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Bachelor Thesis

Patterns of postcolonial domination and digital technologies

A critical lens on the artificial intelligence discourse in the United Nations

by

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ABSTRACT

Postcolonial approaches show that most policy fields reveal patterns of domination that are influenced by colonial power structures, even though the colonial era has officially ended. This approach is also reflected in the field of digital technologies, such as policies on artificial intelligence. The United Nations (UN) as an international organization play an interesting role within the nexus of postcolonial patterns of domination and policies on artificial intelligence (AI), since that is a highly discussed issue between decolonization and neocolonialism. A critical discourse analysis that examines colonial and decolonial concepts aims to study the question of how such patterns of postcolonial domination are reflected within the AI policies of the UN. This method seeks to analyze the linguistic patterns in the policy documents on AI regarding implied hegemonies. These hegemonies are marked by the domination of Western states and the construction of former colonized countries as the universal contrary to the West. The policy documents were selected based on the countries they concern, so that both former colonized and former colonizing countries are represented in the case selection. The integration of the three aspects of international organizations, AI and a postcolonial lens makes the research scientifically relevant.

Keywords: Postcolonialism, Artificial Intelligence, Digital Technologies, United Nations, International Organization, Critical Discourse Analysis

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1. INTRODUCTION

The achievements of the Enlightenment are shaping all aspects of our daily life nowadays, whether it is the way we work, the way we talk or even the way that we are socialized. As Horkheimer and Adorno state, it is the human urge to conquer all sources of fear which causes the emergence and development of technologies and simultaneously the exploitation of nature and peoples during the colonial era (Horkheimer & Adorno 1944/2006). The rapid technological advancement led to tools like artificial intelligence that is also used in different political spheres shedding new light on aspects such as security and development (Dafoe 2018). Simultaneously, the exploitation of people and countries especially of the global South, to control human fears facilitated the colonial rule of most Western¹ powers (Castro & Dhawan 2015). And even though colonial era is officially over, there has been an increasing number of scientists and intellectuals arguing that global and local relations are still highly dominated by hegemonies that emerged in the colonial era (Castro & Dhawan 2015). Consequently, colonial power structures are still influencing societies nowadays, not only globally but also internalized in individual thinking and way of living (Castro & Dhawan 2015), leading to the scientific idea of postcolonialism.

Postcolonialism and AI mark two important topics of this research. The third factor is the context of the UN as an international organization that offers a unique framework for comparing member states and stakeholders with different historical backgrounds that either represent the role of the colonizer or the colonized. The units of research in this thesis are different types of documents of the UN on the issue of AI that supposedly reproduce patterns of postcolonial domination, leading to the following research question:

How are patterns of postcolonial domination reproduced in the artificial intelligence discourse of the United Nations?

What makes this research especially interesting and scientifically relevant is its dialectic character. As literature reveals, the postcolonial approach generates different types of possible answers to that research question, as literature reveals. Most intellectuals of postcolonialism describe and analyze the different ways of reproducing and stabilizing colonial hegemonies. The predominant ones are Edward Said inventing the concept of Orientalism (Said 1978), Stuart Hall on Othering and internalized racism (Hall 1997) and Gayatri Spivak on Subalternity (Spivak 1993). It is one goal of this thesis to find out to what extent these postcolonial concepts can be found in the UN documents on AI.

¹ „Western” refers in this thesis not only to a geographic region but also to an instance of power (“the west”), which is why it will be capitalized. Western states mostly refer to the European Union, the USA and Canada.

However, there are also scholars, such as Nikita Dhawan, who describe the dialectic relation between postcolonialism and modern technologies in the context of the Enlightenment. AI technologies, on the one hand, promise progress and liberation of the individual, while they can simultaneously be used as instruments to create and reproduce patterns of postcolonial domination. On the other hand, they might offer an innovative way to decolonize such power structures, which makes them both a gift and a curse for former colonies at the same time and puts the aspect of liberation in a whole new context (Dhawan 2019). It is a second goal of this thesis to find out whether the use of AI in the UN documents is rather a gift or a curse for former colonies by examining the underlying colonial and decolonial patterns.

A similar dialectic applies to the relation between postcolonialism and international organizations. While the UN is generally referred to as one of the main stabilizers of US imperial rule (Long 2008) it might also be a tool for decolonization (Sinclair 2018), which marks the third goal of this thesis as reflecting the role of the UN in that nexus.

And while postcolonialism is an already important field in literature and political sciences, the use of its perspective to interpret technological or techno-political issues is rather uncommon (Harding 2011), highlighting another contribution to scientific relevance. Moreover, the study of a set of nations that collectively formulates AI policies which may reflect elements of postcolonialism adds to its scientific relevance as well. Additionally, the framework of an international organization offers unique possibilities for comparison between the discourse of former colonized and colonizing countries (Long 2008).

Current scholars that explicitly connect postcolonialism with modern technologies are Nikita Dhawan (2019) as mentioned above and Achille Mbembe (1992) who describes the banality of power that emerges from the discourse of colonialism and modern technologies. AI-surveillance as a tool to reproduce hegemonies and to ensure control over former colonized states is described by Berda (2014) and the inclusion and exclusion of discourses on digital technologies and the consequences of that for policymaking especially in the global South is studied explicitly by Harding (2011). The question of whose identity is shaped and defined by whom is also addressed (Anderson 2002) as well as the risk these technologies bear to reproduce colonial ideas and to amplify neocolonial power structures (Adams 2021). Other theories have an explicit focus on the role of postcolonialism in international organizations as the UN. These are for instance Anshuman Prasad (2003) and Guy Sinclair (2018). The potential of decolonizing mechanisms among AI tools was extensively studied by Mohamed et al. (2018 & 2020).

To understand the focus of the research and to structure its content, the research question above is split into subquestions. The first subquestion about (1) *what does the concept of postcolonial domination entail in the context of the thesis* grasps the role of the postcolonial lens in this research. Next, the question on (2) *what elements of digital technologies are reflecting postcolonial domination* helps to understand the connection between digital technologies and postcolonial power structures.

Accordingly, the third subquestion on (3) *how postcolonial domination emerges within international organizations as the UN* refines the understanding for the cohesion between the UN and postcolonialism. Together, subquestions (2) and (3) illustrate the nexus between AI, the UN and a postcolonial lens of analysis and point out patterns of inclusion and exclusion. Additionally, a fourth subquestion on (4) *how postcolonial narratives are reflected by AI documents of the UN and which differences between colonial and decolonial concepts can be examined*, interprets AI as a potentially postcolonial tool of domination. This enables a structured and detailed answer to the main research question on the extent to which a postcolonial nature of domination can be found in the crafting of AI documents in the UN.

To adequately answer the research question, the relevant theoretical concepts are explained in the next section, followed by a description of the methodology including data collection and analysis. Then, the analytical part follows leading to a conclusion on the examination of the interrelation between postcolonialism, AI and the UN and how this is reflected in the UN documents.

2. THEORETICAL FRAMEWORK

The following section outlines relevant theoretical assumptions and concepts for this research. First, there is a general introduction to the idea of postcolonialism. Second, postcolonialism is connected to AI and to international organizations. Finally, an integration of these approaches follows, leading to the formulation of expectations for the analysis.

2.1 THE POSTCOLONIAL SPHERE

Postcolonialism generally refers to the impact that colonial rule has had until today (Castro & Dhawan 2015). More precisely, it states that hegemonies and hierarchies that were developed during the colonial era still have a huge impact on economy, politics, societies, culture, education, science and technology, despite the fact that colonialism has officially ended. Hence, reviewing colonial narratives explains different types of global inequalities. These analyses reveal that neocolonial mechanisms stabilize and reproduce structural inequalities and power relations (ibid).

Postcolonialism is a diverse field of research, consisting of a variety of scholars that study different issues in different contexts. Hence, generalizing the theory as universally applicable might lead to misunderstandings and misinterpretations. Therefore, a sensibility for the appropriate context is crucial, as much as a sound conceptualization of the term postcolonialism. In this thesis postcolonialism includes different concepts. A first central part is neocolonialism, which can be defined as using economics, globalization, cultural imperialism, and conditional aid to influence a country (Castro & Dhawan 2015). This idea differs from so-called traditional colonial methods, that also include military control or indirect political control. A second relevant aspect is eurocentrism, defined as a worldview focused on the favoring of Western civilization. Third, imperialism is an ideology to extend power and is not necessarily implemented through direct occupation. Contrary to colonialism, imperialism has a focus on the differentiation between center and periphery, meaning that a certain region is controlled by a center (Arendt 1986; Castro & Dhawan 2015). More key concepts are Orientalism and Othering, both underlining the constructed binary between the West and the global South. This dichotomy defines the West as usually being the developed, civilized place and the global South being its constant opposite, representing the barbarian, the evil, the dirty, the uncivilized, the poor, the dumb. Therefore, the constructed other becomes essentialized (Said 1993 & 1983).²

² The relevant concepts mentioned here are often highly discussed in literature, quite complex and context sensitive. However, this thesis tries to offer a short but sound definition of relevant concepts according to the scope of a Bachelor Thesis.

