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## Algorithms Without Borders: Liberal Internationalism and the Governance of Artificial Intelligence

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### ABSTRACT

Artificial intelligence (AI) transnational growth is transforming the nature of global governance by disrupting the state-based regulatory systems and making coordinated international actions more urgent. This article, *Algorithms Without Borders: Liberal Internationalism and the Governance of Artificial Intelligence*, examines how the concept of liberal internationalism is still relevant in response to these changes. Based on key liberal tenets interdependence, institutionalism, and cooperation based on rules it opines that AI is a transnational technological entity in need of multilateral governance structures. Recent events like the introduction of the international ethics of AI, the role of international organizations in it, and the rise in cooperation between states and major technological companies are factored into the study. It analyses the role of these actors in norm-building in areas like transparency, accountability, and responsible innovation using a qualitative method of analysis. Although the article recognizes limitations such as geopolitical rivalry, digital divide, and divided regulatory strategies, liberal internationalism is still viable and applicable, according to the article. It finds that the key to successfully regulating AI in a more globally connected international system lies in enhancing institutional cooperation and global normative agreement.

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**Keywords:** Artificial Intelligence (AI), Liberal Internationalism, International Organizations, Border less Society, Innovation, Accountability.

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## INTRODUCTION

The fast globalization of artificial intelligence (AI) is altering the way international relations operate and introducing new challenges to international governance. Since AI requires the flow of information worldwide, digital networks, and transnational collaboration, it cannot be administered successfully by the state on its own. This corroborates the liberal thesis that states are interdependent and require cooperation. Liberalism is thus a valuable lens through which to conceptualize AI governance, as it emphasizes cooperation, institution, and joint rules instead of just focusing on power politics. Liberal theory emphasizes the presence of various actors as well in international politics, such as international organizations and private companies. Given that states are not the only significant actors in AI governance, major technology companies and international bodies actively influence policies and ethical standards. Meanwhile, liberal institutionalism states that international organizations assist the states to collaborate through uncertainty reduction and provision of shared rules. This is reflected in the new international initiatives to create AI principles of transparency, accountability and responsible innovation. Nevertheless, geopolitical rivalry, unequal technological progress, and national laws are obstacles to liberal cooperation. Despite these, this paper contends that liberal internationalism is still applicable since it seeks practical solutions that are grounded in cooperation and institution building. It is critical to reinforce global institutions and common norms to deal with AI in an interconnected world. This research uses Qualitative research method to examine, aiming to analyze how realism can be revisited in the era of Artificial intelligence and impact of Algorithmic decision making on this conventional theory.

## LITERATURE REVIEW

International relations theory and global governance have been explored in a comprehensive manner in the liberal tradition, especially in the form of interdependence, institutions, and cooperation. According to Robert O. Keohane and Joseph S. Nye (2012), as states become more interdependent, the effectiveness of unilateral action declines, and there is an incentive towards cooperative action. This view should be viewed particularly in the light of artificial intelligence (AI), where data flows and digital infrastructures across borders establish profound global connectedness. Elaborating on this, Robert O. Keohane (1984) puts emphasis on international institutions in helping to bring about cooperation in the context of anarchy. His work implies that institutions assist states to surpass mistrust through provision of information, lessening of transaction expenses, and setting up of shared rules. This observation can be traced in the increased significance of international frameworks and guidelines in the context of ethical and responsible AI development in the new sphere of AI governance. Liberal theory also broadens the field of analysis

