (Adams & Thompson, 2016, Knorr-Cetina & Bruegger, 2000), this thesis is based on interactions through heterogeneous relations, where humans and non-humans produce more detailed understanding of the world from a micro perspective (Law & Singleton, 2000, Law & Singleton, 2005, Law, 2009, Czarniawska, 2004, Czarniawska, 2008). In the modern world the objects have become crucial to understand how markets, which are bundles of people and objects, change and are impacted by the interactions between humans and non-humans through practice (Knorr-Cetina & Bruegger, 2000). The context and the detail of the context where heterogeneous relations

happen start playing the crucial role in understanding of how the mechanisms behind the digital technology work, as opposed to only emphasising their direct qualities (Knorr-Cetina & Bruegger, 2000, Faraj & Azad, 2012, Quinton & Simkin, 2016). Practice-based approaches provide the understanding of how marketing practices change through temporary socio-material interactions (Knorr-Cetina & Bruegger, 2000, Latour 2005, 2014, Law, 2009). In such heterogeneous actor networks, as this study identified them, the process of translation is most productive for creation of additional understanding of the SSA technology when that process fails (Callon, 1984, Latour, 1992, Akrich, 1992, Lammes, 2017, Law & Joks, 2019). Through failure, the notion of power is emphasised for enabling additional understanding through socio-material problematic events (Callon, 1984, Knorr-Cetina & Bruegger, 2000, Galloway, 2004, Law, 2009, Michael, 2017). In failed actor networks, the lack of completeness of relations and the process of translation, where the objects resist to co-operate with the human users, open several opportunities for advanced understanding (Michael, 2017). This enables us to move beyond the fragmented way the knowledge of SSA has currently been produced (Knorr-Cetina & Bruegger, 2000, Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Michael, 2017, Yadav & Pavlou, 2020). Furthermore, the modern world is full of invisible information, which build digital technology (Beunza & Stark, 2002, Lammes, 2017). As such technology has a great tendency to rapidly change and evolve, especially the SSA has seen very fast growth in the past couple of years (Liu-Thompkins, 2018, Morton & Dinielli, 2020, Yadav & Pavlou, 2020, Morton & Dinielli, 2020). One may question where those evolvments of SSA come from and the answer to that is through heterogeneous relations and following the ways in which interactions between heterogeneous actors unfold (Beunza & Stark, 2002). Third, the modern technology is driving fast-evolving changes and creates unequally distributed power between the socio-material actors, which we can no longer call symmetrical (Callon & Latour, 1981). Aligning with the fast-paced digitisation, asymmetry in actor networks becomes a way of understanding the digital marketing practice through relations between their objects and subjects (Haraway, 1991, Mol, 1996, Murdoch, 1996 Mol, 2000, Latour, 2000, 2005, Law & Singleton, 2005, Singleton, 2008). This is visible through the digital attributes of the Google Ads, which becomes more powerful over its users and even overpowers them (Latour, 1992, Beunza & Stark, 2002). With the mostly invisible objects that importantly

inform the marketing practice, it is crucial to look at them through the context and networked relations, where performing the markets brings the understanding, as opposed to only treating them externally and descriptively (Callon, 1998, Beunza & Stark, 2002). Moreover, researching digital actors and its features from the outside and externally does not bring as much value and insight, as does the inside analysis of it (Geiger & Gross, 2017, Michael, 2017, Lammes, 2017). So far, the SSA scholars have mostly studied the SSA technology externally and at face value (e.g., Ghose & Yang, 2010, Yang & Ghose, 2011, Berman & Katona, 2016). However, powerful actor networks drive innovation and change, by human users in the situation relate with digital technology, through use on a daily basis (Beunza & Stark, 2002). With other words, understanding of how the marketing practice reveals itself is from the inside micro relations between technology and its users (Callon, 1984, Latour, 1987, Law, 2009, 2019). These can, due to the very powerful digital technology, and through solving the problems around that technology, have a broader, macro effect across the whole organisation (Latour, 1988, Shove, 2003, Czarniawska, 2004). There, actors are making impact without much notice, which can be better captured when problematic events started (Michael, 2017, Geiger & Gross, 2017). Marketing practice gets redefined through action and capturing that action in the moment through practice (Schatzki, 2006, Beunza & Stark, 2002, Gond et al, 2016, Geiger & Gross, 2017), where moving beyond of what we can see with the bare eye, brings a more insightful understanding of the technological phenomena (Beunza & Stark, 2002, Roscoe & Chillias, 2014, Lammes, 2017, Geiger & Gross, 2017, Michael, 2017). Taking the highlight of the Google practice of this thesis – Google advertising technology, the process of translation happens both on the surface and in-depth level to bring complete and holistic understanding through heterogeneous relations (Lammes, 2017). So far SSA technology in marketing has been studied through the predictability lens, where its nature appears constant and fixed, as opposed to the dynamic, fluid and multiple nature as we know it practically (Morton & Dinielli, 2020, Pritchard et al, Gordon et al, 2021, Porter, 2021). However, the driver of change and innovation is founded in unpredictable digital technology (Geiger & Gross, 2017), which now needs to start being acknowledged also in academia, where several scholars have been emphasising that digital marketing as practice and technology is an on-going journey rather than a final destination (Quinton & Simkin, 2016, Yadav & Pavlou, 2020). The notions like this need to be

taken seriously for proper and accurate understanding of the rapidly changing and evolving digital marketing technology (Brownlie, 2010, Rust, 2020). This thesis is aiming to do that, while building a strong methodological foundation, relevant to the market studies' scholars.

This research has been guided by the following three research questions, which shape its aim and contributions. The research questions will be further discussed below.

- 1. How is a network created in SSA practice?**
- 2. What relations make a successful network and how do the actors influence success?**
- 3. How do networks fail?**

By casting Google advertising as networked practice, this research advances the understanding of SSA by exploring how relations between actors fail and succeed, through tracing marketing managers' interactions with digital objects on a day-to-day basis. The following sections take the above research questions and discuss the theoretical contributions of this research.

This chapter's discussions concern the implications for marketing as well as broader literature on digital technologies in management and organisational practice and information systems literature. For example, in the MOS literature, the current socio-material approaches for studying digital technology at work will benefit from a more thorough examination of that technology and its practice through actor networks (Law, 2009, Lammes, 2017, Michael, 2017). And IS literature, which already acknowledges the notions of power and control related to success of digital technology actor networks (Lammes, 2017), will benefit from including the examination of digital through failure of actor networks. This chapter also discusses methodological contributions of this study and ends with suggesting the future research agenda.

6.2 RESEARCH QUESTIONS DISCUSSED

This thesis produces several theoretical contributions. They are guided by the three mentioned research questions and will be discussed below.

This thesis is founded on the principles of practice-based studies, which have in their development been part of the practice turn (Schatzki, 2006). There the focus is in on how marketing practice changes due to the changes of the objects part of that practice (Schatzki, 2006, Gond et al, 2016). As the SSA objects started to matter more and more in the marketing practice and are together with the human actors important for understanding of how their acting matters as much as the acting of the humans, it is crucially important to analytically see the world as bundles, as a collective and as actor network full of heterogeneous relations (Knorr-Cetina & Bruegger, 2000, Latour, 1999, Michael, 1999, Law, 2009).

Following the above, SSA marketing practice in the post-human world is a practice full of objects, which without us even noticing, create meaning and drive change (Knorr-Cetina & Bruegger, 2000, Adams & Thompson, 2016, Quinton & Simkin, 2016, Liu-Thompkins, 2018). The quick evolvement of SSA technology, which we have seen in the past two decades, is not only centred around the humans and their relations, but rather the SSA technology should there be highlighted and receive the acknowledgement it deserves (Law, 1992, 2009). It should have been considered a while ago, that the times have changed, especially with the rise of digital advertising, that the change is not driven by fixed outcomes and external understandings, but rather by action (Quinton & Simkin, 2016, Geiger & Gross, 2017, Rust, 2020, Yadav & Pavlou, 2020). Understanding what is going on in the situation, with highlighted SSA technology, this thesis analysis given the Google Ads tool and its features equal importance as the managers that use it. Some performative scholars have done this, where their contributions to theory are more accurate and detailed, while they equally considered nonhumans and humans in the process of redefinition of practice (Callon, 1998, 2010, Mackenzie & Millo, 2003, MacKenzie, 2005, Pollock & D'Adderio, 2012 Gond et al, 2016).

The current SSA marketing literature considers SSA technology as taken for granted and at face value, while it misses out the fact that the rapid digital change SSA is prone to, now requires a changed perception of communication, interaction and space, which SSA technology is part of (Knorr-Cetina & Bruegger, 2000, Yadav & Pavlou, 2000, Michael, 2017). In such networked space, Google Ads can change

form, change, redefines and reconfigure marketing practice, talk back and resist the use (Knorr-Cetina & Bruegger, 2000, Thompson, 2012, Lammes, 2017). Despite the fact that digital technology is significantly different to other technology and marketing objects that are not digital, the SSA scholars continued to research the SSA in conventional ways, that do not acknowledge SSA objects as highly networked and relational (Ghose & Yang, 2009, Yang & Ghose, 2010, Jeziorski & Moorthy, 2017, Berman, 2017). This is exactly the fact why the current SSA literature needs a turn, which will provide an additional, but at the same time significantly more accurate and insightful understanding of what the SSA technology is, when part of its practice, which it importantly re-creates and changes (Callon, 1998, 2010, MacKenzie, 2005, Jacobi et al, 2015, Lammes, 2017, Michael, 2017, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021).