2.2 POSTCOLONIALISM AND DIGITAL TECHNOLOGY

As a second distinction, a conceptualization about the reflection of postcolonialism in discourses on modern technologies follows. The dichotomy of *the west and the rest* also operates in the performance of technoscience. A postcolonial perspective potentially reveals how digital technologies, such as AI, are duplicating local and global identities while it also seeks to destabilize or at least to challenge “*the assumption that Western knowledge is objective, authoritative and universally applicable*” (Anderson 2002: 646). In that sense, postcolonialism is an addition to categories such as gender and class as an important category for social or historical analyses in any setting.

AI especially is often viewed as a navigator towards progress and innovation in a technological, social and political way. In that sense it cannot only be conceptualized as a technological instrument but also as a political tool (Amoore 2018). This perspective is rooted within the Enlightenment belief in advantageous power of scientific rationality as the Western crown of modernity. In order to attain progress, myths and beliefs about nature and society are replaced by value-neutral scientific expertise and technical rationality (Horkheimer & Adorno 1944/2006). AI reveals a dialectic character in that context: while it supposedly serves the idea of making the world more transparent, secure and efficient it makes it increasingly mysterious at the same time (Kissinger 2018). These technologies supposedly open up realistic and democratic possibilities to deal with local and global challenges (Harding 2008). However, this practice simultaneously generates the exploitation of nature and people especially in the global South. This phenomenon is generally referred to as the dialectic of Enlightenment, that is deeply connected to the development of modernity, including colonial practice (Horkheimer & Adorno 1944/2006). The interconnection between AI, politics, modernity and capitalism reflects that AI cannot be neutral and that underacknowledged types of discrimination arise from it (Amoore 2018).

Many postcolonial scholars express that the relation between postcolonialism and digital technologies is marked by a Eurocentric discourse. The interests of people in the global South seem insignificant for those who decide on the implementation of technological developments. In addition, scholars of the global South remain underrepresented, stigmatized and stereotyped (Shamsul Hague 2019). Western countries seem to have appropriated the idea of innovation, development, and progress solely to themselves and by that, constructing every other country as their complete opposite (Harding 2011; Said 1993; Said 1983; Fanon 1981; Spivak 1993). In this thesis, inspired by the understanding of Wallerstein (1997) and Santis (2020), the conceptualization of this is called Universal Scientism.

However, some scholars describe AI as a political tool that is filled with potential. It might be possible for former colonized countries to use and adopt the developments of a modern world as a way out of their failure regarding economic and political structures and as an instrument of decolonization towards

liberation (Dhawan 2019). Rachel Adams studied the issue of whether AI can be decolonized and concluded it with the statement “*AI constitutes another step in the evolution of humanity’s triumph over the world. Contained within this imaginary are neo-Darwian notions that those left behind by the technological revolution are not worthy of the new world. If it risks leaving so many behind, can AI, as currently imagined ever be ‘good’, ‘benevolent’, or ‘decolonial’?*” (Adams 2021: 17). Thus, the decolonizing potential of AI strongly depends on the ways in which it is implemented. Finding reflections of that in the UN documents is part of this research as well.

2.3 POSTCOLONIALISM AND THE UN

Third, the following section portrays the relationship of international organizations, such as the UN, and postcolonialism. A relevant concept for this relationship is imperialism, defined as the exercise of economic and political power by one country over another, that may or may not involve direct occupation (Prasad 2003). This implies for the UN that its Western member states seek to reinforce colonial power in a neocolonial, imperial way (Halperin & Palan 2015). This happens through the control of powerful economic institutions, such as the World Trade Organization, the World Bank, the World Economic Forum, or the International Monetary Fund, that are crucial stakeholders for the UN (ibid). The same idea applies for military, cultural or academic control and interventions, for instance by the UNESCO or the Security Council of the UN (Prasad 2003). An evaluation of the decision-making process of the UN security council during the Rwandan’ genocide shows that such processes are rooted in the colonialist and imperialist tendencies of the strongest members of the organization (Long 2008). The five permanent members USA, Great Britain, France, Russia, and China have a double veto power that is exerting their influence in the management of the world’s affairs to the exclusion of so-called developing nations. These are marginalized to the Third World ³while the five permanent members are all part of the First or Second World. Historically, the Third World has been treated as object of colonial interest, as mentioned before (ibid).

Dialectically, other scholars claim that the mere development of international organizations could be part of a decolonizing project (Sinclair 2018). A reflection of this can be found in the UN project called *The United Nations and Decolonization*⁴, that assists non-self-governing territories (UN 2021).

³ Capitalized, because this thesis understands development theories and terms as constructed and negatively connotated.

⁴ The analysis of that project is not an explicit goal of this thesis, even though some documents related to it might be part of the analysis. However, the explicit focus is on AI and not on the evaluation of that project concerning its impact on global hegemonies.

2.4 INTEGRATION OF POSTCOLONIALISM, THE UN AND AI-TECHNOLOGIES

Finally, a first attempt to integrate the theories above follows to fully understand how modern technologies are embedded in the discourse of international organizations. The UN itself is a possible reflection of the pattern of postcolonial domination (Prasad 2003). By reinforcing modern technologies, it produces a narrative of itself as a powerful organization, that is highly influenced by Western rulers while dominating non-Western countries. This domination has a variety of potential facets: For instance, military procedures that show off the power of the UN are sometimes masked behind peace-keeping missions (Halperin & Palan 2015). Additionally, also so-called development help around modern technologies is a potential pattern of domination (ibid, Prasad 2003). The UN seems superior in the role of an aid-giver, which re-creates hierarchies (ibid). A third point is of an economic nature, since the UN is in the position to decide what countries are worth or allowed to receive advanced modern technologies or even the know-how to implement them (ibid).

However, the UN documents on AI might also reveal steps towards liberation and decolonization. Considering that option is crucial for an in-depth analysis (Dhawan 2019). According to Mohamed (2020 & 2018) the term decolonization includes the de-centering of European knowledge, the development towards additive-inclusive knowledge and to engage settled knowledge (Mohamed 2018). Furthermore, Frantz Fanon understand decolonization as an emphasis on self-ownership. This approaches the reclamation of land and life to native and indigenous peoples (Fanon 1981).

Based on the theoretical framework, the following expectations emerge as foundation for the analysis:

- I. Linguistic patterns in the UN documents on artificial intelligence reflect postcolonial domination as a hierarchy in different political contexts.
- II. This hierarchy is based on the dichotomy of former colonizing countries (such as the United Kingdom or France) being in a more powerful, advanced position than former colonized countries (for instance Arabic or Sub-Saharan-African Countries, such as Lebanon, Syria or Kenya).
- III. The different political contexts contain the use of AI technologies in the areas of development politics, trade, health, education, security and ethics.
- IV. Moreover, the involvement of different stakeholders and sub-agencies of the UN (such as the World Bank or the World Health Organization) maintains these hierarchies. Depending on the status within that hierarchy, member states have different approaches to the issue of AI-use in the UN.
- V. The patterns of postcolonial domination vary regarding their intensity. This intensity also depends on the particular policy process, that a document represents.

- VI. Certain aspects of decolonization can be found simultaneously with patterns of postcolonial domination.
- VII. While both AI and the UN may be potential tools on a way towards liberation and decolonization, postcolonial patterns of domination currently still outweigh these aspects.

3. METHODS

This research aims at revealing how patterns of postcolonial domination are reflected in the UN's discourse on artificial intelligence. Therefore, the discourse is examined in terms of a rhetoric strategy serving particular actors to enforce hegemony. For that purpose, a Critical Discourse Analysis (CDA), based on Faircloughs approach is conducted. That concept is informing this research because it examines the hidden connections between language and critical analyses of language use, ideologies and social (de)formations as well as social sciences perspectives in more general terms (Keller 2015).

Their theoretical insights on hierarchies and hegemonies are also reflected in the theoretical framework of this thesis. Hence, Faircloughs idea build up to the theoretical concepts in an almost flawless manner (Fairclough 1997).

His model for CDA consists of three interrelated processes of analysis that are tied to three interrelated dimensions of discourse. These dimensions are the objects of analysis, that include verbal and visual texts, the process by which the object is produced and received and the socio-historical conditions that govern these processes. According to Fairclough, each of these dimensions requires a different type of analysis. There is first the text analysis as a description, then the processing analysis as the interpretation and last the social analysis as an explanation (ibid).

To be able to perform the textual analysis, a coding scheme is created that enables to generate information about linguistic patterns of the discourse by using the qualitative research software ATLAS.ti.

