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The Campaign to Stop Killer Robots and its media problems

An analysis of a newspaper discourse surrounding a campaign against a malicious
technology

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Abstract:

This thesis explores the organization of the Campaign to Stop Killer Robots in its surrounding media discourse as seen in newspapers. The success of the campaign is in the public's interest due to the inevitable threats posed by so-called killer robots. Knowledge creation and messaging are important factors in creating a successful campaign and are at the center of this research. Two coding schemes based on theories concerning public awareness campaign organization, media discourse organization and previous campaigns against malicious technologies, have been developed. These coding schemes were used to conduct a discourse analysis of 111 newspaper articles published by 17 newspaper and tabloids. Key insights into the campaign's organization, in regard to knowledge creation and messaging, have been revealed. The campaign is organized in a manner, where knowledge created by the campaign, regarding the existence of killer robots and their existing and potential threats, is ambiguous and paradoxical. Though the campaign has created a "sticky message" in its surrounding media discourse, it is showing problems in conveying its achievements and lacks representation in big newspaper publishers. Thus, the campaign's potential has not been fulfilled yet. Lastly, practical implications and suggestions to fulfill its potential were derived from these key insights.

Keywords: Campaign organization, public awareness campaign, newspaper discourse, knowledge creation, messaging, killer robots, Lethal Autonomous Weapon Systems (LAWS)

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List of abbreviations:

Abbreviation	Meaning
AI	Artificial Intelligence
ANI	Artificial Narrow Intelligence
ASI	Artificial Super Intelligence
CCW	Convention on Conventional Weapons
ICAN	International Campaign against Nuclear Weapons
ICBL	International Campaign to Ban Landmines
LAWS	Lethal Autonomous Weapon System
NGO	Non-government Organization
PAC	Public Awareness Campaign
UN	United Nations
US	United States

1. Introduction

The Campaign to Stop Killer Robots is an important and arguably the most prominent actor in raising the attention on the issue of advanced artificial intelligence systems and their possible maliciousness. Its success is highly important for today's society, due to the inevitable threats that so called killer robots pose. Organizing such a campaign requires cooperation between multiple stakeholders such as non-government organizations (NGOs), media such as newspapers, and governments. For the campaign to succeed, a coherent and efficient media discourse is needed and even though organizing a successful media discourse around a campaign requires a lot more than focusing on its newspaper discourse, newspapers are still particularly relevant in forming the publics' opinion (Randolph and Viswanath, 2004). Hence, in this thesis the vast topic of campaign and discourse organization is being narrowed down to the topic of the organization of a newspaper discourse surrounding a campaign against a malicious technology. This thesis is especially concerned with knowledge creation and messaging of the Campaign to Stop Killer Robots. Both are vital ingredients to success, as pointed out by leading researchers in the field of public awareness campaign theory such as Heath and Heath (2007), Bloomfield, et al.(2015), Bruce and Tiger (2010), and Hunt (2012). By conducting a scientific analysis, on how the Campaign to Stop Killer Robots is organized in newspapers, key issues in knowledge creation and messaging by the campaign have been revealed. A specific research similar to this has not been conducted thus far and as the reader will find out in the following, research surrounding the relevant fields of media discourse analysis and public awareness campaign research, though quite extensive, is not concerned with the specifics that are being explored in this research. Barely any research regarding discourse analysis of Lethal Autonomous Weapon Systems (LAWS) exists since, admittedly, it is a very niche topic, but, nonetheless, important and relevant to society and science. Technology is ever advancing and inevitably leads to ethical, moral and legal issues, making the campaign at hand is just one extreme case of many more to come. Therefore, exploring how campaigns against malicious technologies are represented in surrounding media discourses and revealing key issues, can potentially help future campaigns against malicious technologies to succeed.

One example of scarcely found research into this topic has been conducted by Schroeder (2016). In the context of his PhD thesis he writes about the debate on LAWS in the field of legality and about ethical aspects in the political and military playing field. However, his work is more concerned with the technical aspects and the dangers of LAWS and neglects the importance of the campaign's media discourse. Though, he recommends further research into the ethical implications of LAWS and suggests that there are a lot of questions regarding LAWS and their implications left unanswered. Besides Schroeder's work, research into similar campaigns to stop malicious technologies such as the nuclear disarmament campaign (ICAN) and the treaty on the ban of landmines can be found. In his discussion about the successful ban of landmines, Hubert (2000) provides an overview over "The ingredients of success" for a campaign to succeed, elaborating that credibility, experience, and the dynamic between multiple actors are important for a successful campaign. Once again however, Hubert too fails to point out the specific importance of media discourses in campaigning. Moreo-

ver, studies of the military REACH team at the University of Minnesota (2015) are in line with Hubert (2000) as they studied various views on how to promote and achieve nuclear disarmament (Bloomfield, et. al, 2015). They add that the importance media in shaping the publics' perception, as well as, involving relevant and credible actors are vital in achieving the goal of nuclear disarmament. Furthermore, they pick up on Bruce's and Tiger's (2010) finding regarding the importance of knowledge creation in creating a successful campaign and surrounding media discourse. In addition, Heath and Heath (2007) elaborate on the importance of creating a sticky message and attribute this factor to achieving goals set out by campaigns. Consequently, these important aspects of knowledge creation and messaging, identified by various authors, are particularly relevant to this research. However, the mentioned authors do not emphasize the importance of media discourses enough and focus mainly on a more general approach regarding campaign organization.

Media discourses themselves have been studied quite extensively by prominent authors such as Van Dijk, O'Keeffe, Fairclough and Jäger, but research into how a specific media discourse is organized in the context of a public awareness campaign is just as scarce. Instead, typical prominent media discourse analysis revolves around critical discourse analysis on media representation in wars (Mohammedwesam, 2017), political crisis, such as the refugee crisis (Fotopoulos & Kaimaklioti, 2016) or economic crisis, such as the Euro crisis (Galpin, 2017). Research into a campaign's discourse focuses mostly on political campaigns such as presidential campaigns and general election campaigns (Benoit, 2003) as well as advertising campaigns, and even more commonly, health awareness campaigns (Gilbert, 2008 and Kariithi, 2010). However, discourses surrounding campaigns against malicious technologies, such as the campaign to stop landmines, the international campaign to abolish nuclear weapons (ICAN) or the campaign to stop chemical weapons, have been researched to some extent by authors such as Bruce and Tiger (2010). This thesis provides a more detailed insight into the specifics of media discourse organization surrounding a campaign against malicious technologies. Due to the extensive influence of media discourses on society in form of newspapers, newspapers are at the centre of this research (Randolph and Viswanath, 2004).

One can see that the previous findings concerned with both, public awareness campaigns and media discourses, lack specific insights regarding the dynamic between the two fields and seem to neglect campaigns against malicious technologies as a socially relevant subject. Furthermore, the importance of media and in particular, newspaper, has been neglected, which is why a look into the specifics on how the Campaign to Stop Killer Robots is organized in its surrounding newspaper discourse is an important and relevant contribution to this field. This contribution of combining the two fields of research into public awareness campaigns and into media discourses, is not only scientifically relevant due to the explored lack of research into the topic at hand, but further socially relevant due the constant possible threat of new technologies and equally important campaigns against malicious technologies. However, the focus on media coverage is just one of many ingredients for a PAC to succeed; Thus, this thesis is not concerned with providing a concrete guide on how to organize a campaign, but provides practical suggestions regarding newspaper discourse organization based on factual discus-

sions of theories and a subsequent discourse analysis. To achieve this aim the following research question has been formulated:

How is the newspaper discourse from 2012 to 2018 around the Campaign to Stop Killer Robots organized?

This question has been formulated on the basis of the prior discussion regarding the lack of research concerned with the topic of the dynamic between public awareness campaigns and their media discourses. In 2012 and especially in 2013 with the launch of the campaign, the Campaign to Stop Killer Robots has become an organized movement. The campaign can be considered to be a critical and most recent case in campaigns to stop malicious technologies. By answering this research question, new insights into how campaigns to stop malicious technologies are organized in their media discourses and how public awareness campaigns can use written media for their benefits, are revealed.

Finally, to answer the research question, this thesis is employing the inductive research method of discourse analysis, with the help of coding schemes developed on the basis of discussion on existing theory and concepts regarding public awareness campaigns, media discourses and campaigns against malicious technologies. The media discourse analysis employs an analysis of 111 selected articles from 17 publishers. The articles have been carefully chosen from the data collection service [Lexis-Nexis.com](https://www.lexisnexis.com). A systematic analysis of the articles with the data analysis program atlas.ti and a factual discussion on observations that stick out, are particularly ambiguous, paradoxical or surprising, revealed key issues that the Campaign to Stop Killer Robots is showing in its surrounding media discourse. These key issues were subject to further discussion and revealed key insights and interpretations that provides practical implications for a campaign against a malicious technology. Throughout this paper "killer robots" will be referred to as "lethal autonomous weapon systems (LAWS)" and vice versa for simplicity's sake and due to a lack of concrete and universal definition of either term (UN reopens talks on defining 'killer robots', 2018). Furthermore the usage of the term "media discourse" encompasses the term "newspaper discourse" and should be understood as such.

2. Theory

2.1. Introduction

To answer the research question at hand several theories are being considered. First and foremost, this chapter is concerned with public awareness campaign theories, as they provide insights into how conventional PAC are organized and reveal key factors, such as knowledge creation and messaging, in creating a successful campaign and surrounding media discourse. Second, the role of discourses in media and in particular, the importance of newspaper, is being discussed to point to the relevance of consulting media discourses in this research. Last but not least, previous research into campaigns against malicious technologies is being consulted, to reveal any specific deviances that these campaigns show in regard to their organization, as well as their newspaper discourse organization. Discussing theories, relevant to these fields of research, proved to be vital to conduct the research at hand, due to their inherent relevance to the topic.

