Leveraging generative AI in international relations – foresight and data-informed diplomacy

Jan Hornát

Abstract

Generative artificial intelligence (AI) will likely impact all aspects of the human experience and international relations are no exception. Decision-making in foreign policy is contingent on the availability of information, which is, however, often scarce. As a supporting tool for policymakers, states have come to employ various methods of foresight and scenario-building in order to better understand and evaluate the behavior of adversaries and the possible results of their own decisions. It is particularly the domain of foresight and data-informed diplomacy, where generative AI could significantly impact the decision-making process. This paper first maps out how generative AI can be leveraged to serve as a "hyper-informed" forecaster and advisor to foreign policymakers and then proceeds to problematize the said developments. Ethical and practical issues related to deterrence and decision-making authority of AI in the chain of command are then discussed as the new security dilemmas of AI integration into policymaking.

Keywords

Artificial Intelligence; Diplomacy; Foresight; International Relations; Data-driven Diplomacy

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Imagining and envisioning possible futures is an inherent characteristic of the human existence. From an evolutionary perspective, the capacity to foresee the future and its possible threats enhances resilience and the chances of survival.[1] This reasoning applies to all spheres of human endeavor and international relations are no exception. States have been applying methodological and systematic foresight into their decision-making to increase their ability of coping and overcoming potential challenges and crises at least since the beginning of the Cold War.[2] Today, advances in generative artificial intelligence (AI) are opening up new opportunities to further develop these practices and, ideally, help increase stability in the international system.

Scanning the geopolitical horizon with emotions and bias

Relations between states are mired in mistrust, misrecognition, lack of information, bluffing and brinkmanship. Anticipating the future steps and decisions of adversaries can thus mitigate these structural problems of international affairs. As a consequence, governmental institutions and international organizations around the world have adopted various methods of scenario-building and horizon scanning to rationalize their future-oriented decisions and

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[1] B. Bowonder, T. Miyake, B. Muralidharan, "Predicting the future: Lessons from evolutionary theory", *Technological Forecasting and Social Change* 62 (1-2), 1999: 51-62.
[2] I. Dreyer and G. Stang, "Foresight in governments - practices and trends around the world", *Yearbook of European Security*, 2013: 7-31.

justify their policy choices to the public.[3] However, even though methodological and thorough foresight can rationalize decision-making, it has been documented that it still suffers from human-induced limitations.

When foreseeing future developments, people tend to exhibit overconfidence, a simplification urge, wishful thinking, deception, illusory expertise, and overselling – and experts, on whose input foresight methods rely, are no different as they too have a tendency to reify current trends or those they are familiar with.[4] Moreover, the normative variant of foresight, which asks "what future do we want", is inherently prone to politicization. So, various biases have a tendency to creep back into the very instrument of decision-making that is designed to test preconceived beliefs through informed and objective foresight.

The techniques of power in modern societies are characterized by systemized bureaucratic processes and a certain level of automatization that aims to eliminate from the decision-making process the propensity of human beings to err. In this sense, generative AI is novel tool entering the decision-making processes, providing a technique of power that is expected to further rationalize governance and rid it of human biases and emotions. In short, the presumption that AI will be able to inform political elites about *what* to do policy-wise and *when* to do it, is warranted. So, given the largely technocratic tendencies of contemporary governance, it is not a question of *if* generative AI will become an instrument employed in the policy-making process of states, but a question of *when* and how far up the chain of command and the bureaucratic hierarchy will it be permitted to rise.

Data-driven and data-informed diplomacy

The private sphere has been using various predictive analytics that employ statistical algorithms combined with internal and external data to forecast future trends for some time now. These commercially available tools are used, for instance, in the political risk industry as early warning systems or to optimize supply chain efficiencies and reduce operational costs. When paired with generative AI, these analytics are expected to become even more accurate.[5] If we consider the methods used for building foresight in governance, we can assume similar increases in accuracy.

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[3] T. Lundqvist, "The Emergence of Foresight Activities in Swedish Government Authorities", Working Paper 5, *Institute for Futures Studies*, 2009.
https://www.iffs.se/media/1328/20090422154222fil2EGQ1z3X03GI48jDeILd.pdf
[4] H. Linstone, "On Discounting the Future", *Tech Forecasting & Social Change* 4,1973: 335-338.
[5] K. Beasley, "Unlocking the Power of Predictive Analytics With AI", *Forbes*, August 11, 2021.
https://www.forbes.com/sites/forbestechcouncil/2021/08/11/unlocking-the-power-of-predictive-analytics-with-ai/?sh=3e87284b6b2a.