by emphasizing the influence of non-state actors. According to Andrew Moravcsik (1997), the state preferences are influenced by both domestic and transnational actors, such as economic and societal interests. This especially applies to the issue of AI governance where big tech companies and research establishments are at the core of influencing standards and practice worldwide. On the same note, Michael W. Doyle (1986) emphasizes the role of liberal norms and institutions that facilitate cooperation and stability in international relations. Later scholarship has applied the liberal lessons to the moral aspects of new technologies. Luciano Floridi et al. (2018) suggest a theory of ethical AI focusing on such values as transparency, accountability, or fairness. This is indicative of the normative aspect of liberalism which upholds human rights and good governance. These contributions show that liberal thought is still responding to the new technological challenges. Alongside such contributions, literature also mentions several major threats to liberal governance, such as geopolitical competition, regulatory fragmentation, and inequality in the digital sphere. However, the bulk of the current literature lends credence to the argument that liberal internationalism is a useful and adaptable framework to understand and inform AI governance. Liberalism offers a multifaceted approach to the global implications of AI by engaging in institutional cooperation, economic interdependence, and normative commitments.

### **Liberalism and Cyber Governance: From Conflict to Cooperation in the Digital Age**

The concept of liberalism can serve as a baseline of the concept of cooperation and governance in a more interconnected world. When applied to artificial intelligence (AI), the assumptions that it makes, namely interdependence, institutionalism, and the involvement of multiple actors, provide useful insights into how the global challenges can be jointly dealt with (Keohane and Nye, 2012). Instead of taking international politics as a competition, liberalism is based on the significance of cooperation, common norms, and order of rules in solving transnational problems like AI governance (Doyle, 1986).

Liberalism does not always focus on power struggle, it gives a new way by focusing on interdependence, cooperation and role of international institutions in international relations. In today's digitally connected world, where one's security is tied with other actions, cooperation and collaborative governance become vital. Assumption of cooperation, which is the foundation of liberalism suggests that states can work together to build rules, norms and agreements. Which helps to reduce the risk of conflict and promote stability. For example, international efforts for global security agreements, formation of ethical framework for Artificial Intelligence (AI) and multi stakeholders' forums reflect a liberal approach to global governance. This article explores how liberalism helps to understand AI and cyber governance in the digital age. It begins with the exploration of foundational thoughts of liberalism and then examining how these principles apply to the AI driven challenges. It also evaluates how cooperation and international institutions might be able to provide solutions for technological risk. At the same time, it acknowledges the limitations of liberalism in a world still marked by power imbalance. By revisiting liberalism in the

digital age, this article highlights how conflicts are replaced by cooperation in modern world.

## **Foundations of Liberal Thought: Cooperation Beyond Anarchy**

### **The Possibility of Cooperation**

Core idea of liberalism is cooperation between states despite the realism's anarchic nature of international relations. Unlike realism assumption that conflict is inevitable liberalism believes on cooperation, it argues that modern challenges like cyber threats, AI misuse and digital instability make cooperation necessary. No country can handle these challenges in isolation due to their transnational nature. Cyber-attacks and hacking campaigns disrupt the global supply chains and rapid spread of misinformation create a sense of insecurity between people. In such environment unilateral response falls short but international cooperation offers strong protection. Liberalism promotes cooperation at global level. Initiatives like **Budapest convention on cybercrime**, introduced in 2001, stand first international treaty which is designed to align national legislation, strengthen investigative capacities, and promote international collaboration against cybercrime. More than 80 states have ratified it. Shows the importance of collaboration of international community to handle cyber threats or cybersecurity. The first UN \_backed cybersecurity alliance named International Multilateral Partnership Against Cyber Threats (IMPACT) is another example. It brings government, academia and industry together to strengthen global cyber resilience and build a sense of understanding that cybersecurity is a shared responsibility. Moreover, the multi-stake holder forums also reinforce the foundational idea of liberalism which is cooperation or collaboration. A collaborative initiative "Paris call for Trust and Stability in Cyberspace" brings together states, civil societies and private companies for the commitment of responsible behavior protection of critical infrastructure and rejecting cyber threats that harm democratic processes.

These initiatives demonstrate liberal's claim that shared benefits encourage cooperation. Cyber governance efforts like treaties, partnership with private companies and institutions show States often unite when faced with cyber threats. Mechanisms like trust building, intelligence sharing, exchange of information and creation of shared norms help to reduce uncertainty and bring greater stability to the digital environment.

