The future of strategic stability

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The future of strategic stability

Introduction

A review of recent policy literature provides three indications:

- The concept of strategic stability, sometimes perceived as a vestige of the Cold War,[1] is in fact still relevant to the expert community, judging from the volume of work published on the subject.
- Authors express various concerns about the future of strategic stability, with a focus on analyses of the resistance of the concept to various technological innovations and,[2] equally important, its adaptation to a new international environment.[3]
- The collapse of the traditional arms control regime raises questions about the preservation of a certain level of strategic stability and the forms it might take in the future.[4]

These studies and reports are characterised by great scepticism and, for some of them, genuine pessimism about the capacity of actors to adopt measures and behaviours that enable strategic stability to adapt to the challenges it faces. At the same time, they demonstrate that the strategic community holds a strong attachment to a concept that appears to be essential to the maintenance of peace between major powers with potentially divergent interests.

A more detailed analysis allows a better understanding of the nature of these difficulties, in particular the inability of the main countries concerned to agree on the nature of strategic stability and what needs to be done to preserve it. These divergent visions have been fully

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[1] Thomas Scheber, "Strategic Stability. Time for a Reality Check," *International Journal: Canada's Journal of Global Policy Analysis*, Fall 2008.

[2] See for instance: Todd Sechser, Neil Narang, Cailin Talmadge, "Emerging technologies and strategic stability in peacetime, crisis, and war," *Journal of Strategic Studies*, 2019 ; Heather Williams, "Asymmetric arms control and strategic stability: Scenarios for limiting hypersonic glide vehicles," *Journal of Strategic Studies*, 2019 ; Christopher Chyba, *New Technologies & Strategic Stability,* Daedalus, MIT Press, 2020 ; James Johnson, "The AI-cyber nexus: implications for military escalation, deterrence and strategic stability," *Journal of Cyber Policy,* 2019 or Margaret E. Kosal, "Emerging Life Sciences: New Challenges to Strategic Stability," in Margaret E. Kosal, ed, *Disruptive and Game Changing Technologies in Modern Warfare*, Springer, Cham, 2020.

[3] Christopher Kuklinski, Jeni Mitchell and Timothy Sands, "Bipolar strategic stability in a multipolar world," *Journal of Politics and Law*, 2020 ; Dmitri Trenin, "Strategic Stability in the Changing World," *Carnegie Moscow Center*, March 2019 ; Zeeshan Hayat, Tanzeela Khalil, "Great Power Competition and Global Strategic Stability," *CISS Insight Journal*, 2020.

[4] Steven Keil and Sophie Arts, "Strategic Spiral: Arms Control, U.S.-Russian Relations, and European Security," *Policy Paper*, GMF, March 2020 ; Corentin Brustlein, "The Erosion of Strategic Stability and the Future of Arms Control in Europe," *Proliferation Papers*, Etudes de l'IFRI, November 2018 or Dmitri Trenin, "Stability amid Strategic Deregulation: Managing the End of Nuclear Arms Control," *The Washington Quarterly*, 2020.

visible in the various iterations of strategic dialogues organised between officials and non-officials, between the United States and Russia, the United States and China; and are reflected in the absence of such dialogue between India, Pakistan and China. They are expressed in forums such as the P5 and are based on the different analyses in the strategic documents of the different states.

In this context, **it is probably impossible to envisage a global, universal and inclusive definition of strategic stability that could be acceptable to all and resistant to the various challenges and risks that characterise the current period and the foreseeable future.**

Nevertheless, it is necessary to reflect on a set of measures that can contribute to a form of strategic stability in particular contexts. These measures may be of limited geographical application, without however disregarding the interdependencies between different theatres. They may also be targeted at specific segments, in particular to respond to technological developments whose full impact and consequences are not known.

This note proposes to question the future of strategic stability. In the first part, it recalls the different definitions of the notion and examines the meaning that can be given to it today. It then discusses the challenges that are transforming this notion and the different evolutions it is facing. Finally, it suggests ways of envisaging a form of strategic stability in the future (within a relatively predictable time scale of about fifteen years) and makes recommendations for developing a more active European position on these issues.

1. What is strategic stability?

Strategic stability is difficult to define easily. More than a concept formalised as such, it is a historical locution, a shared practice, or a moving phenomenon. Thus, the question of the meaning given to it by a speaker at a given time and in a given context is at least as important as that of its measurement. Until now, the vast majority of the traditional Western literature on strategic stability has rarely addressed this socio-political dimension. This has been less true since the last years of the decade 2010.[5]

1.1. The narrow and historical approach

Despite its polysemy, we can usefully assume that strategic stability refers to a situation in which the incentives to change the *status quo are weaker* than the disincentives to do so.[6]

[5] See for instance Lawrence Rubin and Adam N. Stulberg, *The End of Strategic Stability, Nuclear Weapons and the Challenge of Regional Rivalries*, Georgetown University Press, Washington DC, 2018.