3.1 CASE SELECTION

AI plays an increasingly significant role in all kinds of politics, as in development aid or security. However, it supposedly reflects postcolonial practice simultaneously. The framework of the UN as an international organization makes this research especially interesting, as it offers unique analytical approaches for comparing different stakeholders and the constructed position of “the colonizer” and “the colonized” to each other, which is why UN documents were selected for the study.

By that, it allows the comparison of relevant member states and stakeholders from a postcolonial perspective. Relevant stakeholders are the UN general assembly, the UN conference on trade and development, the UN magazine chronicle the commission on trade and development and the chief executives board for coordination but also cooperation institutions, such as the EU or the WHO.

There are also several member states, that are possibly grouped together in commissions or networks, representing different roles. Former colonized states are for instance Arabic or Asian countries, such as Egypt, Saudi Arabia, Lebanon, India, Bangladesh; African countries, such as South Africa, Nigeria or

the Republic of Congo and South American Countries such as Chile or Brazil. Contrarily, there are Western countries as former colonizing states, such as the USA, Germany, Great Britain, or France.

The selected cases, all of which are UN documents, were chosen according to their accessibility and with the goal to represent a variety of perspectives, which is why the method of case selection is purposeful sampling.

The stakeholders initiate the discourse of the UN on AI 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 five years.

3.2 METHODS OF DATA COLLECTION

The collection of qualitative written textual data constitutes one part of the discourse analysis following Faircloughs approach. It is proceeded by first collecting relevant official data concerning the discourse on AI by the UN, these were all provided by the website and digital library of the UN.

The key criterion for a document's selection is to mention either AI or digital technologies, and also to represent a variety of member states and stakeholders. Creating a greater diversity in the data by including a wide range of member states is useful, since the theoretical assumption that postcolonial narratives are reflected by the documents underlies. If this is the case in the discourse, it can be assumed that the narrations of stakeholders and member states manifest themselves in all type of publications (Keller 2015).

The data was selected based on the idea of purposeful sampling. This enables the study of specifically information-rich cases that provide an in-depth understanding as well as an understanding what is still missing in the data. This is also based on the idea, that the cases represent maximal variation (Patton 2002 A & B).

The final data collection consists of 24 documents, that have a total scope of 719 pages. All documents have been published between 2017 and 2021. A list of these documents can be found in the Appendix.

3.3 METHODS OF CDA

To adequately analyze the textual data of the discourse a two-step approach was taken, that includes the analysis of the documents concerning patterns of postcolonialism and decolonization, to reduce the risk of a biased analysis that merely focuses on postcolonial concepts. Therefore, relevant concepts need to be operationalized. The functions and mechanisms that indicate that a discourse reflects postcolonial patterns of domination or decolonization are consulted as the subconcepts to be examined in the analysis.

The subdivided concepts of postcolonialism and decolonization are specified and translated into measurable items by using a coding scheme. The underlying technique of coding is called versus-coding (Saldaña 2015). Thereby, there are different concepts that either indicate colonial or decolonial codes mentioned. Accordingly, stakeholder, actions and underlying issues of both colonial and decolonial codes and concepts are compared to each other in the analysis. By that, the dilemma of two oppositional concepts existing in the same empirical space can be examined (ibid). In addition, the relevant aspects of neutrality, impartiality, validity, and reliability are ensured by adding a decolonial perspective to the analysis. Otherwise, there would be a potential risk of solely illustrating one side of the discourse and risking a biased analysis. Hence, versus coding consisting of colonial and decolonial concepts is the preferred method of CDA in this thesis. The concepts were derived based on approaches of postcolonial scholars. Especially the colonial ones were explicitly connected to specific codes (Santis 2020). The same applies to almost all the decolonial concepts as well (Mohamed 2020). All other ones were implicitly connected to codes in the literature as well (ibid, Adams 2021, Mignolo 2012)

Colonial Concepts	Codewords	Decolonial Concepts	Codewords
Nation-states (sovereignty)	USA, United States, United Kingdom, Great Britain, France, Germany, Portugal, Belgium, Italy, Israel, Netherlands	Grassroot organizations	Civil society, community, social activism, grassroots,
Agencies and institutions	European, Security Council	Agencies and institutions (bottom-up)	All NGOs dominated by former colonizing states following the purpose to decide upon themselves.
Mission of neo-colonial prosperity	Vulnerable*, disadvantage, support, innovation, common good, democracy, AI for good, humanity, global challenges, peaceful, process of stabilization, vision, political solution, needs, assistance, prosperity	Community work	Empowerment, indigenous projects
Ignorance of native language		Use of native language	
Imperialism	Competition, race, challenge, brave, press, force, incentive, military, defend, defense, war, exploitation, battle, fight, warfare, power, nuclear, surveillance, threat	Decolonizing processes	overcome differences, decolonization, representatives of former colonized states, full independence, voices of civil society, focus on people
Historicism	Modern, history*, cold war, century	Acknowledgement of colonialist issues	Conversation, equality, communication, dialogue, fairness, debate, justice, equal access, existing inequalities, discrimination, empowerment, mutual understanding, non-self-governing territories, occupying power, bridge, gap
Universal Scientism	Technology, Science, progress, internet, fourth industrial revolution, Data, digital, digitalization, cybersecurity, artificial	Decentering view	Refuse reproduction and imitation of the West in all structural facets.
Developmentalist fallacy & Binarism (the colonial difference)	Development, sustainable, sustainability, globalization, vision, assimilation, adaption, integration, poor*	Additive-inclusive view	Sticking to existing knowledge but changing the method of approach, more new and alternative approaches.
	Development, developing countries, people, society, sovereign, civil, better, improved	Engagement-view	Critical approach to science, reflection of the context in which science arises.

Intelligence and ethics	Ethic*, Intelligence, human rights,	Reduction of the exclusion of minorities or peripheries	Inclusion, dialogue, representation
Orientalism	Foreign, Middle-East, Terrorism, Barbarian, Uncivilized, Africa, orient		

Table 1: Coding scheme (short version), for the descriptive version see Appendix II.

The coding scheme contains keywords, sentences and phrases, some of which end with an asterik (*) to ensure that all possible linguistic variations are considered in the analysis. By applying the codes to the selected documents, the textual analysis as the first phase of Fairclough’s model is performed. That is the foundation for the linguistic analysis, that examines the relationship between the documents. As a last step, the discursive characteristics of the discourse are linked to the theoretical propositions that inform the thesis. A more detailed version of the coding scheme, in which the particular concepts are explained in further, can be found in Appendix II. For a systematic in-depth analysis, this thesis makes use of the qualitative research software ATLAS.ti, which is another pillar to provide a reliable and valid foundation for the analysis.

3.4 CONCLUDING REMARKS

To conclude, the key methodological insights provided in this chapter are summed up. A Critical Discourse Analysis (CDA) informed by Fairclough is chosen as research design guiding the analysis since its model is constructed to uncover hegemonic relationships and his theoretical approach resembles the one underlying this thesis. As a research case the postcolonial lens on the discourse of AI in the UN is chosen. The data collection consists of official documents published by the UN. In the process, purposeful sampling was applied in order to ensure the representation of a variety of stakeholders and nation states. For the analysis, the concept of postcolonialism is operationalized into subconcepts. Each of these is translated into key words and phrases that are illustrated in a coding scheme. Applying that coding scheme to the collected data presents the first step of the analysis, while analyzing the linguistics is the second step, followed by the interpretation of the intertextual analysis. Following these steps enables to eventually answer the research question:

How are patterns of postcolonial domination reproduced in artificial intelligence discourses of the United Nations?

4. ANALYSIS

The following section summarizes the analysis results of the UN documents. First, this paragraph presents the overall results. Next, outstanding codes and documents are analyzed and interpreted to describe the construction of language and how it connects to colonial ideologies, by connecting the theory with the results of the analysis.

4.1 OVERVIEW OF THE RESULTS

A general overview reveals that there is a much higher number of colonial codes than decolonizing codes, which is corresponding to the expectations stated in the theory section⁵. However, the co-occurrence of colonial and decolonizing codes in the same unit of analysis amplifies the interest in the research question on how patterns of postcolonial domination are reflected in the UN-documents. Hence, the analysis tries to examine that co-occurrence of adverse concepts (colonial and decolonial). This enhances the in-depth understanding for potential reasons for the reflection and reproduction of patterns of postcolonial domination. The following table structures the strongest results of the analysis and occurrence of codes:

(1) Strong colonial Codes UNCTAD (12.24%) Chief Executives (12.15%)	(2) Strong decolonial codes Economic and Social Council (2.24%) General Assembly (2.06%)
(3) Weak colonial Codes Economic and Social Council (10.26%) General Assembly (10.44%)	(4) Weak decolonial codes UNCTAD (0.26%) Chief Executives (0.35%)

Table 2: Categorized document groups according to number of colonial codes, all colonial and decolonial codes together are n= 12.709.

