

PERCEPTION, COGNITIVE DISSONANCE AND NUCLEAR DETERRENCE IN THE INFORMATION AGE, POSSIBLE IMPLICATIONS FOR THE EURO-ATLANTIC SECURITY ARCHITECTURE IN THE CONTEXT OF A NEW NATO STRATEGIC CONCEPT

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The February 2022 military aggression on Ukraine has sent shockwaves across European capitals as well as across the Atlantic. This “new normal”, namely a conventional war in twenty-first century Europe, is both hard to process and inherently ominous as to the future of the European security architecture and strategic stability on the continent. The aim of the article is to analyse the combined effects of technological advances in information/computing technologies and human cognition on strategic choices such as nuclear deterrence strategies. The paper is looking to address the proposed research questions through a cognitive psychology lens, with a particular focus on perception and cognitive dissonance. The plasticity of both the geopolitical environment and the information space present the optimal conditions for propagation of cognitive errors in human decision-making. The article is taking a closer look at what said vulnerability means for the Euro-Atlantic security architecture, most specifically for the North Atlantic Treaty Organization.

Keywords: cognitive dissonance; deterrence; European defence; perception; NATO; strategic stability;

INTRODUCTION

February 2022 officially ended the unipolar moment of the United States and the unipolar world order emerged after the dissolution of the Soviet Union. Undoubtedly, the attack on Ukraine took a vast majority of observers by surprise, it still seems unconceivable that contemporary Europe is hosting a conventional war. It raises the question: what went wrong? After the dissolution of the Soviet Union, the United States and its allies were in a much better position than the Russian Federation. In fact, in the 1990s, Russia experienced de facto economic collapse and numerous civil unrests, some of which culminated with attempted coups. How is it possible that the progressive and advanced West, including its institutions such as the North Atlantic Treaty Organization (NATO) and the European Union (EU), was not capable to foresee the terrible events and developments in Ukraine.

The present article is setting out to initiate a discussion around these questions and is doing so by adopting a cognitive psychology framework applied to the theory of deterrence. First, the paper establishes the theoretical foundation: what is deterrence, what are the elements of deterrence and what brought about the birth of such a theory. Also in the theoretical fragment of the article, there is a brief explanation of the cognitive frame in general and cognitive dissonance in particular. The second portion of the paper illustrates the difference between the Nuclear Age and the Information Age. The reason why these two periods in human history are singled out is because the position of the article is that the rampant advances in technologies, especially the emergence of the internet and social media at a globalised, mass scale, have changed the discussion around deterrence, but not the principles or the central aims of the theory. Human cognition as a process has not changed, it is the environment in which it functions that was altered. The last position of the paper discusses perception and deterrence in the post 2022 NATO Strategic Concept timeframe. The attention falls on the relationship between the perceptions of NATO and the Russian Federation of each other. The reason behind zooming into this relationship is because NATO remains the only credible line of defence for Europe at the moment. In spite of being home to an economic powerhouse like the EU and several technologically very advanced countries such as France or Germany, the European continent is still struggling with the inability to be autonomous, credible and/or capable in matters of security and defence. The article does not spend too much time on the “why” behind this inability

to defend due to the limited scope of the paper. The conclusions bring together the elements of the discussion put forth and close out by tying everything back to Thomas Schelling's theory of deterrence.

THE "DIPLOMACY OF VIOLENCE" – DETERRENCE, COERCION AND DECISION-MAKING

Thomas Schelling is widely regarded as the intellectual founder of US nuclear deterrence thinking. In his 1960 book, *"The Strategy of Conflict"*, Dr. Schelling defined deterrence as a form of cooperation between belligerents/competitors. So, notably, in deterrence theory logic, deterring an enemy to act a certain way is in fact a form of successful bargaining. This will represent the central theoretical pillar of the present article. The concept of deterrence encompasses numerous psychological and cognitive nuances which have been sometimes overlooked in strategic planning. These human elements are embedded in the concept because deterrence is by excellence a theory of influencing an adversary or an ally to do or not to do something. Deterrence existed in military and strategic art for centuries, nevertheless, the nuclear age changed the rules of the game, the potential to influence, became overnight a matter in large part limited to those states who possess nuclear capabilities. The major game changer in international relations was marked by the advent of nuclear weapons. Their impact on both diplomacy and international relations in general was foundational because nuclear powers automatically started and engaged in bargaining from a position of dominance as compared to non-nuclear states. Cold War foreign affairs and strategic planning have been pivoted to nuclear deterrence thinking, and eventually arms control regimes and non-proliferation efforts.