### **The role of International Institutions**

International institutions play a vital role to reduce uncertainty, fostering cooperation and managing the risk that arise in an anarchic world. It is a central assumption of liberalism; liberals argues that institutions can provide structure and stability by setting rules and building trust between states. Importance of institutions and cooperation becomes more evident in the age of Artificial intelligence and cybersecurity because cyber threats do not stop at national borders. Presence of international institutions helps mitigate uncertainty and provides a platform for negotiations, information sharing and norm setting.

The United Nations has increasingly recognized the importance of

cybersecurity and AI governance. States have worked together for the formation of norms and rules setting of responsible behavior in cyberspace through United Nations Group of Governmental Experts (UN GGE) and the Open-Ended Working Group (OEWG). These include commitments related to avoiding attacks on critical infrastructures in peacetime and cooperation against malicious activities. These are not binding agreements; these are marked as a step towards building international censuses. Regional institutions like European union (EU) also plays a proactive role in promoting digital security and AI regulation. Some critiques argue that institutions do not have the power to enforce rules on states they depend on states consent. However, they lack enforcement mechanisms like police and armies, but they still shape the behavior of states by setting expectations and reputation cost. If states violate the agreed rules, they may face diplomatic isolation and loss of trust within international community. Thus, institutions not only work as a regulatory body but also as arena of accountability.

### **Interdependence as a Source of Stability**

Liberalism emphasizes interdependence, it means states which are interconnected to each other become less likely to engage in conflicts. Cooperation and peace are practical necessities in this chaotic world. In the age of cutting-edge technologies interdependence is shaped by Artificial Intelligence, cyber security and digital infrastructure.

Economic interdependence between states plays an important role in avoiding conflicts. For example, the work of Robert Keohane and Joseph Nye highly emphasized interdependence, according to them the states which relate to each other through investment, trade and communication have strong reasons to avoid war and conflicts with each other. In today's digital world, the concept of interdependence is also changed from economic interdependence to AI-driven industries, cloud computing and digital finance. For instance, the formation of semiconductors, which are the crucial part of making intelligent machines, stretches across many states. Raw material is extracted from Africa, its designing is done in united states of America, and its manufacturing is linked with East Asia specially Taiwan and south Korea. Any disruption, whether it is created by any means, affects the entire global AI industry.

### **Democratic Values and Peace**

Another strong contribution of liberalism is the idea of Democratic **peace theory**, which argues that democratic states always avoid engaging in conflict. This is because the foundation of democratic states is accountability, transparency and opinion of public. Democratic leaders must give reasons to public, parliament and free media before engaging in a conflict, this check and balance condition make them more caution before engaging in any conflict. Instead of directly engaging in war, they prefer negotiations and diplomacy to solve a problem. Democracies are more likely to encourage alliance building and establish partnership for better information sharing and cooperation for the protection of digital infrastructure. Most of the member states of NATO are democratic and they cooperate through **NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE)** and share cyber

intelligence and conduct joint training exercises.

This shows that shared democratic values strengthen trust and stability. In this digital age, liberals' principle of democratic values becomes more relevant. Artificial intelligence and cybersecurity unlock a new fear and a way of risks, but democratic states handle these risks differently, for example they can push them with international rules, open debates and collective efforts. Initiatives like AI Act of European Union, a legal framework which is designed to regulate AI based on risk and to protect citizen's rights (European Commission 2023) shows transparency and accountability of democratic state which shapes global governance.