The first row illustrates the document groups, that consist of documents with strong colonial (1) or strong decolonizing (2) codes, while the second row shows document groups with weak colonial (3) or weak decolonizing codes (4). The terms *weak* and *strong* are each defined as the particular documents with the highest or lowest number of colonial or decolonial codes. Due to the scope of the thesis, only the most outstanding document-groups are mentioned in this table. All other documents can be integrated into the categories mentioned in this table.

A closer look at the co-occurrence of these codes reveals that those documents that contain a high number of colonial codes simultaneously contain a low number of decolonizing codes. The groups that contain lots of colonial codes and only few decolonizing codes are *UNCTAD* (United Nations Conference on Trade and Development; D8 & D15) and *Chief Executives* (Chief Executives Board for

⁵ These expectations will be discussed more extensively in the concluding results section since a brief overview is necessary at this point to understand the aspects of analysis and to create a circulate way of reasoning between expectations and results of the thesis.

Coordination; D13). Moreover, the ones containing strong decolonizing codes and, comparatively weak colonial codes are *Economic and Social Council (D24)* and *General Assembly (D23, D21, D20, D14, D7, D6, D4, D3, D2)*.

An in-depth analysis of the above-mentioned four documents groups is the goal of the following sections. For a better comparison and understanding of the phenomena, the analysis takes place on three levels: stakeholder, actions, and issues before leading to concluding remarks on the analysis of the documents, which is why the analysis section is split accordingly. Thus, the thesis examines the appearance of colonial and decolonial concepts in the UN documents.

4.2 EXAMPLES OF POSTCOLONIAL DOMINATION

The first document groups are the ones containing strong colonial and weak decolonizing codes, namely *UNCTAD* and *Chief Executives*. Therefore, the relevant stakeholders are analyzed first, followed by actions that indicate colonial patterns of domination. As both groups manifest a high number of codes that represent the concepts *Universal Scientism* and *Intelligence and Ethics*, these are further analyzed in the section on issues.

4.2.1 STAKEHOLDER

Stakeholders that are categorized as colonial include nation-states and agencies or institutions, that are dominated by former colonizing powers and have the purpose of deciding upon former colonized states or groups. The UNCTAD is an UN-agency that exclusively follows the goal to support the development and progress of countries (UNCTAD 2021), which the postcolonial lens of analysis already approaches as a typical pattern of domination. Thus, the content of the UNCTAD evaluation reports on the implementation of AI tools for trade and development mostly reflects global hierarchies as Western countries being advanced compared to countries of the global South, as for instance the statement “This series of publications seeks to contribute to exploring current issues in science, technology and innovation, with particular emphasis on their impact on developing countries” (D8, 3) ⁶implies. Furthermore, having a closer look at the structure and partnerships of the UNCTAD reveals that almost exclusively European or US-American institutions dominate the UNCTAD (UNCTAD 2021), which confirms the approach of the UNCTAD as a stakeholder that reflects patterns of postcolonial domination.

The other document group (called Chief Executives in this thesis) that presents strong colonial codes is the UN-coordination board, which is the coordination forum of the UN (CEB 2021). Its main tasks are “strategic guidance, promotes coherent leadership, shared vision and enhanced cooperation, and considers forward-looking solutions in response to mandates stemming from the governing bodies of

⁶ Excerpts of the analyzed documents will be referred to as (Number of document (cf appendix), page)

its member organizations“ (ibid). The CEB has plenty of cooperation with other UN-agencies. Within its documents on AI, it mostly sums up the contributions on an AI implementation plan of the Berkman-Klein Center: “At the request of ITU, the Berkman Klein Center for Internet & Society’s team on ethics and governance of artificial intelligence prepared an independent contribution offering a basis for the United Nations system-wide strategic approach on artificial intelligence ” (D13, 2). The Berkman-Klein Center is part of Harvard University in the USA, which examines its position as another rather colonial stakeholder since it represents knowledge and science from a Western perspective.

Other stakeholders that indicate colonial concepts, and hence patterns of postcolonial dominations are nation-states such as the USA or members of the European Union, the European Union itself, or other intergovernmental institutions such as the WHO (Santis 2020). The documents that refer to strong colonial codes also describe close partnerships with these stakeholders, “For example, in Belgium, public authorities have developed a federal strategy for digitalization (...) and regional strategies (...), mostly comprised of projects involving cross-border cooperation at the regional level, often connected to European Union programmes” (D8, 16).

4.2.2 ACTIONS

The *actions* level of analysis within the colonial codes represents not the underlying ideas, but the concrete actions that are suggested or evaluated in the documents. For the strong colonial groups, this demonstrates different actions that reflect patterns of postcolonial domination. One key action is the so-called mission of neocolonial prosperity. This thesis approaches it based on Esteban Santis’ understanding of it (Santis 2020) The mission of neocolonial prosperity is deeply influenced by the so-called United States empire (ibid). In contrast to traditional European colonialism, neocolonialism does not necessarily contain physical occupation. It is rather a project of economic and democratic development, such as the omnipresent concept of *sustainable development* (ibid). Santis states, that it is specifically the US-American idea that is closely connected to neocolonial thought such as the aspiration of a boundless and inclusive utopia as it is manifested in the American Dream (ibid). Thus, there is a connection to US-American policies that reflect the idea of the USA as the ultimate “international police power who determines, calls for, and checks the development of democracies, markets and world peace, globally” (Santis 2020, 145).

Several statements in the UN-documents reflect this idea, such as for instance “It outlines an internal plan to support capacity development efforts related to artificial intelligence technologies, especially for developing countries, with a particular emphasis on the bottom billion, in the context of achieving the Sustainable Development Goals” (D13, 1). The CEB understands itself as a key driver in pursuing the goal of prosperity in the world, by helping developing countries in achieving their Artificial intelligence strategies.

Since context-sensibility is crucial for a critical discourse analysis, only statements made by US-American institutions or organizations concerning peace, democracy, stability, or security are part of the concept of neocolonial prosperity. This point also draws an explicitly strong connection to the type of documents that is analyzed: it is mostly evaluation-reports, that are deeply dominated by US-American powers or representatives. On the contrary, minutes of meetings also allow representatives of former colonized countries to share their opinion. This might be one reason, why the evaluation reports are the ones that contain strongly colonial codes.

The ideas of Shamsul Hague (2019) explain the matter of representation within the postcolonial action of the mission of neocolonial prosperity. He states that the construction of academic knowledge and education is based on Western colonial legacies. In his description, one colonial tool of the de-indigenisation of science is to restructure it towards market driven options and business-type strategies (ibid). The appropriate document groups reflect that by stating:

“Business models that are oriented towards more inclusive and sustainable paths, both economically and environmentally, are a means to make innovations using frontier technologies economically viable and accessible to the poor while limiting possibly harmful impacts from technology” (D8, 8)

Or

“From the business perspective, targeting the poor makes economic sense. The global middle class has recently grown sizeably, but its purchasing power is still below that of the middle class in industrialized countries” (D8,8).

Both extracts describe the idea that it is the state’s responsibility to ensure progress and that that works most efficiently by using an economic perspective and making technology a private matter. Shamsul Hague further describes that, to a great extent, these policy reforms or redirections represent an ideological transition in the nature of the state from a developmental to a more neoliberal formation, especially under the pressure created by international economic powers like the IMF or the World Bank, which are both closely connected to relevant organs of the UN (Shamsul Hague 2019), and especially impacts peoples and communities, that are already marginalized (Sbicca & Perdue 2014).

Shamsul Hague also illustrates that due to contextual incompatibility of borrowed European administrative models it is necessary to reconstruct them in line with the indigenous contexts – historical, political, economic and cultural – of colonized countries (ibid, Mohamed 2020, Adams 2021). This alternative will be further discussed in the section on the strongly decolonizing documents.

4.2.3 ISSUES

The following part of the analysis points out two outstanding parts of the underlying ideological assumptions that are creating the reflection of postcolonial patterns of domination in the UN-documents.

To match the scope of the thesis, only two concepts are examined in detail, since the analysis revealed them as the two strongest codes.

UNIVERSAL SCIENTISM

The concept of *Universal Scientism* was the strongest code in the document groups *UNCTAD* and *Chief executives*, wherefore it can be interpreted as the strongest colonial issue within this framework. Santis (2020) and Wallerstein (1997) claim that scientism in general can be described as the pseudo-religious notion of an existing scientific truth that is valid and applicable across all of time and space (Wallerstein 1997). There are several statements within the analyzed documents that support this idea. For instance:

“Technological change is essential for economic growth and sustainable development, but it can initially widen inequalities. From a user perspective, recent technological advances could bring significant benefits that touch on all the Sustainable Development Goals” (D8, 1)

In this statement, different patterns of postcolonial domination are reflected according to the concept of *Universal Scientism*. The most relevant one is that technological change is told to be essential for economic growth and sustainable development. Following Wallerstein’s idea this would imply that technological change is the existing scientific truth that is valid across all of time and space (Santis 2020). Indicators for that are the use of the word “essential” in the sentence as much as “significant benefits”. And even though the notion of potential risks of technological change is imbedded in the very same sentence the desire for development seems to outweigh those risk (ibid). The constructed validity of this scientific truth is problematic from a postcolonial perspective, because it justifies policies and decisions that one (small) group of people makes for other people, instead of letting them decide for themselves, which is a core issue of (neo)colonialism (ibid). The deciding, hegemonic group is Eurocentric and reproducing colonial patterns of power (ibid).

