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## **PERSPECTIVES OF IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE TOOLS IN RESEARCHING COUPS D'ÉTAT**

### **Resume**

The study of coups d'état emerged and reached its peak during the second half of the 20<sup>th</sup> century, coinciding with the global *Cold War* and centring around examination of coup activities occurring predominantly in African, Asian, Middle Eastern and Latin American countries. This interest was predominantly focused of description of the phenomenon, as well as on the search for its root causes and results. As the *Cold War* ended, so did the interest for coups started to diminish, and some researchers even dared to pronounce this phenomenon a thing of the past, due to global promotion of respect of national sovereignty and integrity and implementation of democratic practices. However, this phenomenon persisted and re-emerged in the beginning 21<sup>st</sup> century, especially on the African continent, only to escalate with the time passing by, and reach its *Cold War* tempo by the beginning of the second decade of the century. Having the renewed interest for coup study in mind, the author will present the current practices in the study of coups d'état, as well as examine the possibilities of using artificial intelligence-assisted tools in the service of operationalization and perfecting the study of political violence, with the goal of introducing new methods of research into the field. With the use of content analysis, as well as theoretical examination of benefits offered by the omnipresent artificial intelligence-assisted tools, the author will provide an answer to the following research question:

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Which artificial intelligence-assisted tools can improve the study of coups, and in what way?

**Keywords:** coup d'état, political violence, artificial intelligence, machine learning, statistics, predictive analytics

## INTRODUCTION

On March 04, 1861, in his inaugural speech, the 16<sup>th</sup> American president Abraham Lincoln addressed the nation with the following words: “This country, with its institutions, belongs to the people who inhabit it. Whenever they shall grow weary of the existing government, they can exercise their constitutional rights of amending it, or exercise their revolutionary right to overthrow it”. A century later, in the sixties of the 20<sup>th</sup> century, on a different continent and in a different context, the decolonization process in Africa was coming to an end, with only a few countries still battling their colonizers and among themselves in order to achieve independence. As the first independent nations emerged on the African continent, so did the Nietzschean concept of the *will to power*, driving strong political figures of the national liberation struggles to take strong hold on weak *quasi* democracies of the countries in the making, thus inciting the local population to rebel, stage revolutions and overthrow governments. And as the colonizers predominantly focused on creation of army-like organizations in the country, thus enabling schooling overseas for African officers and military men, it was more than logical that the only force able to oppose the new *leaders*, much of whom were not democratically elected, but appointed by the departing colonizers, was only to be found among the military staff. Namely, belonging to a structure such as the military, as well as the cult of the warrior, were much known phenomena in African cultures, cherished with almost *mythical respect*. Therefore, when African people grew dissatisfied with the incumbent regimes in many countries throughout the continent, they rightfully turned their eyes towards the army. Hence, the instances of coups d'état became a commonality in African politics, as well as the most utilized method for government overthrow, whether it be justified or not.

Looking back from the current standpoint, we can draw the line and count as many of 43 out of 54 countries in Africa which fell under the

influence of unconstitutional overtake of power through staging a coup d'état, thus proving the point that the cult of a strong military leader and the trust of the nation in the military was indeed an African trend, not restricted to single African countries. For the purpose of this research, let us define *coup d'état* as a politically neutral, either violent or bloodless unconstitutional seizure of power, conducted by the local armed forces (Luttwak, 1969, 11-12). This action is usually conducted in five stages, consisted of coup planning, coup organization, coup execution, coup proclamation and legitimization of power. Albeit, not every coup-maker makes it to the final stage, and thus, we might distinguish coups as being *successful*, *unsuccessful* and *foiled*, with a quasi-coup category, depicted in *faux* coups. *Successful* coups are characterized by the full completion of the coup-making cycle, that is, the final stage of legitimization of power is reached, usually through formation of *Military Transitional Councils*, led by the military junta leader, and consequent organization of democratic elections, usually at least two years into the rule of the junta. In order for a coup activity to be deemed as *unsuccessful*, first three stages of the coup must be present, albeit the third phase, revolving around coup execution, must be interrupted. In this scenario, the final goal of government overtake must thus be not completed, albeit some action must be present in the streets. Because, without reaching the third phase of coup-making, coup-makers remain entangled in a *foiled* coup, which is most often described as a coup that never were, that is, a planned activity that did not get realized. Such coups embody in two forms – as true *foiled* coups, in which the intelligence community and other security forces succeed in detecting the overt activity of the renegade group, as opposed to a *faux* coup, which is usually a coup-proofing measure introduced by the incumbent regime, and directed towards creating a fertile ground for making arrests of the known opponents, and thus nipping the idea of a possible rebellion in the bud.