2.2. Theories on campaigning

Since campaigning is at the centre of the research this theory chapter opens with a brief conceptualization and elaboration on the question of how public awareness campaigns are organized. For that a definition of public communication campaigns is required first and foremost:

"Public communication campaigns are defined as purposive attempts to inform or influence behaviors in large audiences within a specified time period using an organized set of communication activities featuring an array of mediated messages in multiple channels generally to produce noncommercial benefits to individuals and society." (Atkin and Rice, 2013, p.3)

Considering this definition one can say that campaigns against malicious technologies and thus, the Campaign to Stop Killer Robots can, generally speaking, be considered a public communication campaign as it fulfills the criteria of such. Another definition for a campaign such as the campaign discussed in this research can be found in the works of The Military REACH Team (Bloomfield, et al., 2015). The authors provide the definition of a PAC as a comprehensive effort that includes multiple components such as; messaging, grassroots outreach, media relations, government affairs, etc., to help reach a specific goal (Bloomfield, et al., 2015). In the context of this thesis the campaign to stop malicious technology is then focused around messaging through media relations to reach the goal of raising awareness in the public and ultimately stopping the development of "killer robots." Furthermore it is important to address that two types of PACs have been identified and that this thesis is solely concerned with the first type. The individual behavior change campaigns, which focus around influencing a specific behavior of individuals and in contrast, the public will campaigns which aim to promote policy change (Coffman, 2002).

An important aspect to consider when an NGO decides to employ a public awareness campaign is the way what knowledge should be developed and what kind of knowledge development is necessary to give an incentive for the desired behavior change in question. This is due to the idea that, if people know more about an issue, they are more likely to change their behavior (Bloomfield et al., 2015). Leading researchers in this topic distinguish between three type of knowledge forms that can be developed and later conveyed by a PAC in order to succeed (Bruce and Tiger, 2010). First of, (1) impact knowledge which typically includes initial information presentation and facts and statistics about a topic with the goal to raise awareness that a problem even exists. Second, (2) procedural knowledge is being used to call for action through advancing the message by engaging the target audience. Calls for action include specific steps to take and how to participate in campaigns. In the context of the campaign to stop "killer robots" this call for action can be presented in the form of calling for pressure on policy makers of the target audiences or showing ways how to contribute to the campaign. Last but not least, (3) normative knowledge is knowledge centered on groups rather than individuals. By targeting groups and showing real, potentially negative, consequences and impacts of the issue being addressed, audiences are more encouraged to take action. Normative knowledge includes raising information about existing threats as well as potential threats towards a group (Bruce & Tiger, 2010). These three types of knowledge can be seen in the Campaign to Stop Killer Robots and are discussed in the analysis of the chosen data.

Besides this initial theory on knowledge development and its relation to PACs, no specific theory has been developed regarding public communication campaigns and media utilization that fits into the context of this research. However, there are some theoretical perspectives that are frequently being referred to, to guide campaign strategies (Atkin & Rice, 2012). Since PACs are quite similar to commercial advertising campaigns respective theories can be applicable to PACs as well. Most commonly and most fittingly the so called Communication-Persuasion Matrix is applied (McGuire, 2013). The Communication-Persuasion Matrix, discussed thoroughly by McGuire (2013), suggests that persuasion is the result of going through several steps before being persuaded. Through the input, which includes the factors source, message, channel, and audience the persuasion attempt can be revealed. The output on the other hand shows how effective this persuasion attempt has been. This thesis however is concerned mostly with the input; the persuasion method. Considering that previously discussed research is very much in line with these findings, regarding the importance of source (knowledge), messaging and channel (newspapers). A look into the messaging as well as the source (knowledge) factor of this persuasion attempt is especially interesting to since researchers agree that the campaign design regarding messaging and knowledge are two important factors when it comes to organizing a PAC (Atkin & Rice, 2013; Bloomfield et al., 2015).

Therefore, it is vital for organizers of a campaign to consider what knowledge to create, as it helps organizers to tailor the PAC to appeal to the audiences views and opinions. This usually also helps determine the medium the message is going to be delivered through. It is particularly important considering that messaging can be considered to be the campaign designs most important component.

Once the knowledge has been developed, organizers have to think about how they want to craft their message. According to Heath & Heath (2007) crafting a "sticky" message has six components. They developed the SUCCES framework consisting of: (1) simplicity, which involves identifying the most central core elements of a campaign and highlighting them, (2) unexpectedness, searching for parts of the message that do not sound like common sense but are surprising since presenting common sense is less likely to stick, (3) concreteness, meaning that abstract language is not enough and a concrete image is needed, (4) credibility, referring to citing outside experts making the audience believe in the message, (5) emotions, by trying to involve people in your story and last but not least (6) stories which puts emphasis on the points above (Bloomfield et. al, 2015 and Heath & Heath, 2007). Consequently, simple and clear messaging with credible sources and easily recognizable slogans are key in creating a successful campaign. Since it is apparent that media is at the centre as a medium of providing the respective message to the masses, it is further important to explore, how campaigns are represented in media and the role of their respective discourses.

2.3. The role of discourse, knowledge creation and media campaigns

Understanding and discussing the role of media discourses in media campaigns further reveals the reasoning to focus on the campaigns surrounding newspaper discourse in this research. To understand the concept of media discourses and how they are organized however, one must look back on the foundations of discourse analysis. When talking about this topic, researchers all around refer to Michel Foucault, a French philosopher and sociologist, who was convinced that the world we are living in is founded on the idea that knowledge about our world, in form of ideas, is created by certain groups and actors which are then taken as truth and are considered to be normal. In other words, it was the aim of his research to analyze "regimes of truth" (Potter, 2005). Discourse analysis based on Foucault's theories are focused on the question of what is valid knowledge at a certain place and a certain time, how this knowledge arises and how it is passed on, what functions it has for constituting subjects, and what the consequences are for the shaping and developing of society (Wodak and Meyer, 2009). Furthermore according to Wodak and Meyer (2009) knowledge in this sense includes all contents that make up "humanness." It is derived from the discursive surroundings into which humans are born and raised. Discourse analysis is thus concerned with identifying these knowledge and how they are connected to power. Another prominent author Van Dijk, building up on Foucault's work, writes about media discourses specifically. He suggests that discourses are a communicative event in a social situation that involves actors that play different roles and determine actions (Van Dijk cited in Bardici, 2012 p.26). Furthermore he writes that:

"the point of media discourse analysis is describing events with syntactic variations that are a function of the underlying involvement of actors" (Van Dijk, 2008, p.359)

In the context of the research at hand the underlying involvement of actors can be understood as the way NGOs, supporting the Campaign to Stop Killer Robots, convey their messages with syntactic variations.

As the reader can see, knowledge creation plays an important role in media campaigning since, as already pointed out by various authors and elaborated earlier, knowledge creation and identification are vital to create a messaging design. It might be self evident that the bigger the audience or reach of a newspaper the more influence the newspaper has, since as previously shown and analyzed thoroughly by Van Dijk and others media can influence the publics' perception about a certain topic and thus influence politics in that regard (Druckman, 2005; Wodak and Meyer, 2009). It is nonetheless necessary to illustrate this point even more after having elaborate how important media discourses and their organization are. Why is exposure in media and in particular newspapers important and why is the quality and quantity of circulation of the newspaper that picks up on a campaign or rather, is used by a campaign, just as important as the knowledge creation itself?

In his work on media and how newspaper and television news cover campaigns influence voters Druckman (2005) writes on the importance of newspaper when it comes to campaigning. He elaborates on whether the medium that a campaign uses matters and comes to the conclusion that though there are some significant differences between television and written media, the quantity and quality of the coverage in newspapers as well as the ability of the readers to process information with the help of newspapers are important factors in receiving and understanding the information about a certain topic. He further states that because newspapers have more means to provide a larger quantity of coverage of a certain topic than television has, meaning also that readers can consume the information at their own pace, newspapers can impart more information to their readers than television to their viewers (Druckman, 2005). Having briefly explained that newspapers are still highly relevant today, whether it be digital form or in paper form, the question is how important the quality and number of circulation of the newspapers picking up on a campaign is. For this a look at arguably one of the most prominent type of campaigns in our day and age is necessary; campaigns for public health awareness. Randolph and Viswanath (2004) discuss lessons learned from public health mass media campaigns in their work and conceptualize mass media campaigns as exercises in information/knowledge control. They elaborate that utilizing mass media, like big newspapers, is used to influence the trend in the amount of information available regarding the respective topic (Randolph and Viswanath, 2004). Furthermore they point out that this influence can take two shapes. First, the attempt to simply increase the amount of information or knowledge regarding a topic by increasing the number of newspaper stories, advertisements and so. Second, redefining the respective issue as a real danger for the public safety to make the issue salient and more importantly attract the attention of the target audience to provide them with a potential solution (Randolph and Viswanath, 2004). This shows that both quantity and quality of the information delivered is important. Last but not least they reveal that:

"successful manipulation of the information environment by campaign sponsors to ensure sufficient exposure of the audience to the campaigns messages and themes (influencing he information

environment and maximizing exposure)” (Randolph and Viswanath, 2004, p.421)

is an important condition for a campaign to succeed.

In short one can say that these findings are in line with other findings discussed previously and shows once again that knowledge creation as well as knowledge imparting are highly important factors for a successful campaign. It further shows that the number of articles and the size of the newspaper publishing them are just as important as the knowledge that is being conveyed through the medium of newspapers. However since this thesis is concerned with media discourse organization surrounding a campaign against malicious technology as seen in the case of the Campaign to Stop Killer Robots it is necessary to elaborate on specifics of campaigns against malicious technologies to reveal whether they show certain features and require special ingredients, different to that of public health awareness campaigns or political campaigns, to succeed.

2.4. Media campaigns against malicious technologies

Previous research into campaigns to stop malicious technologies like the campaign to stop landmines and the campaign to stop nuclear weapons (ICAN) have touched only slightly on the role of media and even less on the role of written media in the organization of these campaigns. However it is still relevant to explore existing research in this field as it can give more insight into the characteristics of a public awareness campaign concerning malicious technologies. As one can see in Hubert’s (2000) research on the landmine ban, a campaign against a malicious technology inherits some traits that are present in conventional campaigns and play a more important role in campaigns such as the Campaign to Stop Killer Robots.