### **Beyond Military Power**

According to traditional realism, power is defined as military strength, range of missiles, territorial control and abilities to deter enemies, but in modern age this concept of power is more than these factors. Liberals argue that in this interconnected world power is no longer defined by the factors which are presented by realism, now power is not limited to armies, borders and missiles. A country that has advanced AI capabilities can influence global politics a lot, they can change the narratives of public through disinformation campaigns and make huge destruction to critical infrastructure through cyber-attacks without firing a single shot. These non-traditional methods of warfare destabilize the societies and disrupt economies. Data dominance is another form of non-military power, the states like USA and China who have large data pools get more benefits, they have power to make decisions for others and set standards. This power of data cannot be measured through tanks and soldiers, but it can directly affect global politics. Advanced AI systems like semiconductors, 5G networks and rare minerals themselves allow the countries and private firms to dominate others because they have capabilities. Rivalry between USA and China on semiconductor production shows that how economy and technology intersect with each other in this modern era. It shows that today power also comes from AI capabilities, data control and innovations in AI systems. To manage these things countries, must work together.

### **AI Without Borders: Why Technology Demands Global Cooperation**

The impact of digital technology is not limited to one place, software's, data and digital platforms can easily move from one country to another without limitations of borders. This means that no single state is the owner of Artificial intelligence. Cooperation between the states is essential because risks and opportunities developed by AI are global. Unequal access to AI technology is major concern now a day. It means that there is discrimination that some states have advanced AI technology and many of the states do not have these technologies, they rely on such big states who have advanced technology for tools and services this situation makes them dependent. Many states depend on US and China for cloud computing and advanced AI system which makes a kind of digital inequality between states, Cooperation in this situation is necessity of the time due to the global nature of Artificial intelligence.

### **Environmental Cost**

Another important but overlooked issue which is raised due to digital

technology is its environmental impact. Everyone is focusing on security, ethics and economy but the cost in making of this advanced technology is more on environment. Training in large AI models costs huge amount of electricity and water. Studies shows (Strubell, Ganesh, and McCallum (2019)) that the pollution which is caused by several cars running for their entire lifetime is less than carbon pollution created during the making of one advanced AI model. Large data centers where these systems are trained need to cool down, due to this purpose companies use millions of liters of water to set the right temperature for servers. Training of GPT-3 model consumes approximately 700000 liters of clean fresh water (Li, Yang, Islam, and Ren (2023)). The hardware system for these Artificial Intelligence is made up of advanced semiconductor material which is rarely present in some regions of world like Latin America, Asia and Africa. Mining of these materials often cause harm to the local communities and Eco- System. This situation creates a sense of disproportionality between states, that weaker states must suffer, and stronger states enjoy the benefits. If each country makes these AI systems in isolation it will cost huge pollution which affects climate a lot, cooperation and coordination between states will reduce environmental burden. So, the cooperation is not just about security, it also includes the protection of environment.

### **Fragmented Rules**

Governance of AI at global level causes the biggest challenge of fragmented rules. Many countries set rules regarding AI regulation with different priorities, this creates a patchwork of rules rather than single framework. One of the first comprehensive law on Artificial intelligence named AI Act which is introduced by European union focuses on protection of human rights, banning high risk uses like facial recognition in public spaces. US use another direction which is more flexible, they are prioritizing innovation and competitiveness. Meanwhile China adopts a state centric approach, they use AI for surveillance and rapid development of technology.

Use of different approaches in different regions and countries creates uncertainty. The firm working in US makes AI system according to the rules set by US government, which might be illegal or restricted for European countries. Similarly, Chinese production of AI technology may clash with the western standards. This situation of unsanitary effects the trade and technology exchange between countries. This will also create a dangerous gap where illegal use of harmful AI tools is becoming normal, especially in the countries who have weak and no regulations. It's not just about the concern of legal or illegal, it is also a political issue where these fragmented rules create a deeper gap between countries. Absence of global framework led to conflict and mistrust between states.

From liberal prescription it highlights the urgency that international cooperation is needed. Use of AI requires shared standards to avoid accidents, abuse or unregulated arm races.

### **Building Digital Institutions: Liberalism's Answer to Cyber Threats**

Liberalism always focuses on cooperation, mutual understanding and trust. But in this digital age where the nature of threats changed, the development of digital

institutions become necessity. Unlike realism which focuses on individuality in an anarchic system, liberalism emphasized that cooperation and common platforms can manage risks in an effective way that no country could do it alone.