[6] See especially Elbridge A. Colby and Michael S. Gerson (dir.), *Strategic Stability: Contending Interpretations,* Carlisle, PA: Strategic Studies Institute, 2013. See also Lawrence Rubin and Adam N. Stulberg (eds.), op. cit : "*To be clear, there are two main and generalizable components at the heart of strategic stability. First, strategic stability refers to a condition in which adversaries understand that altering military force posture in response to vulnerability—whether to avoid being emasculated or to preempt one's opponent—would be either futile or foolish. Second, strategic stability reflects the ease with which nuclear-armed adversaries can return to stable relations after a period of escalation. Actors can maintain strategic stability even in a crisis by not responding to a provocative action."*

In the traditional sense given in the context of the Cold War prevailing at the time of its adoption, strategic stability covered three complementary notions:

- the predictability of the strategic relationship between the two major players in peacetime *(arms race stability)*, which can be characterised by "*the absence of perceived of actual incentives to augment a nuclear force – qualitatively or quantitatively – out of the fear that in a crisis an opponent would gain a meaningful advantage by using nuclear weapons first.*"[7]
- the predictability of the relationship in time of crisis *(crisis stability)* and the absence of the risk of a first strike by the opponent (*first strike stability).* This was a central theme of the 1960s debates on stability,[8] with particular attention paid to ensuring that behaviour, perceptions, signals and perceptions do not encourage an actor to carry out a first nuclear strike in order to guard against the potential consequences of a first strike.[9]

The two types of stability are not watertight and can reinforce each other.[10] In this classic sense, strategic stability implies a configuration of forces such that neither side is tempted to carry out a first anti-force strike or "surprise attack" without major risk. Therefore, it leads to: (1) the endowment of both parties with invulnerable second-strike capabilities, (2) the absence of strategic defences of the territory against a massive attack, (3) a set of political and legal instruments codifying and controlling competition between the two actors, including the prohibition of certain systems.

In this sense, strategic stability can be confused with "mutually assured destruction", a "minimal" version of stability generally considered too restrictive.[11] Nevertheless, in a narrow interpretation, strategic stability is measured mainly by the capacity of actors to respond to a first strike, and thus to have a credible second-strike capability. It was in this sense that the ABM Treaty,[12] which largely limited the possibilities for deploying missile defence systems, could be described as a "pillar" of strategic stability, guaranteeing that neither party would be totally immune to a massive attack. Indeed, according to this logic, an actor benefiting from such protection could be tempted – and above all perceived by the other as being tempted – to carry out such a strike, which would have left the attacked party with only the choice between capitulation or recourse to an anti-city strike.[13]

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[7] James Acton, "Reclaiming Strategic Stability," in Elbridge Colby and Michael Gerson, eds, op. cit.

[8] As Thomas Schelling writes in his preface to Colby & Gerson's book, "*we used to call this the stability of deterrence and not yet 'strategic stability'".* (p. vii).

[9] G. A. Kentand, D. E. Thaler, *First-Strike Stability: A Methodology for Evaluating Strategic Forces*, Santa Monica: RAND Corporation, 1989.

[10] James Acton, "Reclaiming Strategic Stability," op. cit.

[11] Celeste Wallander, "Mutually Assured Stability: Establishing US-Russia Security Relations for a New Century," *Strategic Analysis*, Atlantic Council, 2013.

[12] 1972 – 2002.

[13] The ABM Treaty prohibited the complete coverage of territories, but at the same time favoured the deployment of "stabilising" anti-missile defences: those intended to protect ground-to-ground missile installations; and those used to protect the capital (decision-making centre).

Under this restrictive interpretation, the interest of strategic stability has generally met with a consensus with rare exceptions (experts militating for a "theory of victory")[14] and despite a recognition of the limits of the concept, which can in particular contribute to facilitating aggression by the major powers below the strategic threshold or perpetuate the life of regimes regardless of their legitimacy.[15]

1.2. An extended approach

Given the relatively narrow and crude nature of the traditional understanding of strategic stability, many theorists and practitioners have sought to promote the emergence of a broader definition, particularly since the end of the Cold War. Thus, strategic stability has gradually been conceived as a set of norms, rules and procedures that minimise the risk that one state may rapidly gain a strategic advantage over another. For some authors, this semantic shift has been gradual, with first a situation characterised by the absence of conflict between nuclear powers and then a security environment characterised by peaceful relations between states.[16]

In this context, stability can be enhanced by a set of measures that go well beyond the military (doctrines and weapons deployed) and arms control framework.