As we have previously stressed, the study of coups was most pronounced during the *Cold War* era, given the higher occurrence of such attempts and successful overtaking of power, only to diminish with introduction of the *second independence* of African states (Schraeder, 1995, 1160), depicted in the third wave of democratization of African countries, in light of the dissolution of the USSR and sudden shrinkage of foreign power interests in the region by the end of the 1980s. This retreat of foreign powers from the continent, as well as the belief in democracy, drove many researchers and political analysts towards

pronouncing the era of coups d'état as a thing of the past, thus causing a decrease of research of the topic. However, we should have in mind that even the first years of the 1990s ended up being marked with many grim forms of political violence, i.e., ethnic conflicts, civil wars, and coups d'état as well, thus proving the initial idea of coups being a thing of the past wrong. Namely, when speaking of coups d'état, it should be noted that only in the 1990s, the African continent suffered from a total of 20 successful coups<sup>1</sup>, as well as four coup attempts<sup>2</sup>. The coup occurrence persisted in the 2000s (seven successful and seven coup attempts)<sup>3</sup>, as well as in the 2010s (nine successful coups and 16 coup attempts)<sup>4</sup>, while since the beginning of the decade of 2020s, at the moment of writing this research, a total of eight successful coups<sup>5</sup> and 10 coup attempts<sup>6</sup> were recorded. Thus, since the declaration of death of the coup activity in Africa, a total of 44 successful coups and 37 coup attempts were recorded, thus negating the commonly present hypothesis that coups in Africa are “a thing of the past” (Birikorang, 2013:1). Moreover, we must stress that the decade of 2020s is currently only in its first years, and thus, there is a chance that coup activity in this decade shall surpass the other decades, thus confirming that coup execution has reached its

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<sup>1</sup> The coups in question are the following: Lesotho and Chad (1990), Mali, Somalia and Lesotho (1991), Sierra Leone and Algeria (1992), the Gambia (1994), Comoros and Sao Tome and Principe (1995), Niger, Burundi and Sierra Leone (1996), DR Congo, Congo and Sierra Leone (1997), and Niger, Cote d'Ivoire, Guinea Bissau and Comoros (1999).

<sup>2</sup> The coup attempts in question are the following: Nigeria and Zambia (1990), CAR (1996) and Zambia (1997).

<sup>3</sup> The successful coups in question are the following: Burkina Faso, CAR and Guinea Bissau (2003), Mauritania (2005), Guinea and Mauritania (2008) and Madagascar (2009); coup attempts: CAR (2001), CAR (2002), Sao Tome and Principe (2003), Chad and Ecuatorial Guinea (2004), Chad (2006) and Zimbabwe (2007).

<sup>4</sup> The successful coups in question are the following: Niger (2010), Egypt (2011), Mali and Guinea Bissau (2012), Egypt and CAR (2013), Burkina Faso (2014), Zimbabwe (2017), Sudan (2019); the coup attempts in question are the following: twice in Libya, once in Benin and Comoros (2013), twice in Libya, once in the Gambia and Lesotho (2014), Burkina Faso, CAR and Burundi (2015), Burkina Faso and Chad (2016), Egypt and Gabon (2019).

<sup>5</sup> By October 2023, the following coups were recorded to have happened in the decade of 2020s: Mali (2020), Sudan, Mali and Guinea (2021), two coups in Burkina Faso (2022), Niger (2023) and Gabon (2023).

<sup>6</sup> By October 2023, the following coup attempts were recorded to have happened in the decade of 2020s: Sudan, Niger and CAR (2021), Mali, Gambia, Guinea Bissau and Sao Tome and Principe (2022) and Sudan, Sierra Leone and Burkina Faso (2023).

previous glory and is once again becoming the most preferred method for government overtake and change in power.

Given the current state in African politics, it is more than obvious that researching coups d'état should once again step from the shadows and take the fore, especially since there is much evidence that, in this case, the phenomenon of violence overspill might play quite a significant role on the continent, and thus enable and empower other nations and other armies to take up similar activities, and depose the incumbent leaders via coups. Hence, there is a growing need for examination of the olden practices in coup research, as well as the current trends in the research of familial political violence phenomena, with introduction of new methods of conducting research, having in mind the pronounced use of artificial intelligence-assisted tools not only in conduct of political violence, but within its research as well.

## **RESEARCH OF COUPS D'ÉTAT: THE PAST AND PRESENT OF THE SCIENTIFIC APPROACH**

Even though the study of coups d'état has reached its peak in the *Cold War* era, this is by no means a phenomenon emerging in the 20<sup>th</sup> century, given that the term *coup d'état* itself was coined in the 17<sup>th</sup> century by the French, representing, at the given time, “any sudden, decisive political act, especially an important and unexpected change in the form and methods of a government” (Online Etymology Dictionary, n.d.). By the next century, with several government overthrow activities, such as the Napoleon I's overthrow of the Directory in 1777 and Napoleon Bonaparte's dissolution of the assembly in 1851 (Britannica, January 05, 2023), the term took a slight shift towards referring solely to the change in power. These instances of unconstitutional overtake of power were examined in great detail by several researchers, among whom Curzio Malaparte stands out, publishing a book entitled *Technique du coup d'état* in Italy in 1931, in which he presented his own observations of several coup-like activities in Russia, Poland, Germany, France, and Italy<sup>7</sup>. At this point, such works were scarce, and thus ground-breaking, albeit consisting solely of description of the phenomenon, without provision of any classification of coups or attempts to provide a definition for such a complex action.