So far, several scholars in marketing have emphasised the fact that the fast-evolving digital marketing needs a more holistic examination, in order to provide a more accurate understanding of it (Quinton & Simkin, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020, Rust, 2020). The current SSA marketing literature presents several quantitative models (e.g., Batra & Keller, 2016, Kannan et al, 2016, Brennan, 2018), where the SSA technological objects are already pre-defined and not given an opportunity to highlight potential new understandings of the SSA technology that being through their networked context (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2000, Law, 2004). The quickly changing SSA technology (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Rust, 2020, Morton & Dinielli, 2020) is presented in the literature as an outcome, rather than through the process of how it is socially enacted in practice (Law, 1992, Callon & Law, 1997, Czarniawska, 2004, 2008, MacKenzie, 2004, 2005, Adams & Thompson, 2011, 2013). The current way of presenting material objects belongs to deterministic approaches, which undermines the relevance of the relational treatment of objects and subjects, which is of specific importance in the post-humanist era we are in (Nimmo, 2011, Michael, 2017, Geiger & Gross, 2017, Law, 2019). An approach that predominantly focuses on either material or social leaves out important details and opportunities of understanding the SSA technology revolutionises marketing practice (Knorr-Cetina & Bruegger, 2000). This is especially the case with the digital objects, where the invisible mechanism (Roscoe & Chillias, 2014, Lammes, 2017) is

hard to grasp on due to its fluid and dynamic nature (Thompson, 2012, Faraj & Azad, 2012, Hind & Lammes, 2015, Lammes, 2017).

The current SSA literature's focus is on helping marketing managers improve their strategies by aiming to capture SSA developments as they occur (e.g., Yao & Mela, 2011, Chen et al, 2009, Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). Despite, such way giving a relevant timeline of evolvments, it is pre-occupied with the trajectory of those events, but less so with the in-depth understanding of what that technology really is and what it does when captured in practice (Beunza & Stark, 2002). Being mostly drawn on the outcomes from the SSA studies, the current literature misses out on the important details of the SSA technology, which causes the fragmentation in knowledge (Geiger & Gross, 2017, Quinton & Simkin, 2016, Yadav & Pavlou, 2020). The conventional approach to studying digital technology fails to meet the details of non-physicality of that technology, as well as the likelihood to fail and be unpredictable, as the digital nature mostly causes (Geiger & Gross, 2017). The Literature review of this thesis establishes that SSA marketing scholars take SSA technology and its features like keywords, metrics, settings (broad match and phrase match modifier) and algorithms, at face value and understand it externally (e.g., Ghose & Yang, 2009, Yao & Mela, 2011, Katona & Sarvary, 2016, Jeziorski & Moorthy, 2017). Despite the well acknowledged features of the SSA technology and what they are made up of, the SSA marketing scholarship majorly misses out the human role in this technology (Latour, 2005).

This study advances the current way SSA is studied by exploring how SSA technology is unpredictable, sometimes fails and is produces incomplete outcomes (Knorr-Cetina & Bruegger, 2000). Relational examination through ANT, which provides several insights and a more accurate understanding of the SSA practice is relevant, as it enables the acknowledgement of matters that we were previously not aware of (Brownlie, 2010, Michael, 2017). ANT approach to analysing quickly changing technology is used in this study to simplify the overly black-boxed technology that forms the marketing practice. Currently being one of the fastest growing industries, sponsored digital advertising technology became equally as important in marketing practice as the marketers who use it (Knorr-Cetina &

Bruegger, 2000, Adams & Thompson, 2016, Geiger & Gross, 2017, The World bank, 2019).

6.2.1 How is network created in practice?

The first research question - "How is network created in practice" compiles several implications and includes several questions like who the network actors are, how do they act and how do they form relations through events to create actor networks. The second research question of this thesis in detail investigates the successful interactions between heterogeneous actors in an actor network. The below sections take in the process of translation and how networks get stabilised and for how long. Theoretical contributions are discussed through the actions, roles, tasks, activities and intentions the human and nonhuman actors participate in (Law, 2009, Lammes, 2017). The contributions, guided by the mentioned research questions, will be discussed below.

This study highlights Google Ads in marketing practice and treats it as an equally important to human actors in actor networks. This enables an understanding of the fast-paced developments of the SSA marketing practice, where the invisible attributes of the Google technology re-create this practice (Law, 1991, 2009, 2019, Latour, 2005, Callon, 2010, Law, 2019). With the momentum analysis, heterogeneous actors interact with each in situation (Knorr-Cetina & Bruegger, 2000). This study examines the Google advertising practice through tracing how relations between the marketing managers and the Google technology are formed and shows the details of these translations through following the actors in their natural setting (Law, 1992, Akrich, 1992, Singleton & Michael, 1993, Czarniawska, 2000, 2004, Law & Joks, 2019). Using an advanced ANT, this study produces a more critical and useful understanding of SSA, with a highlight on Google Ads tool (Brownlie, 2010, Bajde, 2013). The philosophy framing this study, critical constructivism with pragmatism, sets clear direction for collective, as opposed to single, knowledge production (Latour, 1999, Wortelboer & Bischof, 2012, Davis, 2015).

The networked Google technology is more fluid and dynamic, through the ways in which ANT approach can capture it in various actor networks at the same time. This means that Google Ads, and its invisible mechanisms, can be spotted much more closely through following the interactions the technology constantly gets involved in (Law, 2009, 2019, Roscoe & Chillias, 2014, Hind & Lammes, 2015, Lammes, 2017). This study enables a more holistic and connected knowledge production through exploration of how Google technology gets socially constructed and therefore how it changes social practice and gets changed itself (Hind & Lammes, 2015, Lammes, 2017, Michael, 2017). Looking right into the material objects, like Google Ads, phrase match modifier or exact match modifier, rarely gives enough inside understanding of those objects (Knorr-Cetina & Bruegger, 2000, Faraj & Azad, 2012). A conventional SSA marketing analysis might provide enough opportunities for understanding in a non-digital space, however, studying the invisible digital features, several understandings about the overall technology, get missed out (Lammes, 2017). This is because the invisible interfaces that work in the background of the Google Ads, do not include any physicality that could be spotted with a bare eye, but rather need the context, which they can get established in (Knorr-Cetina & Bruegger, 2000, Thompson, 2012, Geiger & Gross, 2017, Lammes, 2017, Michael, 2017).

Marketing literature already records some attempts of studying marketing phenomena more critically (e.g., Andersson et al, 2008, Storbacka & Nenonen, 2021). Through performativity, market studies scholars aimed to produce a less fragmented knowledge and captured marketing objects and subjects in their context to provide their better understanding (e.g., Andersson et al, 2008, Cochoy, 2008, Kjelberg & Helgesson, 2008, Mason, Kjellberg & Hagberg, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). Performativity focuses on studying practices and the objects part of those practices, based on ANT principles (Schatzki, 2006, Gond et al, 2016). There, scholars, especially as part of the Callonian thinking, started considering objects and subjects with equal importance (Callon, 1998, MacKenzie & Millo, 2003, MacKenzie, 2006). This study takes from several disciplines, also IS and MOS, which used ANT in their analysis, and adds to the market studies' practice-based debates to proliferate digital marketing practice (Andersson et al, 2008, Cochoy, 2008, Kjelberg & Helgesson, 2008, Mason,

Kjellberg & Hagberg, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). There, most of the scholars have not yet carried out research on digital matters, which require an advanced analysis to be able to capture not only their visible, but also invisible character (Lammes, 2017).

This study looks at the way marketing managers use Google advertising technology in their day-to-day work (Jaworski, 2011, Wedel & Kannan, 2016). This means how they, following their intentions with it, create new meaning that the SSA marketing literature has so far not considered. Google Ads technology, as presented in Chapter Five, is an actor, that is made up of several smaller elements, which marketing managers interact with during their daily activities. Elements such as the Google Ads functions and settings (phrase/exact match modifier or the Google Ads editor and the Google Ads keyword tool), are part of the Google Ads tool, which agency's managers directly interact with (Lammes, 2017). Given the highlighted focus of this research, Google Ads is the main actor of the networks, actively co-creating the marketing practice (Latour, 1992, Lammes, 2017). Depending on the intention the user has with it, the tool comes out of the process of translation as more or less mutable, while other actors of the network can work as immutable mobiles, which stay constant (Law, 2009, 2019). The constant actors help to add to the temporary physicality of the invisible Google technology, so the researcher can spot it easier (Law, 2009, Lammes, 2017, Lammes & Wilmott, 2020). The immutable mobile are of significant importance in the situation, where the researcher follows actors around their natural setting, however, her eye would fail to capture the details of the practice, if the constant actors would not add to its stability and make it more visible at least for a while (Knorr-Cetina & Bruegger, 2000, Thompson, 2012, Lammes, 2017).

To provide a more critical account (Brownlie, 2010, Rust, 2020) of the currently black boxed SSA technology in the SSA marketing literature, both the Google Ads and its material artefacts are treated as participants in the process of translation from heterogeneous relations (Knorr-Cetina & Bruegger, 2000, Cordella & Shaikh, 2003, Thompson, 2012, Adams & Thompson, 2016, Lammes, 2017). There, roles of human participants get established to help acknowledge the non-physicality of objects (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002). Roles such as spokesmen enable the nonhuman actors get a voice and translate from digital,

invisible and coded into something understandable to humans (Thompson, 2012, Lammes, 2017). The agency's managers, when explaining what is wrong or right while using the Google Ads, give the voice to the tool and contribute to creating reality (Callon, 1984, Adams & Thompson, 2011, 2013, Michael, 2017). This way, the human and nonhuman actors of the network participate in co-creation of the marketing practice through the ways the decisions are made by the marketing managers, through the ways the managers are able to make changes to Google Ads tool and through the way this pushes further SSA evolvement (Lammes, 2017).