Moreover, strategic stability can be based on political-diplomatic balances. Thus, for Robert Cooper, the key to strategic stability during the Cold War was the Quadripartite Agreement on Berlin and the division of Germany.[17] More frequently, strategic stability is extended to a range of practices and areas, reflecting in particular technological developments. The aim is therefore to ensure that the major powers avoid any conventional or even infra-conventional conflict that could unintentionally lead to nuclear conflict, mainly through political initiatives, confidence-building measures and dialogue between actors.[18]

It should be noted that there are two ways to assess such an expanded vision: critically, it can complicate efforts to achieve it by pointing to an unrealistic goal of long-term stable relations between states. According to this logic, it is preferable to stick to the more modest but no less essential goal of defining a nuclear posture that limits the risk of using nuclear weapons.[19] For others, on the contrary, it is essential to integrate a large number of factors into the strategic equation (social, economic, technological, ideological and military), which may complicate negotiation efforts but also offers new levers for reducing instability.[20]

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[14] Colin S. Gray "Nuclear Strategy: The Case for a Theory of Victory," *International Security*, Vol. 4, No. 1, Summer 1979.

[15] Chris Ford, "Strategic Stability and the Global Race for Technology Leadership," *Arms Control and International Security Paper* Series, Department of State, Vol. 1, No. 21, 5 November 2020.

[16] James Acton, "Reclaiming Strategic Stability," op. cit.

[17] Robert Cooper, *The Breaking of Nations, Order and Chaos in the Twenty-First Century*, Atlantis Books, New York, 2003.

[18] Sergei A. Karaganov and Dmitry V. Suslov, "The New Understanding and Ways to Strengthen Multilateral Strategic Stability," *Higher School of Economics*, National Research University, Moscow, 2019.

[19] James Acton, "Reclaiming Strategic Stability," op. cit.

[20] C. Dale Walton and Colin S. Gray, "The Geopolitics of Strategic Stability: Looking Beyond Cold Warriors and Nuclear Weapons," in Elbridge Colby and Michael Gerson, ed., op. cit.

1.3. Non-consensual visions of strategic stability

There is no consensus on what the term "strategic stability" means, despite its common usage. Strategic stability refers to different realities to different actors in different contexts and some note that there are as many definitions of strategic stability as there are authors writing on the subject.[21] Others point to the fact that most of the statements on strategic stability made by governments are actually very vague about what they actually mean and imply.[22] Particularly noteworthy are the understandings of the concept outside the United States, and especially among major US competitors, for whom US conceptions of strategic stability are in themselves biased in favour of US interests.

Thus, on the Russian side, and contrary to the concepts defined by the Soviet Union, it is generally believed that the perception of strategic stability is much broader than the Western vision. This understanding "would contain offensive and defensive, nuclear, non-nuclear and non-military deterrent tools". It could be used in times of peace or war and would look like a "combined strategy of containment, deterrence and coercion" to "deter or dominate conflict".[23] Described as a "multifaceted phenomenon", strategic stability cannot ignore global balances in terms of economy and technology,[24] and would incorporate diplomatic, political, economic, informational and military considerations.[25] Nevertheless, Russian officials tend to focus on its military components in their public statements, paying attention to certain factors in particular: missile defence, very long-range precision strike capabilities, low-power nuclear weapons, weapon systems deployed in space and conventional imbalances.[26] Anti-submarine warfare and the evolution of nuclear arsenals outside the traditional US-Russia dyad would also be of interest, although less openly discussed.[27]

With regard to China, a broader vision has also traditionally been favoured, integrating different aspects that can contribute to stable bilateral relations, particularly in the economic, political, diplomatic and military fields. Because of the frequent discussions on the concept at the multilateral level in recent years, the Western understanding centred on nuclear relations of deterrence and mutual vulnerability is present in China. Nevertheless, because of the country's still expressed sense of inferiority in the purely nuclear segment, its strategic concerns also include other aspects, particularly with regard to conventional forces and in particular American developments in the field of very long-range precision strikes (including hypersonic technologies).[28] Beijing is also paying close attention to other technologies such

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[21] Chris Ford, op. cit.

[22] James Acton, "Reclaiming Strategic Stability," op. cit.

[23] Kristin Ven Bruusgaard, "Russian Strategic Deterrence," *Survival*, vol. 58, No. 4, 2016.

[24] Andrey Pavlov and Anastasia Malygina, "The Russian Approach to Strategic Stability, Preserving a Classical Formula in a Turbulent World," in Lawrence Rubin and Adam N. Stulberg, eds, op. cit.

[25] Dmitry Adamsky, "Strategic Stability and Cross-Domain Coercion: The Russian Approach to Information (Cyber) Warfare," in Lawrence Rubin and Adam N. Stulberg, eds, op. cit.

[26] Sergey Ryabkov, "Towards Global Security Through Equal Rights and Consensus," *PIR Center,* Security Index, No. 10(15), October 2020.

[27] Andrey Pavlov and Anastasia Malygina, op. cit.