Hubert points out key lessons that lead to the success of the campaign. First and foremost he mentions credibility and that having practical experience in the field results in more credibility and leads to greater chance of success (Hubert, 2000). Linking the land mine ban with the Campaign to Stop Killer Robots shows that credibility of the organizations behind this campaign stems from a vast accumulation of already existing experience exactly due to the background of multiple actors in the campaign to stop landmines for example Mary Wareham and the fact that multiple founders of the Campaign to Stop Killer Robots have been active in the campaign against landmines already; Hence exploring whether media picked up on this feature of the campaign is interesting to this research. He further elaborates that coordination, meaning the unity of action, pressure and persuasion of readers, the division of labor by building from below as well as national states as a partner were vital factors in achieving the goal of a landmine ban. Furthermore mentioning that through innovative campaign techniques and effective use of media, a review conference of the international campaign to ban landmines raised a lot awareness in the public. He explicitly refers to an article in the *International Herald Tribune* showing once again how important media and written media is for a campaign to succeed (Hubert, p. 34, 2000). Considering this, conferences and the influence on media, leading to pres-

sure on political stakeholders due to the response and increased awareness of readers is another key factor in organizing a public awareness campaign against a malicious technology.

Another example for a campaign against a malicious technology can be found in the struggle against nuclear weapons. The international campaign to abolish nuclear weapons (ICAN) is an ongoing campaign that aims to achieve a complete ban of nuclear weapons in the world (ICAN, 2018). Bolton and Minor (2016) are concerned with the ICANs operationalization of critical international relation theories in their research but also go into detail how the campaign is utilizing mass and new media to achieve their goal. They explicitly mention that building positive affect among the activists and diplomats that are already supporting the campaign, aims to appeal to courage of further potential supporters and contributors (Bolton & Minor, 2016). By highlighting the support of celebrities and featuring stylish infographics and YouTube videos they further aim to appeal to the masses and persuade people to join their cause. Furthermore, in their so called campaigners kit they explicitly mention to celebrate any success and any small victories with the reasoning that this will excite the masses, be almost infectious and keep people engaged (Hunt, 2012). Another strategy they employ is using disturbing images of nuclear weapon victims and showing the destructive power of it (Bolton & Minor, 2016). They are aiming to appeal to emotions such as guilt, shame, outrage and compassion. These themes have been identified in the previous section of this chapter already to some extent, confirming that emotions and stories are important in creating an engaging message as pointed out by Heath (2007). However other than the Campaign to Stop Killer Robots the ICAN is able to provide a campaigners kit that provides specific instructions on how to proceed when contributing to the campaign and what there is to do for the campaign to succeed (ICAN, 2018). Such a kit is undoubtedly useful when aiming to gain more followers and contributors. Furthermore this campaign has already achieved some success and can built its credibility on that. They specifically use this success to their advantage and it will be interesting to see if the Campaign to Stop Killer Robots is employing this strategy as well.

It becomes apparent that public awareness campaigns in general show some vital features for a successful campaign that are only emphasized in campaigns to stop killer robots. Emphasis is on stories and emotions, as well as showing credibility and experience. These however are factors to create a stick and engaging message and thus, do not deviate too much from the theories surrounding PAC.

2.5. Conclusion

Concluding one can say that the theories and concepts presented, reveal insights into the relevant topics at hand and are ultimately helpful in designing a coding scheme that can adequately analyze the chosen articles. It became apparent when exploring theories regarding public awareness campaigns that knowledge creation, management, and messaging are vital parts for creating a successful campaign. Through this discussion and conceptualization of media discourses one can see that discourses in media play a vital role in creating any campaign. Media discourses shape how humans perceive certain things; thus, allowing campaigns to effectively use media to convey and portray their messages to the public if used correctly. Last but not least, the section on previous campaigns against malicious technologies reveals the specifics of a successful campaign against malicious technologies and further shows the connections between media, messaging and campaigning, emphasizing the utilization of knowledge creation and messaging. These two fields of campaign theory and media discourse, respectively, have been researched thoroughly, but their dynamic has definitely been under researched. This allows for only a limited discussion of the combination these two fields making the previous chapter a conceptualization chapter rather than a full on discussion about disagreements between leading researchers. However, the respective topics that are relevant to this research have been studied extensively. This discussion shows that findings regarding campaign organization and media discourses are in line with each other. All in all, by having elaborated on theories on campaigning, the role of media discourse and media discourse analysis and last but not least theories concerning previous campaigns against malicious technologies, creating new insights into the dynamic of media discourse organization and public awareness campaigns has become possible.

3. Method

3.1. Introduction

To adequately apply the discussed theories a concrete research method was needed. Accordingly, this chapter provides a coherent description of the method, with which the research question was answered. By going into detail about the selected case and the reasoning behind selecting said case, this research is being made as transparent as possible. This transparency, is emphasized by a thorough discussion of the method of data collection used in this research. 111 articles from 17 sources have been carefully chosen and selected as subject for the analysis. The process of selection is well documented in the data collection section. In addition to providing transparency, the section on method of data analysis illustrates the reproducibility of this research, by presenting and discussing two coding schemes that have been developed on the basis of the discussed theories. A detailed description of each code ensures even more transparency. Last but not least, a description on the method of data analysis reveals how the developed coding schemes are being used to conduct a newspaper discourse analysis of the chosen articles.

3.2. Case Selection

The selected case is the critical case of a public awareness campaign, the Campaign to Stop Killer Robots, and thus, the newspaper discourse around the campaign. The focus of this research was on the written media discourse in the form of newspaper articles, as that provided a better overview over the topic at hand and can be researched in a more structured manner than for example by exploring visual media. Besides, newspapers are considered to be highly influential factors in media discourses (Randolph and Viswanath, 2004). Research with newspapers is more easily reproducible due to easy access and provides a coherent overview over the discussion in textual media.

This specific campaign against a malicious technology has been chosen as it is the most recent and prominent case in a series of campaigns against malicious technologies, making it a critical case in the context of PACs. Lethal autonomous weapon systems are not a thing of the future anymore and are already certainly possible making the ongoing Campaign to Stop Killer Robots an important actor in battling the potential and existing threats these new weapon systems pose (Schroeder, 2016). There are multiple voices raising concerns or support regarding this technology. On the one hand, we find the proponents of developing lethal autonomous weapon systems: governments, militaries, weapon manufacturers and developers. They argue that the technology is inevitable and that one country is bound to develop such weapon system sooner or later, which is why it is important to obtain it first (Schroeder, 2016). Furthermore they argue that by using robots to fight, human lives will be saved and only material damage will be the consequence of war. In the other camp we find the opponents of killer robots, such as the Campaign to Stop Killer Robots, as well as governments convinced by the threat of killer robots. The degree of opposition varies here, because while some call for a sensible regulation to also reap the benefits of this new technology, others call for a complete ban of the development

of artificial technology and killer robots. The Campaign to Stop Killer Robots can be considered part of the latter. They call for a thorough discussion on the ethical and legal problems that are connected to robots that can kill without human interference and demand a complete stop of development of any technology that can result in fully autonomous weapon systems, including artificial intelligence technology (Campaign to Stop Killer Robots, 2018)

The campaign has been founded by various non-governmental organizations at a meeting in New York on the 19th of October 2012. Founded by NGOs such as the Human Rights Watch and Article 36, the campaign is being coordinated by Mary Wareham, an activist and the Advocacy Director of the Arms Division at the HRW who contributed to the successful ban on landmines. On the 22nd of April 2013 the campaign launched in London with an NGO conference and Parliamentary event. After this initial launch the campaign held various conferences on its own and was active in international conventions concerned with the regulation of weapons such as the Convention on Conventional Weapons or the Munich Security Conference. Besides that, the campaign has convinced various actors and experts to join their cause throughout the years and has gained more and more traction in media. As of 2018, 22 countries have unequivocally called for a ban of killer robots. In summary, the Campaign to Stop Killer Robots is pushing the narrative of a negative depiction of lethal autonomous weapon systems with the goal to ultimately ban all developments that can potentially result in the creation of such machines by signing an international treaty. The campaign is mainly active in western English speaking countries and has been most active from 2012 and is still ongoing (June 2018). This time span has thus been selected as the time span of data collection.

3.3. Method of data collection

111 newspaper articles from 17 publishers have been selected to assure diverse pool of data for analysis. By entering the term "killer robots" into the search function of the database service "Lexis-Nexis" and choosing the function of only including newspaper and web-based articles, 900 articles were presented. To ensure that only relevant articles were included in the research and to create a more workable pool of data, several steps had to be taken. First, the option to exclude duplicates had been chosen. Second, the option of excluding articles involving the keywords "Television," "TV" and "Cinema" had been chosen. This made sure that no articles concerned with entertainment or solely science fiction were in the selected pool of data. Third, the function to select articles from North America, Europe and Oceania had been selected. This decision made sure that only English based articles were analyzed. Analyzing articles written in different languages would be another interesting research to point out differences in cultures regarding the issue of killer robots, though is not subject of this research. Fourth, to narrow the results even more, only newspapers that have published two or more articles regarding the topic had been selected. Lastly, the remaining results were picked by hand, based on their relevance to the research.