In *"Deterrence"*, by Lawrence Freedman, the author charts the evolution of the contemporary concept of deterrence, and discusses whether and if so how it still is relevant in today's world (Freedman, 2004). Freedman's major contribution to deterrence theory was to develop *"a distinctive approach to the evaluation of deterrence as both a state of mind and a strategic option"* (Freedman, 2004, foreword). Another very poignant way of conceptualizing deterrence was put forth by Thomas Schelling as avoidance of *"mutual damage"* as *"common interest"* (Schelling, 2008, p. 1). Further relevant ideas, meant to reinforce the propositions of the present article were put forth in *"The Spread of Nuclear Weapons: An Enduring Debate"* by Scott Sagan and Kenneth Waltz. Sagan and Waltz conclude in their 2013 book that in order to better develop military capabilities for deterrence, it is vital to understand all sides of the problem on global nuclear proliferation (Sagan, Waltz, 2013).

Robert Jervis reduced deterrence to an excellent explanation when he asserted that deterring means one actor deters another *"convincing him that the expected value of a certain action is outweighed by the expected punishment"* (Jervis, 1982, p. 4). He continued explaining how punishment *"is composed of two elements: the perceived cost of the punishments that the actor can inflict and the perceived probabilities that he will inflict them. Deterrence can misfire if the two sides have different beliefs about either factor"* (Jervis, 1982, p. 4). A working definition for the concept of deterrence was put forth by Rand Corporation's Michael J. Mazarr when in *"Understanding Deterrence"* he wrote: *"Deterrence is the practice of discouraging or restraining someone – in world politics, usually a nation-state – from taking unwanted actions, such as an armed attack. It involves an effort to stop or prevent an action, as opposed to the closely related but distinct concept of "compellence," which is an effort to force an actor to do something"* (Mazarr, 2013, p. 2). By synthesising these different definitions of deterrence, we can say that, in international security and policy building, a policy of deterrence generally refers to employing threats of military force directed by the leaders of one state towards the leaders of another in an attempt to prevent the other state from resorting to the use of military force in pursuit of its political goals.

Deterrence has three main components: capabilities, communication, namely how states communicate to adversaries about said capabilities and credibility. It is in the latter two the challenges of effective deterrence lie because neither is self-explanatory. Communication is a deeply socio-cultural cognitive process, therefore each state will understand to communicate differently and to a different predetermined audience making credibility difficult to gain or maintain. A good example is the United States, a mighty conventional and nuclear superpower who was not able to unequivocally defeat North Vietnam or who abruptly retracted from Afghanistan after twenty years of fighting. The present article focuses on cognitive processes and cognitive dissonance effects, therefore, the discussion will be centred in communication in all its aspects and vehicles as well as credibility shaped by perception.

Deterrence can be attempted in several ways. For the Euro Atlantic security community where the Russian Federation is a decisive player, coercion plays a very significant role. *"Coercion"*, writes Thomas Schelling, *"depends more on the threat of what is yet to come than on damage already done"* (Schelling, 1966, p. 172). Decisions, including political ones, are reached by people and in the human mind, coercing can be done without the use of force, but with the idea that said force could be exercised. To this point, Schelling underscores *"the usual distinction between diplomacy and force is not merely in the instruments, words or bullets, but in the relation between adversaries-in the interplay of motives and the role of communication, understandings, compromise, and restraint"* (Ibid., p. 1).