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<sup>7</sup> See more in: Malaparte, Curzio. (1932). *The Technique of Revolution*. Morris Productions, Aurora, IL.

Omitting the definition of the term, as well as its classification, coincided with the term being restricted to depicting solely the overtake of power over the government by the part of the armed forces, predominantly military elements or the police, by the mid-20<sup>th</sup> century, that is, with the emergence of the fight over global dominance, depicted in the *Cold War*. Let us remind ourselves that the *Cold War* era, when speaking of Africa, was characterized by the rise of national liberation fronts, determined to fight for independence, which later, upon becoming independent, took up deposing governments, in accordance with the will of the people, given that these first governments were predominantly constructed by the departing colonizers. Such actions were not restricted to Africa, but emerged in the Middle East, Asia, and especially Latin America, thus drawing attention of researchers of political violence world-wide, in search of a definition for this activity. In this second phase of research of coups d'état, the authors predominantly focused on the causality of coups and coup definition, not restricting themselves to mere defining the phenomenon, but contributed to the science by providing detailed examinations of phases of a coup, as well as drafting first typologies of coups. One of the first political scientists to address the issue of increased participation of army officers in government overthrow was Samuel E. Finer, who took time in 1962 to research, examine and present not only the *machinery* behind conducting the coup, but also the perspectives of the future military interventions, with regards to the motives, the mood, as well as the opportunity given to the armed forces to intervene in politics (Finer, 1962). After Finer, several have attempted to do the same, whilst certain political scientists, such as Huntington and Luttwak, provided us with such contributions to the field, which even nowadays cannot be omitted from research. Namely, Samuel P. Huntington addressed the issue of the rise of incidence of *coups d'états* in 1968, by publishing the book entitled "Political Order in Changing Societies", in which Huntington raised the issue of *Praetorianism*, that is, the excessive and/or abusive political influence of the armed forces in a country, describing three different scenarios in which such behaviour occurs: *reformist coups*, *veto coups* and *institution-building coups* (Huntington, 1968, 192-219). The same year, Edward Luttwak published his ground-breaking work, entitled *Coup d'état: A Practical Handbook*, in which he presented a comprehensive examination of conditions, strategy, planning, and execution of coups d'état (Luttwak, 1969). This book was not only ground-breaking, but controversial as well, given that many have noted that it

has indeed served many army men as a true *handbook* for planning and execution of their coup-making activities, and the book was later found on site in many cases of coup attempts and successful coups. However, the author stressed that his intention was far from providing the future coup-makers with a manual, but was rooted in his interest in the topic and the wish to provide the world with the explanation of this quite frequent phenomenon of the time.

This is why, in the 2016 revised edition of Luttwak's book, the author himself confirmed that the 21<sup>st</sup> century represents a new phase of research of coup d'état, given that, this time around, many researchers, but also political analysts and especially decision-makers, have more-or-less abandoned the theoretical study of coups, moving on to the research of mechanisms for prevention of coups, commonly referred to as *coup-proofing* mechanisms. Namely, Luttwak himself admits that the biggest change in both conduct and research of coups d'état in the 21<sup>st</sup> century is rooted in the widespread implementation of specific precautionary measures against coups (Luttwak, 2016, 11), which is especially true when speaking of African countries, given the widespread presence of autocracies, military regimes and despotic behaviour of African leaders, who wish nothing more than to remain in power indefinitely, regardless the common democratic practice of holding elections and the common two-term limit on presidencies, and are thus constantly living in fear from being ousted (Frantz & Kendall-Taylor, 2014, 332).

From this short presentation of development of the study of coups d'état, we can clearly distinguish three phases of research in this sub-field of political violence, defining them as follows: the descriptive phase, the definition phase, as well as the preventive phase. Moreover, we must state that the phenomenon itself has not that significantly changed, but the change refers only to the approach taken by the researchers, taking the natural path from observation and thus description, to constructing definition and thus, typologies of the phenomenon observed, in order to reach the final stage of research – provision of preventive measures, given that the phenomenon examined is deemed as negative, since it falls to the spectre of political violence. The phenomenon itself did not change significantly – it is still planned and conducted by a rogue group from the national armed forces; coup is still being proclaimed in the media (though nowadays, the spread of the news that a coup has taken place is faster, given the omnipresence of the Internet, online media publishers and social networks); the coup-makers still need to legitimize their stay

in power, which is still conducted in the same manner: through formation of a *Transitional Military Council*, withdrawal of the coup leader from the army, his participation and winning the election, or, which is a rare occasion, organization of free democratic elections and abandoning the civil-military rule through enabling the nation to choose the president from the civilian ranks. However, the entire coup-making cycle has been influenced by the rise of globalization, perceived as a game-changing process, ensuring “global electronic interconnectivity that allowed individuals to communicate as never before” (Thomas, 2005), thus introducing several perks of the *New Era* – such as the Internet, the use of social media, but the use of artificial intelligence (AI) as well.