Due to the rapidly changing nature of the Google technology (Morton & Dinielli, 2020), many complex relations get formed between subject and objects through several events of Google advertising practice. In order to organise the networked Google practice, this research uses the principles of commensurability to be able to sort the events and relations by themes and provide most understanding from that (Suchman & Suchman, 2007, Adams & Thompson, 2011, Michael, 2017). This means that the researcher makes decisions regarding which events are relevant for opening the black box (Latour, 1991, Singleton & Michael, 1993, Law, 2009, Suchman & Suchman, 2007) of the Google Ads tool. SSA advertising technology being too complex to be able to capture the whole trajectory of it, calls for studying the hotspots of SSA practice that creates micro understanding, but enables macro impact and effect (Latour, 1988, Geiger & Gross, 2017). The essential decisions about capturing the crucial events and relations of the SSA practice, however, leaving when "it gets crowded" is the way to simplification of the SSA phenomena (Beunza & Stark, 2000, Michael, 2017). Using ethnography to follow the actors, enabled capturing the regular and problematic events, where the storytelling approach to it, enabled deep and insightful presentations of that practice and its technology (Latour, 2004).

Through the situations, the researcher follows actors in their natural setting, where they involve in relations, interact with various actors, change networks and participate in practice creation in more networks at the same time (Latour, 1988) Marketing managers at the agency, having the same or different intentions with it, sometimes use the Google Ads tool simultaneously, but for different purposes, in different places and with different outcomes. The data of this study shows that the

Google Ads tool is multiple and fluid (Law, 2009, Hind & Lammes, 2015, Lammes, 2017). The tool does therefore not only have one universal meaning, but it could be understood differently through many various roles, users find themselves in using the tool and through many different events of the networks and this produces different kinds of materialisations. Materialisation creates the character of the Google Ads tool, where the new opportunities for understanding the Google advertising practice open up (Latour, 1986, Licoppe, 2010, Kjellberg & Helgesson, 2007).

In this study, Google Ads was used by several users, such as the client, SSA manager, account managers. Each of these had distinct intentions with the tool: the client used the Google Ads to make disruptive changes in it, SSA manager used it to increase the “client’s brand awareness” and the account manager used the Google Ads to collect the data from it from the client’s accounts. Not only the Google advertising practice was used by one actor and in one network at the same time, but was rather used in multiple networks, subject to multiple intentions and was creating multiple realities at the same time (Callon, 1984, Latour, 2005, 2011, Law, 2009, Michael, 2017). This points at the fluidity of the Google Ads tool both inside and outside the initial research data collection setting. The Google Ads’ virtual nature increases the possibility for the tool to change and create reality at an even faster pace (Thompson, 2012, Lammes, 2017).

As part of the ethnography, the researcher learns that fulfilled intentions like producing a successful campaign (increasing the brand awareness and/or brand sales), is not something that the Google Ads tool could do on its own, and the tool plays an important part in the SSA practice creation (Knorr-Cetina & Bruegges, 2000). This related to the changes and the way Google advertising is evolving, means that an examination of such technology should be through practice and use. In the SSA this is especially important, because SSA is such industry that is expansively growing every year (StatsCounter, 2021) and clearly, Google advertising as part of SSA, is the dominant search engine among the group of other search engines such as Yahoo or Bing (StatsCounter, 2021).

Understanding Google advertising practice through flat and multidimensional translations between objects and subjects therefore enables the details quantitative research about the same practice struggles to uncover (Thompson, 2012, Lammes, 2017, Geiger & Gross, 2017). This is crucial to finally start producing knowledge in digital marketing that is not fragmented, as well as to understand the invisible features of the SSA technology (Google Ads) that play an important role in change.

6.2.2 What relations make a successful network and how do the actors influence success?

The current SSA quantitative models in the SSA marketing literature are presented as stable and taken for granted (e.g., Jerath et al, 2011, 2014, Kireyev et al, 2015, Lu & Yang, 2017, Berman, 2018), rather than as emerging in the process of the material and social actors interacting with each other (Law, 1992, Latour, 1999, Thompson, 2012). Being taken for granted means that the SSA is currently not studied externally, rather than from the inside, where through the networks the redefinition of marketing practice is always ongoing (Knorr-Cetina & Bruegges, 2000, Beunza & Stark, 2002, MacKenzie, 2005, Law, 2009, 2019, Michael, 2017, Geiger & Gross, 2017).

Regardless of the high acknowledgement of Google advertising by the SSA marketing scholars, a more critical, pragmatic inquiry is needed (Law, 1992, Callon & Law, 1997, Shove, 2003, MacKenzie, 2004, 2005, Adams & Thompson, 2011, 2013, Davis, 2015). In this study, the latter was provided through following the actors in an ANT-informed ethnography. Through following the actors in their setting, the researcher studied how marketing managers used the Google Ads tool and how the latter mentioned are continuously joining together in relations, shifting between networks and attend the interactions at the same time (Thompson, 2012, Lammes, 2017, Michael, 2017). This study includes both the successful and failed stabilisations through the process of translation. To portray how sometimes, the highly dynamic non-physical Google technology, can cause problems and resistance, however, other times, smoothly triggers several changes in the marketing practice, the findings of this thesis are organised into eight networks. Both

successful and unsuccessful actor networks provide details of how the Google practice changes, however, in a highly digital marketing, technology, tends to be incomplete, constantly mutates and is unpredictable (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Roscoe & Chillas, 2014, Geiger & Gross, 2017). These sections focus on the successful production of reality, while the sections around the research question number three focus on failed actor networks and how they happen (Murdoch, 1997, Law & Singleton, 2005, Thompson, 2012).

Successful process of translation means that the user of the Google Ads could interact with it on multi-dimensional level (Lammes, 2017, Lammes & Wilmott, 2020) and therefore s/he could make that tool with its settings and functions personalised according to his/her wishes and intentions (Callon, 1984, Lammes, 2017). Moreover, the Google Ads being more mutable for its user means that the power between them is distributed in a way that is more towards the manager, rather than the tool. The user can easily control the tool and use it in a way s/he wants. For example, if the Google Ads rules, such as Google algorithm's requirements are familiar to the client or the agency's managers, this makes the tool more mutable and easier to control. In the setting, the agency's agents were in most control of the tool, using it without disruption to satisfy the main intention of the networks – to increase the client's sales and/or brand awareness. As part of events, there were always other settings, functions and parts of the Google Ads tool that were immutable and uncontrollable by the agency's managers, such as the tool's interfaces.

Through the process of translation, this research overcomes the macro examination of the SSA technology, which has been carried out in the current SSA literature (Ghose & Yang, 2009, Yang & Ghose, 2010, Xu et al, 2011, Rutz & Bucklin, 2011, Rutz, Bucklin & Sonier, 2011, Abou Nabout & Skiera, 2012, Desai et al, 2014). Such external research only considers the outskirts of the SSA technology, but not the analysis which unfolds Google technology on a micro level (Callon, 1984, Czarniawska, 2004, Law, 2009, 2019, Latour, 2005, Serres, 2007). ANT scholars clearly present how micro translations have an effect as a whole and can impact to an extent of the whole country or even beyond (Latour, 1988). Performative scholars claim that one cannot capture the whole trajectory of quickly changing technology,

as digital technology is simply too expansive and with its invisible attributes, too hard to capture in one go and with all the possible evolvments externally (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017). Therefore, the micro, internal examination through relations and interactions, enables to fill the gap the SSA scholars got trapped into – trying to capture all the SSA changes as they happen, however, not considering how the events on the level of relations can provide much more depth, but at the same time breadth, and additional understanding of how the SSA practice changes (Wierenga, 2002, Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Yadav & Pavlou, 2020).

As we study the SSA technology on the micro level of their relations, several, previously hidden, mechanisms, characteristics and features come to the foreground and become visible. The current SSA marketing literature has so far briefly considered the invisible rules, interfaces, prescriptions (Lammes, 2017) and overall, mechanisms that work in the background (Roscoe & Chillias, 2014) of the Google Ads (e.g., e.g., Jerath et al, 2011, 2014, Kireyev et al, 2015, Lu & Yang, 2017, Berman, 2018). However, the external examination of those prevailed and prevented further understanding (Knorr-Cetina & Bruegger, 2000, Faraj & Azad, 2012). Momentum analysis (Knorr-Cetina & Bruegger, 2000) enables to uncover the non-physical Google Ads through the help of immutable mobile, which add to its visibility and physicality (Thompson, 2012, Lammes, 2017).

The Literature review Chapter Two in this study shows that currently SSA technology is mostly acknowledged on an organisational level, rather than on an individual level of a marketing manager. However, micro ANT analysis of this study have macro effects (Law, 1987, Latour, 1988, Shove, 2003, Serres, 2007, Czarniawska, 2004, Law, 2009, Czarniawska, 2008). For example, when the Google advertising campaign stops working, the marketing manager will have to investigate the problem to make the campaign work again. A firstly failed relation opens an opportunity for a further simplified phenomena of Google Ads (Law, 1992, Callon & Law, 1997, Michael, 2017). There, managers aim to solve the occurred issue, which creates more heterogeneous relations in the context (Callon, 1984, Michael, 2017).