### **Digital Institutions as Platforms for Collective Security**

One of the major and concerning threats is that cyber threats most rarely remain local, they spread in countries quickly and unpredictably. It turns local problems into global crises such as **WannaCry ransomware attack in 2017** affects more than 150 countries and shutdown their systems within few hours. Similarly, another attack in 2017 whose target is Ukraine, named **NotPetya attack** ended up causing estimated \$10 billion damage and affects shipping companies, logistic firms and pharmaceutical companies over the world. These worldwide events show that these digital attacks are not like traditional warfare and not held in between the borders, they are global by nature. One of the strongest examples of cooperation between states against repeated cyber-attacks is **NATO Cooperative Cyber Defense Centre of Excellence (CCDCOE)** in Estonia. Members of NATO recognized the importance of shared institutions for defense against cyber-attacks when Estonia faces large scale cyber-attacks in 2017. **CCDCOE** conducts many activities like join training, research and exercises to strengthen the cyber resilience of its member states. Through these activities NATO creates a kind of shield that not only protects military but also protects civil infrastructure of its alliance.

This collective shield of security clearly shows the principle of liberalism in action that institutions play an important role in reducing uncertainty. Without NATO's cyber institution, it becomes difficult to handle these cyber threats individually. This kind of cyber alliance gives benefits to weaker states, that have not much resources to protect themselves individually from large scale cyberattacks. Weak states or developing countries don't have many resources for technical expertise, advanced technologies or intelligence networks so they gain access to such resources through institutions of collective security like **CCDCOE** and **Global Forum on Cyber Expertise (GFCE)**. This will reduce inequality in cyberspace. Digital institutions also create political pressure, when states join any kind of institution other member states expect from them to behave responsibly. Institutions do not just share knowledge; they also make a sense of accountability.

### **Public Private Partnership**

Emerging trends of cyber threats reveal another fact that states are no longer the center of power, private institutions like tech companies hold a share of power through cloud networking, AI systems and digital infrastructure. They are owned by private firms like Microsoft, OpenAI, Huawei and Amazon. This shows the importance of these advanced tech companies at the time of any serious cyber-attack that governments of states depend on these companies to manage digital disasters.

Emergency security patches released by Microsoft in WannaCry ransomware attack in 2017 to help the governments that are struggling to stop the spread of these cyberwars. Even they apply these security patches to old operating systems like Windows XP (Europol, 2018). Microsoft also used this movement by presenting rules

to limit the targeting civilian infrastructure in cyberspace, they named it **Digital Geneva Convention** (Smith, 2017). Such activities show that tech companies not only fix technical problems but also play an important role in shaping global cyber governance. Google's project shield and jigsaw that provides cybersecurity protection for journalists, election systems and human right organizations is another strong example that shows the effective role of tech companies in global cyber governance. These patterns are not just theories they emerge from real world practices; they show the effectiveness of private tech companies through their fast response and rulemaking abilities in cyberspace. Liberalism must expand its understanding of "institution". Institutions do not mean intergovernmental treaties and organizations, they are also a public private partnership that makes rules and set norms.

### **Regional Institutions as a Laboratories of Cooperation**

Patterns show that many institutions start their working at regional level first, after becoming successful at regional level they expand themselves on global level. European Union's General Data Protection Regulation (GDPR) which is introduced in 2018 is one of good examples. This law gives access to public that how companies use their information (European Union, 2016). This European act was adopted by international companies like google, amazon and Facebook, as they operate internationally, they continue their practice throughout world. In this way a **de facto global standard** was set which is initiated by a region. It demonstrates that liberal's perspective of establishing institutions is very important, the most effective way of creating norms and setting rules is that firstly test on smaller region, after success of these models they can spread across the borders. This approach also produces sense of trust and security. After studying the creation and emergence of various institutions like GDPR we can see that governance is often established step by step. In the start it begins at a regional level and after some time expands themselves at global level.