The relevance was subject to the researcher's own discretion and has been decided based on the title of the article and in unclear cases based on a description of the article. Every article that has been

selected, has been selected with a most neutral mindset and based solely on objective relevance to the topic at hand to the best extent possible. This method of choosing articles individually and based on discretion is prone to certain biases and runs danger of being not easily reproducible. However, since the topic is very specific and because the previous steps of the data collection have been made clear, a reproduction of this research method is possible. It might, however, result in slight deviations depending on the researcher's judgement and data collection service. Thus, a researcher wanting to recreate this method has to judge which articles to pick in a most neutral and objective manner. When going through the final results provided by [Lexis-Nexis.com](https://www.lexis-nexis.com) or another data collection service it becomes clear which articles are relevant and which are not. As for other data collection services this method of data collection might not work exactly the same way but the general method of this kind of data collection is clear and straight forward. Based on this method, articles from the years of 2012 until 2018 were chosen. This timeframe is important since, as already mentioned, the Campaign to Stop Killer Robots has been created in the year 2012 and gained further media attention in the following year. In total 111 articles from 16 (+1) publishers were selected (see Appendix 1). The newspapers have not been chosen on any other fact, other than having published two or more articles regarding killer robots, as anything else could compromise the newspaper circulation size factor in the messing coding scheme.

3.4. Method of data analysis

The research in question was conducted by using two coding schemes based on theory on public awareness campaigns and previous campaigns against malicious technologies by various authors. For better comprehension and to make the coding schemes more accessible, this section is separated into two parts. It is divided into the **"knowledge part,"** which includes the factors of "facts," "statistics," "calls for action," "contribution," "existing threats" and "potential threats." And the part of **"messaging,"** which includes the factors of "simplicity," "unexpectedness," "credibility," "concreteness," "emotions," "stories" as well as "newspaper circulation size" and "number of articles of newspaper." These factors are derived from theories set out by mainly Heath & Heath (2007), Bloomfield et al.(2015) and Bruce & Tiger (2010). Though some codes can be applied for multiple factors as is the case for "facts," "existing threats" and "potential threats," they are coded individually since coding every keyword into all factors might have resulted in unnecessary overrepresentation later on. The main purpose of this coding scheme is to provide an overview with subsequent explanation about the factors that can be found in the chosen articles. By using the data analysis program Atlas.ti, to look for suggested keywords in the chosen articles and by entering respective keywords into the auto-coding function of the program, the relevant keywords connected to knowledge creation and messaging respectively, were identified and revealed. The keywords for the factors have been chosen based on probable relevance and subjective judgement depending on the context of the respective factor in the previously discussed theory. Finally, peculiar and extraordinary observations were analyzed with a discourse analysis revealing paradoxical, ambiguous and surprising findings.

3.4.1. Knowledge coding scheme:

Knowledge	Content/Codes	Suggested choice of words and phrases
Impact knowledge	Facts	"real/reality" "exist/existing" "semi"
Impact knowledge	Statistic	"statistics" "data" "numbers" "figures" "evidence"
Procedural knowledge	Calls for action	"help" "donate" "fight" "participate" "donate"
Procedural knowledge	Contribution	"help" "donate" "contribute"
Normative Knowledge	Existing threats	"threat" "danger" "arms race" "terror"
Normative knowledge	Potential threats	"future threat" "potentially" "warn"

To explore whether the campaign has created knowledge in its own right and whether it could mediate these knowledge, the articles were being checked on the three types of knowledge identified by Bruce and Tiger (2010). This coding scheme is derived from the theory set out by Bruce & Tiger (2010), Atkin & Rice (2013) and Bloomfield et al. (2015). One might consider this to be a part of messaging of a public awareness campaign, however the knowledge creation in this part is focused more on neutral and objective reporting of information in the sense that the knowledge was analyzed with help of a factual discussion of key issues, whereas the messaging part was analyzed on different criteria. This coding scheme is merely exploring what knowledge the Campaign to Stop Killer Robots has provided and if the selected newspapers picked up on it in the chosen articles.

Impact knowledge, consisting of **"facts"** and **"statistics"** has been explored with keywords such as "real/reality," "exist/existing" as well as "semi," referring to the existence of semi-autonomous weapon systems. For the factor of "statistics," keywords like "data," "statistics," "evidence," and "figures," "numbers" were being explored. This factor is straight forward, considering that any mentioning of statistics or facts would have been labeled as such in the articles. For the factor of "facts" this coding scheme is only concerned with the question to what extent the researched articles consider killer robots to exist, if they might exist one day or if they even will be possible. The extent was determined by the number of articles considering killer robots to be already possible and the number of articles that claim they are not possible and may never will be. Though the keywords helped in finding the relevant articles, judgement had to be made over the relevance of the keywords and the context they were found in.

As for procedural knowledge the factor of **"calls for action"** has been explored by looking for the keywords "help," "contribute," "fight," "donate" and "participate," to determine whether the articles picked up on the already existing calls for action and any mechanisms in place to fight the rise of killer robots. For the factor of **"contribution"** the article were explored on whether they explicitly

mention contributions by prominent actors that have already happened and other ways of contributing to the campaign.

The existence of normative knowledge in form of **”existing threats”** and **”potential threats”** has been determined by searching for the keywords **”threat,” ”danger,” ”arms race”** and **”terror.”** Similar to the factors regarding impact knowledge, the factor of normative knowledge has been determined based on how many articles raise the point on existing threats or potential threats respectively. Besides the more general terms of **”threat”** and **”danger”** the threat of an arms race and of abuse of LAWS by terror organization are seemingly the most pressing issues which is why these threats received special attention in the data analysis (Schroeder, 2016). **”Potential threats”** present in the selected articles is being identified by checking for the keywords **”future threats,” ”potential threats”** and **”warn”** as well as by looking for any other mentioning of threats.

This coding scheme has proved to be reliable and easily applicable to the 111 chosen articles. However, it quickly became apparent that some codes were more useful in determining the different type of knowledge than others. **”Calls for action”** and **”Contribution”** showed highly similar results, though could still be differentiated to some extent. The **”facts”** code was more difficult to apply than anticipated and required more discretion and individual judgement on the context the keywords were found in but ultimately revealed paradoxical observations.

3.4.2. Messaging coding scheme:

Messaging/Codes	Suggested choice of phrasing/keywords
Simplicity	
Unexpectedness	”unexpectedly” ”surprisingly” ”sudden”
Credibility	”experts” ”Elon Musk” ”Bill Gates” ”Stephen Hawking” ”Mary Wareham”
Concreteness	”killer robots are dangerous... here’s why”
Emotions	”sad” ”fear/afraid” ”desperate” ”serious” ”worry”
Stories	”killer robots” ”lethal” ”autonomous” ”Terminator” ”iRobot” ”fiction” ”slaughterbots”
Success	”Success” ”Achievement” ”Progress” ”CCW”
Newspaper circulation size	
Number of articles per newspaper	

Messaging is a vital part in campaign organization, thus included are the six components that create a **”sticky message”** set out by Heath and Heath (2007) and in addition, the factor how many of the selected articles have been published by which newspaper, since, as pointed out by Randolph and Viswanath (2004), the quantity as well as the quality of the information messaging are important factors in creating a successful campaign. Having many articles published by a big publisher with many

daily circulation is vital to a successful campaign. Moreover, the factor of success has been included due to the importance weighted on it by Bolton and Minor (2016) for creating a successful campaign.

The factor of **simplicity**, which involves identifying the most central core elements of a campaign and highlighting, has not been coded in the same manner as the following factors, since it is nearly impossible to determine a few keywords to show simplicity. Instead, arguments are provided to show whether articles managed to point out relevant key issues and concepts (Heath & Heath, 2007). **Unexpectedness** is relevant due to its role in creating a sticky message and has been coded by checking for the usage of words such as "unexpectedly" or "surprisingly," to see whether the campaign uses this tool of campaigning effectively. The factor of **credibility** has been determined by checking for keywords such as "experts" and in addition references to prominent figures like "Bill Gates," "Elon Musk," "Stephen Hawking" and "Mary Wareham" who received special attention due to her involvement in the successful campaign against landmines. This factor is once again important to create a sticky message as pointed out by Heath (2007) but also given particular relevance by Hubert (2000). The factor of **concreteness** similar to the factor of simplicity has been judged based on argumentation regarding how direct and concrete the articles were in pointing out the issue at hand. For the factor of **emotions** the articles have been scanned for extraordinary use of adjectives and words such as "sad" "fear/afraid," "desperate," "serious," "worry." Using emotions is yet another factor in creating a "sticky" message and is closely tied together with the factor of stories, which is why particular emphasis on the context that involve stories and emotions has been considered. To check for the factor of **stories** the keywords of "killer robots," "lethal," "autonomous," "Terminator," "iRobot," "fiction" have been employed. The code of "killer robots" has been chosen well knowing that the results might have been biased due to the method of data collection that involved entering the term itself into a search function. However the aim of this factors to explore how often articles refer to "killer robots" in comparison to the more neutral term of "lethal autonomous weapon systems." Labeling these weapon systems as "killer robots" which gives them a bad connotation already is creating a story in itself. Furthermore references to science fiction and pop culture to appeal to the masses that might know such weapon systems from movies is also a way of using stories to create a stick message. The factor of **success** has been included due to its importance described by Bolton and Minor (2016), as they point out that presenting success results in masses being excited and convinced of the campaigns goal and purpose. The factor has been explored by searching for the keywords "success," "achievement," "progress" as well as "CCW." The Convention on Conventional Weapons (CCW) has been included as a keywords due to its importance to the campaign. During this convention the campaign has seen great successes in convincing member states and participants of the danger of killer robots. This fact made it relevant and important to explore whether the articles picked up on it.

3.5. Conclusion

This chapter provides an overview on how the research question was aimed to be answered. After having developed a research question based on a discussion regarding the lack of research into the topic at hand, a method was needed to answer the research question accordingly. First, a case had to be selected to answer the research question. Considering that the premise of this research, being the media discourse organization around the Campaign to Stop Killer Robots, has been clear from the beginning, selecting a case was not problematic. Nonetheless, a justification for the case selection has been provided. The campaign is a critical and the most recent case in a series of campaigns against malicious technologies, making it a perfect candidate for the research at hand. Second, decision about data collection had to be made. Therefore, the choice of focusing on newspapers articles has been made clear. Newspapers show great importance in influencing the publics' opinion and can be analyzed more easily than visual media, considering the limitations of this thesis. Furthermore the method of data collection, which involved multiple decisions regarding narrowing down the to be analyzed articles and picking relevant articles, has been described thoroughly. Though, this method of data collection is subject to individual discretion and requires judgement by the researcher, it is, nonetheless, reproducible. Third, two coding schemes have been developed on the basis of the theories and concepts set out before. With factual discussions of certain factors that contribute to creating a successful campaign and are connected to a surrounding media discourse, the relevant factors derived from the theories have been determined. Fourth, by conducting a discourse analysis after applying the coding schemes to the selected articles, key issues that the campaign shows in its surrounding media discourse were identified. Fifth, these key issues were being discussed thoroughly, resulting in key insights and practical implications for the Campaign to Stop Killer Robots.