With its digital features and dynamic nature, digital technology acts as fluid and through multiple ways of how it unfolds through actions, produces several meanings and opportunities to understand it (Lammes, 2017). The notions of multiplicity and fluidity have been discussed in the ANT work, where scholars portray several meanings, objects can produce through action (Mol, 2000, Law & Singleton, 2005, Law, 2009). With digital technology, the multiplicity and fluidity of the objects is even more intense and there are more opportunities for simplification of the phenomena through relations (Lammes, 2017, Geiger & Gross, 2017, Michael, 2017). This adds to the current understanding of the SSA technology and its practice as it has so far been produced. Some examples below will portray, how the actor networks and heterogeneous interactions produced detailed meaning.

In Google advertising of this thesis, Google Ads interacted with more than one human actor network at the same time, also the tool could easily move between the networks (Latour, 1988, Mol, 2002, Thompson, 2012, Lammes, 2017). Google Ads for example interacted with the users both inside the agency, however, also outside of it, with the clients. Due to its digital nature, Google Ads showed as extremely fluid and dynamic, shifting between the networks and actors, or even co-created practice with several actors at the same time (Law, 2009, Thompson, 2012, Lammes, 2017).

The multi-dimensionality of the relations, as it continuously happened in the ethnographic setting of this study, means that relations between objects and subjects were not traced only on the flat level (Thrift, 1996, Lammes, 2017), but also on a deeper level, which enabled the managers to be active co-producers of the Google Ads. Through such way of analysis, Google advertising practice and its tool got an opportunity to be understood as dynamic and constantly changing (Latour, 1987, 2005), which is in contrast with how the current SSA marketing literature currently presents them (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Rutz & Trusov, 2011, Xu et al, 2014, Naboute et al, 2014, Berman, 2018). Exploring and understanding Google advertising practice as multi-dimensional and constantly dynamic and changing through the process of translation, brings many details of that practice that have so far remained unexplored and black boxed (e.g., Ghose & Yang, 2009, Yao & Mela, 2011, Katona & Sarvary, 2016, Jeziorski & Moorthy, 2017). Moreover, the flat way of understanding objects and subject has mostly got to do

with what can be seen with a human's eye, however, on a deeper level, the actual change becomes visible, which opens more opportunity for understanding (Lammes, 2017).

Exploring heterogeneous associations through more dimensions (Lammes, 2017), therefore widens the complexity of Google advertising practice. This includes the notions of power and control (Thompson, 2012, Hind & Lammes, 2015, Lammes, 2017). The perspective of power and control in actor networks in the case of digital technology means that the power is often unevenly distributed between the people and technology. In the setting of this study, sometimes, more power was on the agency's manager's side. This was when the manager changed and edited the Google Ads tool the way s/he wanted according to her/his intentions. However, sometimes the tool had more power over the marketing manager and then the manager could not fulfil his/her intention with the tool. With the digital technology overall (Lammes, 2017), it is almost impossible for the power to be equally and symmetrically distributed between the human and nonhuman actors (Lammes, 2017). Therefore, the Google Ads, due to its rules, like the Google algorithm's requirements, always had more power over its user, especially if the agency's manager did not study and understand these requirements. In contrast, analogue technology (Lammes, 2017, Lammes & Wilmott, 2020) tends to be less prone to the changes of power and control and thus the power between human and nonhuman actors of the association is mostly equally distributed (Latour, 1987, Murdoch, 1997, Pickerling, 1993).

For example, when the agency's account manager collected data from the Google Ads tool and used that data to report to the SSA manager, she had to log into the correct account, change the date range and click between different settings and functions of the tool. As the account manager was changing and editing the Google Ads tool, according to her intentions and preferences, this enabled a deeper understanding about the Google Ads. The changes are in-depth interactions between the manager and the tool and they impact the overall mutability of the tool. From such ANT multidimensional ways of studying Google practice, there are even more possibilities for its understanding.

In the phase when relations are stabilised, the Google Ads temporarily becomes visible (Lammes, 2017, Lammes & Wilmott, 2020). This is until the tool again changes the user, a new problem arises, or marketing managers interact with a new setting or function of the Google Ads. Due to the Google Ads' fluidity in terms of evolvment and change, which is intensified due to its digitality, the phase of stabilisation lasts for a shorter amount of time compared to non-digital objects (Thompson, 2012). For example, the SSA manger in the setting would report on a very successfully performing Google campaign, having the Google Ads tool under control almost completely. However, shortly after, another manager, scanning through the tool, would report about the client making changes to the same Google advertising campaign, which would result in a failed attempt of reality creation. This points at a short span of the time in which the Google Ads stays stable. The unsuccessful relation is therefore between the SSA manager and the Google Ads, as the SSA manager does not manage to fulfil the intention of the network and therefore fails to control the tool in such a way for it to create results and perform well. The same tool is in one event seen as working well, while shortly after, it is seen as part of a problematic event, where the complexity around it suddenly increases (Suchman & Suchman, 2007).

The same as for boundaries and intentions, which cannot exist before the process of translation and stabilisation, roles of actors also get established only through acting (Lammes, 2017, Michael, 2017). This study recognises several roles of its actors, such as the SSA manager is a problem fixer, the investigator, the evaluator of the SSA campaigns and the checker. Those roles are temporary and change every time the agency's managers form new relations with the Google Ads tool. The role of a fixer, in which the SSA manager fixes a problem related to a particular function of the tool, quickly changes into the SSA manager being in the role of an evaluator of the level of optimisation, or else. The current SSA marketing literature does not recognise such different roles as part of the use of the SSA technology in practice. However, in other disciplines, scholars acknowledged various roles as a result of the process of translation in an actor network (Thompson, 2012, Lammes, 2017).

This research contributes to other, but marketing disciplines, as well. For example, in management and organisation studies (MOS), scholars study digital technology through social and material entities (Barett et. Al., 2012, Yoo et. Al., 2012, Mazmanian & Orlikowski, 2013, Orlikowski & Scott, 2016). This is through the approach, called socio-materiality, which aims to bring better understanding about the studied digital technology and pays more attention to the objects as opposed to their practices (Brownlie, 2010, Gond et al, 2016). However, socio-material process of knowledge production is not based on tracing how objects and subjects join in associations, act in those associations and then separate again, like ANT (Callon, 2010). The socio-material approach of knowledge production is different in how digital objects get explored. For example, socio-materiality explores objects and subjects from the point when they are already existent (outcomes with their boundaries), however, ANT explores objects and subjects as they never existed before, with no pre-defined boundaries (Law, 1992, Callon & Law, 1997, MacKenzie, 2004, 2005, Adams & Thompson, 2011, 2013). As such, ANT approach produces a more accurate and revolutionary reality, than socio-materiality, allowing for more detail and insight about digital technology.

In Information Systems (IS) studies scholars do study digital technology through the process of translation and are tracing how the latter constructs digital technology (Lammes, 2017). Some IS' scholars (Hind & Lammas, 2015, Lammas, 2017) also acknowledge the notions of power and control as part of the ANT analysis. However, critical examination of digital technology from the failure of relations perspective is missing from those studies. Examining digital technology from the failure perspective would open more opportunities for understanding various digital technologies (for example currently examined digital mapping by Lammes, 2017, Lammes & Wilmott, 2020). Failure will be considered in more detail in RQ3.

6.2.3 How do networks fail?

The third research question includes matters such as problematic events in actor networks, how these problematic events cause failure of relations, how a more immutable technological actor causes less control on the side of its user and what

a failed relation means on a small and on a large scale. The discussion below will present theoretical contributions through failed actor network interactions.

Regardless of the efforts of the SSA marketing scholars to capture change in SSA, those scholars are making marketing literature more and more fragmented (Quinton & Simkin, 2016). The scholars are keeping SSA technology and practice black-boxed by researching it externally, as opposed to looking at it from the inside and more in-depth (Knorr-Cetina & Bruegger, 2000, Shove, 2003, Law, 2009, Michael, 2017). However, some marketing scholars have already noticed the growing fragmentation of digital marketing knowledge and have been calling for a different examination of digital technology to enable more connected ways of understanding digital marketing advancements, including SSA advancements (Lamberton & Stephen, 2016, Kannan & Li, 2017, Rust, 2020). Such holistic and connected ways of understanding the SSA practice and technology are taken in also through failed actor network analysis (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017, Lammes, 2017).

Digital technology and its invisible features are a special type of objects that by its nature, as the market studies' scholars have already stated, require a special type of examination for proper understanding of them (Roscoe & Chillias, 2014, Geiger & Gross, 2017). This is mostly due to their non-physicality and the fact that digital is built of information, interfaces, codes, rules and prescriptions that are the mechanism, working in the background, but in charge of what we see on the surface (Hind & Lammes, 2015, Lamberton & Stephen, 2016, Quinton & Simkin, 2016, Lammes, 2017, Yadav & Pavlou, 2020, Rust, 2020). The power of relations stems from the fact that the invisible mechanism is hidden in the background and is therefore mostly in control of the digital SSA tool, while its invisibility causes the technology to create action without anyone even noticing (Geiger & Gross, 2017, Lammes, 2017). Furthermore, the power often being more on the side of the digital technology, rather than on the side of its user, makes it be unpredictable and very prone to failure and incompleteness (Knorr-Cetina & Bruegger, 2000, Geiger & Gross, 2017).