Artificial intelligence (AI) indeed impacted both execution of coups d'état and research of this phenomenon, albeit, in this research, our main focus will be set on examining the current practices in terms of the use of AI in other segments of research of political violence, with the main goal of singling out the fields of AI, as well as specific artificial intelligence-assisted tools that might contribute to the future research into this phenomenon. Namely, due to increasing digitalization and robotization of the society, the use of artificial intelligence in the security context is already on the rise (Ђорић & Милошевић, 2021, 201), thus demanding for the research in such phenomena to follow this trend as well. In this regard, in the next chapter, the author will examine the past, present and future perspectives of the use of artificial intelligence-assisted tools in the research of coups d'état. This examination and presentation will be conducted in five segments, given the current typology of artificial intelligence consists of five categories: 1) interactive artificial intelligence, 2) functional artificial intelligence, 3) analytical artificial intelligence, 4) textual artificial intelligence, and 5) visual artificial intelligence (Ђорић & Милошевић, 2021, 207). However, before we commence our examination of possibilities artificial intelligence-assisted tools have to offer in terms of research of coups d'état, we should define several aspects of the study of coups to be built into this interdisciplinary research<sup>8</sup>, given that certain aspects of the study of coups can be improved with the use of such research methods, whilst others might provide us with the same of even poorer results, due to the lack of *human touch*.

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<sup>8</sup> Regarding the significance of cyberspace as a domain of conflict, see more in: Vuletić, D. V., Milenković, M. R. & Đukić, A. (2021). Cyberspace as a domain of conflict: the case of the United States – Iran and North Korea. *Vojno delo*, 1/2021.



Having all the previously said in mind, we argue that three sub-fields of the study of coups can be improved with the use of artificial intelligence-assisted tools – coup risk examination, coup triggers, as well as coup-proofing. Before we dabble into examination of possibilities of using AI-assisted tools for researching coups d'état, it is necessary to define them, in order to avoid any confusion and misconception of the given terms. For the purpose of this research, let us define *coup risk* as a set of “structural, background causes” (Belkin & Schofer, 2003, 598) that depict a state of a country as being unstable, thus pointing to a high possibility that a coup might be used as a method for deposing the incumbent president. Coup risk should be, therefore, referred to as a *long-term* variable, or a set of variables, unchangeable and fixed, that continuously build up and lead a country towards a coup. However, these *long-term* variables need a trigger to set the notion of a coup d'état in motion, and thus, we speak of a *coup-trigger*, a *short-term* variable, usually represented in a crisis or a sudden change of the situation in a country. In this case, we are speaking of a factor that “might determine the exact timing of a coup in regimes that suffer from high coup risk” (Belkin & Schofer, 2003, 598). And finally, when researching coups in the present times, we ought to pay special attention to *coup proofing methods*, given that they represent a true variable in its essence, when speaking of their temporal emergence – in some cases, these mechanisms appear prior to a coup being executed, as a sign of fear of the incumbent and his wish to remain in power; in other cases, they are introduced in the aftermath of a *failed*, *foiled* or a *faux* coup, as a counter-measure and a desperate attempt of the leader to remain in power. For the purpose of this research, let us define *coup proofing* as “a set of actions a regime takes to prevent a military coup” (Quinlivan, 1999, 133), or even “a set of strategies that are associated with reducing the militaries’ coup-making capabilities” (Sudduth, 2016, in: Reiter, 2020, 314).

In the next segment, we will examine in which way the study of these three segments of coup research, namely coup risk, coup trigger, and coup proofing, can best be improved with the use of all five categories of artificial intelligence-assisted tools: interactive artificial intelligence, functional artificial intelligence, analytical artificial intelligence, textual artificial intelligence, and visual artificial intelligence.

## ARTIFICIAL INTELLIGENCE IN THE SERVICE OF POLITICAL SCIENCE: PERSPECTIVES OF IMPLEMENTATION OF AI TOOLS IN COUP RESEARCH

Artificial intelligence is nowadays a term quite present not only in the academic circles, but among the general population as well, especially given the rise and persistent use of several artificial intelligence-assisted tools, such as, for example, *ChatGPT*. Namely, in just a week after this tool was launched online in December 2022, millions of users subscribed, thus allowing us to state that artificial intelligence has, more than ever, stepped into the ordinary lives of many people. Given that the use of AI has nowadays become a trend, it is only normal that academicians and political analysts attempt to implement similar tools into their research as well.