Last but not least, some issues that this method showed have to be addresses. It is a known problem of discourse analysis that is always subject to subjective interpretation since there are no hard data resulting through such an analysis (Heiman, 2001). Consequently, results might vary but as the reader will see in the next chapter, there is overwhelming evidence for some key issues that have been identified. A recreation of this research will most likely not vary substantially to the extent that it would devalue this analysis. Furthermore, some codes proved to be more useful and applicable than other codes. In the knowledge part the factor of "facts" required the described subjective interpretation since the context that the keyword was found in had to be judged. The messaging part showed more difficulties in regard to the factors of simplicity and concreteness. These are two rather abstract concepts compared to the other factors and required further subjective interpretation and ultimately did not prove to be overall relevant to key issues that have been identified. The same is true for the factor of emotions. Emotions are difficult to analyze scientifically in the context of this research and considering that the topic at hand does not necessarily involve emotions, a search for this factor proved fruitless. The combination with the factor of stories countered this weakness.

4. Analysis

4.1. Introduction

With the use of the developed coding scheme an analysis of the chosen articles revealed a number of insights into how the Campaign to Stop Killer Robots is organized in its newspaper discourse. However, one should be wary that the influence of a campaign on mass media has its limits which is why it is questionable whether the causes of the issues that will be presented in the following, can be found in the campaigns organization itself or in the media discourse and how the selected newspapers chose to address the topic of killer robots. To provide coherency and be in line with previous chapters, this data analysis section is divided into two main parts, similar to the division of the method chapter into "knowledge" and "messaging". Accordingly, key issues seen in the organization of knowledge and key issues identified in the messaging part of the campaign make up this analysis section. For each section, the results as well as most striking features are being presented and reveal key insights that the analysis has brought. These key insights are based on the theories regarding knowledge creation and messaging as well as reasoning and further discussion of related literature. Not only present factors of knowledge creation and messaging in the campaign were able to be identified, but further and more important, factors that the Campaign to Stop Killer Robots are lacking were identified, leading to unexpected, ambitious and even paradoxical key issues that the Campaign to Stop Killer Robots inherits. As for the knowledge creation, two key issues of ambiguous impact knowledge as well as ambiguous and paradoxical normative knowledge have been identified. In the messaging part, the campaign shows problems in its ability to convey its existing successes and shows underrepresentation in big newspaper publishers. The applied coding schemes and respective articles can be found in the data appendix as an .atlpac file.

4.2. Ambiguous, paradoxical, and blurry impact and normative knowledge

In line with Bruce & Tiger (2010) the Campaign to Stop Killer Robots has created not only one form of the three knowledge but shows signs of all three. Most prominently the impact knowledge as well as the normative knowledge is being represented in the articles. As for the impact knowledge (facts and statistics) it became apparent after searching for the keywords "exist" and "real" that there is no clear vision of whether killer robots exist already, do not exist yet, only exist in some form or might even never exist. The analyzed articles are coming to different conclusion to the extent of the existence but the majority of authors argued that killer robots do not exist yet. This notion of fully autonomous lethal weapon systems not existing yet can also be found in the literature regarding the thematic of LAWS (Schroeder, 2016). Considering that these findings are in line with most scholars opinions, one can say that the campaign managed to shape the discourse in a way that made clear that killer robots will definitely exist in the future. However, when it comes to the factor of statistics, no mentioning of specific data or statistics that are relevant to the issue of killer robots were able to be

identified. The only mentioning found is concerned with the spending on the development of AI in the world (Article 6, p.21, The Guardian).

Procedural knowledge (calls for action and contribution) showed similar results. "Calls for action" by some newspapers are targeting mainly governments and civil societies with their call to fight the development of killer robots can be seen, most notably Australia and Canada (Article 21, The Guardian). One recurring theme is that prominent figures such as Bill Gates and Elon Musk are frequently mentioned having contributed to the campaign in form of large sums of money. Other than that, the articles mention that these actors have already contributed and petitions signed by a large number of experts (Article 8, The Times). However, no concrete mentioning of any method of individual participation by the readers in form of donations or any other help can be found. Paradoxically though on the campaign's own website, stopkillerrobots.org, one can immediately see two big icons "Our call to action" and "Donate" once clicked on, provide specific steps that can be taken by individuals to participate in the campaign as well as plenty of resources to support the cause. This raises the question why newspapers do not pick up on this. However, other more grave key issues have been identified that require more attention.

For the last part of the knowledge section, normative knowledge, dangers and threats that the discourse surrounding the campaign picked up on were identified. However, once again, the line between the existing and potential threats and dangers is not quite clear. Most articles pick up on the potential threats rather than the existing threats (Article 40, Irish Mirror; Article 96, The Telegraph; Article 22, Irish Mirror).

These findings already show some inherent problems, though some issues deserve special attention. In particular the issue of ambiguity when it comes to the existence and threats of LAWS in the impact and normative knowledge. Ambiguity is not only damaging to the campaigns messaging due to increased confusion and potentially less sense of urgency, but also dangerous since campaign opponents can utilize this ambiguity to their advantage.

It became apparent that there is no clear and universal agreement on the issue of existence of lethal autonomous weapon systems. This issue is highly relevant and important for the success of the Campaign to Stop Killer Robots. Though the initial concept of the three forms of knowledge for creating a public awareness campaign by Bloomfield et.al. (2015), does not explicitly mention any hierarchy of importance, having a concise idea on whether the problem that a campaign wants to address and raise awareness on, exists, may someday exist or might even never exist is immensely important for a campaign to succeed. If, for example, a majority of the selected articles had come to the conclusion that killer robots will never exist or if anything in a distant future, there would be no sense of urgency and all of the other factors that contribute to a successful campaign would be redundant.

To discuss what the articles got right and wrong about the facts concerning the existence or potential existence of these lethal autonomous weapon systems we must first look back to the actual possibilities that exist today based on research in this topic. Schroeder (2016) quite clearly and extensively

describes the extent to which these weapons are possible. He distinguishes between term "artificial narrow intelligence" (ANI) which is used to describe artificial intelligence that can perform only a specific skill set, like a search engine, "true artificial intelligence" (AI), meaning human level intelligence and lastly "artificial super intelligence"(ASI) which is considered to be greater than human level intelligence. Though true AI is not possible yet he points out that computer visual recognition, audio recognition, cognitive computer processing and decision making are approaching a level that is close to one that true AI might achieve (Schroeder, 2016). With this in mind no country is employing fully autonomous weapon systems at this point (Campaign to Stop Killer Robots, 2016). Schroeder however points out that one should not view full autonomous weapon systems and semi autonomous weapon systems as a black and white issue. Though it is true that countries are not employing fully autonomous weapon systems with human level intelligence, they are still employing semi autonomous weapon systems that pose the same threats as a true AI weapon system would. True AI simply refers to the fact that a system is not automating a pre-given process but is completely autonomous. He further points out several of these systems such as the U.S. Close-In Weapon Systems (CIWS) which is capable of defending anti-ship missiles on its own without human interference, or the SGR-A1 machine gun developed by Samsung with an attached camera operated by either a human or an autonomous program. This weapon is guarding the de-militarized zone (DMZ) and is capable of not only detecting an enemy but also engage on with its own discretion. Similar weapon systems are being employed in Israel, Qatar and the UAE (Boulainin and Verbruggen, 2017). Another similar weapon system has been developed by a Norwegian defense company. An anti-ship missile which can plan the best route to a target and can decide on its own which and where on the ship to engage. It is apparent that not only autonomous weapon systems are being developed but they are also already in place to some degree (Schroeder, 2016). Since the implications and consequences of these systems are similar if not the equal to the ones of true AI it should be presented as such in the media discourse surrounding the Campaign to Stop Killer Robots for it to succeed effectively. They and multiple analyzed articles are claiming that once they are here that it is already too late. The potential sense urgency is not used to the full extent. In addition he campaign defines killer robots as such:

"A weapons system that identifies, selects and employs force against targets without meaningful human control should be considered a lethal autonomous weapons system."

Considering this, the weapon systems described above are considered "killer robots" according to the campaign. This definition of killer robots has not yet been translated to its surrounding media discourse, partly because this definition is rather new since the campaign and the UN had difficulties coming to an agreement as to how define the terms of killer robots at the Convention of Conventional Weapons (CCW) (UN reopens talks on defining 'killer robots', 2018).

Moreover, in the analyzed articles the capabilities of these weapon systems are described more often as a thing of the near or distant future and could become a reality. *"Could become reality," "May not exist yet," "AI could become a real danger in the not too distant future"* are common phrases one might encounter when reading an article about killer robots (Article 4, The Daily Telegraph;

Article 12, Ottawa Citizens; Article 32, Daily Mirror). Out of the 111 articles analyzed, 87 articles claim that LAWS do not exist yet but might in the future and 16 articles acknowledge the existence of LAWS or semi autonomous weapon systems to at least some extent. Only one article goes so far to claim that killer robots only exist in science fiction. "So why would we want to base real world military planning on the imaginary threats of sci-fi thrillers?" These numbers and findings clearly show the problem discussed above. Killer Robots do exist and already pose serious threats.