Tracing issues and problematic events caused by the asymmetry between heterogeneous actors provides more opportunities for understanding the complexity of Google advertising practice in detail (Thompson, 2012, Lammes, 2017). When a problematic even occurs, it requires solving and therefore the impact of the Google tool on the Google practice triggers major impact on practice through actions both on the tool's and on the manager's side (Lammes, 2017, Michael, 2017). As the co-creation of marketing practice happens, the human and nonhuman actors interact with each other in various different roles and situations, which bring detailed insight into the evolvement of digital those failed interactions are forcing (Akrich, 1992, Latour, 1992, Callon, 1998, 2010, Law, 2009, Brownlie, 2010, Michael, 2017, Geiger & Gross, 2017). This enables an additional and more complete understanding of the SSA technology in practice, which is a clear and significant contribution to the currently provided knowledge in the SSA marketing literature.

ANT scholars speak about the immutability of technological objects (Law, 2005, 2009). Objects are immutable when the user cannot control them, and s/he is uninvited to change them according to his/her intentions with them (Lammes, 2017). In this study, if the Google Ads' algorithm worked against the manager in terms of an additional campaign the client created, then the manager lost control over the tool and the Google Ads became immutable for him. The mutability and immutability of the Google Ads tool was therefore dependant on the intention (task) of the manager. The more the technological object is mutable for its user, the more the user can accomplish the intentions of the network. However, the less the technological object is mutable, the less the managers have the opportunity to change the tool according to the managers' intentions.

Solving the Google Ads issue therefore enhances the complexity of the network with many more formed heterogeneous relations and this brings more details and more understanding about the digital practice and objects such as Google advertising practice and the Google Ads. And given the intentions from the networks, the Google advertising practice is temporarily stabilised when problematic events are solved and when actor networks are successfully established. This brings us closer to understanding how change and evolution of digital advertising, such as Google

advertising, happens, how such practice can be both successful and problematic and how it emerges in relation with humans in an organisation, and this is what opens up the black box of Google advertising (SSA) technological advancements.

In the cases when relations failed, this has got to do with the power of relations (Callon, 1984, Law, 2019), which in this case was critically unevenly distributed between the two heterogeneous actors (Lammes, 2017). In this case, much more power is on the side of the Google Ads, rather than on the side of the marketing manager using the tool. For example, many times the agency's SSA manager failed to accomplish the intention, as part of the service the agency was providing to the client, as the client disabled a setting to grant full access to the manager. This made the tool more powerful than the manager, which caused the manager to fail to materialise his specific intention, such as solving an issue of the Google Ads integration with another tool.

In case when the SSA manager failed to accomplish the intentions of the networks, the Google Ads therefore had more power over him. For example, if the Google campaign stopped working, and the manager could not enter specific settings' sections at the backend of the tool, then the Google Ads was more powerful than the manager. This means that the Google Ads kept its features locked and unavailable to the manager and the agency's manager was uninvited to use them (Lammes, 2017). In this case, the tool became more immutable and harder to change and personalise (Lammes, 2017, Lammes & Wilmott, 2020). Using the momentum analysis (Beunza & Stark, 2002) for analysing the Google Ads' relations with its users, enables us to understand various roles, actions and intentions as part as part of the Google advertising practice.

The rules and prescriptions of the Google Ads such as its codes, settings, software and Google algorithm, can never be fully controlled by the user. For example, Google algorithm, presented in Chapter Five, was changing frequently and the managers could be in control with it, if they followed it's requirements. Algorithm's updates therefore impact the ways managers set up and manage Google advertising. This includes optimising the client's website and matching it with the Google advertisement. However, sometimes, the algorithm works without the

possibility for the managers to be in control of its actions. For example, when the prices of keywords rise or fall or when competitors steal branded keywords.

In the existing SSA marketing literature, many scholars call for studying problematic events around the SSA technology, such as the issue of viewability (e.g., Pritchard et al, 2021, Gordon et al, 2021, Porter, 2021). However, those calls for new research are not well directed in terms of the research methodology. If the scholars in the specific area of study continue to mainly use the quantitative approaches to study SSA technology, this will result in an even more fragmented and less connected SSA marketing literature (Thompson, 2012, Quinton & Simkin, 2016, Lamberton & Stephen, 2016). The market studies scholars already characterise digital marketing objects as invisible, changing and prone to failure (Roscoe & Chillias, 2014, Geiger & Gross, 2017). And this research joins the debates of those scholars and adds to them based on ANT principles (Callon, 1998, MacKenzie, 2005).

In such digitised environments, users can change its tools, however, the technology can also speak back and refuse change through rules and requirements (Thompson, 2012, Lammes, 2017). In this case, the relations tend to fail, as the users have less power compared to the technological actors, to pursue their intentions. Such an in-depth, multidimensional analysis therefore considers the invisible rules and prescriptions of the tool (codes, settings, algorithm). All the mentioned enables accurate representation of reality that shows how the Google Ads ad Google advertising practice are constantly evolving.

Failed relations therefore occur when the process of translation is prevented, there is no materialisation and objects stay black boxed (Latour, 1993, Lammes, 2017, Michael, 2017). This can be due to the human and nonhuman actors failing to join together and create reality. In the setting of this study the agency's managers were incapable of interacting with the Google Ads tool in such a way that would enable the fulfilment of intentions of the actor networks. Failed relations were therefore such, where the agency's manager had less control over the technological object. Examples of such failed relations were when the Google campaign did not perform well enough to satisfy the intention of the network which was to increase the client's sales and/or brand awareness. There can be many reasons for such intention failing

to be pursued such as when the client intervened with the SSA's manager's Google campaign not knowing the Google's algorithm's requirements. Failing to comply with the Google algorithm's requirements was when the client failed to change the settings on the Google Ads like the exact/phrase match modifier or when the SSA manager did not feed the SSA campaign with researched enough information, like keywords. In those cases, the Google Ads tool disallowed control over it, which prevented the agency's managers from using the tool to fulfil their intentions.

The following sections will discuss the methodological contributions of this thesis.

6.3 Methodological contributions

ANT in this research was used as an approach (Michael, 2017) to analyse how Google Ads, a tool of Google advertising, is socially constructed through marketing managers using it on a day-to-day basis. In the setting of the digital marketing agency, heterogeneous relations of actors were followed through their process of translation (Law, 2009, 2019). Some of the enactments from those relations were successful, however, others unsuccessful (Callon, 1984, Latour, 1992, Akrich, 1992, Beunza & Stark, 2002, Lammes, 2017). The following sections will discuss methodological contributions this study makes, while using learnings from ANT principles (Latour, 1988, Callon, 1984, 1998, 2010, Mackenzie, 2005), and adding to the practice-based analysis used by market studies' scholars (Knorr-Cetina & Bruegger, 2000, Roscoe & Chillas, 2014, Geiger & Gross, 2017).

From the ANT point of view, successful relations are those that stabilise through the process of translation and enact reality (Star, 1991, Law, 2009). Opposite to that, unsuccessful relations in an actor network are such that fail to become stabilised and therefore fail to bring objects and subjects, with their characteristics, to being (Akrich, 1992, Law, 1992, Law & Joks, 2020). As the world has moved to the era of post-humanism, the objects have become more meaningful in practice, as opposed to the fact that previously scholars were mostly studying human-human relations and their outcomes. Now, recognising equal importance of objects and subjects is very beneficial with additional understanding of rapidly changing digital technology (Adams & Thompson, 2016, Geiger & Gross, 2017). In their studies, ANT scholars

have only briefly acknowledged failure. This is unfortunate, as failure is a normal, daily part of digital marketing technology, as it evolves with a fast pace (Knorr-Cetina & Bruegger, 2000). Due to the unpredictability of digital technology, that is barely or not even at all physical, that technology tends to have the features like incompleteness, mutation, power and control (Knorr-Cetina & Bruegger, 2000, Thompson, 2012, Lammes, 2017). However, as the practice turn in marketing literature mostly acknowledged non-digital phenomena and studied it, the scholars have not paid enough attention to the invisible tools and their features, which are the main driver of change (Roscoe & Chillas, 2014, Geiger & Gross, 2017). As much as ANT scholars considered equal importance of human and nonhuman actors (Callon, 1998, MacKenzie, 2005, Callool, 2010), that much the failure was not related to quickly changing digital technology. ANT scholars did consider failure of actor networks (e.g., Akrich, 1992, Latour, 1992, Law & Joks, 2019), however, with non-digital objects, which tend to be less fluid, multiple and dynamic (Lammes, 2017). In those studies and through heterogeneous relations, scholars researched invisible medical conditions like atherosclerosis, anaemia and liver disease (Mol & Law, 1996, Mol, 2002, Law & Singleton, 2005, Law & Joks, 2019).

In the fast-paced and highly dynamic digital technology like SSA was able to shift between the networks and participate in socio-material interactions in different networks at the same time. Such acting is more prone to failure (Knorr-Cetina & Bruegger, 2000, Thompson, 2012, Lammes, 2017). However, due to the failed events being trickier to collect the data around, ANT has so far mostly been used to analyse the successful relations of actor networks (Lammes, 2017, Lammes & Wilmott, 2020).

The non-physical digital technology is hard to capture in the setting (Auge, 1995, Kupfer, 2007, Lammes, 2007, Lammes & Wilmott, 2020), and this is where the immutable mobile help enable the materialisation and temporary physicality of the Google technology (Law, 2009). Those invisible matters tend to give the most useful and interesting details about the digital practice and objects (Michael, 2017). As digital technology is made up of invisible rules and prescriptions (Hind & Lammes, 2015, Lammes, 2017, Lammes & Wilmott, 2020) this therefore makes those rules harder to trace. For example, the Google algorithm as a set of rules regulates the

Google advertising practice makes the events around those rules harder to collect the data around (Latour, 2005, 2011, Michael, 2017, Lammes 2017). The Chapter Five of this thesis shows that the Google algorithm and other invisible features of the Google Ads tool, had a big impact on Google advertising practice and therefore largely impacted its failure and/or success. This study shows problematic events in Google advertising practice as it encompasses several ways of how the agency's manager interacts with the Google Ads tool to get an issue fixed. This is what brings the complexity and at the same time opens the black box of the Google advertising practice and its tool (Callon, 1984, 2010, Law, 2009, 2010).

