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The discourse of the Maven Project - a technological nationalist strategy to enforce hegemony?

A Critical Discourse Analysis

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Abstract

Technological nationalist discourses can present strategies to enforce hegemony and in practice impede democratic deliberative processes. Worryingly, scholars increasingly notice analogies between discourses of the former technological nationalist discourse of the Manhattan Project and those accompanying contemporary AI warfare technology projects, like the Maven Project. This raises the question to what extent the discourse of the Maven Project is a technological nationalist one. The question is answered by carving out the conceptual traits of technological nationalism and thereupon deploying a Critical Discourse Analysis (CDA). Thereby, the collected research data consists of official documents like press releases and interview transcripts, as well as of inter alia newspaper articles, corporation statements and consultancy reports. Eventually, the research reveals that the discourse of the Maven Project is invisibly imposed on the American citizens as an ideology, which enables a group of American defense policymakers involved in the Maven Project to reinforce power relationships. This manifests itself in the discourse's function to prevent public scrutiny over their policymaking on the one hand and to force technology companies into cooperations with the Department of Defense (DoD) on the other.

Keywords: ideological discourse; hegemony; technological nationalism; AI arms race; CDA

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List of Abbreviations

AI	Artificial Intelligence
CDA	Critical Discourse Analysis
DoD	Department of Defense
ISA	Ideological State Apparatus
ISIS	Islamic State of Iraq and Syria
RSA	Repressive State Apparatus
US	United States

1. Introduction

At least when Putin famously stated, “Whoever becomes the leader in [Artificial Intelligence] will become the ruler of the world“ (Vincent, 2017), everybody had to know that the Artificial Intelligence (AI) arms race was on. But already before, scholars and policymakers across the world had started to increasingly share the belief in the transforming power of AI (Horowitz, 2010), which today is considered to be a military reality yet. Not surprisingly, researchers at present assume that dramatic changes in the development of military AI systems are underway (Payne, 2018, pp. 8-9). What increasingly comes to the fore is the emphasis put on parallels between contemporary efforts to develop AI warfare technologies and former technological endeavors to build the atomic bomb. In that context, the Manhattan Project in which the first nuclear bomb was developed is brought again into the discourse.

A short retrospection. Following Dwight Waldo (1955), the success of the Manhattan Project has not only been, like generally assumed, a mere achievement of physical science but rather presents the result of human cooperation and hence public administration (Waldo, 1955). Likewise, Farrell regards the project from a political perspective and claims that the American atomic elite pushed the Manhattan Project by controlling its accompanying discourse (Farrell, 1995, pp. 6-7). Elaborating on his thought, Masco argues, that the discourse was dominated by an ideological bomb-supporting “national security discourse“ which threatened counter-discourses and thereby enabled scientists to increase investment in nuclear weapons (Masco, 2013). Edgerton typifies this ideological discourse as a technological nationalist one (Edgerton, 2007, p. 14), while similarly, Masco notes that the bomb functioned in terms of a “techno-national fetish” (Masco, 2013, p. 11). In short, the Manhattan Project’s discourse was invested with a technological nationalist ideology whose imposition on the listeners served elites to enforce hegemony during World War II.

Today, scholars outline several analogies between the discourses of the Manhattan Project and those accompanying AI warfare technology projects (Maas, 2019, p. 288). Thereby, the most striking narration is the one about the alleged “new Cold Technological War“, which Rajan (2018) describes as the battle between nations to “own the future“, waged by means of technological investment (Rajan, 2018). It follows, that Bitzinger’s assumption, “the siren song of [military] techno-nationalism“ was still very powerful (Bitzinger, 2015), might prove accurate.

Hence, the question arises, to what extent narratives about AI arms projects can be explained in the light of technological nationalist discourses that serve specific actors to enforce hegemony. To examine that phenomenon, the exemplary discourse of the Maven Project is chosen, which is conducted against the backdrop of the alleged AI arms race. The discourse started in 2017 with the narration about developed "AI-drones" which had been applied in counter-terrorism activities like the "Defeat-ISIS-campaign" (Allen, 2017), and manifests itself in a broad range of texts produced within the last three years. It is ideologically underpinned from the outset, communicating the view that the Maven Project is some kind of 'magic enabler' which will eventually allow the American nation to win the supposed technology race.

In case the Maven discourse is like the Manhattan one invested with a technological nationalist ideology, it poses a threat to the public deliberative processes required to enable democratic legitimacy of the Maven Project. That is because democracy is heavily reliant on intelligent and informed citizens (Waldo, 1984, p. 16), who discuss and decide on different ideas in a process of deliberation (D. Johnson & Johnson, 2000, p. 10). However, technological nationalist discourses constrain what is said to be rational by marginalizing counter-discourses (Bright, Marsh, Smith, & Bishop, 2008, p. 135). Althusser refers to this as the "exploitation of the exploited class" (Althusser, 1971, 93) which becomes possible when the powerful group manages to impose ideology, in this case, the technological nationalist discourse itself (Fisher, 2010, p. 231), invisibly on the listeners (Asghar, 2014, p. 230). Then, a technological nationalist discourse serves as an instrument of domination (Van Dijk, 1998, p. 11). By undermining the possibility of a community to participate (Charland, 1986), it enables powerful groups in the absence of deliberation to make decisions isolated more easily (Dryzek, 1990).

To ensure the American citizenry's ability to partake in the discourse of the Maven Project, scrutinizing it in terms of its ideological underpinnings and hegemonic embeddedness is necessary. For that purpose, the explanatory research question is formulated: *To what extent is the discourse of the Maven Project a technological nationalist one?* The question is answered by generating in-depth knowledge about the Maven discourse's ideological function. For this purpose, the concept of technological nationalism is outlined. Therefore, on the one hand, theoretical propositions regarding the ideological

endowment of technological discourses are discussed, whereby the approach is deduced understanding them as ideologies (Edgerton, 2007). On the other hand, the hegemonic embeddedness of ideological discourses is theorized, whereby the insight is drawn that powerful actors dominate and exploit others by enforcing ideological discourses (Althusser, 1971) in order to legitimize their actions (Van Dijk, 2006, pp. 120-121). To be able to examine the extent to which the Maven discourse is a technological nationalist one, the conceptual traits of technological nationalist discourses are carved out, as a discourse's function to integrate people, legitimize actions and distort meanings (Amir, 2007). Eventually analyzing and interpreting the data regarding these characteristic features enables to generate an answer to the research question.

Thereby, this thesis can contribute to the scientific research which approaches the concept of technological nationalism from a critical ideological perspective. This scientific approach is often overshadowed by the one understanding technological nationalism as a sole matter of policy choices, thereby neglecting the society in which it is embedded (Karaoğuz, 2016, p. 43). This is also why the concept of technological nationalism has barely been applied in discourse analysis before. By applying the concept to the discourse of the Maven Project, this research can provide an insight into the occurrence of technological nationalist discourses regarding national defense projects. Besides, it can make a scientific contribution in that it examines how hegemony manifests itself in everyday life and thereby draw attention to potential practical implications of technological nationalism. In that sense, exposing the hegemonic embeddedness of the discourse can encourage counter-discourses and hence promote critical deliberation, which is required since according to Adria, the design and adoption of technology provide insight into the kind of which a nation is (Adria, 2010).

The research approach used to examine the Maven discourse is shortly outlined at this point and explained in greater detail in Chapter 3. In the limelight of the research stand the ideological endowment and the hegemonic embeddedness of the Maven discourse. According to Van Dijk, understanding how ideologies are created, reproduced and work requires to closely look at their discursive manifestations (Van Dijk, 1998, p. 6). To do so, a Critical Discourse Analysis (CDA) as interpretive research design is conducted since it enables to work out the ideological effects that discursive practices have on unequal power relations (Van Dijk, 2011, p. 358). Thereby, the data collection comprises of official documents

published by the Department of Defense, as well as of data gathered from inter alia newsmagazines, policy institutes and corporate websites, whereby throughout the selection purposeful sampling is applied. The CDA is conducted following Fairclough's three-dimensional model, consisting of the textual analysis, which is performed by employing a coding scheme, the discursive practice and finally the social practice.