Accordingly, Santis states that within the narrative of universal scientism, the Western Man is the central, almost deified subject. He is constructed as the founder of knowledge, using science as a tool to rationally tame and conquer nature, to control multitudes and dissect secular phenomena (Santis 2020). This is reflected in the documents for instance by stating that *“All countries will need to pursue science, technology and innovation policies appropriate to their development stage and economic, social and environmental conditions” (D15, 4)*. The described need to pursue science, technology and innovation reflects Santis’ interpretation of science as a desired tool to tame the uncontrollable (Santis 2020).

Another indicative statement is the idea of *Sustainable Development* that is a central concept in many of the documents. Hence, it appears as the goal and central issue of modernity. Simultaneously it

represents Horkheimer and Adorno's *Dialectic of Enlightenment* (2006/1944): Development and progress remains crucial for the Western Man. The realization of exploitation and destruction of nature and peoples as the consequence of technological progress, the idea of *Sustainable Development* emerges (Jabareen 2006). It implies, that development remains the core value, which is supported in the UN-documents by statements such as “*Recent developments in frontier technologies, including artificial intelligence (...) have shown tremendous potential for sustainable development*” (D15, 4) or “*Technological progress is essential for sustainable development*” (D15, 23) creating the narrative of an unavoidable progress towards constant development and improvement (Jabareen 2006). This reality is, by necessity, a masculine reality: “in modernity, non-Europeans and women are closely associated with nature, an element which the deified Western Man must tame”(Santis 2020: 137). The documents reflect this pattern by statements such as

“Currently most technologies are created by firms in the global North and predominantly by men” (D15, 21),

a statement that underlines the masculine and Western narrative of the current technological discourse in the UN, but also in general.

INTELLIGENCE AND ETHICS

The concept of *Intelligence and Ethics* includes all codes and phrases that refer to the Eurocentric understanding of Intelligence and Ethics in a postcolonial sense. Rachel Adams (2021) refers to the technology of artificial intelligence as a tool that alters the definition of being human. She states that the concept itself is missing out on relevant issues: it only includes a particular, Western perspective on the definition of intelligence. Therefore, it creates a division between the intelligent and the non-intelligent that reminds of the concept of colonial binarism (Adams 2021). The roots of this can be found in traditional colonial practice, as Achille Mbembe further describes the history of the human body itself as machine and commodity borne from slavery and colonialism. Hence, it is blackness and everything connected to it that serves as the prototype for the relation between human and object in modernity (Mbembe 2017). The different ways in which the knowledges that constitute AI (statistical enumeration of people and land) were advanced by imperial powers to control colonial populations (Adams 2021). However, there is no explicit mentioning of the ideology of intelligence and ethics as colonizing tools. Underlying statements are for example: “*New technologies could also enhance the maintenance of peace and security, (...), by providing new tools and augmenting existing ones.*” (D5, 1). Therefore, it is rather the theoretical framework that implies the purpose of AI as a surveillance and security mechanism, than the analyzed documents.

A similar idea applies to ethical standards, as Gayatri Spivak points out (Spivak 1988). She states that ethics is one of the main drivers seemingly legitimating traditional colonialism as such. Thus, the

narrative of Europe as a savior that is helping and protecting its colonies was created and ethics were the justification for so-called civilizing missions and the exploitation of colonies as laboratories for Western scientific progress (Adams 2021). Consequently, a colonial structural order emerged, leading to the idea of Western reason being neutral, universal, and objective. Hence, it is assumed to be universally applicable and able to be dislocated from the context in which it arose and applied elsewhere. Additionally, Western knowledge and rationality is claimed to be the only serious way of knowing and understanding the world (ibid).

The UN-documents imply these concepts in different statements. The strongest indication of a patterns of postcolonial domination and the concept of Intelligence and Ethics is probably the fact that the UN does not take any non-Western ethical guidelines into consideration. Almost all guidelines are presented by either the USA or European Countries. There are few contributions of Asian Countries, such as Japan or China, but there is not one single contribution from either an African or a Latin-American Country. Also, the UN strongly oriented its AI-plan on the ideas of the Berkman Klein Center (part of Harvard University):

“At the request of ITU, the Berkman Klein Center for Internet & Society’s team on ethics and governance of artificial intelligence prepared an independent contribution offering a basis for the United Nations system-wide strategic approach on artificial intelligence . The contribution drew upon the Berkman Klein Center’s significant expertise in considering the effects of emerging technologies, the Center’s work as part of the Ethics and Governance of Artificial intelligence Initiative, and extensive research relating to the concerns of global policymakers as they seek to respond to the challenges and opportunities of artificial intelligence technologies. The contribution was key to the role of ITU in leading the related work stream of the Committee.” (D13, 2)

This excerpt reveals, how closely connected the concept of ethics is to Western ideologies, because there were no guidelines or principles from the global South taken into consideration. Furthermore, D15 (p.21) shows, that all successful AI-technologies are exclusively built in big tech-firms in the USA, which supposedly adds to Adams’ argument of an unbalanced understanding of Intelligence and Ethics itself: since Western firms are a synonym for intelligence and progress they are trusted most to build and program excellent AI technologies (Adams 2021).

4.3 THE UN, ARTIFICIAL INTELLIGENCE AND DECOLONIZATION

In the following section, the document groups that show a relatively high number of decolonizing codes are further examined. The documents by the Economic and Social Council and by the General Assembly provide a foundation for analyzing the dilemma of colonial and decolonial codes existing simultaneously. Therefore, the following section points out different approaches on how to interpret

that dilemma and in doing so, tries to offer different perspectives on how postcolonial patterns of domination are reflected in the AI-policy documents of the United Nations.

4.3.1 STAKEHOLDER

First, the codes that indicate potential decolonizing stakeholder are analyzed within the document groups that contain strong decolonizing codes. Having a closer look at that issue reveals that it is especially the stakeholder component that determines a decolonizing understanding of a particular code. In addition, both groups are rather focusing on the process of policymaking concerning AI in the UN, instead of evaluating the results. During the process, a lot of *decolonizing* stakeholder get the chance to share their opinion whereas the evaluation reports seem to be strongly influenced by Western perspectives.

In this thesis, a stakeholder is defined as a decolonizing stakeholder when it represents a former colonized country personally and formally (Césaire 2001). This includes agencies, organizations and institutions that are from former colonized countries and that represent the interest of the people of such countries. The appropriate documents expose a relatively high number of representatives of former colonized countries and the representation of such interests (ibid).

For instance, in D24 different points of views participate in a so-called multi-stakeholder forum:

“TAREQ MD ARIFUL ISLAM (Bangladesh), speaking on behalf of the Group of Least Developed Countries, said those nations had made progress in achieving universal access and Internet affordability. Yet, information and communications technology was almost entirely in the hands of large companies, with least developed countries lacking the infrastructure and broadband networks to derive their benefits. Noting that several of those countries were on the path to graduation, he said that to make graduation irreversible, science, technology and innovation was crucial.” (D24, 5)

or

“Ms.KIJAZI, who was also co-chair of the 10 Member Group, said not all available technologies could be applied to countries, citing infrastructure and human capacity challenges. Least developed countries must be able to sustain the technologies that were transferred to them.” (D24, 8)

These excerpts are relevant regarding different decolonizing mechanisms. The mere presence of representatives of former colonized countries to share their perspective already implies an approach towards decolonization. Despite that, the documents still reveal a much higher amount of colonial codes, meaning that the presence of decolonizing stakeholder might not be able to outweigh the underlying subconscious patterns of domination. In addition, even though they can speak and represent

decolonizing interests, they are not in deciding power-holding positions. The implications for decolonizing actions and the acknowledgement of colonial issues will be examined in the following sections.

4.3.2 ACTIONS

The next section outlines the actions that imply decolonization. Indicators for that are the explicit mention of community work, the use of native language and decolonizing processes, that includes involvement of former colonized countries in relevant matters and their definite representation. As Wa Thiong'o (1986) states, it is especially language that carries the potential to reproduce postcolonial patterns of domination. Through language, a variety of values and cultural ideas are shaped and the predominant use of former colonizing languages, such as English, French, or German indicates an ongoing hierarchy and hegemonic perception of the world. Hence, language is a crucial tool for decolonization (Wa Thiong'o 1986).

While the UN generally claims to offer their documents in a variety of languages, the documents at hand are all written in either English or French. One document contains a foreword in Arabic (D1, 7f.). However, the documents themselves do not indicate a translation into any further non-colonial language.