Finally, to complete the theoretical framework of the article, we will clarify the concept of cognitive dissonance. The concept first appeared in academic literature in 1957 when American psychologist Leon Festinger published *“A Theory of Cognitive Dissonance”*. Festinger’s theory of cognitive dissonance is regarded as one of the most influential theories in social psychology (Harmon-Jones, Mills, 1999, p. 1). The article employs the concept as it was conceptualised by Festinger, namely *“pairs of cognitions (elements of knowledge) can be relevant or irrelevant to one another”* (Ibid., 1999, p. 3). If two cognition processes, or cognitions, are relevant to one another, they are either consonant or dissonant. Cognitive consonance reflects a state of mind in which a person’s *“conscious knowledge, attitudes, and awareness are congruent and in harmony with their unconscious, emotional, or innate beliefs”* (Festinger, 1957). APA defines cognitive consonance as *“a situation in which two cognitive elements are consistent with one another, that is, one cognitive element follows from or is implied by the other”* (APA, 2022). Conversely, a cognition is dissonant if *“the obverse (opposite) of one cognition follows from the other”* (Festinger, 1957). The existence of dissonance, or *“being psychologically uncomfortable”* acts as a motivator for a person to reduce the dissonance and herein leads too *“avoidance of information likely to increase the dissonance”*. The power/intensity of dissonance is directly proportional to the pressure to reduce it. In the wider context of the article, I argue that the perceptions of our adversaries can potentially act as saboteurs to strategic stability negotiations and nuclear deterrence design. Because deterrence is so heavily interlinked with human perception, which in turn is received, processed and interpreted through a socio-cultural rather than rational lens, the strategy under analysis runs the risk of producing at best irrelevant at worst negative outputs in strategic stability negotiations.

NUCLEAR AGE VS INFORMATION AGE

“With enough military force, a country may not need to bargain” (Schelling, 1966, p. 1) no longer holds true in the information age. Every single piece of information we receive we can run due diligence on thanks to the internet. At least we think so. The information age altered the strategic environment the same way the industrial revolution did in the previous century. In the context of the article, the information age represents the historical/temporal period of the twentieth century which can be characterised by a fundamental shift from *“traditional industry”* established by the Industrial Revolution to *“an economy primarily based upon information technology”*. In the information age, information itself has essentially become a prized commodity and the ways in which it is distributed and disseminated have been exponentially increased by massive leaps in the use of computer technology.

Just like the detonation of the first atomic bomb by the US announced the ominous birth of the Nuclear Age, the Information Age was precipitously brought upon the international system by the advent of the internet. Information propagation by multiple sources with their own agendas and more often than none no accredited training or credentials, can have a damaging impact on human cognition, especially if applied consistently over a medium to long period of time. The Russian Federation has been very successful in systematically distributing disturbing information in order to instil fear and propagate insecurity. Under this pressure, man’s cognition can elect to distance itself from the dissonant element, in doing so, sometimes achieving the opposite result.

A major complication in the information age is the fact that the nuclear threat did by no means disappear or diminish, but the stimuli for potential conflict, like information about the assumed intentions of the adversary, or our perception of him/her, is readily available and compounds by the minute by means of social media and the internet. The ephemeral balance of power is heavily dependent on *“information advantage”* and this in turn can easily be swayed by leveraging human cognition, which tends to not be rational. Other disruptors are artificial intelligence, cloud computing, data analytics, and cyber operations, including cyber warfare (Microsoft, Applications for Artificial Intelligence in Department of Defense Cyber Missions 2022). Information is collected in unprecedented volumes and at an unprecedented pace and this is done by all great powers not only the *“usual suspects”*: USA, China or Russia. This overstimulation of the human mind can easily lead to cognitive dissonance and people may easily start to *“operate”* in a white noise vacuum. If in the pre-internet era of the Cold War, information distribution was easily controllable, at present this no longer is the case. During the Cold War, controlling information flows was easy compared to today due to several factors. On the other hand, intelligence collection (information collection) was not the easiest task. Strategic decisions were heavily dependent on Hum Int in addition to Sig Int. The Cuban Missile Crisis is a good example of how the two contributed to political decision making. While the intelligence collected via signal/satellites presented unequivocal proof of missiles on the US border with Cuba, the perception the leaders had off each other and of each other’s strategic culture played a decisive role in the outcome. While Nikita Khrushchev perceived the much younger American resident as inexperienced and gullible, John F. Kennedy demonstrated to be anything but such things.