2. Concept of Technological Nationalism

In this chapter, the concept of technological nationalism is theorized. To this end, in the first section, the link between ideologies and discourses is discussed and the approach is carved out which understands technological nationalist discourses as ideologies. In the next section, it is shed light on the hegemonic embeddedness of ideological discourses, whereby it is shown that technological nationalist discourses can serve as strategies to enforce hegemony. The last section offers a more detailed approach to technological nationalist discourses. For this purpose, it is elaborated on three conceptual traits which are identified as a discourse's function to integrate people, to legitimize actions and finally to distort certain meanings concerning these actions.

2.1 Ideological Endowment

An early approach to the concept of discourse is offered by Wittgenstein (1973), who describes discourses as "language games" consisting of "language and the actions into which it is woven" (Wittgenstein, 1973, p. 4). Contemporary scholars mostly understand discourses as a form of linguistic social practice which manifests itself in both written and spoken language (Fairclough & Wodak, 1997, 66). The role which discourses generally play for ideologies is by the vast majority of scholars described as means for members of different social groups to produce, reproduce, express, sustain, defend, legitimize, change and spread their ideologies in the contexts of interaction (Asghar, 2014; Oktar, 2001; Parker, 2006; Shahmirzadi, 2018; Van Dijk, 2006). Thereby, Fairclough notes that the degree of discourses being ideologically endowed differs (Fairclough, 1988, 91).

Regarding technology discourses, some scholars point out ideological features and functions (Best & Kellner, 1999; Fisher, 2010; W. Keller & Samuels, 2003; Mosco, 2004; Nye, 1994; Turner, 2008). In that sense, Best and Keller claim that technological discourses have to be understood as ideological tools mystifying power mechanisms and domination (Best & Kellner, 1999). However, according to Fisher (2010), an even stronger approach regards technological discourses "as a particular outlook, an ideology" themselves (Fisher, 2010, p. 231). In that sense, Edgerton argues, technological nationalism, rather than approaching it in terms of technological policies or realities, or like Karaoğuz puts it, as a

“state-tool“ (Karaoğuz, 2016), has to be regarded as an ideology (Edgerton, 2007, p. 1). Likewise, other scholars understand technological nationalist discourses as ideologies (Amir, 2007; W. Keller & Samuels, 2003).

2.2 Hegemonic Embeddedness

Ricouer notes, that ideology can legitimize governance and authority by convincing the public and establishing consent (Ricoeur, 1986). Building on his thought, Amir argues, that technological nationalist discourses enable technological elites to gain enormous power (Amir, 2007, p. 283). In line with that, Van Dijk claims, that ideological discourses can serve as an instrument of domination (Van Dijk, 1998, p. 11). However, an ideological discourse can only serve as such an instrument, if it wins the struggle over hegemony, in which Laclau and Mouffe (2014) think discourses continuously find themselves in (Laclau & Mouffe, 2014). An ideological discourse wins this struggle if it is accepted as worldview or schema (Young, Klosko, & Weishaar, 2003). Hegemony, following Gramsci, is hence to be understood as a strategic approach to winning “the consent of the majority“ which together with coercive force allows maintaining contemporary power (Gramsci, 1971). Building on his thought, Feenberg points out that ideological discourses present a substantial source in modern societies to obtain public power as they, in reality, justify power relations (Feenberg, 1995). Brighenti even claims that the domain of discourses presents the actual political battleground (Brighenti, 2016, p. 1).

Althusser offers a more detailed approach capturing how the dominant class secures conditions which enable it to exploit others. He explains, that the powerful group enforces its ideology through two types of apparatuses. According to him, the “Repressive State Apparatus“ (RSA), consisting first and foremost of the government and administrative institutions, functions primarily through repression and secondary through ideology, while the “Ideological State Apparatus“ (ISA), manifesting itself in institutions like newspapers, primarily functions through ideology. He argues that, although the ISAs do not produce the state ideology themselves, they realize elements of the dominant ideology through their institutions and their practices (Althusser, 1971, pp. 77-79). Fairclough elaborates on this thought, by stating that ideology functions through ideological assumptions manifesting themselves in constructed texts in the form of typically unconscious beliefs of the text

producers. In constructing ideological texts, the producers impose the assumptions upon the interpreter who decodes them (Fairclough, 1989). Thereby, Asghar notes that the powerful group aims to impose the ideology invisibly (Asghar, 2014, p. 230) since it considers it to be the most effective then (Fairclough, 1989). This is in line with Gramsci, who argues that the ideological dominance is perfect when the dominated group, usually the citizenry, is not able to differentiate between its interests and attitudes and the ones of the dominant group. Then, according to him, the dominated class might not even recognize other ideologies as acceptable alternatives which conflict with the dominant one (Gramsci, 1971). ‘Acceptable alternatives‘, following Parker, are discourses which are not readily supported because they have lesser access to ideological forms of legitimation and communicative power (Parker, 2006). In terms of technological nationalist discourses, such a counter-discourse might be found in the techno-globalist discourse (Karaoğuz, 2016, p. 37).

As an interim result, it can be noted that technological nationalist discourses are ideologies, which present strategies that serve actors to enforce hegemony. In the following, it is elaborated on the conceptual traits which indicate that a discourse presents such a strategy, as this enables to identify the extent to which a discourse is a technological nationalist one at a later point of this thesis.

2.3 Technological Nationalist Strategy

According to Maurice Charland, technological nationalism has to be regarded as an “insidious“ rhetorical discursive strategy to gain political power (Charland, 1986). Building on his idea, Amir notes that this rhetorical strategy “encourages people to fully trust technological elites“ by evoking a feeling of pride and thereby hindering people to assess their choices and actions critically. Drawing on his work, the technological nationalist rhetoric strategy functions through three levels; integration, legitimation, and eventually distortion (Amir, 2007, pp. 283-284). In the following, these three functions are theorized in detail.

2.3.1 Integrating the Nation

The first feature which indicates that a discourse serves as a technological nationalist strategy can be found in its function to integrate a nation into a technological nationalist one. According to Nye (1994), the technological nationalist ideology evokes a nationalist sentiment through the sublime of technological systems and artifacts (Nye, 1994). Elaborating on his thought, Amir argues that a technological nationalist rhetoric strategy allows dissolving horizontal as well as vertical boundaries between people (Amir, 2007, p. 284). Miremadi (2014) builds on this idea, by stating that the creation of a collective identity works through technological artifacts insofar, as that the own nation is demarcated from foreign nations based on their technological "haves" and "have nots". Thereby she stresses that the technological nationalist worldview is closely related to the "selfhood" on the one hand and the "otherness" on the other (Miremadi, 2014).

Her theoretical allegation is consistent with the technological nationalist view which regards technological strength as a crucial factor for determining the national power "in a harshly competitive world" (Johnson-Freese & Erickson, 2006). Furthermore, it corresponds to the assumption that the attribution of exceptional technological power to a foreign nation equals the deprivation of the own national power (Edgerton, 2007). This perspective also underlies the belief, that the outdating of the own nation by technological advances of foreign nations increases the risk to become dependent on foreign technology (Karaoğuz, 2016). This is why, following Edler and Boekholt (2001), technological nationalist actors try to enforce policies to limit such technological dependence (Edler & Boekholt, 2001). Crucially, the threat which originates of technological advances by foreign nations is portrayed as concerning the national security, like Lee, Chan and Oh note, when they state that technological nationalists think the rise of Japan is "endangering the US national security" (Lee, Chan, & Oh, 2009, p. 11).

2.3.2 Legitimizing Technological Nationalist Actions

Another feature which is characteristic for a technological nationalist discourse is its function to legitimize technological nationalist decisions and actions. This function is necessary to bridge the contradictions which occur between its integrative and distortive function, which Karaoğuz describes as arising due to the integrative function being neutral and inclusionary,

while the distortive one is political and exclusionary (Karaoğuz, 2016). Relating to Ricouer, Amir in his approach clarifies, that technological nationalist discourses solve these tensions by legitimating "the authority of the governing through the consent and cooperation of the governed" (Amir, 2007, p. 284).

For the sake of comprehensibility, a brief side note about the actors whom a technological nationalist discourse serves. Such actors are generally referred to as actors of the 'technological nationalist elite'. Although no uniform specification of who belongs to that elite exists in recent literature, it is often loosely referred to as the state, or like Amir puts it, the ones who govern, hence the policymakers (Amir, 2007). However, it is important to note that actors are not limited to policymakers and can range from politicians, representatives of the military, scientific or corporate elites to other high rating opinion makers.