Despite that, statements like “*His organization was working on a project for people to use their own scripts — or languages — to navigate the Internet.*” (D24, 8) indicates actions, that presumably work towards the idea of making AI more accessible by adding to the variety of languages.

4.3.3 ISSUES

The next section analyses the underlying acknowledgment of colonial issues in the documents that appear to be categorized as strongly decolonizing. The codes of decolonizing issues imply all types of acknowledgements of the underlying and partly subconscious colonial patterns of domination. This includes the mere acknowledgment of the fact that such hegemonies and power structures exist. Thereby, a critical understanding of history and the reflection of colonialism, the recognition of scientific truths being context sensitive instead of universal applicable, the recognition of ongoing effects of colonialism and the explicit goal of building bridges between oppositions to overcome them implies a decolonizing issue (Mohamed 2018 & 2020).

Mohamed, Png and Isaac (2020) state that the idea of decolonization includes the territorial and the structural decolonization. The second seeks to undo colonial mechanisms of power, economics, language, culture and thinking that shapes modernity: interrogating the provenance and legitimacy of dominant forms of knowledge, values, norms and assumptions. According to Mohamed, Png and Isaac that includes three central factors. First a so-called decentering view follows the intention to refuse the

reproduction and imitation of the West in all structural facets. This also includes the decolonization of science and technology as Western tools and instruments (Harding 2011). Second, the so-called additive-inclusive view serves the idea of sticking to existing knowledge but changing the method of approach. Accordingly, new and alternative approaches should receive more attention (Mignolo 2012) and appreciation (Escobar 2011). Third, the so-called engagement-view requires an overall critical approach to science, meaning that the context in which science arises needs to be critical reflected and that minorities and marginalized are the focus of all scientific practice. Hence, the exclusion of minorities or peripheries will be decreased (McDowell & Chinchilla 2016).

Generally, decolonial theory is a concept that understands the nature of power of technologies such as AI as imbalanced. Hence it creates a framework and perspective of metropole and periphery whereas the metropole is the power holder and by that, controls the periphery. The periphery holds relatively less power and contest the metropoles authority, participation, and legitimacy in shaping everyday life. That lens corresponds with postcolonial theory. “Using the lens of metropole and periphery, we can identify con- temporary practices in AI development partially as features of colonial continuities from states and governments. Similarly, today’s technology corporations could be described as metropoles of technological power with civic society and consumers sitting at the periphery.” (Mohamed et al. 2020: 664)

In the appropriate documents, there were some extracts that indicate the acknowledgement of colonial issues, for instance

„External forces — consumers, citizens and entrepreneurs — were needed from around the world, not only a pocket of wealthy California entrepreneurs“ (D24, 4)

This excerpt indicates that stakeholders from all over the world should contribute to AI-strategies and not only stakeholders from the US or, more specifically, Silicon Valley. This shows that there is awareness of current structures, that depend on the idea of Western thought being more valid than non-Western thoughts. A similar thought is underlying in the following statements:

“It was a truly multi stakeholder endeavour, with most contributions having come from developing country nationals, almost half of them women.” (D24, 5)

Or

„There was a risk of not taking advantage of technological advancement or being a good adopter of technologies that had been imported from the outside. The local perspective must be harnessed to find the best solutions to problems” (D24, 7)

Furthermore, it is explicitly mentioned that indigenous knowledge should be part of AI-strategies and that the implementation of digital technologies as political tools is highly context sensitive:

“He welcomed the issue raised around indigenous and existing knowledge, a focus area of the last10 Member Group, and cautioned against confusing emerging with disruptive technology.” (D24,.10)

In addition, another conceptualization of “Sustainability” is provided. In D24 it is described as solutions that should focus on people and existing systems, implying a decolonizing idea, whereas the usual concept of sustainability (often in the context of the SDGs) mostly bears the inevitable use of digital technologies. In this case, those technologies do not seem to be essential for solutions to be sustainable. In addition, D24 does not describe countries of the global South as being “behind” Western states (even though the term “developing countries” is used) but rather focuses on mentioning all the knowledge that “the South” can add to the dialogue. Therefore, decolonizing tools such as the additive inclusive view are represented in D24.

“Sustainable solutions must, therefore, focus on people and on existing systems.” (D24, 12)

There is a similar underlying decolonizing thought in the following excerpts:

“A representative of the major group for children and youth made a number of suggestions, underlining a need to shift away from economic models exclusively and towards living in harmony with nature.” (D24, 13)

Or

“The South had much to teach the North on low impact, high output agricultural production, including indigenous knowledge that had been cultivated over thousands of years.” (D24, 14)

Nonetheless, there is still a high number of colonial codes in that document. Hence, even though there is awareness about underlying postcolonial patterns of domination, they are still yet to be fully recognized and transformed. It is especially the stakeholder aspect that makes a difference, because if the statements that are understood as “decolonizing” in this thesis were made by stakeholders that are categorized as “colonial”, the statement themselves would reflect such hegemonies of colonialism as well.

5. CONCLUSION

The last section describes the results of the analysis and thus summarizes a sufficient answer to the research question of the thesis, based on the analysis. Then, the findings are discussed followed by some practical implications that emerge from the discussion.

5.1 RESULTS OF THE ANALYSIS

First, different final remarks and results can be drawn from the analysis that respond to the expectations stated based on the theoretical framework. The first expectation (I) states that the language used in the UN documents on AI reflects postcolonial domination as a hierarchy in different political contexts. The analysis reveals that this first expectation can be confirmed. Numerous distinctive colonial concepts that imply postcolonial patterns of domination, were found in the documents. In addition, these colonial concepts are predominant compared to decolonial concepts, which is another validation of the expectation.

The second expectation (II) draws the connection that the hierarchy reflects the binarism of former colonized and colonizing countries. This can be generally confirmed as well. Most documents reveal, that on a stakeholder level, Western countries hold more power compared to non-Western countries. However, there are few documents revealing that a dialogue at eye-level does happen, as for instance during some assemblies.

Third, (III) the political contexts that involve AI use are areas of development politics, trade, health, education, security, and ethics. The analysis generally confirms this expectation as well. The most relevant political contexts represented by the documents are development politics and trade, but also security and ethics play a significant role. On the contrary, the sphere of education or health politics do not matter as much, at least in this selection of documents.

The fourth expectation (IV) expresses that these hierarchies are also reflected in the involvement of different stakeholders and sub-agencies of the UN. Depending on their status within that hierarchy, stakeholders have different approaches to the AI use in the UN. The analysis strongly confirms this expectation, as it is especially the stakeholder that either reflects colonial or decolonial concepts. Most Western stakeholders reflect colonial concepts and thereby postcolonial patterns of domination while non-Western stakeholders potentially reflect decolonial concepts as they represent the marginalized.

Fifth (V), it was expected that the documents do not reflect the same type of postcolonial patterns of domination. Hence, that domination varies according to the particular policy process that a document represents. This expectation was met in the analysis as well. As the different document types reveal, it is especially the beginning of the so-called policy-cycle that reflects decolonial concepts, such as the representation of non-Western countries. In contrast, the evaluation reports rather reproduce colonial

concepts, such as colonial binarism or universal scientism. Both concepts entail the hierarchies of colonialism as mentioned above and the Eurocentric foundation of technological tools in the political sphere.

A sixth expectation (VI) states that aspects of decolonization will be found simultaneously with patterns of postcolonial domination. This expectation is verified as well. The analysis shows that both concepts exist in the same empirical space. Nonetheless, the colonial concepts are more prevalent than the decolonial ones.

Finally, the seventh expectation (VII) assumed, that while both AI and the UN are potential tools for liberation and decolonization, postcolonial patterns of domination are still predominant in the documents as those patterns are deeply rooted within political and economic systems. The analysis proves this expectation to be confirmed as well. The existence of liberating and decolonizing aspects is another clue for the possibly underlying and subconscious character of the postcolonial patterns of domination. Nonetheless, the mere quantitative results of the analysis are evidence for predominant colonial concepts.

5.2 ANSWER TO THE RESEARCH QUESTION

As Mohamed Shakir states “We rely on inherited thinking and sets of unquestioned values; we reinforce selective histories; we fail to consider our technology's impacts and the possibility of alternative paths; we consider our work to be universally beneficial, needed and welcomed“ (2018), a quote, whose content is well reflected in the UN-discourse on artificial intelligence , as the discourse analysis in this thesis points out.

The discourse analysis revealed different ways in which patterns of postcolonial domination are reflected in the AI discourse of the UN. This phenomenon has been examined on different levels, namely the stakeholders, actions and underlying issues. To get a clear distinction and explanation for the existence of postcolonial patterns of domination and decolonizing factors in the same empirical space, the mechanism of versus coding unraveled the dialectic behind that co-occurrence.