When we speak of artificial intelligence, we ought to say that we are referring to *machine intelligence*, that is, intelligence demonstrated by machines, *taught* to do a wide variety of task as humans do, from speech recognition, to learning, planning and problem solving. This branch of computer science involves “developing computer programs to complete tasks which would otherwise require human intelligence” (Mohammed, 2018, 1). Artificial intelligence has been researched and developed since the fifties of the previous century, only to become quite *visible* and even *omnipresent* since the beginning of the 21<sup>st</sup> century. Political science did not evade such fate as well, and nowadays, we have many examples of interdisciplinary research, involving artificial intelligence-assisted tools.

The biggest breakthrough of implementation of artificial intelligence-assisted tools in research, as well as in policy making, has been made in the field of counterterrorism studies and practice, whilst in this sub-field of research of political violence, the use of AI centres on prediction of timing and location of terrorist attacks, identification of vulnerability to radicalization, as well as identification of terrorists (McKendrick, 2019), which is most commonly conducted through implementation of data mining, machine learning, and predictive analytics. The biggest contribution of the political science and computer science alliance, in the context of prevention of violent extremism and terrorism, was definitely provided with the use of machine learning tools, predominantly in the field of detection of radicalization and violent extremism-related

behaviour<sup>9</sup>. Regarding radicalization, it must be noted that machine learning approach has been especially used in the analysis of personal profiles of individuals deemed as radicalized, with a special emphasis on monitoring and examination of their online presence (Ivaskevics & Haller, 2022). Similar attempts have been made in the field of researching behaviour of armed forces and groups in the context of conflict monitoring, in which data collection and machine learning-based tool were used for operationalization and optimization of the research (Terry & Dany, 2023). During our examination of present practices and interdisciplinary research in this field, we have also found several initiatives promoting the idea of using machine learning to identify political violence and anticipate conflict, initiated by the EU, and conducted by the Uppsala University in Sweden and the European Research Council, through a project called *ViEWS*<sup>10</sup> (European Research Council, 2022). Machine learning processes were implemented in the research of political science beyond the study of political violence as well, to which testifies the fact that several authors, such as Duffy and Tucker (Duffy & Tucker, 1995, 1), have dabbled into researching political decision making and conflict simulation through implementation of AI-assisted tools. Unfortunately, besides the steps made by the EU regarding monitoring and analysis of behaviour of armed forces and groups with the help of artificial intelligence, the author did not come across any study researching the possibilities of the use of artificial intelligence for researching coups d'état. Having that in mind, in the following segments, we have examined benefits and possibilities offered by the use of various AI tools in every category of artificial intelligence, in order to present the most prominent perspectives regarding implementation of such tools within the research of this phenomenon.

*Interactive artificial intelligence* refers to all tools and algorithms based on machine learning processes, albeit with an interactive feature incorporated in them. This means that the tools and algorithms in question predominantly rely on their own databases, but build up on communication with users, thus perfecting themselves as the time passes by and completely adjusting the responses and products offered to each

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<sup>9</sup> See more in: Đorić, M. (2020). *Priručnik za prepoznavanje, prevenciju i suzbijanje radikalizacije i nasilnog ekstremizma kod učenika*. Biro za operativnu koordinaciju, Podgorica, 2020, as well as in: Krstić, M. (2019). Internet kao platforma za radikalizaciju. *Vojno delo*, 4/2019.

<sup>10</sup> Violence & Impacts Early-Warning System

user. Such algorithms can be found in personal assistants such as *Siri*, *Cortana* and *Alexa*, to name just a few, but also in *ChatGPT*, which represents a mixture of *interactive*, *textual* and *analytical artificial intelligence*. Namely, in terms of *textual artificial intelligence*, we ought to say that these tools have been present in the shadows of many research conducted by political scientists in the recent past, given that it uses machine learning algorithms for recognizing and correcting textual excerpts, thus enabling our *Microsoft Word* software, for example, to correct our spelling and grammar mistakes; it has also impacted our *Google* searches by predicting our needs through completion of our search queries, as well as listing the adequate content through implementation of search and recommendation algorithms, also predominantly based of machine learning. On the other hand, *analytical artificial intelligence* relies predominantly on big data collection and data mining, which is later processed with the use of machine learning tools, thus providing us with the most suitable answer to our question. The best examples of application of such practices can be found in chatbots, that is, computer programs designed to simulate human-like communication with the user, thus building up from the previously mentioned virtual personal assistants (*Cortana*, *Alexa*, *Siri*) to life-like *companions* such as *Meena*, *Kuki AI*, *Xiaoice*, *Replica*, to name just a few. To this category falls the previously mentioned *ChatGPT* as well, as the most famous of them all. Apart from the three previously mentioned and quite interlinked types of artificial intelligence, the most celebrated embodiment of functional artificial intelligence is depicted in the emergence and wide use of *drones*, that is, *flying robots* (Grossman 2018). However, this type of artificial intelligence has been more present in the conduct of political violence, and less in the research of it; therefore, further examinations of possible implementation of this type of artificial intelligence in researching coups d'état will not be examined in detail, given that *drones*, as such, cannot be implemented in such research at this point<sup>11</sup>. Finally, the last type of artificial intelligence refers to *visual artificial intelligence*, most commonly used in the field of *simulation*, that is, in provision of virtual

