

CLEIMUN20

Diplomacy in a Challenging Global Environment

A Research Report

COMMITTEE: Security Council

QUESTION OF: The Question of the Development of Artificial Intelligence

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Introduction & Background

Artificial Intelligence, or AI, is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction. AI has been a concept heavily debated, discussed and researched for decades from its inception in the early 1900s, and has been developing throughout the past century. This advancement gained real headway in the mid 20th century, as serious research began to be conducted. Firstly, British scientists developed machines to crack the German ‘Enigma’ code, which was the first main foray into “machine learning”. Continuing further into research on AI, the Logic Theorist program was examined in the 1950s by coalitions of American scientists which sought to find methods to conjure an artificial sense of logic within mechanical objects. Initially, the plan of project leaders Herbert Alexander Simon and Allen Newell was to write programs that could prove mathematical theorems, and their goal was reached somewhat successfully. Although the computers were unable to prove every theorem

correctly, the program served to open the field of heuristic programming (essentially teaching pragmatic thinking to computers). In 1956, American computer scientist John McCarthy organised the Dartmouth Conference, at which the term ‘Artificial Intelligence’ was first adopted. Although the era of computer research spanning from the later years of World War II to the 1960s yielded an abundance of new information on the subject of AI, the technology of computers simply could not keep up. Research and development was limited because of the lack of storage and appropriate processing data possessed by scientists at the time. Therefore, progress was limited until the birth of the new millennium, under which the abilities of computing technology was greatly enhanced. Throughout the 21st century, machine learning has been utilized primarily by commercial entities in order to understand consumer behavior more effectively, and has been a driving force behind the success of many modern companies. However, with the power of new technology comes a desperate race to harness it, and the world’s great powers have been rushing to compete for superiority. China reportedly has a \$7 billion investment plan that runs through 2030, making it the world’s most aggressive pursuer of the technology at a government level. The United States has no stated governmental plan, yet private industry and academia continue to fund research. International leaders elsewhere, including Russia and certain nations in Europe such as the United Kingdom, Germany, and France, also allocate significant resources towards the development of technology. Artificial intelligence has largely been labeled the new space race, and the generations to come will likely be defined by its result.

What Are the Central Concerns of Developing Artificial Intelligence?

The ability of artificial intelligence to govern most aspects of a country's operations, including their military, foreign diplomacy, and commercial sector, is both a blessing and a curse. Trusting the framework of a growing yet volatile structure of technology could make the information and inner workings of government organizations extremely vulnerable to outside actors.

Furthermore, the technologies around artificial intelligence largely still reside in uncharted waters for many, if not most, nations around the globe; for those nations without the necessary resources for AI investment and development, their inability to pursue it could conjure fear and uncertainty. Nations with resources, however, propagate a highly competitive field of research that is largely detrimental to all those involved. The ethics behind AI is also rather undefined- the consequences and power that the first to wield it is unknown. Despite the years of research and billions of dollars invested in AI, no one can accurately predict its true capabilities or limits.

Why Is Artificial Intelligence Relevant To Our Future?

The issue surrounding artificial intelligence and the problems it engenders is one that may define the generations to come. Firstly, the difficulty behind developing such software is obvious- despite a century of research, progress is relatively limited, as "intelligent" computers are still not at the level scientists intend them to be. Because of this plateau of progress, countries have entered 'AI Winters' over the years, wherein the flow of resources towards research is halted because of a lack of tangible progress. In order to stop the vicious circle of investment followed by 'AI Winters', serious inroads and innovation must be made. Competition within the race for

AI may very well inspire this urgency; the first nation to achieve worthwhile technology will have a useful tool for military and governmental programs as well as a bargaining chip for economic benefit. As was the case with the Industrial Revolution, those who perfect AI will certainly become world superpowers. However, the power that AI engenders presents a whole new issue- guidelines must be created to govern its use and application towards global problems. The ethics behind artificial intelligence is no doubt a vital issue that the Security Council must address before AI becomes ubiquitous to modern society. The 2015 Puerto Rico conference predicted that AI will be perfected by 2060, which gives the UN an appropriate amount of time to navigate the issue. However, action must be taken to protect future generations.

Past Efforts To Solve This Problem

Due to the influence and power that a nation wielding artificial intelligence could command, international conferences to achieve AI and coordinate research have been widespread. For instance, the 1956 Dartmouth Conference, regarded as the birthplace of artificial intelligence as it is known today, predicted that progress in processing speed and capacity would eventually lead to a point where computers could potentially possess intelligence equal to humans. The spark of innovation was set alight at Dartmouth, and it would inspire the next half century of research. More recently, the 2015 Puerto Rico conference was established as a symposium for leading AI researchers, ethicists, and software engineers to examine the world's capabilities. As a result of the conference, concrete research directions were decided upon (see [here](#)) and the future of AI was essentially created. Despite the devotion of time and resources to AI by the international community in past years, further cooperation is definitely necessary.

Possible Solutions

In order to accelerate the achievement of a reliable artificial intelligence technology, an evaluation of different research techniques should be enacted in order to devise a valid way forward. Although competition is often beneficial to urgency and therefore production, it might be more efficient for global leaders to collaborate on their development. Not only will research will be advanced far more quickly and effectively, cooperation would eliminate the sense of distrust and fear that arms races conjure, as evident in the Cold War. Furthermore, developing nations must not be alienated by the new technology; inclusion and development should be a priority for the Security Council. Separate from the difficult task of research is the issue of ethics, as discussed previously. As the Council looks at potential avenues for research, they must examine the morality behind their endgame- once AI is attained, how shall it be used? Guidelines must be established to ensure the safe use of the new technology. Artificial intelligence certainly has the potential of becoming a powerful weapon upon discovery, yet the world should not shy away; instead, the safe development and subsequent protection of AI is a goal that the international community has a responsibility to pursue.

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