According to Amir, technological nationalist discourses enable actors to legitimize all their "technological endeavors and actions" through the depiction of their nationalist actions as being pursued in terms of the national interest. Thereby, he describes actors as mediating "political and cultural interpretations of nationalist spirits" which eventually enables them to forge social trust over their actions (Amir, 2007, p. 284). Referencing Amir, Karaoğuz refers to the legitimizing function of technological nationalist discourses as the "ideational space base" on which policies are formulated (Karaoğuz, 2016, p. 44). In line with that, Charland argues that the technological nationalist actors would lose their power without their persuasive rhetoric of the allegedly national interest (Charland, 1986, p. 202).

Thereby, the actions which the technological nationalist elite legitimizes through the discourse are typically large-scale projects which are particularly designed to "push the technological frontier" regarding the development of new products (Lambright, Crow, & Shangraw, 1988, p. 63). For that purpose, the national interest is associated with technological progress, whereby the view is enforced on the discourse's listeners that technology has to be regarded as the "big magic" (Winner, 1998) since it allegedly has the potential to transform society and eventually solve all problems (Mosco, 2004; Turner, 2008). In that sense, Johnson-Freese and Erickson (2006) express the view that technology presents *the* source of national security (Johnson-Freese & Erickson, 2006, pp. 14-15), while Mosco describes this conception of technology as "the myth of our time" (Mosco, 2004).

2.3.3 Distorting Meanings to Enforce Hegemony

Lastly, the function of a discourse to distort certain meanings presents a characteristic of technological nationalist discourses. According to Amir, the distortive function of a technological nationalist discourse results of its ability to limit the listener's choices by marginalizing alternative narratives, while simultaneously overstating specific decisions as “inevitable and natural“. Thereby, he notes that the marginalization of counter-narratives enables to create a sentiment of national pride and, as it diverts the audience’s consciousness from ethical concerns, hinders the discourse’s listeners from critically assessing the technological nationalist elite’s actions (Amir, 2007, p. 284). This corresponds to Charland’s theoretical allegation, that technological nationalist discourses are discourses which listeners have no choice but to listen to since they are only producible by specialists who use them to conceal a set of power relations (Charland, 1986).

It follows, that the distortive function of a technological nationalist discourse enables certain actors to enforce hegemony. This functions especially through the distortion of the meaning concerning the national funding of research (Edgerton, 2007), as it enables actors, who, as Bitzinger puts it, ground their approach on an emotional appeal rather than on a “sound strategy“ to produce arms (Bitzinger, 2016, pp. 137-138), to continue their activities. Thereby, the approach on which the technological nationalist elite grounds their actions, is by Reich (1987) described as “irrational nationalism“ (Reich, 1987), while Bitzinger clarifies, that military technological nationalist projects come with very high opportunity costs. This is because, on the one hand, countries spend an extraordinarily high amount of money to achieve only limited autarky in purchasing arms technology, while on the other, they risk losing access to the global momentum of technological development and their endeavors might result in the wasting of efforts and resources on “reinventing the wheel“ (Bitzinger, 2016, pp. 135-137). In line with this, according to Lambright, Crow et al., the desired technological nationalist projects differ from others in terms of their high costs and associated risks (Lambright et al., 1988, p. 63).

2.4 Concluding Remarks

To conclude, the theoretical expectations regarding the concept of technological nationalism, on which the upcoming analysis is based on, are reproduced. Technological nationalist discourses have to be approached as ideologies which can serve as strategies to enforce hegemony. Examining a discourse in terms of a technological nationalist rhetoric strategy consequently provides insights for the degree of its technological nationalist endowment. Such a strategy can be detected by a discourse's ability to function integrative, legitimizing as well as distortive. Thereby, discursive features indicating that a discourse functions integrative, are the creation of a technological nationalist identity through the demarcation of foreign nations based on their technological advances. The legitimizing function of a discourse shows off by its emphasis put on the alleged national interest and the need to achieve technological progress by initiating large-scale projects. Lastly, the distortive function of a technological nationalist discourse becomes visible in its ability to effectively marginalize counter-discourses and thereby distort meanings concerning certain policymaking components, especially regarding spending policies.

3. Methods

3.1 Introduction

This research aims to reveal the extent to which the Maven Project's discourse is a technological nationalist one. Therefore, the discourse is examined in terms of a rhetoric strategy which serves actors to enforce hegemony. For that purpose, a Critical Discourse Analysis (CDA) is conducted, using Fairclough's approach as a starting point. His concept is beneficial to inform this research because it helps to uncover the hidden connections between language, power and ideology (Morley, 2004), whereby it can specifically serve the "emancipation of the oppressed" (Fairclough, 2010). Most importantly, Fairclough constructs his approach on theoretical assumptions regarding hegemony developed by Gramsci and Althusser (Wang, 2017, p. 46). Their theoretical insights are also used to inform the theoretical framework of this thesis which is why his model builds up to my theoretical background assumptions in an almost flawless manner.

Fairclough's approach to the CDA consists of a three-dimensional model comprising of the textual analysis, the discursive practice and the social practice. Thereby, each dimension of the discourse corresponds to one of the three phases; 'description', 'interpretation' and 'explanation' (Wang, 2017, p. 49). To be able to perform the textual analysis, a coding scheme is created, which, by using the computer program ATLAS.ti enables to generate information about linguistic patterns of the discourse.

3.2 Case Selection

Increasingly, the perception is expressed that an ongoing AI arms race puts the American nation under pressure to increase its investment in AI warfare technology, as competitors like China and Russia manage to make technological advances. This is where the Maven Project comes to the fore (K. Johnson, 2019a). The discourse of the Maven Project, which is conducted against the backdrop of the alleged AI arms race, is chosen as the research case.

In the Maven Project, different groups of stakeholders are engaged in the creation of the discourse. One is the group of American defense policymakers. Relevant officials of the Maven Project are thereby Bob Work, the former Deputy Defense Secretary, who initiated the

project, Lieutenant General Jack Shanahan, who has been the Project Director of the Maven Project for two years before becoming the Director of the Joint Artificial Intelligence Center and also Drew Cukor, the Chief in Office. Another group of stakeholders is composed of journalists reporting for newspapers like the ‘New York Times' and reporters writing for newsmagazines, which are usually specialized in technology or defense topics, or both, like the magazines ‘Defense One‘ and ‘C4ISRNET‘. Moreover, technology companies contracting with the Maven Project like Google, Palantir (Greene, 2019) or Anduril Industries (Liptak, 2019), but also companies like Microsoft which is not directly involved, show their interest (Konkel, 2018). Further stakeholders are policy experts like Gregory C. Allen (Allen, 2017) and scientists.

The stakeholders initiate the discourse of the Maven Project by producing articles, press releases, reports, comments and other documents. In that sense, the discourse comprises of texts almost exclusively retrievable online, produced within the last three years. Thereby, the beginning of the Maven discourse manifests itself in the coverage concerning the deployment of AI-drones which were developed in the Maven Project. Very specifically, it can be dated back to the press release “Project Maven to Deploy Computer Algorithms to War Zone by Year’s End“ by the Department of Defense (Pellerin, 2017) which was followed shortly after by the commentary of Gregory C. Allen “Project Maven brings AI to the fight against ISIS“ published at the webpage of the Bulletin of the Atomic Scientists, an academic journal (Allen, 2017). As the discourse developed, increasingly ethical controversies were reported, especially in the face of the Google company’s withdrawal from the project due to internal dissent (Shu, 2018). This, in turn, triggered a fundamental debate about the meaning of partnerships between the US Department of Defense and the American technology sector, in which currently the question of patriotism comes to the fore (Garber, 2019).

Interestingly, the Maven discourse is ideologically underpinned, thereby opening up leeways to legitimize activities related to the Maven Project. This is generally observable in the discourse’s conveyance of the view that the Maven Project has the ability, as some sort of ‘magic enabler‘, to allow the American nation lead the supposed AI arms race. In this thesis, the Maven discourse is examined in terms of its ideological underpinnings on the one hand. This is especially relevant regarding the attribution of effectualness and power to AI warfare technologies. On the other hand, the Maven discourse’s hegemonic embeddedness is

investigated. In that sense, the discourse's function to enable actors to enforce hegemony takes centre stage.