Information is the catalyst of communication in deterrence: *“If he cannot hear you, or cannot understand you, or cannot control himself, the threat cannot work”* (Schelling, 2008, p. 38). For example, early 2022, when Russian troops were

building up on the borders of Ukraine, NATO Secretary-General Jens Stoltenberg was “reassuring” everyone “NATO has no plans to deploy combat troops to non-NATO member Ukraine in the event of a Russian invasion” (Reuters, 2022). Furthermore, it was indeed difficult to fathom that in twenty-first century Europe one sovereign nation state will violate the territorial integrity and sovereignty of another European sovereign state. Many analysts, as well as specialists in the media or academia, have jumped to call this a miscalculation by the Russian government, but not many have tried to decipher why many people, including in the Russian Federation and Ukraine, did not believe an invasion is possible. The article postulates it is because of cognitive processes. After all, in cognitive psychology, we have identified how “Whatever we know about reality has been mediated, not only by the organs of sense but by complex systems which interpret and reinterpret sensory information” (Neisser, 2014, p. 24).

An interesting aspect of nuclear deterrence in the information age is the emergence of artificial intelligence (AI). The implications of AI applications at the strategic level are not in discussion, at least for now. Nevertheless, at the operational and tactical levels, AI has been applied in order to maximize effectiveness. Nuclear deterrence and nuclear strategy remain a human domain decision process. This in itself should once again underscore the importance of nuclear deterrence and should assure a special place for diligent research and planning for the field. The decision to push the nuclear button so to speak is still in the hands and minds of leaders and a very select few.

PERCEPTION AND DETERRENCE POST 2022 NATO STRATEGIC CONCEPT

A multipolar world, with multiple decision-making centres, is undoubtedly complex. Naturally, the more decision makers, the more potential for risk, the more opportunities for misinterpretation. After February 2022, it has become very clear that the European security architecture is fully dependent on the United States. On its own, neither the EU as a whole nor individual European powers have the credibility (in a deterrence sense) or capabilities to withstand an attack from nuclear power Russia. The US nuclear umbrella shields the European continent from a conventional or nuclear attack and US basing enforces the guarantee. NATO nuclear posture after the 2022 Strategic Concept is clear: nuclear weapons are a core component of the Alliance’s capabilities for both collective defence and deterrence. NATO remains firmly “committed to arms control, disarmament and non-proliferation, but as long as nuclear weapons exist, it will remain a nuclear

alliance” (NATO, 2022). The Alliance’s strategic outlook presented in its documents is also clear: “The fundamental purpose of NATO’s nuclear capability is to preserve peace, prevent coercion and deter aggression. As long as nuclear weapons exist, NATO will remain a nuclear alliance” (Ibid.). Nuclear weapons are a core component of “NATO’s overall capabilities for deterrence and defense, alongside conventional and missile defense forces” (Ibid.). Concretely, NATO’s current nuclear policy is based on two public documents agreed by all Allies: the 2022 *Strategic Concept* and the 2012 *Deterrence and Defense Posture Review*.

To the Russian Federation, de facto heir to the Soviet Union, nuclear deterrence, deterrence logic and signalling are important tools in designing strategy as well as communicating to foes or competitors. The core official document, the Fundamentals of the State Policy of the Russian Federation in the Field of Nuclear Deterrence, was designated by Russian political leadership as the “strategic defense planning document that reflects official views on the essence of nuclear deterrence, defines the military dangers and threats that nuclear deterrence is intended to neutralize, the principles of nuclear deterrence, and the conditions for the transition of the Russian Federation to the use of nuclear weapons” (Fundamentals of the State Policy of the Russian Federation in the Field of Nuclear Deterrence, 2020). Nuclear posturing and nuclear arsenals have remained a foundational instrument of exerting power for Moscow. According to the same 2020 document, nuclear is not a standalone element but a segment of “a set of coordinated, united by a common plan, political, military, military-technical, diplomatic, economic, informational and other measures implemented based on the forces and means of nuclear deterrence, to prevent aggression against the Russian Federation and (or) its allies”. (Ibid.). As with any Russian strategic document, it is imperative for it to be properly framed, in concert with Russian history, a thorough understanding of Russian socio-cultural customs, Russian grand strategy, including military and economic strategies. The Doctrine underscores “preventing the escalation of hostilities and their termination on terms acceptable to the Russian Federation and/or its allies”. Similarly to other documents denoting Russian strategy building, nuclear deterrence “is carried out continuously in peacetime, during the immediate threat of aggression and in wartime, up to the beginning of the use of nuclear weapons”. Probably the most important assertion of the Doctrine is that Russia reserves the right to use nuclear weapons “in response to the use of nuclear weapons and other types of weapons of mass destruction against it and/or its allies, as well as in the event of aggression against the Russian Federation using conventional weapons, when the very existence of the State is threatened” (Ibid.). The nuclear first strike capability works as a very strong deterrent.