The coding scheme and use of the qualitative research software program ATLAS.ti illustrates the existence of a variety of patterns of postcolonial domination within the UN discourse on AI. The most outstanding ones were pointed out in the thesis, together with several aspects that would indicate decolonization, however, they showed off to be infrequent compared to the colonial codes.

On the stakeholder level of analysis, predominant factors are the matter of representation and the part of the policy process that the document represents. Evaluation reports or policy recommendations are rather influenced by colonial stakeholders (Western states and institutions). On the other hand, assemblies and meetings demonstrate more decolonizing stakeholder, such as representatives of former

colonized countries. That reveals that patterns of postcolonial domination are deeper embedded in the outcomes of the policy process than in the discussion about issues. Thus, the UN as an international organization does seem to generally provide an appropriate forum to discuss matters of AI in a decolonizing sense (Sinclair 2018), however, the outcomes are still reflecting ongoing colonial hierarchies (Nikita & Dhawan 2015; Halperin & Palan 2015). In addition, the stakeholder level shows, that there is a high potential to work towards decolonization, as stakeholder as representatives of the global South might be able to speak for the marginalized (Mohamed 2020).

Nonetheless, the action level of analysis deepens the interpretation that the mere representation of non-Western stakeholders does not automatically lead to decolonial actions emerging from it. On the language level, the use of colonizing languages (such as English and French) and the ignorance of native languages reflects patterns of postcolonial domination (Wa Thiong'o 1986). Also, the frequently implied mission of neocolonial prosperity, that puts the UN in the position of "the savior" bringing peace and democracy, examines such patterns (Santis 2020). And even though there seems to be a general awareness about postcolonial issues, the concrete AI-related policies and recommendations mostly ignore them.

Third, especially the underlying issues and ideologies are reproducing patterns of postcolonial domination, as there is an exceptional gap between colonial and decolonial codes on the "issues" level (Santis 2020). This confirms the underlying idea of a critical discourse analysis: linguistic patterns in the UN-documents reflect current sociological structures. And as several postcolonial scholars point out, postcolonialism deeply influences all parts of our everyday life (Nikita & Dhawan 2015). The strongest underlying ideology within the analyzed documents are Universal Scientism (Santis 2020; Wallerstein 1997) and Intelligence and Ethics (Adams 2021). The first implies an approach that assumes Western science and knowledge to be universal applicable, although it might be context sensitive (Santis 2020). Intelligence and Ethics is connected to AI in particular, as it questions the context of its development: the roots of intelligence and ethics are strongly linked to actual colonial practice of surveillance and the use of the African continent as a "Western laboratory" (Adams 2021: 10). By continuing to apply that idea and knowledge without a critical reflection of it, global postcolonial hierarchies are re-created (Mohamed et al. 2020).

In addition to the main research question, the subquestions can be answered as well. Thus, the theory is critically reviewed in light of the research question. The first subquestion (1) includes the concept of postcolonial domination itself (Nikita & Dhawan 2015). This can be answered with central aspects of the theoretical framework. In the technological context of the thesis, postcolonial domination entails different colonial concepts such as Universal Scientism, neocolonial prosperity, Orientalism or colonial binarism (Santis 2020, Said 1978, Wallerstein 1997). All concepts share the idea of Western countries being (still) advanced and opposed to non-Western countries, that represent the constant other (Nikita

& Dhawan 2015). Hence, Western thought, such as science or technologies, are assumed to be universal applicable without considering their potential context-sensitivity (Harding 2011) or respecting the global diversity of lifestyles, needs and preconditions (Mohamed 2020, Shamsul Hague 2019).

Thereby, different elements of digital technologies reflect postcolonial domination, as subquestion two (2) addresses (Harding 2011). These are especially the concepts of universal scientism and intelligence and ethics. The first one, as mentioned above, glorifies Western rationality and scientific progress, and is thereby strongly connected to the Enlightenment idea (Wallerstein 1997, Santis 2020). The second one assesses technological tools and especially AI as reproduction of colonial thought and practice. During the colonial era, both intelligence and ethics were central factors for differentiating between what is human and what is not. This idea is reflected in AI as a political tool as well, as this study shows (Adams 2021, Mohamed 2020).

The third subquestion (3) asks about postcolonialism within international organizations. Within the UN, postcolonial domination emerges especially through the dichotomy of “the West and the Rest” (Hall 1997). Here, the policy-cycle has a strong influence on the perception of power in the UN, as there is a general inclusion and representation of non-Western stakeholder for marginalized peoples (Mohamed 2020). However, evaluation reports reveal that Western stakeholder dominate the discourse at last.

The fourth subquestion on how postcolonial narratives are reflected in AI documents of the UN and which differences between colonial and decolonial concepts can be examined is anticipated in the research as well. These postcolonial narratives on AI are reflected in the documents in different ways. The existence of decolonial concepts next to colonial concepts underlines the complex embeddedness of postcolonial patterns of domination in society and political systems (Mohamed 2020, Nikita & Dhawan 2015). For decolonization, the stakeholder factor seems to be especially significant (ibid).

Finally, the extent to which a postcolonial nature of domination can be found in the crafting of the AI documents draws a connection to the main research question. As an answer, it can be stated that there is a strong presence of postcolonial patterns of domination in the UN documents on AI, especially in contrast to decolonial structures.

5.3 DISCUSSION OF THE FINDINGS

The nexus of analysis for this thesis consisted of AI as a technological factor, the UN as an international organization and the analysis of the discourse with a postcolonial lens. Both factors (AI and UN) potentially withhold empowering and decolonizing mechanisms (Sinclair 2018, Dhawan 2019). However, it seems to be especially the AI-factor that reflects patterns of postcolonial domination (Adams 2021). The factor of an international organization as such proved to implement some essential

decolonizing mechanisms (Sinclair 2018), especially on the stakeholder level, regarding the representation of issues related to the global South.

The research revealed that the postcolonial lens in a discourse analysis generally confirms the existence of global hegemonies, that are influenced by colonial power structures, such as many postcolonial scholars as for instance Edward Said (1978), Stuart Hall (1997) or Gayatri Spivak (1993) state. Simultaneously, decolonial concepts exist in the UN documents as well, as Mohamed (2020), Sinclair (2018) or Adams (2021) suppose. It seems, that especially the technological aspects of Universal Scientism and Intelligence and Ethics have a strong influence on implicit or explicit patterns of postcolonial domination. This argument is supported by theories of Santis (2020) and Wallerstein (1997) and further integrated by the ideas Shamsul Hague (2019), Harding (2011) or Adams (2021) who assume, that the colonial history and context insensitivity of AI makes its implementation in former colonized countries especially contentious. Thereby, the research questions the possibility of AI being a tool of decolonization, an idea, that is implied by Dhawan (2019) and Mohamed (2020). In contrast to their statements the thesis reveals that the current discourse about AI in the UN does not approach decolonizing ideas and rather deepens Western Hegemonies throughout the years. However, the approach of international organizations being a suitable framework for decolonization, as it is anticipated by Sinclair (2018) could be confirmed in this research, since it revealed that especially the stakeholder level allowed marginalized stakeholder to represent former colonized countries or communities. Hence, the framework of the UN currently and in the context of this thesis seems to have a higher potential to liberate and decolonize than AI does. Moreover, some colonial concepts such as Intelligence and Ethics, that has been extensively studied by Adams (2021) arose in the documents quantitatively, but a deeper insight revealed, that the issue is rather underlying than explicitly mentioned.

However, there are some limitations to this study, which are also discussed in this section. Firstly, the selection of 24 UN documents is not able to represent all UN documents or the underlying mindset and structures of the UN. It can only offer a small insight into the UN's work that is represented in the documents. Second, the scope of the thesis did not allow for an in-depth analysis of all 24 documents. Especially the interpretation of the results has a focus on the strongest colonial and decolonial concepts regarding the hegemonies they reproduce. The distinction between quantity and quality of the coded statements is another weakness of this study because the quantity of coded statements was the crucial factor for its classification as colonial concept. Hence, another international organization or an in-depth analysis of particular documents and stakeholder would be an interesting issue for further research and provide supplementary information regarding the rejection or confirmation of the stated expectations.

5.4 PRACTICAL IMPLICATIONS

Finally, the present study provides crucial implications for policy makers not only in the United Nations, but in international organizations in general. Since decolonization is the central underlying concept and one goal of international relations (UN 2021), the ideas of Mohamed (2018) and Adams (2021) are fundamental as guidelines. Thus, the most central steps emerging from Mohamed and Adams ideas connected with the outcomes of this thesis are summed up in the following paragraph.

A first crucial step is the *degeneration of dependencies of Western stakeholders*. In the context of the UN, this implies the concrete ability for non-Western stakeholders, such as countries of the global South, to not only represent themselves in all relevant councils and assemblies, but also to create a dialogue about AI-related policies on eye-level. This applies specifically to the use of AI-technologies regardless of the context. Thereby, non-Western regions should be supported in creating their own AI-mechanisms that suit their specific needs and conditions (ibid).