3.3 Methods of Data Collection

The collection of qualitative written textual data constitutes one part of the discourse analysis following Fairclough's approach. It is proceeded by first collecting relevant official data concerning the Maven Project. This is necessary since it is assumed that ideological discourses are produced by the RSA, which comprises mainly of actors of the government and administrative institutions (Althusser, 1971). To take their narrative into account in the analysis, data provided by the website of the US Department of Defense [1] is used, whereby the determined key criterion for a document's selection is to mention the Maven Project explicitly. The final selection consists of the memorandum of establishment, press releases, interview transcripts and other policy documents, like budget estimates. An exemplary document is the interview transcript "Lt. Gen. Jack Shanahan Media Briefing on A.I.-Related Initiatives within the Department of Defense" (Deasy & Shanahan, 2019).

To be able to generate insights into the hegemonic embeddedness of the Maven Project's discourse, data is also collected from non-official online resources. Creating greater diversity in the data by including a wide range of actors with various professional affiliations is insofar useful, as the theoretical assumption underlies that ideological discourses are reproduced by ISAs (Althusser, 1971). If this is the case in the Maven discourse, it is assumed that the narrations of actors constituting the ISAs, manifest themselves in publications by inter alia newspapers, newsmagazines, corporations, policy institutes and think tanks. Therefore, data is collected in the form of newspaper and magazine articles, press releases, consultancy reports, statements and comments. An example presents the article "Inside the Pentagon's Plan to Win Over Silicon Valley's AI Experts" by Zachary Fryer-Biggs published in the online-magazine 'Wired' (Fryer-Biggs, 2018a).

In the course of the data collection, purposeful sampling in terms of the non-official documents is carried out in the face of a large amount of data available. This enables to specifically study information-rich cases which provide in-depth understanding (Patton,

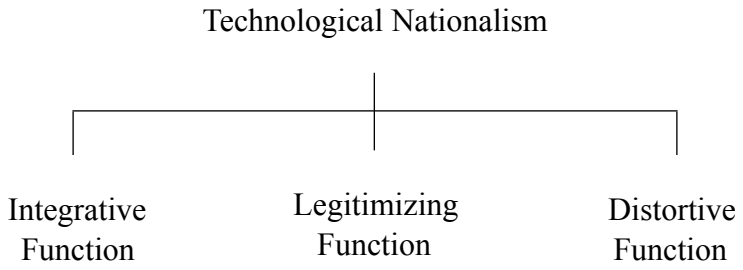
[1] Retrievable under: https://www.defense.gov

2002b, p. 272) and to understand what is yet missing in the data (Flick, 2008, p. 26). To make the data collection more comprehensible, Patton's suggestions to integrate deviant cases on purpose, to look for typical cases and to seek the maximal variation (Patton, 2002a) are followed. The final data collection consists of 200 documents which have a total scope of 1.054 pages. The selected documents have been published in the time frame from 26 April 2017, the day of the Maven Project's initiation, to 12 May 2020.

3.4 Methods of CDA

To analyze the textual data of the Maven discourse, the concept of technological nationalism needs to be operationalized. To do so, the three aforementioned functions indicating that a discourse is a technological nationalist one are consulted as the subconcepts to be examined in the analysis (Figure 1).

Figure 1: Concept of Technological Nationalism



The subdivided concepts of technological nationalism are specified and translated into measurable items by using a coding scheme, as illustrated in Table 1. The coding scheme contains keywords of which some end with an asterisk (*) to ensure that all possible linguistic variations are considered in the analysis.

Table 1: Coding Scheme

Theoretical Concept	Explanation	Keywords	Clarification
Integrative Function	A technological nationalist identity is constructed by demarcating the own nation from foreign nations competing for technology in an alleged race. These nations are portrayed as the national enemies threatening national security.	[technology] race, national security, Chin*, Russia*, American	The keywords "China" and "Russia" are used since they are assumed to be portrayed as the main national enemies of the American nation. The keyword "American" is used to examine the emphasis put on national identity.
Legitimatizing Function	The need to develop revolutionizing warfare, as it is said to have the ability to solve all problems, is followed by the alleged national interest in large-scale projects which require high investments.	revolution*, invest*, save lives, ISIS	The keyword "ISIS" is used to examine the emphasis put on the Maven's ability to counter the terrorist group ISIS.
Distortive Function	Counter-discourses are marginalized to distort certain meanings concerning policymaking components.	Google, scrutiny industry, scrutiny AI/ Maven, lack of transparency	The keyword "Google" is used to assess the significance of the Google-withdrawal incident. The keyword "scrutiny industry" refers to citations which concern "scrutiny" in regard to the American technology industry. The keyword "scrutiny AI/ Maven" refers to citations which concern "scrutiny" in regard to AI or the Maven Project.

By employing the codes to the gathered documents, the textual analysis as the first phase of Fairclough's three-dimensional model can be performed. It serves as a starting point for the linguistic analysis, in which the relationship between texts is interpreted. In the third phase, the discursive characteristics of the discourse are linked to the theoretical propositions informing this thesis.

3.5 Concluding Remarks

To conclude, the key methodological insights provided in this chapter are summed up. A CDA informed by Fairclough is chosen as research design guiding the analysis, since his model is construed to uncover hegemonic relationships and his theoretical approach resembles the one underlying this thesis. As the research case, the ideologically underpinned discourse of the Maven Project, which is conducted against the backdrop of the alleged AI arms race, is chosen. The data collection consists of official documents published by the US Department of Defense and data gathered from inter alia newspapers, policy institutes and corporate websites. In the process, purposeful sampling is applied. For the analysis, the concept of technological nationalism is operationalized into three subconcepts, whereby each is translated into several keywords which are illustrated in the coding scheme. Applying the coding scheme to the collected data presents the first step of the analysis while analyzing the linguistics the second and performing the intertextual analysis the last one. Following these steps enables to eventually answer the research question: *To what extent is the discourse of the Maven Project a technological nationalist one?*

4. Analysis

The aim of this chapter is to understand the extent to which the discourse of the Maven Project is a technological nationalist one. For this purpose, the discourse is analyzed in terms of the three conceptual traits of technological nationalism which were elaborated on in the theory chapter. In the first section, the Maven discourse is investigated in terms of its function to integrate the American citizenry into a technological nationalist nation. To this end, the meaning of AI technology for the perception of national power is examined. Moreover, it is shed light on the construction of an AI technology race, the production of national enemy images, as well as on the depiction of a national security crisis, as rhetoric features supporting the creation of a technological nationalist identity. In the following section, the discourse's function to legitimize the policymaking concerning the Maven Project is carved out. For this purpose, the illustration of the national interest as a matter of technological progress and the supposedly thereof deducible duties of American defense policymakers are analyzed. In the final section, the function of the discourse to downplay and ignore particular policymaking aspects of the Maven Project, as well as to marginalize counter-discourses which criticize the project are examined. Thereby, the distortion of certain meanings comes to the fore.

4.1 Integrating the American Citizenry into a Technological Nationalist Nation

To begin with, the discourse of the Maven Project is analyzed in terms of its integrative function. Throughout the Maven discourse, it can be observed that the assumption is imposed on the listeners, that advances in AI technology present the most important determinant of national power nowadays. This is accomplished not only through expressions made by American policymakers but also by high-ranking politicians around the world, as the citation of the Russian President Vladimir Putin shows.

“And a few months later, Vladimir Putin of Russia ominously declared: ‘Whoever becomes the leader in [the AI] sphere will become the ruler of the world.’“ (Knight, 2019)

The illustration of national technological property as being translatable into national power corresponds to the theoretical underpinnings of technological nationalist discourses, in which

technological strength is said to be an effective determinant for national and global power (Johnson-Freese & Erickson, 2006; Karaoğuz, 2016). The underlying assumption, that technological progress increases national power, moreover manifests itself in the construction of a technology race. Therefore, the view is imparted that the United States currently race against foreign nations for the production of AI-related warfare technology. This is, for instance, visible in the statement of Drew Cukor, the chief of the Maven Project, who belongs to a group of narrators consisting of policymakers related to the US Department of Defense.