Considering now that the goal of the impact knowledge creation is to make people aware that a problem exists, according to Bloomfield et.al. (2015), one can judge the organization of this discourse regarding the existence of killer robots in multiple different ways. For one, the articles raise awareness on the potential of fully autonomous weapon systems existing in the near future, while mostly dismissing the existence of semi-autonomous weapon systems that are already capable of basically the same tasks. But due to the fact that research in this field shows that the line between full autonomy and semi autonomy is blurry and not a black and white matter, it is to be expected that newspaper articles convey this knowledge in such a non universal way either. However, one could also argue that the Campaign to Stop Killer Robots has not succeeded in making it obvious that autonomous weapon systems are already existing and should put more emphasis on raising awareness on this issue and impact knowledge creation. Though whether it would make much difference if people think that killer robots already exist or are about to exist very soon is questionable. The campaign is still able to raise awareness on the issue of killer robots and is able to portray some sense of urgency in its media discourse.

This sense of urgency becomes even more apparent when looking at the existing and potential threats that the analyzed articles refer to. Once again, similar to the impact knowledge, the creation of the normative knowledge has shown some blurry lines and ambiguous results. Here it is helpful to also consult literature on this topic to point out exactly what the existing threats are, if there even are any, and what potential threats might be existing in the future. On their website (stopkillerrobots.org) the campaign provides a short overview over threats that fully autonomous weapon systems pose. However, they do not explicitly elaborate on which threats already exist and which are potential threats. They mention the threat of an arms race and explain that if a nation that has developed such a weapon system would deploy it, other nations would lose any restraint and put more emphasis on developing and deploying these systems themselves. They neglect to point out that an arms race is arguably already currently existing, since the research and development efforts of these weapon systems is already quite advanced (Schroeder, 2016; Boulanin and Verbruggen, 2017). Furthermore they raise the issue of allowing machines to make life and death decisions, which in their judgement would violate fundamental moralities. They argue that full autonomous weapons would lack human judgement and would not be able to judge highly complex situations that require contextual thinking. They further neglect to point out the difference between full autonomous weapon systems and autonomous weapon systems with full artificial intelligence. This lack of distinction can cause for confusion as the analyzed articles reflect. Full autonomous weapon systems with full AI would have human-level intelli-

gence and would thus be able to judge in an at least similar manner a human would. However, the threat they describe is real already, due to already existing and deployed semi-autonomous weapon systems with humans out of the loop (Schroeder, 2016; Boulanin and Verbruggen, 2017). Another threat they point out revolves around the issue of a higher likeliness of nation states to go to war, since war would mean pure material damage and would not cost human lives anymore. On the one hand this fact, as the campaign points out, is a threat but on the other hand it could potentially save a lot of human lives, which is one of the main arguments that governments, that are developing these weapon systems, use (Schroeder, 2016). They raise the additional argument that the issue of accountability would be even more blurred since there would be no clarity as to who would have to be punished for potential mistakes.

This reoccurring theme of having no clear sense of the existing and potential dangers or rather the neglect to point out the specifics of existing danger can be seen once again in the analyzed articles. There is no universal agreement on whether an arms race already exists or whether one is inevitably close. There is no universal agreement on the benefits versus the dangers of employing LAWS instead of human soldiers, and once again no universal agreement on the actual capabilities of fully autonomous weapon systems with full AI. For one, some articles concede to the existing threats of an ongoing arms race as can be seen in articles from Irish Mirror or The Guardian besides some others. Other, earlier written articles, however point out that an arms race does not exist. An article published in The Guardian in 2017 for example writes:

"...to ban killer robots and so halt the arms race now underway to build autonomous weapons...." (Article 25, p. 56, The Guardian)

In another instance an article published in The Daily Telegraph in 2014 points out:

"...an expert on military robots said he knew of no programmes to build autonomous killer robots. Huw Williams, unmanned systems editor at IHS Jane's International Defence Review, said taking human control away had big disadvantages for commanders." (Article 80, p. 171, The Daily Telegraph).

One can say that it is rather unclear, when exactly the arms race for LAWS started. It is hard to pinpoint to an exact moment in time since, the capabilities of such weapon systems are not a black and white issue. Evidence from the analysis however suggests that the existence of an arms race has at least gained more attention and recognition in the years from late 2015. In the Irish Mirror in an article published in 2015 the authors writes:

"Professor Stephen Hawking has teamed up with thousands of scientists to call for an urgent ban on killer robots and an end to the global artificial intelligence arms race showing that at least some considered the arms race to be existent in 2015 already." (Article 59, p. 135, Irish Mirror).

Going further back to 2013 when the Campaign to Stop Killer Robots first got media attention and started pushing their agenda one can already find articles mirroring the potential dangers pointed out by the campaign on their official website.

"Another big danger of developing these kinds of robots, he said, is that it will make it easier for nations to go to war because of the increasing detachment between people and the decision to kill" (Arti-

cle 100, p. 205, The New Zealand Herald).

Most of the analyzed articles point out potential dangers and are consistent in what kind of dangers they elaborate on. These dangers are mostly in line with the knowledge, regarding the potential dangers, that the Campaign to Stop Killer Robots has created. Though more often than not, the danger being cited first and foremost is the threat of the development of killer robots itself. Rather than showing the actual existing threats, which are highly similar to the considered potential threats, these articles point out the creation of killer robots as the biggest threat and neglect semi-autonomous weapon systems. In addition to this paradoxical issue, one can see that, as the advancement in AI progress over the years, the frequency of references to existing threats also increased. For a definite conclusion on this however, a quantitative correlation analysis would be needed. At first glance though one can definitely see a pattern. The minority of the analyzed articles refer to existing threats such as the threat of an arms race and the threat of already existing semi autonomous weapon systems, which is also in line with previous findings regarding the existence of semi autonomous weapon systems. It is only reasonable that the articles that consider the existence of LAWS also consider already existing threats, showing an overlap with the issue described in 4.2.1.

Concluding, it became apparent that similarly to the question of existence, the Campaign to Stop Killer Robots has managed to create knowledge about the actual and potential threats of AI but dismisses already existing threats that require more urgency. This theme is in line with the previous findings since a non universal agreement on the existence of killer robots inevitably leads to a non universal agreement on existing threats of these systems. Considering that normative knowledge is being used to raise awareness on existing but also on potential threats, it is questionable whether one of the two has superiority over the other in terms of importance (Bloomfield et. al, 2015). However since urgency is a central theme in the Campaign to Stop Killer Robots one can conclude that raising awareness on existing threats should be prioritized. The majority of analyzed articles convey the idea that the arms race is a potential threat rather than an existing threat, while further dismissing the threats posed by semi autonomous weapon systems. The campaign has difficulties creating concise and accurate knowledge leading the media discourse surrounding the campaign to be organized in a manner, where the actual urgency of the issue, though present and recognized, is not being made clear enough throughout. Impact knowledge which purpose is to create knowledge and raise awareness regarding the existence of threats (Bloomfield, et al., 2015) has shown problems in the campaign in regard to providing accurate knowledge about the existence and terminology of killer robots. Killer robots, as of now, are understood as lethal autonomous weapons systems (LAWS), which raises questions either left unanswered by the campaign regarding semi autonomy and full autonomy or not conveyed coherently for media to pick up on this distinction.

4.3. Sticky message in small newspapers with no success conveyed

To come to a conclusion regarding the organization of the Campaign to Stop Killer Robots in its media discourse the analysis of the messaging component of the campaign, as seen in its media discourse, can provide additional and complementing answers to the already existing key issues seen in the knowledge formulation of the campaign. The campaign has arguably a more coherent and concise organization in its media discourse when it comes to the messaging and conveying of their knowledge and aim than in creating it. This can be seen in the analysis of the chosen articles regarding their messaging with the respective developed coding scheme applied. Most of the important factors in creating a "sticky message" as set out by Heath and Heath (2007). Concreteness, Credibility, Simplicity, Emotions and Stories have been determined to be present and coherent. As for unexpectedness the Campaign to Stop Killer Robots shows some difficulties in portraying the development of killer robots as something unexpected since only a few articles were identified that point out the unexpectedness and sudden rise of killer robots and artificial intelligence. Articles write for example:

"Such doomsday scenarios might seem science fiction. But AI is suddenly everywhere,..." (Article 52, p. 119, Canberra Times),

or

"I was witnessing a toy model of how an AI disaster would begin, a sudden demonstration of an unexpected intellectual capability." In other words, it's a little too much like a precursor to "The Terminator." (Article 74, p.161, The Washington Post).

The reference in this last citation shows the potential root of the problem for the lack of unexpectedness of the message. For decades the idea of killer robots and artificial intelligence taking over the world or advancing to superhuman intelligence has been the theme of multiple movies and is one of the central themes of the science fiction genre. Though fiction is not to be understood as possible future, the fear that these movies appeal to in humans is very real and due to the developments in the last decade regarding advancing computer technology and robotics, it can hardly be a surprise that killer robots are possible or might be in the future. This is also supported by the fact that a large number of articles agree on the potential existence of killer robots in the future.

The credibility of the campaign is supported by various well known actors and public figures that showed support regarding the Campaign to Stop Killer Robots. Credibility is undoubtedly a vital part in creating a believable and sticky message, making this factor particularly important as Hubert (2000) and Heath and Heath (2007) point out. Prominent figures in the technology industry such as Bill Gates and Elon Musk are referenced throughout the chosen articles. Bill Gates a total of three times and Elon Musk a total of 30 times. With Elon Musk's interest in autonomous driving and investment in other artificial intelligence development companies, as well as his frequent appearance in media, he makes for an important supporter for the Campaign to Stop Killer Robots. Furthermore, the recently passed Stephen Hawking can be found referenced frequently in the chosen articles, even

though his research is not immediately connected to the development of artificial intelligence. This shows that for the campaign to create a sticky message they do not necessarily require experts in the field in question. Besides these numerous popular figures various, experts in the field of artificial intelligence, are being referred to as well. More than 100 times the articles mention "experts" that signed petitions to stop killer robots or contributed in any other matter to the campaign. In addition, Mary Wareham, also frequently referenced, holds an important place in the credibility of the campaign as seen in its media discourse since she, besides others, led the already successful campaign against landmines (Article 6, *The Guardian*; Article 55, *Ottawa Citizen*; Article 90, *The Hamilton Spectator*).