[28] Tong Zhao, "China's Hypersonic Technology and the Security Dilemma," in Lawrence Rubin and Adam N. Stulberg, eds, op. cit.

as missile defence, space offensive capabilities, cyber weapons, autonomous lethal systems and the use of artificial intelligence.[29]

In regional contexts, the concept can be defined more specifically. For example, on the Pakistani side, a strategic condition for stability includes a satisfactory resolution of the Kashmir dispute. At a more operational level, Pakistan is concerned about maintaining nuclear parity with India as long as a conventional military balance is not feasible.[30] New Delhi, for its part, is not specifically concerned about bilateral parity with Islamabad and believes that stability rests only on the strategic nuclear deterrent relationship. As long as a retaliatory strike is deemed credible, it would therefore be relatively assured and operations carried out by its various adversaries on its borders would have little impact on it.[31]

This 'regionalisation' of the concept was pointed out as a risk to its sustainability, insofar as it leads to the loss of a sense of global balance that would make it possible to avoid major risks in order to focus on the contingent interests of certain actors. The reconstruction of a shared idea of balance is undoubtedly one of the keys to a discussion on arms control and stability today.[32]

2. Strategic stability today

Several factors have contributed to the re-emergence of debates on strategic stability. The failure of Obama's policy of "*reset*" with Russia, the aggressiveness of Russian foreign policy (annexation of the Crimea) and its disaffection with the bilateral and multilateral arms control architecture (CFE and INF Treaties), the failure of the Prague vision (April 2009) of a world free of nuclear weapons, and the rise in strategic power of China are among the elements that now feed the perception of a new "strategic instability".

In particular, until March 2014, the American approach to Russia's strategic posture considered that whatever the vicissitudes of Moscow's foreign and security policy, NATO would no longer face a major military threat to the East. This approach has been obsolete since the annexation of the Crimea. American expertise has reappropriated the debate on strategic stability.

Measure strategic stability today has become somehow more difficult, because of the entanglement of strategic or theatre offensive and defensive systems, nuclear weapons and certain conventional weapons, ballistic missiles and cruise missiles in the possession of more States. Moreover, long confined to bilateral relations between the United States and the Soviet Union, then between the United States and Russia, strategic stability is now potential-

[29] Tong Zhao, "Opportunities for Nuclear Arms Control Engagement with China," *Arms Control Today*, January-February 2020.

[30] Sadia Tasleem, "Pakistan's View of Strategic Stability, A Struggle between Theory and Practice," in Lawrence Rubin and Adam N. Stulberg, eds., op. cit.

[31] Sajid Shapoo, "Understanding Perception Dissonance in South Asia's Strategic Environment," *South Asian Voices*, 16 August 2019.

[32] Adam Mount, "Implications for US Policy, Defending a Stable International System," in Lawrence Rubin and Adam N. Stulberg, eds, op. cit.

ly useful for triangular forecasting between the United States, Russia and China, but also on a strictly regional level, the Indian subcontinent for example.

Finally, it is worth mentioning here a more essential critique of strategic stability, which emanates from a nuclear disarmament activist fringe within Western civil society. According to this line of thought, which can be found in particular in the peace research institutes of the northern European countries,[33] strategic stability is the doctrinal emanation of a world frozen in a strategic reality which does not allow progress towards the ideal of abolishing nuclear weapons: in this sense, stability is synonymous with immobility and the preservation of the acquired interests of the nuclear-weapon states within the meaning of the NPT. According to this view, the objective of strategic stability must therefore be criticised and surpassed. In this respect, strategic stability is also one of the arguments for the polarisation of the strategic debate in the West.

Essentially, the main changes at work today affecting the phenomenon of stability as well as its understanding can be schematised as follows.

2.1. Changes

A. A greater number of nuclear players

Originally, the notion of strategic stability involved adversaries in very limited numbers (two), of comparable military power, devoting a level of resources also comparable to their armament. Hence the importance of the notion of "strategic parity", which the Soviet and then Russian sides have always tried to maintain. Today's world has more states possessing nuclear weapons and delivery systems. Nuclear multipolarity is not new, but it is now more complex: the arsenals of China, India and Pakistan are more mature and North Korea is a new nuclear power. Trilateral deterrent relations have been established (United States/Russia/China; China/India/Pakistan, in particular), while North Korea has become a strategic variable to be taken into account in the scenario of a conflict between the United States and China.

B. A new political context and its legal consequences

The revival of nationalism in Russia, Asia - and, to some extent, in Western countries - opens the way to the temptation to alter the "strategic status quo" under the shadow of nuclear weapons. The "paradox of stability/instability" is at full play. Russia violates treaties and America withdraws from them. The legal framework for nuclear and conventional arms control has been considerably weakened and, although it may be partially restored by the Biden administration, will continue to suffer from the now more erratic image of American policy.

C. New domains, new means

Since the beginning of the century, the background of strategic stability has been turned upside down:

[33] Directorate for Disarmament and Non-Proliferation at the Swedish Research Institute SIPRI, for example.