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<sup>11</sup> In terms of the use of drones by terrorist and extremist groups, see more in: Ђорић, М. & Милошевић, Т. (2021). Злоупотреба вештачке интелигенције у екстремистичке и терористичке сврхе. *Српска политичка мисао*, број 1/2021, год. 28, vol. 71, стр. 201-221, as well as in: Ђорић, М. & Милошевић, Т. (2020). Uticaj Saudijske koalicije na nacionalnu bezbednost Jemena. *Politika nacionalne bezbednosti*, Vol. 2/2020. DOI: <https://doi.org/10.22182/pnb.1922020.7>

training opportunities due to the lack of real-life opportunities, or them being potentially harmful and/or deadly.

What can be deduced from this short examination of the examples of the use of different types of artificial intelligence in everyday life is the fact that interactive, textual and analytical artificial intelligence indeed have the biggest potential for contributing to the future research of political violence, and especially the study of coups d'état. Moreover, we have determined that such contribution can best be given through application of data mining, machine learning and statistics, which all fall to the spectre of artificial intelligence-assisted tools implemented in the process of *predictive analytics*.

As we have previously stated, *predictive analytics* is an advanced analytical tool, created on the foundation of application of several different techniques rooted in the use of artificial intelligence-assisted tools, such as statistics, data mining, machine learning, etc. It predominantly refers to the use of advanced analytics in predicting future events on the basis of current and historical data, with a consequent creation of predictive scenarios and possible outcomes (Elkan, 2013). Given that we are speaking of quite an advanced tool, the process of its application is quite complex as well, and is usually consisted of the following six phases: *requirement collection*, *data collection*, *data analysis and massaging*, *statistics and machine learning*, *predictive modeling*, and *predictions and monitoring* (McKendrick, 2019). Most phases are self-explanatory, and are indeed present in any common research in political science, whilst *requirement collection* can be translated into *construction of a hypothesis* or a *research question*; *data collection* equates to *gathering a corpus of previously conducted research on the topic* or *conducting in-depth interviews*; *data analysis* can be equalled to common examination and analysis of the *acquired corpus*. However, *statistics* and *machine learning*, that is, the fourth phase of this advanced analytical cycle, can be conducted only half-heartedly if conducted in the old-fashioned way – by hand, given that a human researcher, unfortunately, cannot replace the machine. The final two stages of the cycle – *predictive modeling* and *predictions and monitoring*, both refer to creation of predictive models, as well as consequent *scenario building* and *monitoring* the development of the situation in the field. These two can indeed be conducted by a political violence researcher alone, without the help of a machine. Albeit, the results might be short-sighted and scanty, due to the fact that exploiting knowledge possessed by a machine connected to several databases or even

the entire Internet, stripped of fatigue, stress, prejudice and subjectiveness, can provide us with more objective and unbiased scenarios that have a greater chance of being realized in real time.

Until nowadays, the majority of research combining political science analysis and predictive analytics revolved around the study of political violence, thus giving this advanced analytical tool major perspective when speaking of it being applied in the study of coups. Albeit, until nowadays, it has most commonly been applied in counterterrorism studies, though such practice raised some issues among the human rights activists due to its “deleterious effect on human rights, generating spectres of ‘pre-crime’ punishment and surveillance states” (McKendrick, 2019). Thus, let us ask ourselves: *how can we implement predictive analytics, that is, machine learning, in the research of coups d’état?*

As we have previously concluded, *predictive analytics* is a process predominantly built on *statistical tools*, as well as *machine learning* processes, that, when combined, enable the researcher to conduct the research and find the needed answers in a more timely and comprehensive fashion. Moreover, machine learning processes use *statistical* methods in order to find logical patterns in great amounts of seemingly illogical data, thus providing us with conclusions that might be invisible to the humble human eye. Therefore, we cannot examine the benefits of *predictive analytics* without examining the possibilities that *machine learning* and *statistics* bring to the table. Given that the use of statistical tools in political violence research has been widely researched and examined, and is thus quite present in the study of coups d’état, we will limit our further research solely to researching the possibilities offered by *machine learning*, and thus, *predictive analytics*.

As we have already stated, *machine learning* processes build on using statistical methods and big data collections in order to find logical patterns in a vast amount of seemingly illogical data. Therefore, they offer different possibilities for researching various segments of the study of coups, especially in terms of research directed towards examining and discovering *coup risk*, *coup triggers* and *coup-proofing mechanisms*. What we can see when we group these three terms together is the fact that they all rely on existence of certain historical prerequisites – for example, many researchers base their initial research of *coup risk* on the result of the Hebditch and Connor ten-point *putsch prognosis* questionnaire (Hebditch & Connor, 2005:195), consisting of the widest

range of historically present variables<sup>12</sup> that can be collected through machine learning the fastest; *coup triggers* can be discovered through examination of up-to-date news, depicting the current political, economic and security situation in the country, but also the sentiment of the army and the locals regarding the incumbent<sup>13</sup>; *coup-proofing mechanisms* can best be discovered through examination of not only the current news, given that such mechanisms are usually publicly announced (i.e., shuffling of the high-ranking officers, creation of paramilitary forces, creating the *persona* of a leader, etc.), but also through *linguistic* examination of statements of the incumbent.