The world of diplomacy and international relations revolves around the access to and provision of information. The collective knowledge of diplomats in each country has been historically documented in thousands of cables, communiqués and reports and these have been shared, transcribed and archived, constituting a "knowledge graph" of various encounters between states' representatives, observations and analyses of elite and societal behavior.[6] Of course, all this knowledge has been amassed particularly for the purpose of having a more profound understanding of the counterparts' actions and future outlooks. This wealth of information, however, is mostly processed manually and the labor employed in this process to extract meaningful material for policy design can be intensive and arduous.

As a first step in integrating AI to simplify their internal procedures, some foreign ministries have started to test AI to sift through the large volumes of text received from their global outposts and identify policy-relevant information.[7] In 2020, the US Department of State (DoS) established its Center for Analytics, which now coordinates a number of projects across the executive branch that employ AI as a facilitator of labor-intensive tasks. At the Center's inauguration, a DoS spokesperson pertinently noted that "In an age of information overload, only those who can leverage data as a strategic asset can win."[8]

But apart from simplifying work tasks and permitting analysts and diplomats to focus on more substantive work, AI can be leveraged for the more creative work of scenario-building and foresight. It is no surprise that so far, the predictive capabilities of AI have been tested and applied mostly in the military domain. For example, the much-discussed Project Maven aimed to help the US Department of Defense (DoD) sieve through the hundreds of thousands of hours of video footage and surveillance collected globally every year and thus reduce inefficiencies in managing the data, the scope of which the DoD does not have the human capacity to fully process. During the course of analyzing this input data, AI would be used to detect patterns of behavior, identify possibly dangerous subjects and ultimately evaluate future courses of action. Given the amount of data available for analysis, human observers would not be able to discover the nuances that form significant patterns and trends that facilitate foresight and prediction.

In a similar sense, data companies like Palantir – which currently provides a number of services to the Ukrainian government, including assistance with the prosecution of alleged

[6] R. Dukeman, "Winning the AI revolution for American diplomacy", *War on the Rocks*, November 25, 2020. https://warontherocks.com/2020/11/winning-the-ai-revolution-for-american-diplomacy/

[7] A. Zahara et al., "Adapting to Data-Driven Diplomacy with Machine Learning", *UN Global Pulse*, February 25, 2021. https://www.unglobalpulse.org/2021/02/adapting-to-data-driven-diplomacy-with-machine-learning/.

[8] D. Nyczepir, "State Department calls new Center for Analytics a 'strategic milestone'", *Fedscoop*, January 24, 2020. https://fedscoop.com/state-department-center-for-analytics/.

Russian war crimes – have been exploring using AI models for purposes of predictive policing – an algorithmic method that takes data from disparate sources and analyzes them to anticipate and predict future crime, mainly to help more effective prevention and response. All these systems operate "historically" and "predictively" – that is, they take facts that we already have about a subject or object (based on surveillance, for instance) and "make predictions about where they're going to be and what they're going to do, and so aids us in making decisions".[9]

These are essentially *micro-predictions* of what one object or subject is likely to do based on big data input, algorithmic processing and machine-learning. Needless to say, the number of subjects, whose movements and behavior are being evaluated and predicted at once, can be countless. But when we speak of foresight and scenario-building in diplomacy, we are referring to *macro-predictions* that are not concerned solely with predictions about the nature of individual subjects or groups, but rather with broader socio-political and socio-economic trends and their interaction among states and regions.

AI as a hyper-informed forecaster and advisor?

If large language models (LLM) are trained on and have access to diplomatic cables, reports and other internal documents depicting past and present interactions with decision-making elites across the world and mapping the stances and behavior of states in various fora, they would potentially become hyper-informed toolboxes to policymakers. If this internal knowledge is coupled with various commercially available satellite data, search engine trends and mood analyses of conversations on social and mainstream media, generative AI models could be capable of identifying trends in international affairs and state behavior that human advisors would otherwise be blind to.

The commonly employed approaches to foresight in policymaking include the DELPHI method, horizon scanning and trend impact analysis. The three methods have a basic commonality: they all rely on variegated input data from human experts who either identify key trends or answer structured questions. This input data is then filtered through workshops, moderated discussions or editing and modeled into scenarios that present some form of consensual vision of prospective developments. It is clear that these methods can easily be influenced by human cognitive biases and when coupled with emotional reasoning and politicization, the practical value and authority of foresight scenarios can be downgraded

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[9] J. Davis, "The Ethics of AI Warfare", *Naval Postgraduate School*, September 27, 2021. https://nps.edu/documents/110773463/135759179/Ethics+and+Insights+The+Ethics+of+AI+in+Warfare.pdf/dfa 0271f-1b93-9495-69a3-fa160ebb2f77?t=1652136179368

significantly. Generative AI models can contribute significantly to generating such foresight scenarios – if not fully replace the methods used.