With failed relations it is also the notions of power and control that need to start to get better acknowledged in the ANT critical analysis of objects and subjects. So far, the notions have only rarely been given deeper attention (Callon, 1984, Law, 2009, 2019). For example, the notion of power (power relations – Galloway, 2004, Lammes, 2017) has so far been acknowledged through the process of translation that enables materialisation from heterogeneous associations with successful creation of reality (Latour, 1987, Murdoch, 1997, Law, 1994, Law, 2009). However, the failure of materialising reality has been acknowledged by ANT scholars analysing the non-digital phenomena (Law, 2019, Law & Joks, 2019).

The methodological implications of this study are also related to the multidimensionality of the ANT analysis. So far, ANT scholars have mostly been using the flat representations of reality; however, those that happen in-depth and impact the overall mutability of the tool have majorly been left out of the research (Lammes, 2017). For example, scholars, who study non-digital objects, usually do the analysis of objects and subjects on a one-dimensional level (Lammes, 2017). This is what is called flat ontology or flat representation of reality (Callon, 1991, Latour, 2005, Law, 2009, 2019, Michael, 2017, Lammes, 2017). In this study, the Google Ads, is analysed from both the in-depth and flat way, which provides a much deeper level of understanding of this practice and its tool. There, the in-depth analysis can happen on the level that is a lot of the times invisible to the human eye and therefore many times left out from the research (Hind & Lammes, 2015, Lammes, 2017). However, such invisible rules and prescriptions allow for a deeper, better and more complete understanding of the digital technology. And such in-

depth process of translations, impact the way the technology, like the Google Ads tool, is mutable or immutable and therefore changeable by its user or not.

Related to this, the notions of mutable and immutable mobile (Walsham, 1997, Fenwick, 2010, Law, 2009, 2019) play an important role in understanding and tracing the failed relations (Lammes, 2017). Immutable mobiles are defined as constant actors that travel between relations to enable their stability (Latour, 1990, 1992, Walsham, 1997). For example, the Google Ads is an immutable mobile for the part when the manager has little control to change it, however, it becomes less immutable and therefore more mutable, when power increases for the manager and s/he can change it more. Such treatment of digital technology has generally been left out from the ANT research (Hind & Lammes, 2015, Lammes, 2017)

For the methodological contributions this study took from the scholars that used analysis based on ANT principles to explore objects in practice (Callon, 1998, 2010, Roscoe & Chillias, 2014, Gond et al, 2016, Lammes, 2017, Lammes & Wilmott, 2020) and expanded ANT analysis of digital practice with the failure perspective. With such expanded ANT analysis, now many disciplines that digitised will get an opportunity for better understanding of their practices and objects. The latter can have many revolutionary implications for the knowledge production and the understanding of such digitised disciplines. And this will make significant difference for both practitioners and academics.

The next section will present the future research agenda.

6.4 Future research

Based on this study the future research agenda was established. The researcher is suggesting two main ways in which scholars can join the discussions that were started as part of this thesis.

First, given that ANT is an approach that aims to provide a more accurate understanding of objects and subjects of practice, is of a significant importance for tracing and understanding the constantly changing sponsored search advertising

technology in marketing. Given that this research has contributed to the progression of momentum analysis (Beunza & Stark, 2002, Geiger & Gross, 2017) in terms of calibrating it to study digital technologies, scholars should join this debate and continue developing them further. Specifically marketing scholars should take the learnings from this thesis to apply them to their analysis of similar digital marketing phenomena. With the world getting significantly digitised, this including technology in marketing, market scholars need to enrich and adapt their current practice-based approaches to the non-physical, invisible marketing objects as part of their practice. This way, the increasingly fragmented digital marketing can slowly and gradually become better understood from the inside and on multiple levels (Lammes, 2017). Applying this type of analysis to performativity studies in marketing, will enable a proper understanding of objects that are forcing change in predominantly digitised practice of post-human worlds (Knorr-Cetina & Bruegger, 2000).

This type of analysis can also enrich the understanding of phenomena in other discipline such as IS, MOS and Education. Given that this research focused on studying digital technology with ANT analysis from the failure perspective, IS scholars can continue those debates in other than cartographical mapping examples of digital technology (Lammes, 2017) and MOS scholars can add a more micro-level analysis to their studies of organisations (Czarniawska, 2004). As well, scholars in Education can consider studying more non-physical objects in their practices, having a very strong foundation for it (Thompson, 2012). Scholars, who believe that practice-based momentum analysis is one to uncover the phenomena in the world more accurately, should certainly take into account a failure-based approach to exploring those phenomena, while tracing the problematic events, which tend to bring even more simplification and uncovering of the phenomena (Michael, 2017).

Second, marketing literature should pay greater attention to qualitative ways of collecting the data, and telling a story, as this enables rich presentations of the fluid and dynamic phenomena such as digital (Latour, 2004). One such approach that provides in-depth insights is ANT-informed ethnography, which through storytelling provides such details that open many new possibilities for understanding digital technology, as used in this study (Nimmo, 2011, Corman & Barron, 2017).

6.5 Summary of the chapter

Following the above discussion, this study is significantly contributing to the literature both theoretically and methodologically. On one hand, theoretical contributions were discussed through three research questions to show how the type of analysis used can help extend the current SSA studies in marketing through a more critical and network examination in situation. And on the other hand, methodological contributions include the ways in which scholars interested to explore the world through practice, can now do so with an enriched analysis through failure. Both methodological and theoretical contributions span beyond the marketing discipline, and into IS, MOS and even Education studies, where practices are increasingly digitised.

7 Chapter 7: Conclusion

This chapter presents the concluding remarks of this thesis. It mostly focuses on the contributions this study makes to the marketing literature. The chapter starts with summarising those contributions, continues with the managerial implications and finishes with presenting the study's limitations.

7.1 Summary of theoretical contributions

7.1.1 Research questions

Three research questions were answered in order to fill several identified gaps in the marketing literature. The discussions from the research questions will be summarised below.

Several scholars highlight the importance of a more critical examination and understanding of objects in practice (Brownlie, 2010, Rust, 2020). In an increasingly digitised world, objects have become equally as important as subjects, to understand the way practice is progressing (Knorr-Cetine & Bruegger, 2000, Beunza & Stark, 2002, Geiger & Gross, 2017).

Market studies' scholars already use the practice-based analysis called performativity to study marketing objects (e.g., Andersson et al, 2008, Cochoy, 2008, Kjelberg & Helgesson, 2008, Mason, Kjellberg & Hagberg, 2015, Cluley, 2018, Cluley & Nixon, 2019, Storbacka & Nenonen, 2021). Some of those being based on ANT, enables enrichment of the current practice-based socio-material analysis through following the ways actors interact through failure and success in situation (Callon, 1984, Law, 1991, 2009, 2019, Latour, 2005, Michael, 2017).

This thesis identified several gaps in the SSA marketing literature concerning the lack of critical examination of the SSA technology (Yadav & Pavlou, 2020, Rust, 2020). Currently, the SSA marketing literature mostly treats the SSA technology as

black boxed, static and singular, while being examined externally (e.g., Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017, Berman, 2018). This means that SSA technology with its main features and functionalities, such as keywords, settings, algorithms and strategies, is currently presented as an outcome, rather than as emergent in practice (Geiger & Gross, 2017). The details about how the mostly non-physical and invisible SSA technology comes to being are currently not fully explored in the SSA marketing literature. Also, the current SSA marketing literature mostly examines the SSA on a macro level, therefore on an organisational level, rather than the micro level of relations, which can capture the incompleteness and failure of the backend mechanism that changes marketing practice (e.g., Yao & Mela, 2011, Chen et al, 2009, Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). This study explores how Google Ads gets constructed in practice, through the process of translation, which is on a micro level, however, having a macro effect (Latour, 1988, Geiger & Lammes, 2017).

So far, the SSA marketing studies have mostly used quantitative research methods to examine the SSA technology, such as quantitative models (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Yao & Mela, 2011, Katona & Sarvary, 2016). As much as quantitative analysis is very relevant, qualitative ethnographic approaches to data collection, can provide more insight and depth to the internal reconfiguration of marketing practice (Nimmo, 2011, Corman & Barron, 2017, Geiger & Gross, 2017, Michael, 2017).

Several marketing scholars have been calling for a more holistic, and less fragmented, treatment and presentation of digital technology in marketing (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Kannan & Li, 2017, Rust, 2020). However, the SSA marketing literature has not yet used practice-based approaches to study digital technology, which would enable its more nuanced understanding about it. The next sections will present how this study addressed the gaps in the SSA marketing literature.

7.1.2 RQ1, RQ2, RQ3

All three research questions focused on better understanding of how SSA technology, like the Google Ads tool emerges in practice through the interaction with its users. Overall, the questions are aimed at teasing out from the data a more critical understanding of the SSA to make a strong contribution to the marketing literature. Contributions were also made to other disciplines such as MOS, IS and Education studies.

The first research question focuses on the creation of actor networks as part of the SSA practice, highlighting Google Ads. This covers the matters such as who are the actors, how do they act, how do they form relations with other actors, which are the events in actor networks and how are they organised into networks. The first research question therefore aims to show the Google Ads more critically.