Having all the previously said in mind, we must agree that several artificial intelligence-assisted tools, nowadays rooted in machine learning processes, are *up for the job*, albeit three of them possess widest applicative value in terms of researching coups d'état. However, one should have in mind that human factor that is, vigilance of the author of the research, always needed, given that the machine cannot make the same decisions and conclusions as a skilled and well-educated researcher can.

For example, when speaking of providing answers to the questions consisting the previously mentioned *putsch prognosis* questionnaire, one possibility of taking a *shortcut* with the use of machine learning-assisted tools might be application of chatbots, such as *ChatGPT*. Albeit, one should still be careful and have in mind that such tools can only provide assistance, and not be the author, especially having in mind the fact that the data available to such tools might be restricted and most commonly outdated<sup>14</sup>, and can thus limit and even harm our research. Moreover,

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<sup>12</sup> The questionnaire consists of ten questions referring to the historical and current political and economic organization of the country (history of colonization, unity of the state, economic state of the country, corruption and status of the leader, previous coup history), geographical features of the country (geographical positioning, presence of energy and mining resources), and the history and organization of the army (state of the army, overseas and/or foreign training, strength of the army).

<sup>13</sup> Let us remember that in 2019, the broad discontent of the people with the Sudanese president of the time, Omar al-Bashir, created a fertile ground for the paramilitary Rapid Support Forces – once created as means of *coup proofing* – to overthrow of the then-incumbent, causing a shift in loyalty of this paramilitary force. Hence, sentiments of the people, especially if expressed publicly, can be treated as a strong coup trigger, thus worthy of examination.

<sup>14</sup> For example, when the *ChatGPT* chatbot was asked the following question: *What countries in Africa are deemed as Russian allies?* – the machine learning mechanism provided us with the answer starting with the following syntagm: “As of my last knowledge update in September 2021...”. Therefore, upon first examination of the

the results and answers acquired through this method can also be quite limited, general and thus without any scientific value, thus making this tool useful only when researching general information about a country or an event<sup>15</sup>.

On the other hand, when speaking of *coup risks*, two specific tools brought by *machine learning* can be implemented in the research in this field: *news and opinion analysis* and *social media monitoring*<sup>16</sup>. These two tools are quite similar and interlinked, and represent distinctive features of *sentiment analysis*, that is, a broader machine learning tool that analyses texts for polarity, whilst the machine, in this case, is trained to recognize emotions presented in a text, defining it as positive, negative or neutral. Based on the acquired data, the machine is later able to *make a decision* whether the media discourse is, for example, predominantly in favour or against the incumbent, the army, or a certain opposition leader, to name just a few examples. Moreover, these tools also build up on *Natural Language Processing (NLP)*, a tool extracted from *linguistics*, that can be used for, when speaking of *news and opinion analysis*, analysing a large corpus of news stories with the goal of identifying articles that cover the same story and evaluating the *uniformity* or *balance* of the media coverage, thus discovering the polarity and sentiments in the media (Baker, 2019). On the other hand, application of *social media monitoring* tools in political science research has already been present in the field of political violence, notably in counterterrorism studies, as we have

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possibilities of machine learning tools of this sort, the chatbot in question failed to provide us with a valuable and up-to-date answer.

<sup>15</sup> For example, when asked the question – Are there any paramilitary forces in Sudan? – *ChatGPT* provided us with a positive answer, additionally providing us with general information about the Rapid Support Forces. Once again, the chatbot informed us that the knowledge presented relies on examination of data last updated in September 2021. However, given that the existence of such armed group is historically known (the Rapid Support Forces were introduced in 2013, after a series of failed coups against the then incumbent Omar al-Bashir), such answer would in fact aid our research in the topic, if our goal was to implement the *coup prognosis* questionnaire on a specific case.

<sup>16</sup> Regarding the significance of monitoring social media in cases of a coup d'état, see more in: Milošević, T. & Milošević, N. (2022). The Role of Social Media in Coups d'État. In: Stanković, M. & Nikolić, V. (eds.). (2022). *Proceedings of the 4th Virtual International Conference: Path to a Knowledge Society – Managing Risks and Innovation*. Complex System Research Center, Niš, Serbia; Mathematical Institute of the Serbian Academy of Sciences and Arts, Belgrade, Serbia, as well as: Mitrović, M. (2020). The media as an instrument of strategic communication in armed conflicts – the CNN effect. *Vojno delo*, 3/2020.



previously mentioned, and thus, its significance is evident. Such tools can be useful for monitoring and examining propaganda material as well, given that, in certain cases, coup-making and coup-proofing processes are announced by powerful propaganda matrix as well<sup>17</sup>.