Importantly, data-driven diplomacy is no longer a prerogative of large states with significant resources and capabilities but, due to the decreasing entry costs, it is increasingly available to smaller states. By employing generative AI in diplomacy, small states could compensate for their inherent disadvantage of having limited analytical capacities and in turn maximize the potential of their human analysts as they will no longer be needed to conduct repetitive or overly time-consuming tasks.

To avoid miscalculations and solve crises, diplomats are by default expected to be cool in their demeanor, unemotional and make rational decisions (and give advice) that support national interests of the state they represent. So, in a theoretical sense, the dispassionate, hyper-informed and always available AI would prove as an excellent advisor, embodying the traits of the ideal diplomat or foreign affairs official. Of course, if the training data is biased, the LLM will also show signs of bias, but over time these biases can be self-corrected.[10]

Some may argue that the main added-value of foresight exercises with input from experts and practitioners is in the *originality* of the human contributions, which LLMs as mere word-predicting algorithms cannot match. But if originality, out-of-the-box thinking and groupthink-busting is the added-value of foresight, then even the observed phenomenon of AI "hallucination" can be considered as a means for testing our preconceived understandings of international affairs. After all, the reason why AI came to excel at games like Go is because it invented "entirely new ways of approaching the game" and defied "millennia of basic human instinct".[11]

New AI dilemmas

The incremental introduction of generative AI into foreign and security policy decision-making also comes with its own caveats. It is likely to present a novel form of a security dilemma between states. As Andersen succinctly writes, "If America's generals find themselves overmatched by Chinese AIs that can comprehend dynamic, million-variable

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[10] N. Firth, "Language models might be able to self-correct biases—if you ask them", *MIT Technology Review*, March 20, 2023.
https://www.technologyreview.com/2023/03/20/1070067/language-models-may-be-able-to-self-correct-biases-if-you-ask-them-to/
[11] J. I. Wong and N. Sonnad, "Google's AI won the game Go by defying millennia of basic human instinct", Quartz, March 25, 2016.
https://qz.com/639952/googles-ai-won-the-game-go-by-defying-millennia-of-basic-human-instinct.

strategic situations for weeks on end, without so much as a nap—or if the Pentagon fears that could happen—AIs might be placed in higher decision-making roles."[12]

In other words, generative AI systems (i.e. the hyper-informed advisor) could move up the chain of command and have more power to influence (or even make) decisions – not only because they would be viewed as more rational than the human being and as such help avoid miscalculations and decrease informational asymmetries, but because of considerations related to deterrence. Automated responses to threats as a form of deterrence have been sought out during the Cold War (e.g. the Soviet "Dead Hand" nuclear launch system) and it would be myopic to assume that states will not seek such deterrents that use AI in the coming future.

Similarly, concerns are increasingly raised about "tech-washing" of policymaking and governance practices. By introducing algorithms in decision-making that substitute (often erroneous) human judgment, policies can be presented as objective and have the appearance of being just, since they were created by a disinterested algorithm. However, particularly with respect to predictive policing, "tech-washed" policies can be employed only to further embed racially biased strategies.[13]

Conclusion

When discussing foresight and predictions of state (and thus human) behavior, there is doubtless a fine line between plausible scenarios and fiction. But as mentioned earlier, the human predisposition to constantly plan and prepare for the coming challenges is futile without some visions of the possible future. As a consequence, foresight is an undisputable technique of governance in modern societies and since generative AI opens new avenues of "predicting" the future, we cannot disregard its implications and ethical aspects. We can imagine situations in the future where – based on big data, proven and transparent algorithms and machine learning – an AI foresight model will be trusted by state leaders and the public to decide about launching a preemptive attack against an adversary. Conversely, those leaders and the public may be dissuaded from launching an attack, because the same model will expose their groupthink and biases.

Herman Kahn, the Cold War-era trailblazer of prediction and scenario-building, explicitly intended that "scenarios should function as contributions to and guidelines for

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[12] R. Andersen, "Never Give Artificial Intelligence the Nuclear Codes", *The Atlantic*, May 2, 2023. https://www.theatlantic.com/magazine/archive/2023/06/ai-warfare-nuclear-weapons-strike/673780/.

[13] T. Lau, "Predictive Policing Explained", *Brennan Center for Justice*, April 1, 2020. https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained.

public debate". Those he later inspired, "would come to develop scenarios for use in decision-making processes, and not only as contributions to the public debate."[14] The question is on which side of this argument will foresight scenarios generated by AI models fall. More importantly, it is reasonable to ask how far up the chain of command will the content (not just foresight scenarios) and recommendations produced by generative AI models have authority or even unilateral decision-making powers. Mapping and monitoring these advances of generative AI into policymaking is thus a crucial task for scholars in the near future.

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[14] I. B. Neumann and E. F. Øverland, "International Relations and Policy Planning: The Method of Perspectivist Scenario Building", *International Studies Perspectives* 5 (3), 2004: 258-277.

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