- Outer space and above all cyberspace have become considerably more important. These two domains which, according to a former Obama administration official, "*can bring Americans and Russians into conflict*" (Jim Miller), make any attempt at "strategic stabilisation" more complex.
- The United States is deploying means (precise intercontinental missiles with conventional warheads, non-nuclear ballistic missile defence), admittedly modest at this stage, but which in the long term make Russia and China fear the acquisition of a non-nuclear first strike capability. Moscow has announced the development of new types of strategic means, including some that cannot be taken into account by traditional arms control frameworks.[34] All the major players are developing hypersonic means.
- Dual-capacity ballistic and cruise vectors – but today primarily intended for conventional battle – have proliferated. Some ten countries have national medium- or long-range missile programmes.
- Strategic power relations are once again developing in "grey areas": blurring of the distinction between conventional and nuclear means and operations; nuclear submarines carrying conventional missile launchers, mixed units, search for greater fluidity between areas, integrated operations;[35] recourse to mercenaries and unsigned operations; seizing of territories in disputed areas.
- Some states, including Russia, have "standardised the use of chemical and biological means", while the hypothesis of biotechnologies allowing the targeting of a particular country is taking shape.[36]

2.2. Consequences

Regional actors themselves are now defining contemporary stability criteria, based on very detailed security considerations. More complex and localised, these criteria do not detract from the notion of strategic stability.

The contemporary period is not characterised by a new "arms race" in the sense of the Cold War. The dynamics of competition continue, but they are more qualitative than quantitative (even if China may feel that it must react numerically to American strategic developments).[37] The United States and Russia seem less inclined to seek strategic parity with their adversaries and competitors.

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[34] Not to mention the "return" of the heavy liquid-fuelled MIRVed ICBMs, which were to be abolished by the START agreements.

[35] Rachel S. Cohen, "USAF Rethinks Relationship Between Conventional, Nuclear Weapons," *Air Force Magazine,* 19 August 2020.

[36] Elizabeth Sherwood-Randall, "The Age of Strategic Instability," *Foreign Affairs,* 21 July 2020.

[37] See the work of Tong Zhao and especially *Narrowing the US-China Gap on Missile Defense: How to Help Forestall a Nuclear Arms Race*, Carnegie Endowment for International Peace, 29 June 2020 ; Ibid., Tong Zhao, "Conventional long-range strike weapons of US allies and China's concerns of strategic instability," *The Nonproliferation Review*, 14 September 2020.

On the other hand, there is a greater risk of perceptual errors or uncontrolled escalation "from one area to another." This is what researcher James Acton has called the risk of escalation by "entanglement". The new context of diffusion and amplification of information (true or false) is likely to make crisis stability more difficult to guarantee. Additionally, one now wonders about the possibility for artificial intelligence to create additional strategic risks (even if it can have stabilising virtues: aid to identification, aid to verification...).

In this context, it is legitimate to question the sustainability of traditional strategic arms control mechanisms:

- ***What is their relevance in a context of diversified and asymmetric capability developments?*** The question is not new, but seems to be taking on considerable importance as the three major military powers develop their strategic arsenals in diversified segments and the lines separating the different categories of systems seem to be blurred.
- ***What is their relevance in an increasingly multilateral context?*** If Russia and the United States regularly refer to their willingness to bring China into these discussions, it is because China's arsenal has reached a maturity that did not exist when *New Start* was signed. Such a prospect would require a complete rethinking of the concept of arms control agreements and probably a move away from a quantitative logic.

There is thus a risk that strategic arms control will become either "impossible" - its "vertical" (means) and "horizontal" (parts) extension proving to be out of reach - *or "useless"* - the only limitation on strategic nuclear delivery systems appearing much less central than it was during the Cold War.

The arguments in favour of agreements of this type remain (i) the maintenance of a channel for bilateral political-military dialogue, (ii) the predictability of the evolution of the opposing arsenal, and (iii) its verification. However, the case of the INF Treaty has had a lasting effect on arms control by demonstrating the risk of a significant violation of the very essence of the Treaty. The difficulties encountered in conventional arms control, and in particular in implementing the Vienna Document, illustrate the same trend. For many, arms control cannot work if there is not a minimum of confidence in the fulfilment of the commitments undertaken. However, while ongoing technological developments may offer new possibilities in terms of verification, they may also create new difficulties.

3. Looking forward

3.1. Building a shared vision

The ambition to build a shared vision of strategic stability is certainly useful to harmonise perceptions of the notion and agree on common principles. Such work would undoubtedly lead to approaching strategic stability in a significantly different way than in strictly capability and doctrinal terms, and to integrating a strong sociological and geopolitical dimension into the analysis.