Finally, the study of *coup proofing mechanisms* could benefit from all the previously mentioned machine learning tools. However, this phenomenon could also be examined through implementation of the search of *hidden political ideologies*, given that *coup proofing* is directly linked with the personality, attitudes and behaviour of the incumbent president, whether it be a democratically-elected civilian, or a military junta leader. Such examination and the acquired data would have enabled us with enough information to construct certain conclusions, and even create possible scenarios regarding the situation developing in the field, especially in terms of implementation of certain *coup proofing mechanisms*, as well as their success-rate.

## CONCLUSION

Many have believed that the lessons learned in the 20<sup>th</sup> century and the atrocities of the World War I and World War II would have restrained the humanity from starting new conflicts in the 21<sup>st</sup> century, especially given the fact that the world has stepped into this new century still struggling from numerous forms of political violence, from terrorism, to civil wars and coups d'état. Unfortunately, the world at peace was only *wishful thinking*, and not the reality we are currently facing. As the centuries changed, we have witnessed not only an increase of violent incidents throughout the globe, but also the impact of technological improvements on these incidents, ranging from the wide use of drones in modern warfare – whether among the national armed forces, local armed groups, or terrorist cells – to wide application of hacking tools and machine learning processes directed towards the enemy, whether it be the state or the individual. Having all this in mind, it is obvious that political science, and thus, political scientists, ought to follow these trends, and attempt to *fight fire with fire*, that is, employ the possibilities

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<sup>17</sup> See more in: Jevtović, Z. & Aracki, Z. M. (2019). Propagandna matrica globalnih medija u hibridnim ratovima. *Politika nacionalne bezbednosti*, Vol. 1/2019. DOI: <https://doi.org/10.22182/pnb.1612019.8>.

offered by artificial intelligence in the research of the contemporary manifestations of political violence.

The study of coups d'état has developed during the last two centuries, going through three distinct phases – the descriptive phase, the definition phase, and the preventive phase – finally reaching the point of being ready to be interlinked with other scientific branches – computer science, with a little bit of *linguistics* on the side. Namely, as was the case with the research of other phenomena from the spectre of political violence, the study of coups has stepped from the books and the terrain to the cyberspace, thus demanding from coup researchers to do the same. Namely, the use of the media, as well as the increasing presence of social media platforms even in the most oppressed African countries, led by life-long despotic leaders of military juntas, has elevated the need for accessing and analysing media coverage, public speeches and the sentiments of the local people, but also the members of the army, especially when speaking of the research of coup risks, coup triggers, and coup proofing mechanisms. Therefore, researchers should be encouraged to dabble into simple computer science research, but also forge alliances with computer science professionals, especially the ones professionally involved in the development of artificial intelligence-assisted tools, with the sole goal of providing the academic community with fresh and open-minded *new* perspectives of the *old* phenomena, such as coups d'état.

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## ПЕРСПЕКТИВЕ ПРИМЕНЕ АЛАТА ВЕШТАЧКЕ ИНТЕЛИГЕНЦИЈЕ ПРИЛИКОМ ИСТРАЖИВАЊА ПУЧЕВА

### Сажетак

Проучавање пучева је као дисциплина доживело врхунац током друге половине 20. века, коинцидирајући са глобалним *Хладним ратом*, фокусирајући се на изучавање пучистичких активности које су се претежно одвијале у афричким, азијским, блискоисточним и латиноамеричким државама. Ово интересовање се претежно фокусирао на описивање овог феномена, као и на потрагу за узрочницима и резултатима таквог политичког понашања. Како је *Хладном рату* дошао крај, тако је и интересовање за пучеве почело да јењава, при чему су се поједини истраживачи чак усудили да овај феномен прогласе заоставштином прошлости, узевши да је у том моменту на светску политичку сцену наступила глобална промоција поштовања и уважавања националног интегритета и суверенитета, као и примене демократских пракси. Међутим, овај феномен је опстао и поново ступио на политичку позорницу почетком 21. века, посебно у Африци, да би затим ескалирао и достигао темпо из времена *Хладног рата* до почетка друге деценије овог века. Имајући у виду поновно интересовање за изучавање пучева, аутор ће презентовати актуелне праксе у изучавању пучева, а такође ће проучити могућности употребе алата вештачке интелигенце ради операционализације и усавршавања ове области, са главним циљем увођења нових метода истраживања. Уз помоћ методе анализе садржаја, као и кроз теоријско пропитивање погодности које нуде свеprisутни алати вештачке интелигенције, аутор ће пружити одговор на следеће истраживачко питање: Који алати вештачке интелигенције могу унапредити изучавање пучева, и на који начин?

**Кључне речи:** пуч, политичко насиље, вештачка интелигенција, машинско учење, статистика, предиктивна аналитика