SSA is a form of digital marketing practice, including various technologies, tools and features, which have been rapidly evolving over the past 25 years (e.g., Fain & Pedersen, 2006, Kannan & Li, 2016, Liu-Thompkins, 2018, Morton & Dinielli, 2020). The combination of SSA technology and its practice has significantly changed the ways in which marketing managers make strategic advertising decisions. Changes of marketing practice being pushed by the marketing objects, points at the equal importance of those objects to their users. The changes and advancements continue to attract scholars to produce research on SSA and related matters, however, the fragmentation of the SSA marketing literature keeps expanding. Given several calls for a more holistic examination of the SSA technology (Quinton & Simkin, 2016, Lamberton & Stephen, 2016), this thesis uses ANT to explore SSA technology as an enactment of the process of translation in practice.

This study chose to examine the Google practice, highlighting the Google Ads tool. The justification for this choice lies in the overall dominance of Google (StatCount, 2021) and the overall rapidly growing SSA sector (Morton & Dinielli, 2020, StatCounter, 2021) in digital marketing, which makes it significant to provide a more critical understanding of the Google practice, where in the post-human world, digital objects are equally as, or even more, powerful than their users (Geiger & Gross, 2017).

The first research question discusses the process of translation from heterogeneous relations between Google Ads and its features as technological actors and marketing managers as human actors (Law, 1992, Akrich, 1992, Singleton & Michael, 1993, Czarniawska, 2000, 2004, Law & Joks, 2019). The process of translation includes how the formation and stabilisation of relations was traced by the researcher in the research setting. In a rather complex and potentially overwhelming number of events and relations available to study in the setting, the networks were formed and cut by the principle of commensurability (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002, Latour, 2005). This enabled the researcher to keep the focus, cut networks where needed and make decisions which events were the spotlights of the practice (Knorr-Cetina & Bruegger, 2000, Beunza & Stark, 2002). The Google Ads tool in this thesis is presented as multiple, dynamic and fluid.

As such the Google Ads tool was part of many different networks at the same time (Law & Singleton, 2005, Thompson, 2012) and it could act locally or at distance. This often caused disruption to the Google practice and increased the complexity of actor networks. The relations between heterogeneous actors enabled the micro perspective of the Google Ads, rather than the macro, organisational perspective, which the current SSA marketing literature mostly takes (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Yao & Mela, 2011, Katona & Sarvary, 2016, Berman, 2018). The micro perspective enables a more detailed understanding of the Google Ads and the Google practice, through focusing on individual relations internally, as opposed to the currently external ways of examinations of SSA.

The second research question of this thesis focuses on how reality is created through the process of translation and how the boundaries become visible when the human and nonhuman relations stabilise. The research question uncovers how roles and intentions in the Google advertising practice were established in actor networks. Again, the second research question aims to present the SSA Google Ads more critically.

Furthermore, the second research question discusses the ways this study collected the data through an ANT-informed ethnography. Several ethnographic methods

used, enabled the researcher to follow the actors in the networked Google advertising practice to understand how the relations between its technological objects and subjects are formed and how they come apart. Tracing the process of translation enabled the detailed understanding of how the Google Ads emerges in practice through several changes. Such tracing of relations opens the black box of SSA, which brings understanding beyond the so far taken for granted SSA in the marketing literature (e.g., Jerath et al, 2011, 2014, Kireyev et al, 2015, Lu & Yang, 2017).

Tracing the details of the process of translation provided rich details of how the intentions of marketing managers, established in actor networks, drove interactions and enabled Google technology to materialise. Through ethnography and following actors, the researcher studied how agency's managers interacted with the Google Ads, which sometimes turned into a successful, but sometimes into a failed fulfilment of managers' intentions with the tool.

Successful creation of reality was possible when the agency's manager had full control of the Google Ads, therefore s/he could interact with it and change it according to his/her intentions. The asymmetry between human and nonhuman actors comes to the foreground through power and how it sometimes gets distributed more towards the object, but other times more towards the subject. With a successful materialisation of Google technology, more power is on the side of the user of Google Ads, while with failed relations the control is shifted towards the tool. Such internally driven and critical way of understanding the heterogeneous relations of Google advertising enables a move forward in understanding the SSA better than it has so far been understood by the SSA marketing scholars. This study therefore contributes to a more holistic understanding of the SSA, where its technology is severely digitised, full of information and due to its invisible features hard to capture (Geiger & Gross, 2017, Morton & Dinielli, 2020, StatCount, 2021).

The third research question focuses on how actor networks fail and how failure of the process of translation from heterogeneous relations is related to the notions of power and control. Moreover, the third research question discussion considers the

mutable and immutable mobile and how these significantly contribute to a better understanding of the SSA, both on a smaller (micro) and larger (macro) scale.

Scholars, who use ANT in their research, have so far mostly considered successful materialisations of reality (e.g., Law & Singleton, 2001, Mol, 2002, Latour, 2005, Lammes, 2017, Lammes & Wilmott, 2020) and only a handful of them have studied failure in actor networks (e.g., Callon, 1984, Latour, 1992, Akrich, 1992, 2000).

Since the quickly changing SSA technology was only rarely captured in a complex way, the SSA marketing literature has become very fragmented (Quinton & Simkin, 2016, Lamberton & Stephen, 2016). This study addresses this issue by focusing on failed process of translation from heterogeneous relations in actor networks. Failed interactions between the Google Ads tool and the agency's managers enable several opportunities for understanding the ways in which the Google technology materialises and becomes more physical through practice and constant objects (Law, 2009, 2019).

Networked resistance and failure mean less control the technology user has over the Google Ads tool, its functions and settings. This at the same time disables the manager to fulfil the intentions with the tool and makes the tool more immutable and less flexible and prone for change (Law, 2009). This study focuses on the problematic events in actor networks, where such unsuccessful materialisations from heterogeneous relations brought greater complexity and therefore greater understanding of the Google advertising technology.

7.2 The gaps and the contributions to the literature

The current marketing literature is largely missing out the presentation of digital technology and its advancements the way they happen in practice (Brownlie, 2010). The scholars have been taking the SSA technology at face value (e.g., Ghose & Yang, 2009, Yang & Ghose, 2010, Berman, 2018), while a proper, embedded in practice, understanding of the SSA practice and its technology is needed to enable a more holistic evolvement of knowledge in digital marketing (Quinton & Simkin,

2016, Rust, 2020). This study used ANT analysis to fill that gap and to significantly contribute to a more accurate understanding that a mostly digital information-dense marketing technology has been calling for (Geiger & Gross, 2017).

This study also addresses several other gaps that were identified in the marketing literature, such as the lack of critical understanding of the SSA, quantitative research design mostly undertaken by the scholars and a macro, rather than micro perspective on the SSA technology in the marketing literature.

The focus on failure and success, enables SSA technology to be seen in its full complexity and opens many possibilities for understanding it the way it happens through action. Such understanding through social construction was enabled by the detailed ANT analysis in this study. ANT enabled the exploration of Google advertising, highlighting its tool Google Ads and this answers many calls from marketing scholars to start building a more holistic and less fragmented knowledge in digital marketing (Quinton & Simkin, 2016, Lamberton & Stephen, 2016, Rust, 2020, Yadav & Pavlou, 2020).

This study therefore makes two main contributions to the SSA marketing literature. First, as per the research questions discussions, the SSA technology is more critically presented than the scholars have presented it up to date (e.g., Ghose & Yang, 2009, Katona & Sarvary, 2016, Berman, 2018). Such critical understanding of the SSA technology, through powerful human and nonhuman relations in actor networks, captures the way the mentioned emerges in practice. This enables opening of the currently black boxed SSA technology.

And second, the SSA marketing literature mostly researches its phenomena from the macro perspective, therefore a perspective of an organisation (e.g., Katona & Sarvary, 2010, Jeziorski & Moorthy, 2017, Lu & Yang, 2017). This is useful and interesting, however, a micro perspective, such as exploring the SSA on the level of heterogeneous relations in the moment, brings many more details and insights about the non-physical digital marketing technology and the backend understanding of how it forces rapid change of marketing practice.

This study also makes contribution to other disciplines and literature, such as the MOS, IS and Education studies. There, the study contributes by adding to the current socio-material stream of scholars, by enabling more detail and depth to the exploration of the digital technology. To IS studies this study contributes by the ANT approach from the failure perspective, which enables an even more detailed exploration and understanding of digital phenomena. And in Education, this research enables a strong, upgraded momentum analysis, where also fully digital objects can be captured and understood on multiple levels.

7.3 Managerial implications

Based on the collected data through ANT-informed ethnography and its analysis, several implications for marketing managers were identified. Chapter Five of this thesis presents many details of the issues around Google advertising practice and its Google Ads tool. This is useful for the managers in practice and will be presented below.

This research uses ANT approach to explore actor networks and their relations, especially the failed relations (Callon, 1984, Akrich, 1992, Latour, 1992, 2000, Lammes, 2017). Such an exploration provided several insightful details about the Google practice, and how it gets reconfigured through socio-material interactions (Beunza & Stark, 2002, Suchman & Suchman, 2007). As the relations failed to materialise due to problems that occurred while Google Ads was used, marketing managers tackled those problems by aiming to solve them. Therefore, exploring the Google Ads and its practice more critically and from the inside, as it was done in this study (Geiger & Gross, 2017), will be helpful for the marketing managers to help them build their digital marketing strategies and solve problems. Especially the story-telling approach enables a complete understanding and a relevant insight into situations from real life situations (Latour, 2004, 2005, Nimmo, 2011, Bajde, 2013, Corman & Barron, 2017).