Because the concept was introduced during the Cold War, and in the context of strategic thinking on nuclear deterrence, it is proving insufficient to explain many of the strategic postures of emerging states and powers. That is to say, the meaning and implementation of strategic stability is a function of the regional nature of a given strategic environment and the security objectives and interests of the countries that are part of it. Thus, each country develops and maintains an understanding of strategic stability that is intrinsically linked to its own characteristics on a given chessboard. Israel, an undeclared nuclear state, provides a good illustration of this phenomenon: when Israeli policy makers and researchers use the phrase "strategic stability", it is not to evoke a global nuclear dimension but, on the contrary, a conventional regional reality. Preventing the formation of a new coalition of Arab countries after the Yom Kippur War by amputating the Arab states from Egyptian leadership, combating the destabilising effects of terrorism in the Middle East, or implementing the Begin doctrine of counter-proliferation in Iraq, Syria, or today in Iran, are, for Israel, privileged means of maintaining the strategic stability of the Middle East region, independently of any nuclear doctrine.

Moreover, whatever the objective of sharing or harmonisation, a pending question is whether the major powers and certain emerging powers want stability or whether, on the contrary, the "revisionist" nature of some of them makes it unlikely that useful work in this direction will be carried out in the current strategic environment.

Finally, envisaging future forms of strategic stability requires taking into account the dynamics of the social actors[38] who construct their vision of stability in order to defend it with other social actors: these dynamics relate both to the freedom of initiative of a given subject and therefore to its autonomy (physical or moral person), and to the various constraints that frame and determine a rational choice. In particular, the approach to strategic stability is always based on individual action – that of a decision-maker – articulated to the organisational environment in which he or she operates. This dimension of stability by the social actor who formulates its meaning is generally lacking in the analysis of the notion. Reintroducing this dimension would be useful for the construction of a shared vision.

3.2. Strategic stability and multilateral dynamics

One consequence of nuclear multipolarity is the multiplication of escalation factors and the risk of conflict between nuclear-weapon dyads. In this context, several paths can be pursued not to increase strategic stability in a broad sense, but to reduce the different levels of instability.

First of all, it may be useful to adapt the reflection and approaches to different theatres and cases in order to examine in detail the most sensitive risks in a given situation or dyad. For example, strategic risk reduction measures between India and Pakistan may focus on nuclear strategy itself, or with issues of sub-conventional conflict within the border of the states. Conversely, the China-US dyad may be more likely to slide into nuclear escalation as a result

[38] The "social actor" is a malleable sociological concept but useful for treating both the subject as a rational actor and the organisation as a framework for collective action.

of conventional conflict, for example over the status of Taiwan.[39] Moreover, because of the asymmetry between capabilities, doctrines and situations, considering effective global measures may be over-ambitious, ineffective and unlikely to receive political agreement. In this context, a tailored approach to each actor appears attractive.

However, this tailored approach cannot ignore the multiple interactions and interrelationships between the different dyads, and the observed and predictable ripple effects of certain initiatives. Thus, a bilateral arms control agreement is not without consequences on the perception of the threat from a third party actor. It is therefore essential to develop in parallel a global vision of risks and perceptions in order to anticipate action-reaction phenomena and to be able to limit the process of spirals of mistrust that can lead to the logic of offense/defence races, technology races or arms races.

3.3. Strategic stability and new technologies

Much recent work has focused on the role of new technologies in strategic stability and has proposed ways to reduce their risks. Among the elements studied are, in particular, artificial intelligence, very long-range precision strikes (hypersonic), missile defence, offensive warfare capabilities in space, and cyber aggression.

For the foreseeable future, efforts to maintain or even increase strategic stability can take three non-exclusive forms. At the first level, States can take only national and unilateral measures to secure the credibility of their nuclear response capability and increase the potential stability benefits of these new technologies. At the second level, a cooperative approach can be envisaged, making it possible to mobilise tools, particularly in the area of transparency, to reduce the risks. Thirdly, and in the context of a favourable political window of opportunity, the formalisation of bilateral or multilateral arms control agreements could be envisaged.

3.3.1. First level: national responses

The use of artificial intelligence (AI) at the strategic level has been described as a "double-edged sword", with the ability to stabilise deterrence through improved ISR and early warning capabilities; and to increase the accuracy and speed of any response.[40] On the other hand, it could be perceived as a risk to the survivability of response forces and thus lead to greater instability in the event of a crisis.[41] This perception would be enhanced if the use of AI could more increase the vulnerability of the nuclear forces of a country to conventional attack. The impact of AI on strategic stability will depend on advances in the discipline, which remain uncertain today, but also on their potential usefulness. In particular, the issue of the vulnerability of systems to cyber risks (including manipulation of the information landscape) could be a strong determinant of the application of machine learning and autonomy

[39] Robert Levgold, "Meeting the challenges of the new nuclear age: Contemplating Strategic Stability in a New Multipolar Nuclear World," *American Academy of Arts & Sciences,* 2019.