NATO also acknowledges deterrence is essentially a *“political function”*. As with any deterrence discussion, the credibility and resolve of the alliance, in addition to capabilities, are the factors which decide whether said deterrence is indeed capable to achieve set aims. NATO declares that in the event the *“fundamental security of any NATO Ally”* will be threatened, the Alliance *“has the capabilities and the resolve to impose costs on the adversary that would be unacceptable and far outweigh the benefits that any adversary could hope to achieve”* (NATO, 2022). In the European security architecture, this is mainly targeted towards the Russian Federation. The conflict in Ukraine is a very good example of the fragility of deterrence in Europe, not because of capabilities, but because of the ever present risk of misperception or *“misreading”* the other side. In addition to this potential vulnerability, there is the internal makeup of the Alliance, where each country, hence its political decision makers prioritise a domestic political agenda for reelection and have different degrees of perception or misperception of Russian intentions. As professor Jervis indicated: *“Unless statesmen understand the ways in which their opposite numbers see the world, their deterrence policies are likely to misfire unless scholars understand the patterns of perceptions involved, they will misinterpret the behavior”* (Jervis, 1982, p. 1). In the cognitive frame, professor Jervis referred *“that actors’ perceptions often diverge both from ‘objective reality’ (or later scholars’ perceptions of it, which is as good a measure as we can have) and from the perceptions of other actors. These differences, furthermore, both randomly and systematically influence deterrence”* (Ibid.). Furthermore complicating the discussion is the perception of the *“other”*. Russia presents a markedly dissonant conception of the situation in Ukraine, it has been presenting a contradictory discourse on its intentions in Ukraine. In 2014, Foreign Minister Sergey Lavrov penned an article in Russian newspaper Kommersant in which he, on the one hand, underscored the importance of Ukrainians’ free will to choose which alliance it will belong too and simultaneously wrote: Russia *“explained to our Ukrainian friends that a change in the economic rules of the game on their part would cause a strictly adequate reaction from Russia in full compliance with international standards, including WTO norms”* (Lavrov, 2014). This divergent discourse is consistently present in Russia. It remained constant since the illegal annexation of the Crimean peninsula at the very least. As recently as 2022, at a press conference following his speech at the UN, Russian Foreign Minister Sergei Lavrov talked about how *“all Russian laws and doctrines, including the nuclear doctrine, will apply to the territories of Ukraine that are to join Russia through sham referendums”* (Ukrainska Pravda, Russia’s Nuclear Doctrine Will Apply to *“New”* Territories – Lavrov 2022). The Russian nuclear

doctrine was updated and according to experts, it changed the focus from Western to non-Western threats. Paradoxically one might say. Here is where the dissonant cognition might explain said perception. In Western view, Russia remains behind its occidental counterparts due to economic and technological shortcomings. This is not of importance when building nuclear doctrine because the nuclear doctrine needs to factor in not Western perception but Russian conceptualization of the world. It goes back to debates about strategy and implicitly deterrence during the Cold War when in 1981 it was also argued how *“our strategy has to be aimed at what the Soviets think is important to them, not just what we might think would be important to them”* (Jervis, p. 6).