Digital marketers from practice benefit from this study because of the rich details from an ANT-informed ethnography and ANT analysis (Brownlie, 2010, Michael, 2017). This will help the managers improve bidding strategies, improve SEO

strategies, learn what to expect from a Google advertising campaign and when, how to work successfully as a team, what are some tips and trick in the Google advertising, how to best plan Google advertising strategy and how to best manage a client. From the series of events as part of the 8 networks (Latour, 2005), marketing managers will become more familiar with the details of those events, while reading through the insightful narrative of how the digital agency from this study implemented new advertising policies induced by socio-material interactions (Callon, 1984, Michael, 2017, Lammes, 2017).

7.4 Limitations of the study

Below sections will discuss limitations of this research. They are mostly referring to the design of this research used to collect the data – ethnography. Three main limitations will be presented.

First, ethnography is meant to study phenomena within society or as part of a particular setting. As such, ethnography is less likely to be generalisable, due to the large amount of subjectivity included in such methodology. The answer to generalisability is twofold. First, the research is less generalisable for theoretical contributions. For example, Hammersley (1990) claims that the researcher's choice to decide which events and actors to follow and when, adds to the subjectivity and bias of the research. Also, where the digital marketing agency where ethnography was conducted was a small setting, which might not have included other practices and events that a bigger setting would.

Second, Denzin & Lincoln (2005) claim that going native is another problem of ethnography. The latter is partly correct for this research, as the researcher did participate in some of the tasks while conducting her ethnography. As the researcher did participate in tasks that were complementary to the Google advertising practice, this might have lowered her objectivity of the events and people she was studying (O'Reilley, 2009). However, given that the research was guided by the ANT principles, it implied analysing both the objects and subjects in their networked power relations. This made the ethnographic data collection more objective than it would have been if it was only aiming to study people's interactions

(Smith, 2006). Not only that but some scholars claim that a reasonable amount of the researcher's involvement in the tasks at the setting at the time of ethnography is rather beneficial (Jules-Rosette, 1975, Tedlock, 1991).

And third, if the researcher were more knowledgeable about the Google practice before the ethnography started, she could have potentially been more persuasive with taking part in other aspects of Google advertising practice, such as keyword bidding. This could have provided even more problematic events and the potential to study Google practice and Google Ads in even more detail.

Appendix D: “Main SSA Studies” Table

	Scholar	Title	Year	Topic	Aim	Technology Treatment	Perspective	Research Design
1	Ghose & Yang	An Empirical Analysis of Search Engine Advertising: Sponsored Search in Electronic Markets	2009	Analyses relations between various keywords and metrics of SSA, based on behaviour of consumers, advertisers, and search engines.	To explore the impact of keyword characteristics, ad rank and website quality on buyer's behaviour, CTR and search engine's ad rank decision.	Singular, Static	Macro	Quantitative, Model
2	Yang & Ghose	Analyzing the Relationship Between Organic and Sponsored Search Advertising: Positive, Negative, or Zero Interdependence?	2010	Studies how SSA (CTR, Conversion rate, ad rank, search volume) is impacted by the searchers' behaviour for organic listing and vice versa, and if those effect are positive or negative.	To explore the impact of SSA on organic listing performance and vice versa.	Singular, Static	Macro	Quantitative, Model

3	Katona & Sarvary	Sponsored Search Advertising: Positive, Negative, or Zero	2010	Examines the bidding patterns that determine the ad rank on SERP.	To measure the competition for ad position on SERP, based on the attractiveness of the landing page and the relation between organic and sponsored links.	Singular, Static	Macro	Quantitative, Model
4	Xu et al	Price Competition and endogenous Valuation in search advertising	2011	Examines whether it is desirable for a brand to aim for the expensive ad position, while its product and competitiveness on the market are already prominent.	To assess the value of an expensive ad position on SERP, based on brand's endogenous analysis, such as product price and competence, compared to competitors.	Singular, Static	Macro	Quantitative, Model

5	Yao & Mela	A Dynamic Model of Sponsored Search Advertising	2011	Studies the relations between searchers, advertisers and search engines and how actions, like changing the advertiser's site, advertising by segments or using second price and first price auctions, impact firm's profit and consumer's welfare.	To assess how various actions and responses by consumers, search engines and advertisers impact the welfare of a firm and of a consumer.	Singular, Static	Macro	Quantitative, Model
6	Rutz & Bucklin	From Generic to Branded: A Model of Spillover in Paid Search Advertising	2011	Researches the spillover effect of generic and branded searches and if the generic searches positively impact the future branded searches.	To research the spillover effect between the branded and generic searches in SSA.	Singular, Static	Macro	Quantitative, Model
7	Zhu & Wilbur	Hybrid Advertising Auctions	2011	Researches the hybrid advertising auctions "for per impression" or "per click" bidding offered in the same advertising space.	To analyse the hybrid type of auctions and to provide an understanding of how search engines could offer more efficient hybrid auction mechanism to their advertisers.	Singular, Static	Macro	Quantitative, Model

8	Berman&Katona	The Role of Search Engine Optimization in Search Marketing	2013	Studies how SEO improves the satisfaction of searchers and the SERP rank, and the search engine's profit given better/worse SEO of the advertiser's website.	To examine how SEO impacts the SSA and organic ad ranks between competitors	Singular, Static	Macro	Quantitative, Model
9	Jerath et al	Consumer Click Behavior at a Search Engine: The Role of Keyword Popularity	2014	Studies the activity of consumers - the clicks on organic or sponsored listings, based on the keyword characteristics (e.g., popularity).	To explore the click behaviour on sponsored and organic links on SERP.	Singular, Static	Macro	Quantitative, Model
10	Sayed et al	Competitive Poaching in Sponsored Search Advertising and Its Strategic Impact on Traditional Advertising	2014	Researches how a smaller firm steals larger firm's keywords, which leads the larger firm to increase their budget for SSA or move some of its advertising budget towards traditional advertising (TV, print).	To examine the correlation between the large firms' stolen keywords and the decrease of search engine's profits.	Singular, Static	Macro	Quantitative, Model

11	Dinner et al	Driving Online and Offline Sales: The Cross-Channel Effects of Traditional, Online Display, and Paid Search Advertising	2014	Researches the effect of advertising across online and offline channels, and especially SSA's impacts on offline sales and ROI increase.	To explore the cross-channel (online-offline) effects of advertising and sales.	Singular, Static	Macro	Quantitative, Model
12	Abou Nabout et al	Empirical Generalizations in Search Engine Advertising	2014	Compares CPC in SSA across 15 industries in 6 countries.	To understand the SSA expenditure and CTR in 6 industries in 15 different countries.	Singular, Static	Macro	Quantitative, Model
13	Desai et al	The Company That You Keep: When to Buy a competitor's Keyword	2014	Studies how branded keywords get purchased by the brand competitor and what are the effects of that for both the brand and its competitor.	To explore the strategic effects (incl. costs) of the brand's competitor buying the brand's own keywords.	Singular, Static	Macro	Quantitative, Model
14	Shin	Keyword Search Advertising and Limited Budgets	2015	Studies how limited budgets for SSA may impact the advertiser's decisions about the amount of bid for keywords.	To explore how limited budgets for SSA impacts strategic SSA decisions.	Singular, Static	Macro	Quantitative, Model

15	Chan & Park	Consumer Search Activities and the Value of Ad Positions in Sponsored Search Advertising	2015	Studies consumers' click activities for a particular keyword to be able to predict what drives website traffic and purchase and consequently what are the values of certain ad positions on SERP.	To examine how advertisers compete for ad rank in SSA and how searchers make sales decisions based on that.	Singular, Static	Macro	Quantitative, Model
16	Yang et al	The Impact of Market Competition on Search Advertising	2015	Studies whether and how advertisers change their ad content depending on the number (intensity) of their competition in SSA.	To examine the impact of competition in SSA on the advertiser's ad content (changes).	Singular, Static	Macro	Quantitative, Model
17	Amaldoss et al	Keyword Management Costs and "Broad Match" in Sponsored Search Advertising	2016	Studies how the broad match modifier (automatic bidding), as a setting of search engines, impacts the cost of advertiser's keyword management and search engine's profit.	To explore how broad match modifier in SSA impacts SSA advertising decisions by advertisers and how this impacts the search engine's profits.	Singular, Static	Macro	Quantitative, Model

18	Yang et al	Brand engagement on social media: will firms' social media efforts influence search engine advertising effectiveness?	2016	Studies how brand's engagement on social media impacts the SSA metrics such as CTR and Conversion rate and specifically how brand's use of social media impacts the ad rank and effectiveness.	To explore how social media activities impact the effectiveness of SSA.	Singular, Static	Macro	Quantitative, Model
19	Jeziorski & Moorthy	Advertiser Prominence Effects in Search Advertising	2017	Studies the relation of the ad rank and the advertiser's brand prominence in obtaining the high CTR.	To explore how the prominence of the SSA advertiser and the ad position prominence interact to impact the CTR of the ad.	Singular, Static	Macro	Quantitative, Model

20	Lu & Yang	Investigating the Spillover Effect of Keyword Market Entry in Sponsored Search Advertising	2017	Studies how the advertiser's decision about the keyword selection depends on its competitor's keyword selection decision and vice versa and what the probability for those impacts is.	To explore how the advertiser's keywords decisions are impacted by the competitor's selection of keywords and vice versa.	Singular, Static	Macro	Quantitative, Model
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