[40] Petr Topychkanov, ed, "The Impact of Artificial Intelligence on Strategic Stability and Nuclear Risk, Volume III, South Asian Perspectives," *SIPRI*, April 2020.

[41] Benjamin Hautecouverture, "Artificial intelligence and risk analysis for strategic stability," *Bulletin No. 68,* Observatoire de la Dissuasion, FRS, September 2019.

to deterrence architectures. Indeed, it is likely that the highly conservative environment in which the nuclear arsenals of the nuclear-weapon states have been operating since the establishment of deterrence doctrines will tend to over-react spontaneously to this new perception of vulnerability. At the unilateral level, a set of technical and organisational measures could mitigate the main alleged risks of AI while maximising its "stabilising" impact, in particular the separation of early warning and command and control systems and the preservation of human analysis, the deployment of highly tested and proven systems, excellent training for operators, redundancy of sensors and algorithms, cross-checking of automated information with other types of intelligence, a significant investment in the cybersecurity of systems, or an exchange between engineers and military practitioners on system vulnerabilities.

At the political level, these technical measures could be supplemented by changes in doctrine or in alert levels, as well as by transparency measures aiming to limit AI-related misunderstandings, in particular by publicly evoking the ways in which AI is used, especially in defence matters, and which measures are taken to reduce the associated risks. In the field of strategic deterrence in particular, such transparency would make it possible to reassure the public about the procedures for limiting the risks associated with automation in the field of decision-making.[42]

The risks posed by very long-range and hypersonic precision strike capabilities have been examined in times of peace (technological races dynamics already underway between the United States, Russia and China), and in times of crisis (potential confidence in an actor's ability to disarm its adversary, risk of confusion in the event of strikes on dual systems, etc.)[43] To limit the effects, States could feel encouraged to strengthen their anti-missile defences, at the risk of amplifying the threat of an offensive/defensive technologies arms race.[44] Another response could be to separate as much as possible the elements related to nuclear and conventional command and control.[45]

In terms of threats to space capabilities, the first avenue can also consist in increasing the resilience of the systems developed. This path is favoured to date by most players, in particular with the adoption of clear declaratory policy for the defence of space systems, the improvement of passive defences for essential satellites and the creation of redundancies at multiple levels to avoid creating a vulnerability that could be exploited by an adversary.[46] The same objective applies in particular to cyber threats.

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[42] Vincent Boulanin, Lora Saalman, Petr Topychkanov, Fei Su and Moa Peldan Carlsson, "Artificial Intelligence, Strategic Stability and Nuclear Risk," *SIPRI,* June 2020.

[43] Heather Williams, op. cit.

[44] "Hypersonic Missile Defense: Issues for Congress," *In Focus,* Congressional Research Service, 17 August 2020.

[45] James Acton, "Escalation Through Entanglement: How the Vulnerability of Command-and-Control Systems Raises the Risks of an Inadvertent Nuclear War," *International Security*, vol. 43, No.1, 2018.

[46] Forrest Morgan, "Deterrence and First-Strike Stability in Space, A Preliminary Assessment," *Rand Corporation*, 2010.

3.3.2. Second level: confidence-building and risk reduction measures

At the unilateral, bilateral or multilateral confidence-building measures level, several options can be envisaged to limit the main risk linked to long-range conventional missiles, including hypersonic systems. This risk resides in the ambiguity on the warheads carried by the missile. Protocols could be envisaged to clarify the status of the weapons and make strategic deterrence components and conventional capacities more distinct.[47] Transparency measures could also cover the missions assigned to the weapons and concepts of use.[48] The extension of the Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) to cover hypersonic non-ballistic systems could allow for the exchange of information on test flights, provided that States developing such systems participate to this instrument.[49]

As far as AI is concerned, unilateral transparency could be coupled with cooperative programmes in the form of expert dialogues at the scientific and military levels. If AI applications can improve strategic stability, it will be because states are able to work together in some way to avoid or at least minimise the emergence of new phenomena of asymmetry in a technological action/reaction dynamic.

In the space field, a large number of proposals have been made in terms of confidence-building measures, including of course a draft Code of Conduct, which could be resurrected.[50] Also in the field of missile defence, several options could reduce the number of questions and limit the insecurity perception of various stakeholders, particularly in the European theatre.[51]

3.3.3. Third level: arms control

Finally, the third level, which is much more complex to envisage at this stage, would consist in promoting the negotiation of arms control agreements, in particular by seeking to prohibit the development, deployment or use of certain systems. This could cover all areas, although important questions arise about the verifiability of such measures, for example in the area of AI[52] or cyber.[53]

Several options exist for regulating very long-range conventional weapons. Among the most restrictive, the proposal to prohibit the deployment or testing of hypersonic weapons,[54] or the one to limit deployment to the three countries that now have advanced prototypes, seem

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[47] James Acton, Tong Zhao and Li Bin, "Reducing the Risks of Nuclear Entanglement," *Carnegie Endowment for International Peace*, 12 September 2018.