Considering that the danger of killer robots is relatively new and that most threats are considered potential and hypothetical by media, it is unsurprising that the factor of emotions does not show too many results. Most findings that refer to emotions emphasize on worry and angst for killer robots. Sentences like: "*Some experts fear that...*" (Article 3, p. 16, *The Sun*) can be found frequently throughout the chosen articles as well as "*The worry is that...*" (Article 27, p. 59, *The Times*). These findings underline previous findings that show the general consensus on killer robots being very likely to be possible in the future. However, in combination with "stories," which emphasize the emotions created in the reader, as pointed out by Heath & Heath (2007) one can see that the articles pick up on fictional stories that most readers will recognize. Well known movies dealing with the dangers of artificial intelligence and killer robots as their central themes, such as the Terminator series or iRobot, are frequently referred to in the analyzed articles. Terminator has been referred to 55 times. Besides appealing to stories that the readers are familiar with the campaign further pushes their own agenda by creating awareness movies. One of which is the viral movie "Slaughterbots" which depicts a scenario of highly advanced lethal drones being equipped with explosives that are being abused by terrorists by targeting civilians and political leaders. Due to the activity of the campaign on social media and video sharing platforms such as YouTube, newspaper articles pick up on these formats of messaging as well leading to a more recognizable and sticky message. Furthermore applying the coding scheme showed that the chosen newspaper articles refer to lethal autonomous weapon systems as killer robots far more as they refer to them as LAWS. The Campaign to Stop Killer Robots is able to give these type of weapon systems a negative connotation by calling them "killer" robots which is being portrayed in its surrounding media discourse. Besides painting a solely negative imagine of LAWS they further create a sticky message since the term "killer robots" is far more easily recognizable than the far longer term "lethal autonomous weapon systems" and less confusing than its abbreviation of "LAWS." Though most factors set out by Heath and Heath (2007) are present and well organized in the media discourse surrounding the campaign, other factors, such as "success" and the size of the newspapers publishing articles regarding the issue, show some problems and room for improvement.

Thus, keeping in mind that pointing out existing success has been identified as one of the leading factors in creating a successful campaign, the issue of a lack of conveyance of success deserves special attention. As Hunt (2012) points out, referencing and presenting existing success will excite the masses and make them more optimistic to join a cause that has potential to succeed. Even if, the problems and the immediate urgency of the issue that a campaign wants to fight against are made perfectly clear and justified, it is possible that it will fail simply because people are not persuaded by its probability to succeed, due to too few concrete achievements. This is especially important for the Campaign to Stop Killer Robots to be aware of since it is a public awareness campaign trying to stop something that people are not completely aware of even exists yet. The campaign's inability to fully explore their potential of raising the issue of urgency regarding killer robots, as pointed out above, seems to be a bigger danger than previously assumed. Besides, a campaign against a weapon and against a potentially revolutionary and beneficial technology such as artificial intelligence, is particularly difficult as history has shown with struggles beginning in the medieval age, with the attempt to ban crossbows, until today, with the struggle against nuclear weapons. Such a campaign requires special attention to factors such as success and credibility (Hunt, 2012; Bolton & Minor, 2016). Looking at the analyzed articles however one can only find few references to small successes and achievements that the Campaign to Stop Killer Robots has achieved. The question is, whether the campaign simply had not had much progress so far or whether it was unable to shape their success into a sticky message that the media can easily recognize.

The campaign states on their website that: *"A comprehensive, pre-emptive prohibition on the development, production and use of fully autonomous weapons—weapons that operate on their own without human intervention—is urgently needed. This could be achieved through an international treaty, as well as through national laws and other measures."* (stopkillerrobots.org)

Thus one can measure their level of success on the criteria of how many countries are cooperating towards an international treaty or implemented their own national laws and "other measures." In a statement released by the campaign regarding the fifth Convention on Conventional Weapons (CCW) in 2018 they point out that 22 countries have unequivocally called for a ban of killer robots. They further state that most states not only agree with the need for a pre-emptive ban but also expressed strong desire to begin negotiating new international law. However these expressions of desire and recognition of the problem do not have any legally binding foundation as of yet. The campaign emphasizes the need for such a legally binding document that provides an explicit definition of "killer robots" and concrete measures against the development of such weapon systems (Campaign to Stop Killer Robots, 2018). Considering that the CCW has met only five times so far and had only two meetings regarding the issue of killer robots one should not expect such an inter-governmental agreement of most UN member states to be likely right away. However as Hunt (2012) and Bolton & Minor (2016) point out, even small victories should be presented in a media discourse surrounding a campaign to excite the masses.

The CCW is being referred to in the analyzed articles but not to the extent that reveals any success that the campaign has achieved in convincing UN member states of the need for a pre-emptive ban. Though some national newspaper of Australia and Canada for example express the urgency for their governments to take action, a comprehensive overview over the willingness of other countries to participate in a legally binding treaty is missing. Considering further that the campaign states that the only way to stop killer robots is to create such a legally binding treaty with all countries capable of developing such weapon systems, it is especially important to point out small victories.

In addition to exploring the successes of the Campaign to Stop Killer Robots it is further necessary to discuss the accessibility of potential achievements compared to other similar campaigns such as ICAN or the campaign to stop landmines. Due to their high similarity in organization as well as aims such a comparison can reveal what the Campaign to Stop Killer Robots is lacking, thus revealing further key insights into media discourse organization of a campaign against malicious technologies.

On their website ICAN provides a coherent timeline for milestones achievements throughout the years of their activity whereas the Campaign to Stop Killer Robots is lacking such a coherent overview. Furthermore the ICBL (International Campaign to Ban Landmines) centers their website on their success of achieving a treaty to ban landmines and builds up their ongoing campaign on this achievement. Such measures taken by the campaign to ensure that their success is easily visible to anyone interested show clear differences to the Campaign to Stop Killer Robots. These campaigns however have existed for a lot longer and had more chances to build up their reputation. However it is important to point out that members of ICAN and the campaign to stop landmines are also founding members of the Campaign to Stop Killer Robots. This crucial aspect has not been fully utilized in the analyzed media discourse. Actors that contributed to the success of the ICBL such as Mary Wareham and the Human Rights Watch (HRW) are only being mentioned sparsely, even though their participation in the campaign gives it a particular credibility (Bolton & Minor, 2016 and Hunt, 2012).

Mentioning and referring to even the smallest successes throughout the campaigning should not be underestimated and is a vital ingredient in creating a sticky message and thus successful campaign (Heath & Heath, 2007). The Campaign to Stop Killer Robots, even though quite young, has already seen some successes in the CCW by raising awareness and convincing multiple state actors to act against the danger of killer robots. These successes cannot be seen in its media representation, showing once again that the campaign is not acting to its fullest potential.

This becomes further apparent considering that the 17 selected newspaper from all over the world and different type of newspaper show that the Campaign to Stop Killer Robots has not been able to present itself in the biggest and thus most relevant newspapers. As the reader can see in the appendix, the most articles published regarding the term killer robots are by the The Guardian with 24 articles. The Guardian, though well known, has a medium size daily circulation amount with 152,714 newspapers. More prominent newspapers and tabloids such as The New York Times, The Sun and The

Washington Post have published comparatively few articles in the years from 2012 to 2018. In the time span chosen for the analysis, only four articles regarding the issue of killer robots have been published in The New York Times. Only five articles have been published in the tabloid The Sun. Of course one has to keep in mind that the data that has been collected might not necessarily be completely representative to every newspaper and the whole discourse surrounding the campaign, albeit can give a rough idea of the frequency of articles published in each newspaper. A representation in prominent newspapers is highly important for a campaign to succeed as pointed out by Randolph and Viswanath (2014) and Hubert (2012). Without a representation in big newspaper publishers the campaign has a hard time gaining more traction and staying relevant in peoples mind. The Campaign to Stop Killer Robots seems to be present in media predominantly during international conferences such as the CCW and anytime public figures express their support for the campaign. It fails however to stay relevant throughout the years. Considering the urgency of the issue that the campaign is raising awareness on, it is in the interest of the campaign to focus, emphasize and utilize conferences regarding killer robots to their advantage and aim to be more prominent in bigger newspapers. To find out why exactly the Campaign to Stop Killer Robots is not gaining a lot of attention in big newspaper publishers a more extensive research into it would be needed. For now one can only speculate. For one, newspapers have been and are becoming more and more profit driven and since the urgency of the issue that the campaign is trying to raise awareness on is not completely clear in peoples minds, articles regarding the campaign might be interesting momentarily but are soon forgotten. If this were true it would make for a very paradoxical issue. To raise awareness on the issue the campaign has to gain attention of big newspapers. Big newspapers do not show much attention to the campaign because readers are not aware of the urgency of the issue. It is a vicious cycle and can be broken by the campaign by concentrating efforts on working together with big newspaper publishers by convincing them of the issue. This assumption however does not explain outliers like The Guardian, which publishes a great number of articles concerned with the topic of killer robots.

4.4. Conclusion

The analysis has shown that the campaign has difficulties creating concise and accurate impact and normative knowledge leading the media discourse surrounding the campaign to be organized in a manner where the actual urgency of the issue, though present and recognized, is not being made clear enough throughout. Impact knowledge which purpose is to create knowledge and raise awareness regarding the existence of threats as well as normative knowledge which is being used to raise awareness on existing but also on potential threats show some serious issues in the organization of the media discourse surrounding the Campaign to Stop Killer Robots. For one the media discourse organization surrounding the campaign is organized in a manner that shows a lack of decisive and non ambiguous impact knowledge. The campaign has not made clear enough what the capabilities of lethal autonomous weapons are at present times. Given the fact that fully autonomous weapon systems are not completely possible this might not seem too detrimental but as shown, semi autonomous lethal weapons systems are already existing and pose the same or at least similar threats that LAWS will in the near future. As for normative knowledge this non universal knowledge creation can be seen further. The issue of existing and potential threats has shown blurry lines most noticeably in the discussion on the issue of a global arms race of LAWS. Even though relevant literature has shown that an arms race has been existing for quite some time now, multiple articles considered this to be a threat of the future.