"'We are in an AI arms race', Cukor said." (Pellerin, 2017)

Further evidence for the construction of an "AI arms race" is found in the fact that 3,21 % of all citations in the analysis concern the wording of a 'technology race' (Appendix A). Noteworthily, the terminology of such a race presents striking similarities to former technological nationalist discourse like the one of the Manhattan Project, which was centred around the technological race for nuclear warfare. Moreover, the construction of a technology race reflects the technological nationalist view of states as constantly having to compete against each other (Johnson-Freese & Erickson, 2006).

Based on the illustrated technological racing dynamics, the message is communicated that foreign nations which compete for AI technology have to be considered as the national enemies. In that sense, throughout the discourse, the main enemies are defined as the nations of China and Russia. This is, for example, observable in the statement by the Secretary of the Department of Energy, Rick Perry.

"As I speak, China and Russia are striving to overtake us. Neither of these nations shares our values, or our freedoms." (Gershgorn, 2019)

Notably, the constructed enemy images broadly resonate with the coverage of the narrators reporting about the Maven Project. This is retraceable in the fact that 22,61% of all analyzed citations concern the alleged national enemies China and Russia (Appendix A). Besides, it is inter alia visible in the citation of Palmer Luckey, the founder of Anduril Industries, a company which contracts with the Maven Project.

“The real enemies are China and Russia, both of which have invested in AI military technology.“ (Fang, 2019)

With his statement, Palmer Luckey reproduces the enemy images pre-defined by the group of US policymakers to which Rick Perry belongs to. By stating that their technology investments make China and Russia the “real enemies“, he also reinforces the discursive demarcation of the American nation from foreign nations based on their technological properties. This can be explained by Miremadi (2014), who argues that the technological nationalist worldview is divided into the “selfhood“ and the “otherness“ in terms of technological “haves” and “have nots” (Miremadi, 2014). Moreover, Luckey's statement demonstrates the imparted belief that the more promising a foreign nation's assumed ability to make technological advances, the greater the national threat it presents. Thereby, portraying technological advances by foreign nations as national threats, contains another hint for a technological nationalist strategy, since according to Edgerton (2007), from a technological nationalist perspective “the attribution to another nation of extraordinary technological powers“ would elude one’s own (Edgerton, 2007). Besides, it corresponds to Karaoğuz’ claim that in technological nationalists discourses the dependence on foreign technology is depicted as endangering national goals (Karaoğuz, 2016).

The observation, that the threat arising from national enemies is depicted as depending on their ability to make technological progress, rigidifies when taking a look at the citation frequency. While citations associated with China make a total of 17,57%, those concerning Russia only account for 5,04% (Appendix A). The extraordinarily high percentage of citations regarding China visualizes the constructed image of China as the enemy number one. At first sight, this might appear as a surprise since the enemy construction as regarded from a technological nationalist lens was initially used to express hostility towards the Soviet Union. Nonetheless, it corresponds to the theory of technological nationalism, as China is considered to be the most-advanced regarding the development of AI technologies, which leads to the logical conclusion of it posing the largest threat to the American nation.

What is furthermore detectable, is the imposed view that the national threat which arises from foreign technological advances constitutes a national security crisis. This view is enforced through statements like the one below from the first report of the National Security Council on Artificial Intelligence. The Council is led by Eric Schmidt, a former Google Chief Executive Officer, and the high-ranking defense official Robert O. Work, a founder of the Maven Project.

“We are in a strategic competition. AI will be at the center. The future of our national security and economy are at stake.” (K. Johnson, 2019b)

The observed construction of a national security crisis moreover manifests itself in, for instance, Rick Perry’s statement which was examined previously, in which he claims that China and Russia do not share American values and freedoms, thereby linking the alleged national security threat to the national integrity and autonomy. He thereby imparts the assumption on the discourse’s listeners, that the technological outdating by foreign nations allows them to impose foreign values on the American nation. Rick Perry is by no means isolated with his expressed concern about the potential technological outpacing by rival nations, which is for example visible in the commentary of Gregory C. Allen, a policy analyst writing for the Bulletin of the Atomic Scientists.

“For now at least, the best AI research is still emerging from the United States and allied countries, but China’s national AI strategy, released in July, poses a credible challenge to US technology leadership.“ (Allen, 2017)

In his statement, Gregory C. Allen reproduces Rick Perry’s view that technological AI advances generated by foreign nations like China pose a “credible challenge“ to the Americans. Finally, the depiction of such a challenge as a national one can be observed in the citation of General James Holmes, who leads the Air Combat Command.

“What I’d like to do is be able to convince people that we’re all in the business of avoiding major war“ (Weisgerber, 2018)

General James Holmes with his statement not only reinforces the belief that the security of the American citizenry is under threat due to an ongoing technological race. He, by imparting the impression that "all" American citizens are affected equally by it, moreover contributes to the creation of a nationalist feeling which is grounded on the shared understanding of technology. The observation that the Maven discourse contributes to the construction of a national identity is supported by the fact, that 4,32% of all citations in the analysis concern wordings about the American nationality (Appendix A). It is explicable by Edgerton, who argues that in technological nationalist discourses new national identities which are fitted for the technological age are sought to be created (Edgerton, 2007, p. 3).

As an interim result, it can be noted that the actors producing the dominant narrative consist of a group of policymakers who are allocated at the US Department of Defense and often directly involved in the Maven Project, like Drew Cukor or Robert O. Work. In that sense, narrators other than policymakers, like the Anduril founder Palmer Luckey, the policy analyst Gregory C. Allen, or the journalist Marcus Weisgerber who cites General James Holmes, do not actively produce the assumptions which they pass on to their listeners, but rather reinforce narratives pre-defined by relevant policymakers.

4.2 Legitimizing the Maven Project's Policymaking

In this section, the function of the discourse to legitimize decisions and actions concerning the Maven Project's policymaking is examined. To begin with, what attracts attention is that the national interest is emphasized as an interest in technological progress regarding AI warfare technologies. Such view of the national interest is conveyed by, for instance, Lieutenant General Jack Shanahan, the former Director of the Maven Project. With his statement, he conveys the message that the national interest is to develop the most-advanced AI warfare technology worldwide.

"'We have the solemn responsibility to place the world's best technology into the warfighters,' he said." (Heckman, 2020)

As accompanying the alleged technologically marked national interest, the argument is expressed that defense policymakers need to focus their policies on the development of AI technology. In that sense, Lieutenant General Jack Shanahan implicitly claims that the American policymakers have the responsibility to develop “the world’s best“ technology, in order to satisfy the national interest. Following Amir (2007), portraying nationalist actions as required to satisfy the collective and national interest is part of a technological nationalist strategy to coerce social trust over the policymaker's actions (Amir, 2007, p. 284).

What thereby stands out is the precise formulation which is provided regarding the actions allegedly required from the defense policymakers. Therefore, the view is expressed that the only responsible action for policymakers is to make efforts to achieve technological advances faster and more effectively than America’s rivals. For that purpose, a special type of warfare is supposed to be required, which Joshua Marcuse, a former Advisor of the Secretary of Defense on Innovation, refers to as ‘revolutionizing‘.

“’We’re not going to sit on the sidelines as a new technology revolutionizes the battlefield,”’ Marcuse said. ‘It’s not fair to the American people, it’s not fair to our service members who we send into harm’s way, and it’s not fair to our allies who depend on us.’” (Fryer-Biggs, 2018a)

By stating that not developing this kind of warfare would equal policymakers letting down “the American people“, he reinforces the narrative that policymakers have a responsibility to invest in technology. Moreover, the portraying of the required policymaking as to be developing ‘revolutionizing‘ warfare corresponds to the theoretical allegation that technological nationalist actors aim to produce ‘game-changing‘ products since only they are regarded as actually affecting the balance of power (Payne, 2018, p. 7).

Strikingly, the desired kind of warfare is portrayed as exclusively being developable in special large-scale technology projects. This view is for instance enforced by Ron Brachman, a former Manager of the AI Programs of the Defense Advanced Research Projects Agency.

“’We probably need some gigantic Manhattan Project to create an AI system that has the competence of a three year old. ’Ron Brachman“ (Fryer-Biggs, 2018b)

By his demand for AI technology projects ranging in the financial ballpark of the Manhattan Project, Ron Brachman imposes the view on the listeners that extraordinarily high levels of public funding are necessary to develop the type of AI warfare which eventually generates the strategic advantage required. He is not isolated with his assessment of the magnitude in which the AI technological development allegedly needs to work within, as observable in the fact that 8,08% of all citations in the analysis concern wordings related to investment (Appendix A).