Second, the *inclusion and recognition of marginalized communities* is highly significant. Hence, decolonization does not solely include the mere creation of a dialogue at eye-level, but also requires this dialogue to anticipate bottom-up structures. By that, the risk of a reproduction of exploitative systems gets minimized and a general approach of giving a voice to the marginalized is provided (ibid).

Third, *regional, local, and especially indigenous cooperation* needs extensive support. In the context of AI mechanisms within the UN this means, that companies, researchers, universities but also communities in countries of the global South should get major financial and ideological support from Western member states and stakeholders within the UN. Preconditioned is the aspect of recognition of these global imbalance and inequalities regarding hegemonies and power structures within the political sphere of AI in the UN (ibid).

The aspects above facilitate the empowerment of marginalized countries. For policies on AI this concretely entails the inclusion and representation of people from the global South for the discussion, implementation, and evaluation of AI policies. Meaning, policies and technologies should be studied and implemented due to the context they are applied in. The UN should support that in economic and political ways. Furthermore, Western stakeholders should explicitly address issues in Western context and thereby offer marginalized communities' autonomous solutions. Underlying postcolonial issues and patterns of domination should be discussed, reflected and acknowledged in the UN to create dialogues at eye-level. Decolonization is a long-lasting process. This thesis revealed based on theoretical considerations that this process requires a lot of work and changes, however, it also revealed that it is a very realistic and essential process, aiming at the liberation of all people and the creation of a consistent international community.

6. LITERATURE

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APPENDIX

I. UNITS OF ANALYSIS: UN-DOCUMENTS

1. **ESCWA** (Economic and Social Commission for Western Asia): *Impact of the Fourth Industrial Revolution on Development in the Arab Region*. Beirut, 2019.
2. **General Assembly**, Official Records: Summary Record of the 28th meeting. *Promotion and Protection of Human Rights*. 73rd Session, 24/01/2019.
3. **General Assembly**, Human Rights Council: *Racial discrimination and emerging digital technologies: a human rights analysis. Report of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance*. 44th Session, 18/06/2020.
4. **General Assembly**, United Nations Commission on International Trade Law: Work programme of the commission: *Legal aspects of smart contracts and artificial intelligence* . 51st session, 30/05/2018.
5. **Secretary-General**, Statements and messages: *Use Science, Technology to Bolster World's Collective Security*, Secretary-General says at Round Table. 23/03/2018.
6. **General Assembly**, Second Committee, Meetings Coverage: *Amid Rise in Migration Worldwide, Representatives Underlines Segment's Contribution to Development, as Second Committee Debates Globalization, Interdependence*. 73rd Session, 19/10/2018.
7. **General Assembly**, Human Rights Council: *Artificial intelligence and privacy, and children's privacy*. Report of the Special Rapporteur on the right to privacy. 46th Session, 25/01/2021.
8. **UNCTAD** (United Nations Conference on Trade and Development): *Harnessing Rapid Technological Change for Inclusive and Sustainable Development*. Geneva, 2021.
9. Kirkpatrick, R. and Vacarelu F.: *A Decade of Leveraging Big Data for Sustainable Development*. **UN Chronicle**, 2017.
10. 'Utoikamanu, F.: *Closing the Technology Gap in Least Developed Countries*. **UN Chronicle**, 2019.
11. **ESCWA** (Economic and Social Commission for Western Asia): *Developing an artificial intelligence strategy National guide*. Beirut, 2020.
12. **ITU** (International Telecommunication Union): *United Nations Activities on Artificial intelligence (AI)*. Geneva, 2019.
13. **Chief Executives Board for Coordination**: *Summary of deliberations, A United Nations system-wide strategic approach and road map for supporting capacity development on artificial intelligence* . 1st Session, 17/06/2019.
14. **General Assembly**, United Nations Commission on International Trade Law: *Legal issues related to the digital economy – artificial intelligence* . 53rd Session, 07/05/2020.

15. **UNCTAD** (United Nations Conference on Trade and Development): *Technology and Innovation Report. Catching technological waves. Innovation with equity*. Geneva, 2021.
16. **ITU** (International Telecommunication Union): *United Nations Activities on Artificial intelligence (AI)*. Geneva, 2018.
17. **Secretary-General**, Statements and messages: *Harness Technological Advances for “the common Good”*, *Secretary-General tells Artificial intelligence Summit*. 28/05/2019.
18. **Deputy Secretary-General**, Press Release: *Deputy Secretary-General Spells Out Benefits, Risks of Artificial intelligence during Event on “Advancing Global Goals”*. 25/09/2019.
19. **Secretary-General**, Statements and messages: *Secretary-General, at UNESCO General Conference, Welcomes Effort to Form Global Normative Instrument on Ethics of Artificial intelligence* . 12/11/2019.
20. **General Assembly**, Plenary Meetings Coverage: *Defeating Terrorism, Human Trafficking crucial for Addressing Huge Migratory Flows into Europe, Speakers from Continent Stress at General Debate continues*. 71st Session, 23/09/2016.
21. **General Assembly**, First Committee, *Meetings Coverage: Potential Security Impacts of Cyberspace Misuse considered in First Committee, as Speakers warn of Arms Race, Emergence of New Theatre of Warfare*. 70th Session, 30/10/2015.
22. **Secretary-General**, Statements and Messages: *From Nuclear Threat to Cyberwar, Unity must prevail over Division in Tackling Global Challenges, Secretary-General Tells Security Forum*. 16/02/2018.
23. **General Assembly**, Fourth Committee, *Meetings Coverage: Delegates Urge Administering Powers to Take Necessary Steps for Rapid Self-Determination, as Fourth Committee begins Decolonization Debate*. 73rd Session, 08/10/2018.
24. **Economic and Social Council**, *Meetings Coverage: Critical Role of Science, Technology, Innovation Cannot be Ignored, Economic and Social Council President Tells Multi-Stakeholder Forum*. 05/06/2018.

II. DESCRIPTION CODING SCHEME

<u>Stakeholder</u>			
Colonial Concepts	Colonial Code Description	Anti-/ Decolonial Concepts	Anti-/ Decolonial Code Description
Nation-states	Nation States (as a Western, colonial control mechanism) (Colburn 2021)	Grassroot organizations	Movements, affected communities (Mohamed 2020)
Agencies and institutions	(...) that are dominated by former colonizing states and follow the purpose to decide upon former colonized states (Halperin & Palan 2015)	Agencies and institutions	NGOs dominated by former colonizing states following the purpose to decide upon themselves (Mohamed 2020)
<u>Actions & Perceptions</u>			
Mission of neo-colonial prosperity	The USA as an international police power and protector of democracy. Unlike European colonialism, neocolonialism (typified by the US empire) is not fixated with a physical and limited occupation. (Santis 2020), “development work” e.g. vulnerability, peace-keeping missions, collective security, denuclearization, peaceful resolution (Santis 2020)	Community work	A bottom-up approach of support and “development-aid” (Mohamed 2020)
Ignorance of native language	The extensive use of colonial languages (Wa Thiong’ O 1986)	Use of native language	Expression of acknowledgement and respect towards marginalized communities (Mohamed 2020)
Imperialism	The way one country exercises power over another (direct & indirect); all actions following the goal to force one countries’ power on another (Halperin & Palan 2015)	Explicit Decolonizing processes	As for instance the repatriation of indigenous land and peoples (Fanon 1981)

Issues

Historicism	European perfection, Europe as the end of history (Santis 2020)	Acknowledgement of colonial issues, following the goal to reveal and transform them (Mohamed 2020 & Adams 2021)	A woke and aware examination of history including reflection of colonialism and postcolonial patterns of domination
Universal Scientism	Notion of the existence of scientific truths that are valid across all time and space (Wallerstein 1997 & Santis 2020)	<ul style="list-style-type: none"> - Decentering view - Additive-inclusive view - Engagement-view - Reduction of the exclusion of minorities or peripheries (Mohamed 2020) 	Realizing that scientific truths are context-sensitive and not universal applicable
Developmentalist fallacy	Shame, putting guilt on countries that are not as developed as the West (Santis 2020)	All code-descriptions emerge from Mohamed's conceptualization of decoloniality.	Recognizing different historical contexts and ongoing effects of colonialism
Binarism (the colonial difference)	A system of differences, two oppositions and the colonial status quo is marked by the impossibility of bridges between these oppositions (Said 1978, Santis 2020)		Building bridges between oppositions to overcome them
Intelligence and ethics	“both are value-laden concepts that historically operated as a racialized dividing practice to differentiate between peoples and reaffirm white superiority” (Adams 2021)		Recognizing intelligence and ethics as former colonial mechanisms, accredit non-Western intelligence and ethics
Orientalism	“stylized and abstracted statement of the characteristic non-Western civilizations” Wallerstein (1997: 28); cf. Said 1978		Recognizing orientalist patterns and setting the goal of transforming them