In the messaging department of the campaign the campaign is succeeding in creating a sticky message but is not able to convey small successes in order to gain more traction and excite potential supporters. The CCW has been gradually focused more on the issue of lethal autonomous weapon systems, partly due to the efforts of the Campaign to Stop Killer Robots, leading to 22 countries expressing their willingness to sign a joint paper to counter the threats that these weapon systems would pose. The campaign's surrounding media discourse barely picks up on this fact. Last but not least the campaign shows difficulties in attracting the attention of big newspaper publishers such as The New York Times or The Washington Post. Having ones campaign covered by big publishers will lead to more attention to ones cause, thus more supporters and political leverage, leading to more potential for success. All in all the main key issue the campaign shows in different compartments is a lack of fulfilling its potential to the fullest extent.

5. Conclusion

This thesis was aimed at exploring the newspaper discourse organization of the Campaign to Stop Killer Robots by answering the research question of "How is the newspaper discourse from 2012 to 2018 around the Campaign to Stop Killer Robots organized?" By focusing on the aspects of messaging and knowledge creation an answer was found by employing a coding scheme to conduct a discourse analysis of 111 newspaper articles published in the years from 2012 to 2018. This method allowed for an unmasking of underlying key issues and key insights into the organization of the Campaign to stop Killer Robots.

On the basis of numerous findings by researchers concerned with the topic of public awareness campaigning, media discourses and campaigns against malicious technologies, two coding schemes have been developed that encompass aspects from the most important factors that lead to a successful campaign. These most important factors of media discourse organizations were derived from theories by multiple researchers. Heath and Heath (2007) created the SUCES concept which allowed to analyze the campaign's discourse for its messaging part. Adding on to that, the factor of success itself was identified to be highly important by Hunt (2012). Furthermore, Randolph and Viswanath (2014) and Hubert (2012) pointed out that the quality as well as the quantity of newspaper articles, discussing the campaign, are important factors leading to success. An extensive research into public awareness campaign by Bloomfield et al. (2015) identified important factors of knowledge creation that are needed for a campaign to succeed. Thus, the coding scheme of "knowledge creation" was aimed at exploring these three type of knowledge that can be employed by a public awareness campaign. Impact knowledge, procedural knowledge and normative knowledge were able to be identified in the campaign. Besides the research by Bloomfield et al. (2015), researchers into media discourses themselves have pointed out the importance of knowledge. Wodak and Meyer (2009) point out that knowledge conveyed efficiently in a discourse can have great consequences for society. In addition to that, Van Dijk (1995) points out the power that media discourses hold, confirming that concisely creating and imparting knowledge is a powerful tool.

Analyzing the selected articles with the help of the coding scheme, two key issues and key insights into the discourse organization of the campaign were found. For one, the Campaign to Stop Killer Robots shows difficulties in fulfilling its potential in the impact knowledge department. Though the urgency of the threat of so called killer robots has been made clear by the Campaign to Stop Killer Robots, a certain sense of ambiguity exists in regard to the definition of killer robots or Lethal Autonomous Weapon Systems. It has not been made clear what the actual capabilities of killer robots are and what exactly a killer robot is. In its surrounding media discourse this problem of full autonomy versus semi autonomy has not been discussed extensively, leading readers to believe that killer robots are a black and white matter. In line with Schroeder (2016), further discussion has shown that they are not. Semi autonomous weapon systems are already being employed by various nation states and even though they are not fully autonomous, they, nonetheless, pose the same threats that fully autonomous weapon systems would. Only a few of the chosen articles picked up on this issue and came to the con-

clusion that killer robots already exist to some extent. The Campaign to Stop Killer Robots has to make clear that the issue they are raising awareness on is already an existing issue and has to provide a clear definition that is universally accepted by the UN member states if it wants to fulfill its potential in Impact knowledge creation. Next to this issue of ambiguity regarding the existence of killer robots a similar ambiguity and uncertainty has been identified in the Normative knowledge compartment. The analyzed articles did not show a universal agreement on existing and potential threats posed by killer robots. Thus it is unclear to many whether a global arms race for LAWS is already ongoing or will exist in the future. Furthermore, instead of focusing on already existing threats posed by Semi Autonomous Weapon Systems in place, the campaign focuses on knowledge creation in potential threats, resulting in a paradoxical situation where the existence of fully autonomous killer robots itself becomes the main potential threat. Even though, this creates a sense of urgency and shows that the media discourse around the campaign is completely aware that once fully autonomous killer robots exist, they will be highly problematic and dangerous, the potential creation of a sense of urgency has not been fully realized. To combat this issue the campaign should focus on creating concrete knowledge about existing threats posed by already employed Semi Autonomous Weapon Systems.

The coding scheme of messaging was concerned with everything that makes for a sticky message (Heath & Heath, 2007), as well as additional factors that contribute to a successful message creation such as circulation size of the chosen newspapers. With the help of this coding scheme and a discourse analysis of the chosen articles it became clear that the media discourse organization around the campaign has picked up on the knowledge that has been created by the campaign. One can conclude that the campaign has created a sticky message by employing well known public awareness campaign techniques that include, increasing credibility by gaining support from numerous experts and prominent public figures and referencing well known pop culture stories. However, the campaign is lacking in the factor of pointing out their own success. By doing so campaigns aim to achieve exciting further potential supporters and showing that their cause, though ambitious, has chance to succeed. The campaign has been successful in convincing numerous UN member states, of the threats posed by killer robots at mainly the CCW, but does not convey this fact properly to its surrounding media discourse. Furthermore the Campaign to Stop Killer Robots has been formed by NGOs and actors that took part in creating the successful campaign against landmines, which in itself can be considered a success for the members of the Campaign to Stop Killer Robots. This fact is also not reflected in the surrounding media discourse. Moreover, the analysis has shown that the media discourse around the campaign is present predominately in multiple small newspapers and not in big newspaper such as the New York Times or The Washington Post as one would expect considering the importance of this issue. The thesis is not concerned with as to why this might be though one can argue that the Campaign to Stop Killer Robots has little influence over its surrounding media discourse outside of knowledge creation. Rather than shaping and influencing the media discourse, the campaign has to adapt to what newspapers discuss in their articles regarding the issue. Further assuming that the campaign becomes particu-

larly present during the CCW or the MSC, one can argue that the campaign has difficulties in achieving a constant or at least frequent media coverage.

Considering the findings summed up in this chapter, one can say that the media discourse surrounding the Campaign to Stop Killer Robots is organized in a manner where, even though a sticky message has been created, ambiguity and paradoxical knowledge creation hinder its success. It is not acting to its fullest potential and shows room for improvement. Even though, the campaign is relatively young, not much time is left to prevent the creation of killer robots, which is why a greater sense of urgency is needed. Furthermore, one has to consider that this research is merely covering a small part of the discourse surrounding the campaign in question and that more research into it might discover different results. Nonetheless, this thesis has created new knowledge and insights into the organization of a media discourse surrounding a campaign to stop a malicious technology. Combining the findings of existing research, relevant to campaign organization and media discourses, a concrete approach to analyze such a campaign's media discourse has been developed. This approach can be applied to different campaigns. However, this research shows some difficulties that have to be addressed. For one, the approach is questionable in regard to scientific accuracy. Choosing 111 articles, though quite extensive in the context of this thesis, might not be enough to paint a full picture regarding the media discourse surrounding the campaign. Since the creation of the coding schemes based on scientific literature has been made transparent and is reproducible, similar research with different and more articles from a different source can be conducted and would certainly discover at least similar results to the ones presented here. Besides, discourse analysis is always prone to subjective and individual argumentation (Heiman, 2001).

Lastly, practical implications for the Campaign to Stop Killer Robots can be derived from the previous findings. The campaign is and will remain to be one of, if not the most, important actor in achieving a regulation of so called killer robots. The campaign has to provide a concrete definition for killer robots and make clear that they already exist to some extent and that threats posed by these weapon systems are real and not only potential. Furthermore, it has to address its success in convincing stakeholders of the inevitable threats of these LAWS. In addition, a greater presence in big newspapers is needed to ensure more support and political pressure on policy makers.

As most of the analyzed articles and research concludes, killer robots and highly advanced artificial intelligence are inevitable. Regulating such advanced technology is thus undoubtedly an important task and requires dynamic interaction between multiple stakeholders. Furthermore, technology will always be advancing and will always bring risks and potential threats with it, which is why a scientific analysis into how campaigns against malicious technologies and their surrounding discourses are organized is an important contribution to the scientific field concerned with these issues. Media discourses remain important tools to influence the public's opinion and if utilized correctly can provide great power and influence.

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7. Appendix

1. Newspaper selected:

Newspaper	Origin	Daily circulation	Articles published
The New York Times	New York City, USA	1,865,318	4
The Sun	London, England	1,545,594	5
Daily Mirror	London, England	583,192	3
The Washington Post	Washington, USA	474,767	2
The Times	London, England	440,558	4
The Daily Telegraph & Sunday Telegraph	England & Australia	385,346	7
The Globe and Mail	Canada	336,487	4
Toronto Star	Toronto, Canada	318,763	2
The Guardian	London, England	152,714	24
The New Zealand Herald	Auckland, New Zealand	144,157	5
Calgary Herald	Calgary, New Zealand	107,954	3
The Australian	Sydney, Australia	94,448	2
Ottawa Citizen	Ottawa, Canda	93,277	6
The Age	Melbourne, Australia	83229	6
Irish Daily Mirror	Dublin, Ireland	35,433	7
Canberra Times	Canberra, AUstralia	15,298	3
US Official News (PMS)	"US Official News is a comprehensive source of major happenings, developments and full text public announcements made through press releases, statements and other documents issued by various federal and state governments." -LexisNexis.com		21