So far, the discourse conveys the message that defense policymakers, to satisfy the national interest, need to develop revolutionizing AI warfare by initiating large-scale technology projects. This observation corresponds to the theoretical proposition of Bitzinger, according to whom military technological nationalist actors spend outstandingly high amounts of money on projects which are initiated to develop a certain kind of technology (Bitzinger, 2016). Such a project is the Maven Project. In the discourse, it is treated as some kind of ‘magical enabler‘, like observable in the citation by Lieutenant General Jack Shanahan.

“Maven is designed to be that pilot project, that pathfinder, that spark that kindles the flame for artificial intelligence across the department.“ (Hoadley & Sayler, 2019, p. 9)

With his statement, in which he depicts the project as “pathfinder“, he imparts the perception of the Maven Project as being some sort of instrument which can enable the American nation to lead the AI arms race. Strikingly, his perception of the project is reproduced by different narrators, as visible in the citation by the journalist Marcus Weisgerber, reporting for the newsmagazine ‘Defense One‘.

“Holmes also made the case that technology could deter war.“ (Weisgerber, 2018)

Weisgerber, by citing Holmes claim that technological products developed in the Maven Project might bear the possibility to deter a war, conceivably unconsciously, contributes to a technological nationalist strategy. This is because glorifying the Maven Project as some sort of ‘magical enabler‘ which has almost endless potential, conforms to the technological nationalist assumption that technology can unfold capabilities close to magic (Winner, 1998) and in that sense bears the potential to transform society and especially the ability to solve all problems (Mosco, 2004; Turner, 2008).

4.3 Distracting the Discourse’s Listeners

In the final section, the Maven discourse’s function to distort certain meanings and thereby distract the listeners is analyzed. What can be observed first is that the discourse from the outset constrains narratives regarding the policymaking concerning the Maven Project. This manifests itself in the excerpt from her statement of reasons, in which Lisa Hershman, the Chief Management Officer of the Department of Defense, justifies the denial of disclosure of information regarding the Maven Project to the American public.

“Although there is value in the public release of this information, because the risk of harm that would reasonably result from its disclosure is extremely significant, I have determined that the public interest does not outweigh its protection.“ (Hershman, 2018)

Lisa Hershman's decision to keep the basic information about the policymaking concerning the Maven Project under lock constrains the discourse insofar, as it limits the scope of the discourse to pre-selected information inserted by involved policymakers. As a result, the discourse enables involved defense policymakers, on the one hand, to emphasize those policymaking components which present them and their actions in a good light. On the other hand, it allows them to omit certain policymaking aspects which they consider to be uncomfortable from the narrative. In that sense, what can specifically be detected is the downplaying of the spending policy aspect. For that purpose, narrators like Lieutenant General Jack Shanahan limit their statements to vague evasions about possible future expansions of public funding.

“But - but as we get further along - we're talking six months to a year down the road - we may find, so just like we did with Maven, big projects that have difficult integration challenges that may bring financial resource, or just overall resource requirements that are unexpected. Just don't know that right now“ (Defense, 2019, p. 14)

Thereby, his statement demonstrates the unwillingness of the group of policymakers related to the Maven Project to provide clarifications over their public financing policy. The only insight regarding the rising level of spending for the Maven Project is provided by a few reporters of technology newsmagazines, like Meloni and Wisinger, who notice “a 480 percent increase“.

“For example, Project Maven, which is the DOD’s AI solution for analyzing imagery for intel purposes, increases from $16 million last year to $93 million this year – a 480 percent increase!“ (Meloni & Wisinger, 2019)

However, like the majority of the rapporteurs, Meloni and Wisinger do not further comment on the spending policy. The observation that the funding increase for the Maven Project is downplayed can moreover be underpinned by the following statement.

“’Nothing is being done under the carpet,’ Chamberlain said. ‘Congress has access to the list. It’s certainly not done without transparency to Congress.’ Just the taxpayers.“ (Weisgerber, 2020)

Although Major General Paul Chamberlain, the Army Budget Director, denies any issues in terms of public oversight over the Project Maven’s spending policy, Marcus Weisgerber expresses concerns regarding the taxpayer's access to information. Thereby, the fact that Weisgerber’s opinion receives no attention by other narrators of the discourse is meaningful, since it shows that narrators of all backgrounds and affiliations widely ignore or downplay the meaning concerning the potential lack of transparency over the increased spending levels of the project.

Another observation which indicates that the Maven discourse functions distortive, is the distraction of the listeners from resource-wasting risks associated with the Maven Project. Significantly, scholars like Bitzinger claim that there is, in theoretical terms, a high risk of large technological investment projects to not deliver the desired ‘game-changing‘ weapons and instead to waste resources and efforts large-scale (Bitzinger, 2015). However, in the discourse of the Maven, no expressions by project officials acknowledging such potential risks can be observed. Strikingly, besides missing statements of policymakers involved in the project, also no narrative by other narrators noticing or even elaborating on the issue is visible. The interim finding, that the Maven discourse distorts certain meanings regarding the policymaking of the Maven Project coincides with Amir’s idea, that the distortive function of a discourse prevents the citizens from scrutinizing the technological nationalist elite’s policies, hence in this case, the ones of the Maven Project’s policymakers (Amir, 2007).

What furthermore attracts attention is the downgrading of counter-narratives which question the Maven Project. Right from the start, the Maven discourse restricts the margin of counter-voices and decreases the possibility for deviating opinions to be heard. This is done by the implicit narrowing down of the discourse’s scope to the security dimension by marginalizing non-security related opinions. It is visible in, for instance, Michael Brown’s statement, who is the Director of the Defense Innovation Unit at the US Department of Defense.

“We have the freedom to believe whatever we believe in and to express it. But let’s make sure the point of view of the military, national security, is at least represented in the conversation.” (Mehta, 2019)

Furthermore, the marginalization of counter-discourses assessing the Maven Project critically manifests itself with respect to the narrative concerning the ethical dimension of technological products developed in the project. It originated when newspapers leaked the information in March 2018 that the technology company Google was secretly involved in the Maven Project (Cameron & Conger, 2018). Google was reported to face dissent with its employees, in which more than 70.000 employees signed a petition to end Google's contract with the Maven Project, which they considered made Google participate in “the business of

war". According to the journalists Shane and Wakabayashi, Google decided to defend its public relations slogan "Don't Be Evil" (Shane & Wakabayashi, 2018), wherefore in June 2018, the company stated it would not bid for a new contract again (Shu, 2018).

The conflict is accompanied by an ethically motivated narrative which discusses the Google employees' expressed concerns, that AI technology is possibly employed for military purposes in an unethical way. Crucially, it can be observed that in the Maven discourse this ethically motivated counter-narrative is portrayed as a product constructed of myths and misunderstandings of what the Maven Project is. This becomes apparent in the next line, citing Lieutenant General Jack Shanahan.

"In a March interview, Shanahan said the past controversy stemmed from 'grave misperceptions about what the DoD is actually working on.' (Graham, 2019)

Apart from that, counter-voices are marginalized by illustrating them as reflecting disloyal behavior. To do so, the message is conveyed that actors like the Google company who do not support the Maven Project, consequently behave Anti-American and betray the American citizens in the middle of an alleged national security crisis. This view is, for example, observable in the headline of Sydney Freedberg's article published in the newsmagazine 'Breaking Defense'.

"Google Helps Chinese Military, Why Not US? Bob Work" (Freedberg, 2018)

Bob Work, also called Robert O. Work, reinforces the assumption of counter-opinions as presenting a matter of disloyalty, by emphasizing that the Google company, while stating ethical concerns regarding the Maven Project, at the same time cooperates in a similar project which is located in China, the nation considered to be the worst enemy from a technological nationalists perspective. He moreover imparts the belief that American technology companies have a patriotic duty to share their level of knowledge regarding AI warfare with the Department of Defense. This view also manifests itself in the statement of Aaron Mehta, a reporter for the technology magazine 'Defense News'.