### **Tech Giants and Power Asymmetry**

Unlike realist assumptions that power is measured by military and economic strength, digital age introduces a new way of power which is strength of algorithm. Some states have highly advanced AI technology that become the reason for power while some don't have many resources to adopt these advance technologies. This creates an asymmetric situation between states and gives birth to a new kind of power imbalance. Global technological companies play an important role in this asymmetry. These tech companies work not only as a technical fixing they also work as an institution builder, WannaCry ransomware attack in 2017. countries like US, China and member states of European Union have resources to access advanced AI technologies rather than countries in Asia, Africa and Latin America have lack of expertise and economic resources to get benefits from advanced technology. While cooperation also becomes a driving force for institution building, stronger states put efforts to make institutions or norms and make weaker states join these alliances and get that expertise which they cannot develop alone this alliance-making system gives strength to those weaker states. For example, NATO's Cooperative Cyber Defense Centre of Excellence (CCDCOE), smaller states get benefits of expertise which they

cannot develop by themselves.

## CONCLUSION

This article shows that liberalism provides a powerful tool for understanding the role of institutions, cooperation and private actors in managing risks and opportunities in digital age. We examine in this article that treaties, regional regulations, multi stakeholders' initiatives and cooperate governance models emerge from real world practice. The key factors which we discuss in this article give us deep insight. We look at cyber governance of international institutions which produce stability and plays a vital role in setting norm in cyberspace. These organizations provide a platform to counter common problems of different countries. Attacks of Cyber espionage, most of the countries are unsure about the center of these attacks from where they are emerging and what is going to happen next. Through these institutions and organizations countries create norms and rules of cooperation to handle these circumstances in digital age. For example, NATO's Cooperative Cyber Defense Centre of Excellence (CCDCOE) which is located in Estonia where member countries share information, train experts and make strategies to handle the upcoming threats in cyberspace, each member state cooperate in this because they know that everybody is following the same practice which makes predictions more accurate. Global Forum of Cyber Expertise (GFCE) is another example of international institutions, they work to connect companies, countries and organizations to share knowledge about cybersecurity. Now a question might arise in your mind that what if they deny following the rules and violate them? These institutions do not use direct enforcement strategies, they create accountability in different ways if any state violates the rules or makes any cyberattack against anyone, it may face diplomatic pressure and isolation. These activities of a state cause loss of trust and reputational damage. So, this shows that without having enforcement strategies international institutions still have ability to create stability.

Second, in global politics interdependence has become a major source of stability. Cyber conflicts become too costly in this interconnected world where economy is highly integrated into digital systems. Interdependence between countries in Sectors like finance, healthcare and technology creates a strong incentive for states.

Third, this article also highlights the importance of private firms and tech companies. Authority is no longer only belonging to international institutions like UN; private companies also become the center of power in this digital age. These companies not only provide services in technology, but they also take steps as frontiers to handle situations in case of any cyber incident and shape rules in cyberspace. These private actors work like an institution Builders; they work to make frameworks for cyber governance. Discussion reveals that, in the beginning institutions start working from regional level and then expand themselves on global level is more beneficial. This also supports the liberal argument that institutions have no need to start working on global level, once they set rules and norms on regional

level, they expand themselves on global level.

Finally, this article addresses power asymmetry. Not all the member states of an institution are equally capable in IT sector, some of them have facilities and abilities to create secure cyberspace but it does not mean that the states who are weaker are excluded. Institutions work to balance through information sharing, trust building and platforms of participation. In conclusion, liberalism provides a strong framework to understand cyber governance in the age of Artificial Intelligence. No state can manage all the cyber threats which we are facing in digital age alone, cooperation, institutions and trust building are essential. The analysis I made in this article also highlights the shortcomings of liberalism, although it clarifies cooperation and norm settings, it falls short in addressing more significant issues of identity, values and social construction of norms that influence digital politics.

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