The situation in Ukraine is complicated from a nuclear deterrence perspective because the Russian Federation perceives US and European support for Ukraine as a declaration of war. In the same UN press conference cited earlier, the Russian Foreign Minister explained how *“by providing Kyiv with weapons, the USA, the European Union and NATO cannot claim to have a neutral status, that is, they cannot claim that they are not taking part in the conflict”*. At present, United States’ nuclear weapons are *“forward-deployed in Europe”* (NATO, NATO’s Nuclear Deterrence Policy and Forces, 2021) but the same Russian elites do not value much Western credibility or resolve in the face of a nuclear or conventional threat on NATO territory. Russian foreign policy expert Aleksey Arbatov synthesised this domineering perception about the West in Russian security and defence circles: *“Russian political and expert circles as well as the Russian public share a latent conviction that the West is more afraid of nuclear war than Russia – sometimes, this conviction manifests on the official level”* (Arbatov, 2022). This further demonstrates how a dissonant view of the opposing side can undermine the deterrence posture of a state, especially if the revisionist/aggressor state does not understand how far the status quo alliance is willing to go. Steven E. Miller wrote about this when he analysed deterrence during the Cold War: *“Deterrence can also be undercut if the aggressor does not understand the kind of war which the status quo state is threatening to wage”* (Miller, 1985, p. 60). Miller illustrated his assertion with the Pearl Harbor example when Imperial Japan assumed the US will respond, but it did not gauge the strength and scale of the response. *“The magnitude of dissonance between one cognitive element and the remainder of the person’s cognitions depends on the number and importance of cognitions that are consonant and dissonant with the one in question”* (Harmon-Jones, Mills, 1985, p. 4). One inconsistency feeds off the other and can, and most likely will, perpetuate misinterpretation. The same can be said about the *“opposite side”* – NATO. If NATO planners and US strategists in

particular do not return to understand Russia and using signalling in bargaining for a positive outcome, humanity runs the risk of further, unimaginable consequences. Again, in deterrence theory logic, because of the potential devastation brought upon by nuclear war, bargaining does not mean giving into the revisionist aggressors' demands, but in preventing nuclear armageddon and saving lives as well as the environment. Conventional defence remains the foundation of a sound security and defence architecture in Europe, but in a multipolar world in technological and economic flux, it is a matter of survival to influence a malign power to stop the destruction. Skilful diplomacy needs to replace the Russian diplomacy of violence and coercion in order to protect the rules based order where norms, laws, human rights and positive values matter and thrive.

To sum up as pragmatically as possible, this inner turmoil embodied by cognitive dissonance affects all strategic decision making, including nuclear. Paradoxically, it is in the nuclear realm where this sense of cognitive unrest should not matter because in objective reality, a nuclear power has the capability to inflict incommensurable pain and destruction on its enemies. A nuclear war or escalating a war with a nuclear super power is automatically a lost battle, a failed negotiation, or as Thomas Schelling would call it: failed bargaining.

CONCLUSIONS

The nuclear threat is real, complex and very serious. In addition to the matter itself being existential in nature, the information age has exacerbated the dangers of propagating agents of disinformation or misinformation, elements which only add to the sense of dissonance in relation to any subject. The key element of any debate related to European security architecture, simply must be approached from an acceptance that the Russian Federation, to this day, remains the only state on par with the US in the nuclear realm. For Moscow strategic planning, the nuclear element is foundational, in contrast, the Americans tend to consider nuclear weapons a sort of last resort option. These are obvious conclusions, yet, the diplomatic evolutions in the post Cold War strategic environment tend to contradict deterrence logic. Capabilities are important, but communication and credibility can transform a nuclear adversary with lesser nuclear potential into a super foe simply by means of perceptions or misperceptions. As mentioned in the article, Russian elites tend to perceive the US and its allies as risk avoidant. In the zero sum game of nuclear deterrence, perceptions matter far more than actual potential. We simply do not know if the Russian president will decide to use tactical weapons in Ukraine for example. We know he has the capabilities, but we have no way of anticipating his thoughts. This matters a lot in deterrence. The use of nuclear weapons or their proliferation simply cannot amount to anything positive. Instead of wasting precious

time on trying to guess what Russian leaders think, the West, to mean the US and its allies and partners, including NATO, would be better served by trying to understand Russian mindset and engage in the bargaining Thomas Schelling spoke off at the advent of deterrence theory.

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