“For many in Washington, it is self-evident, if not obligatory, that the tech community should want to help America’s military. After all, those private company employees live in the U.S., and the Cold War provides precedent for industry working with the government for the national interest, so the argument goes.“ (Mehta, 2019)

The depiction of the cooperation of technology companies with the defense policymakers as “self-evident, if not obligatory“ is also replicated by Satya Nadella, the Microsoft Chief Executive Officer.

“’We fundamentally rely on our form of government to engender trust in everything that we do, not just in the United States but across the world,' Nadella said, responding to a question about Google’s decision posed by a Navy midshipman.“ (Konkel, 2018)

More evidence for the reproduction of the marginalization of the counter-narrative, which is conducted against the backdrop of the Google withdrawal, shows off in an overwhelmingly 53,76% of all citations regarding the Google company (Appendix A). The observed emphasis in the Maven discourse on the alleged patriotic duty for American technology companies to cooperate with the Department of Defense thereby corresponds to Amir’s theory. He argues, that the distortive function of a technological nationalist discourse partly results of the narrator’s ability to overemphasize specific choices and make the discourse’s listener believe these were the only natural and inevitable choices (Amir, 2007, p. 284). In this case, the decision of technology companies to cooperate with the Department of Defense is depicted as indispensable by portraying them as otherwise threatening the national interest, like visible in Mehta's statement. Besides, referencing the national interest is in line with Karaoğuz, who argues that the distortive function of the technological nationalist rhetoric strategy is grounded on the alleged national interest (Karaoğuz, 2016).

In general, the observation that ethically motivated counter-discourses are marginalized to distort meanings is in accordance to Amirs’ theoretical claim, that marginalizing alternate narratives enables the distortive function of the discourse to unfold (Amir, 2007, p. 284). Concerning the Maven discourse, this unfolding of the distortive function manifests itself in the following. Since the marginalization of ethical counter-

opinions leaves American technology companies with as few leeways as possible to legitimize potential refusal to cooperate with policymakers of the Maven Project, it simultaneously increases the pressure on them to eventually agree on partnerships. This is of significance for the defense policymakers, because the military's technological development is largely believed to rely on the American technology industry's state-of-the-art knowledge when it comes to the development of AI, like Lieutenant General Jack Shanahan's statement proves.

"I submit that we can never attain [the nation's vision for it] without industry and academia with us together in an equal partnership." (K. Johnson, 2019b)

Finally, it can be noticed, that the distortive function of the Maven discourse only works, since the produced narrative of the group of defense policymakers is overtaken and reinforced by the wide majority of narrators. These narrators are inter alia journalists like Meloni and Wisinger and corporative representatives like Satya Nadella. Thereby, these narrators are observed to mostly overtake assumptions and recite the same policymakers, like Lieutenant General Jack Shanahan, while in case relevant officials refrain from an in-depth narration on certain elements, like the resource-wasting risk, the majority of narrators also neglects the topics in question.

4.4 Concluding Remarks

To conclude, the findings are shortly recapitulated. In the first section, it was shown that the Maven Project's discourse, overall through the equating of AI technology with national power, serves the integration of the American citizenry into a technological nationalist nation. More specifically, this functions through the construction of an AI technology race and the strict demarcation from competing nations whose technological progress is depicted as a national security threat. In the second section, it is observed that the view is imparted that the national interest is a matter of technological progress in AI warfare technology. Thereof, the policymakers' responsibility to initiate large-scale AI technology projects, like the Maven Project, is deduced. In the final section, it is found that, on the one hand, certain policymaking aspects of the Maven Project, like the spending policy and the weighing of

associated risks, are downplayed and ignored which leads to the distortion of their meaning in the discourse. On the other hand, by marginalizing ethical counter-narratives, the discourse limits the American technology companies' leeways to reject cooperation requests from the US Department of Defense.

5. Conclusion

5.1 Answer to the Research Question

Maurice Charland already over 30 years ago has warned against technological nationalism, which he thinks presents an insidious strategy to gain political power (Charland, 1986). As this thesis shows his concerns are not unfounded, as first and foremost the research reveals the Maven discourse's function to serve a group of American defense policymakers involved in the Maven Project to reinforce power relationships. This manifests itself in the discourse's function to prevent public scrutiny over their policymaking on the one hand, and to force technology companies into cooperations with the Department of Defense, on the other.

The function of the discourse to prevent public scrutiny regarding the Maven Project's policymaking can be led back to the Maven discourse being imposed as an ideology on its listeners. Thereby, the American citizenry which listens to the discourse is coerced to perceive reality through a technological nationalist lens. This functions through the construction of an American technological nationalist identity, rhetorical features supporting the legitimization of the policymaking concerning the Maven Project and the distortion of meanings regarding certain policymaking aspects. Crucially, the dominant pre-defined narrative which is particularly produced by the group of project-related policymakers, is reproduced by the wide majority of narrators, which results in a one-sided biased coverage regarding the project. This ensures that the discourse is imposed invisibly on the American citizens and leaves them unaware of what Althusser would call “exploitation“ (Althusser, 1971, 93).

This exploitation is reflected in the citizenry's distraction from policymaking aspects which directly impact it, hence in particular from the spending policy of the Maven Project, as it relies on the American citizens' tax money. Ideally, citizens would deliberate on the rising spending levels for the Maven Project, thereby also taking into account the risk of wasting resources as assumed by scientists. However, since citizens are unaware of their distorted worldview, they are unable to assess the policymaking concerning the Maven Project critically and cannot engage in an appropriate public deliberation. In that sense, the Maven discourse withdraws the necessary tools from the citizenry which it needs to

appropriately scrutinize and in the course legitimize the policymaking of the Maven Project. This enables defense officials related to the Maven Project to continue policymaking in the same lines. The perception conveyed by the discourse, that the policymaking is sufficiently legitimized due to the lack of dissent turns out to be an illusion.

Outstanding thereby is the interplay of the policymakers' ideological and repressive function. This is because the Maven discourse's ideological function, which prevents effective scrutiny over the Maven Project's policymaking, is facilitated due to the repressive state function manifesting itself in the legal decision not to disclose information to the public. This decision is led back to the exemption clause in the US Freedom of Information Act [2] which permits policymakers the right to keep internal documents under lock, in terms, they think the interest of the national defense prevails the public interest. In the Maven discourse, the activation of this exemption clause simplifies the marginalization of ethically motivated counter-discourses insofar, as it does not provide any points to criticize in terms of the Maven Project's policymaking.

Moreover, the Maven discourse enables policymakers to put pressure on American technology companies. Currently, the Department of Defense lacks the required expertise and human capital to develop AI warfare technology, which, however, the companies located in the American technology sector dispose of. By the imposition of the Maven discourse on its listeners, public pressure is created which forces technology companies, as faced with a loss of image, into cooperations with the Department of Defense. This enables defence policymakers to overcome conflicts that may arise from their dependence.

To conclude, the discourse of the Maven Project is invisibly imposed on the American citizenry as an ideology, which leads to a wide spread technological nationalist world view. This enables involved defense policymakers to enforce hegemony over the American citizenry on the one hand and companies of the American technology sector on the other. Thereof, it follows that the discourse of the Maven Project is a technological nationalist one to a large extent.

[2] Retrievable under: https://foia.state.gov/learn/foia.aspx

5.2 Discussion of the Findings

To begin with, the insight that the Maven discourse is ideologically endowed, in a broad sense confirms assumptions of the strand of scholars acknowledging the ideological dimension of technology discourses (Best & Kellner, 1999; Fisher, 2010; Mosco, 2004; Nye, 1994; Turner, 2008). More specifically, that the Maven discourse presents an ideology in itself, corresponds the scientific approach to technological discourses as ideology, advocated by the scholars Edgerton, Amir and Keller (Amir, 2007; Edgerton, 2007; R. Keller, 2013). However, this finding also contradicts the research approach of various scholars (Edler & Boekholt, 2001; Johnson-Freese & Erickson, 2006; Lee et al., 2009), who assess technology discourses as a simple matter of policy choices and thereby overtake the ideology of technological nationalism without critically reflecting on it. This is, for instance, visible in Bitzinger's work, who understands technological nationalist approaches to arms production as mere policy decisions (Bitzinger, 2016, p. 135). Since such an approach overlooks the ideological dimension of technological discourses which has been uncovered in this research, it is rejected.

Moreover, it was found that the Maven discourse is imposed on its listeners through the functions which the discourse displays. Thereby, the observed function of the discourse to construct the national identity as based on AI warfare technological facilities builds up to the theory that the creation of national identity functions through the narrative regarding technological artifacts (Amir, 2007; Nye, 1994). Moreover, it confirms Miremadi's perception that national identity is based on demarcations in terms of technological properties (Miremadi, 2014), which is also shared by Edgerton (Edgerton, 2007). Besides, the insight that the Maven discourse functions legitimizing by constructing the national interest as a technological matter, is consistent with Amir, who regards the construction of the national interest as part of a strategy pursued by policymakers to enforce social trust over their actions (Amir, 2007). Finally, the distraction of the discourse's listeners through the marginalization of counter-discourses confirms the view expressed by Bright et al. and Amir, that technological nationalist discourses curtail what is sound to say (Amir, 2007; Bright et al., 2008).

It follows, that the Maven discourse, through the outlined functions, enables to enforce hegemony and thereby allows actors to gain political power. That the Maven

discourse serves the enforcement of hegemony does not come as a surprise and builds on to the theories of scholars like Althusser, who emphasizes the exploitative character of ideological discourses (Althusser, 1971) or Van Dijk, who argues that discourses can serve as an instrument of domination (Van Dijk, 1998). Furthermore, the observation that the Maven discourse enables actors to gain political power, adds to Dryzek's work on discourse theory, who notices that discourses enable powerful groups to simplify decision-making (Dryzek, 1990). In that sense, it corresponds to scholars, who assess discourses as significant sources to gain political power (Brighenti, 2016; Farrell, 1995; Feenberg, 1995; Masco, 2013; Waldo, 1955).

Apart from that, it has been shown that the hegemonic embeddedness in the Maven discourse is especially reflected in its function to prevent public scrutiny over the Maven Project's policymaking. This generally confirms Charland's view, that the marginalization of counter-discourses leads to the community being unable to participate (Charland, 1986) and builds on to Amir, who argues that technological nationalist discourses enable to distract listeners from ethical concerns, thereby preventing them from assessing the elite's actions critically (Amir, 2007). More specifically, the observation in that context, that the ideological imposition only works in the face of the ideological reproduction by narrators other than the group of defense-related policymakers, adds to Althusser's theory which states that actors of the RSA, consisting of the government and administrative institutions, produce the dominant ideology, which especially actors of the ISA, like journalists, reinforce (Althusser, 1971).

Furthermore, that the Maven discourse is as a consequence imposed invisibly on its listeners leaving them unconscious of their exploitation, builds on to the theory that powerful actors intend to impose ideologies unnoticed since the ideological dominance is believed to be more effective then (Asghar, 2014; Fairclough, 1989; Gramsci, 1971). Besides, the revelation, that legal structures facilitate the ideological function of the Maven discourse is in line with Althusser (Althusser, 1971), as according to him, the RSA enforces hegemony not only through its ideological but also through its repressive function, which manifests itself, regarding the Maven discourse, in the exemption clause under the Freedom of Information Act. It also confirms Gramsci's allegation, that hegemonic discourses enable to preserve contemporary power together with coercive force (Gramsci, 1971). Notable is that the jurisdiction in its current form seems to make discourses like the one of the Maven Project

more vulnerable to serve as technological nationalist strategies. In that sense, further research about the meaning of legal regulations for technological nationalist discourses would be interesting.

An unexpected finding presents the observation of tensions within the technological nationalist elite, as observable in the coercion of technology companies into cooperations with defense policymakers. In the Maven discourse, the technological nationalist elite not only consists of American defense policymakers but also inter alia of representatives of the technology industry. However, in the Maven discourse, it is observed that predominantly defense policymakers involved in the Maven Project manage to enforce hegemony. Strikingly, they thereby also achieve to enforce hegemony over actors which represent the American technology sector, of which some might have to be considered to be part of the technological elite as well. Since no propositions over the dynamics within the technological nationalist elite can be deduced from existing theory, a suggestion for future research is to examine the different involved groups of actors in terms of their affiliations, intentions, relationships and conflicts.

Apart from that, the Maven Project's discourse shows, that while in the Manhattan Project the state was able to develop ‘revolutionizing‘ warfare by itself, this has changed as the Department of Defense nowadays heavily depends on the technology sector's advances. Since apparently, this leads to companies like Google being subject to verbal attacks, technology companies might trigger technological nationalist discourses through their technological “haves“. Hence, more research is needed regarding the impact which globalized high tech cooperatives like Google have on the development of technological nationalist discourses.

Finally, the conclusion that the Maven discourse is a technological nationalist one underlines Bitzinger’s assumption, who argues that technological nationalism is still very powerful (Bitzinger, 2015) and confirms Edgerton’s thesis, that technological nationalism is not a phenomenon exclusively occurring in undemocratic countries (Edgerton, 2007). However, the fact that the discourse of the Maven Project presents a fairly unique case poses limitations to the explanatory power of the research findings. Hence, observations cannot simply be applied to similar discourses, instead, they have to be regarded as an impulse to initiate further research. While the phenomenon of technological nationalist discourses,

especially regarding national defense projects and its spreading across western democracies, is currently under-researched, the results of this thesis evince the urgent necessity to increase research in this field. Significantly, this could conquer threats directed against processes which are required for the democratic legitimization of national defense projects, like the one of the Maven.

5.3 Practical Implications

Given the insight, that the Maven discourse enables policymakers to prevent public scrutiny over their decisions and actions, concrete actions are required. At first, the sensitization amongst the American citizens for their inability to engage in an effective deliberation over the Maven Project's policymaking needs to increase. Here, the civil society and especially American non-profit organizations engaging for democratic rights, like the National Democratic Institute, can contribute by invoking forms of political participation, like petitions, initiatives, discussion forums and demonstrations.

Furthermore, to enhance transparency and thereby encourage counter-discourses, policymakers need to be incentivized or legally coerced to provide a broader range of information regarding their policymaking. This can be done, for instance, by increasing public pressure on the project officials. A specific measure would be for Lisa Hershman, the Chief Management Officer of the Department of Defense, not to activate the exemption clause under the Freedom of Law Act and to instead decide in favor of the public interest.

Another required action is to ensure independent media coverage since the media can function as the fourth power in a democracy by supporting the citizenry in its public deliberation. Therefore, it needs to be assured that media representatives acknowledge their obligation to provide neutral information. This means that rapporteurs in their coverage of the Maven Project depict both sides of the spectrum and thereby contribute to critical deliberation. To ensure editorial independence, self-regulatory mechanisms can be introduced by newspapers and newsmagazines, which increase the sense of responsibility of reporters concerning their ethical methods, standards and also in terms of the transparency of their funding sources. Apart from that, the exemption clause under the Freedom of Law Act needs to be prevented from facilitating the enforcement of technological nationalist discourses since they can lead to the obstruction of public scrutiny over policymaking. Therefore, a change in

legislation, which sensitivities the Freedom of Law Act for threats arising from technological nationalism, is required.

And finally, as they offer a potential to counterbalance hegemonic infiltration, more technology companies have to raise their ambitions towards their global understanding of ‘Corporate Social Responsibility‘. By introducing principles related to AI and globally credibly sticking to them, technology companies can counter pressures put on them in technological nationalist discourses more easily, thereby making it harder for policymakers to enforce hegemony. In that sense, Google sets a good example with its expressed ambitions ‘not to be evil‘ and its self-imposed ‘Responsible AI Practices'.

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Appendix A: Results ATLAS.ti Analysis

	Number of Citations	
	Relative	**Absolute**
[technology] race	3,21 %	91
national security	5,33 %	151
Chin*	17,57 %	498
Russia*	5,04 %	143
American	4,32 %	120
revolution*	0,88 %	25
invest*	8,08 %	229
save lives	0,46 %	13
ISIS	0,53 %	15
Google	53,76 %	1524
scrutiny industry	0,07 %	2
scrutiny AI/Maven	0,14 %	4
lack of transparency	0,71 %	20
Sum	100 %	**2835**

Appendix B: Data Collection

Abadicio, M. (2019). Artificial Intelligence in the US Army – Current Initiatives. *Emerj The AI Reseach and Advisory Company.* Retrieved from https://emerj.com/ai-sector-overviews/artificial-intelligence-in-the-us-army

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