[48] Dmitry Stefanovich, "Hypersonic Weapons and Arms Control," *RIAC,* 6 April 2020.

[49] *Hypersonic Weapons, A Challenge and Opportunity for Strategic Arms Control*, A Study Prepared on the Recommendation of the Secretary General's Advisory Board on Disarmament Matters, UNODA, UNIDIR, New York, 2019.

[50] *Transparency and confidence-building measures in outer space activities*, Report of the Secretary-General, A/72/65, General Assembly of the United Nations, 16 February 2017.

[51] Corentin Brustlein, op. cit.

[52] Vincent Boulanin, Lora Saalman, Petr Topychkanov, Fei Su and Moa Peldan Carlsson, op. cit.

[53] Andrew Futter, "What does cyber arms control look like? Four principles for managing cyber risk," *Global Security Policy Brief*, June 2020.

[54] Mark Gubrud, Rajaram Nagappa and Tong Zhao, "Test ban for hypersonic missiles?," *Bulletin of the Atomic Scientists*, 6 August 2015.

likely to face strong political obstacles.[55] On a more modest level, some systems could be banned[56] (dual-capable missiles in particular or nuclear-capable missiles).[57] Non-proliferation approaches, which could involve coordinated efforts to mobilise export control regimes on the various technologies related to hypervelocity, could show some effectiveness while raising important questions of legitimacy. Approaches based on bilateral arms control (inclusion of long-range conventional weapons in a US-Russian strategic arms control agreement) might be easier to implement in the short term, but have the disadvantage of excluding certain key players on this issue.[58]

In the space domain, proposals have abounded for more than forty years on the possibility of banning anti-satellite weapons in particular, with general or more sectoral visions. For example, anti-satellite weapon tests could be banned, or only those that cause debris.[59]

Finally, in the field of missile defence, the end of the ABM Treaty (2002) has led to a political stiffening on the subject, which is detrimental to an objective assessment of the various possible options.

4. Recommendations

In this context, several recommendations can be made, at the three levels of analysis, depending on the circumstances, risks and windows of opportunity. The first is above all to guard against any temptation to seek to copy known historical models and to encourage creative thinking.

4.1. Beware of Cold War nostalgia

SALT-1 (ABM treaty + agreement on offensive forces) and SALT-2 in fact had the effect, as well as limiting the race for strategic delivery vehicles (ballistic missiles and bombers), of shifting the field of the Russian-American competition towards:

- the *number of offensive weapons,* favouring the MIRV race. Although the ABM Treaty guaranteed stability on the offensive/defensive side, the configuration was no less unstable because of Russia's presumed (albeit often exaggerated) capacity to exert an "almost disarming" strike on the United States with its heavy MIRVed ICBMs;

[55] Richard H. Speier, George Nacouzi, Carrie A. Lee and Richard M. Moore, "Hypersonic Missile Nonproliferation Hindering the Spread of a New Class of Weapons," *RAND Corporation*, 2017.

[56] Patrick Smith, "Countering Russia's Hypersonic Weapons with Arms Control Agreements," *American Security Project*, 6 September 2019.

[57] Michael T. Klare, "An 'Arms Race in Speed': Hypersonic Weapons and the Changing Calculus of Battle," *Arms Control Today*, June 2019.

[58] *Hypersonic Weapons, A Challenge and Opportunity for Strategic Arms Control*, op. cit.

[59] Ross Liemer and Christopher Chyba, "A Verifiable Limited Test Ban for Anti-satellite Weapons," *The Washington Quarterly,* vol. 33, No. 3, July 2010.

- the *diversification of means of delivery,* SALT-1 having encouraged the development of ground-to-ground and sea-based land-attack cruise missiles, not taken into account by the treaties;
- *Europe*, the deployment of "Euromissiles" corresponding to an escape route from SALT-2, and opening up a new debate on the notion of stability.

The ABM Treaty was only one element among others in the stability of the Russian-American strategic relationship during the Cold War. It is not correct to say, as Russia does, that the fate of the ABM Treaty mechanically determines the fate of disarmament treaties: ABM was an important part of the strategic backdrop, not a *sine qua non* (in the legal sense) for nuclear disarmament.

Any reflection on strategic stability must therefore take care not to start from an artificial, sometimes idealised reconstruction of a bygone past.[60]

4.2. What are the possibilities in the current context?

A close reading of the history of strategic stability as a practice indicates that the nuclear powers have rarely shared an identical understanding of this notion, in particular of the intellectual assumptions that it underlies, maintains and reinforces. Strategic stability is not the mould of a homogenous thinking that would have cracked in the post-Cold War era. Rather, it is an evolutionary, adaptive experience, which does not need to be strictly defined in its modalities in order to continue to be valid in principle. This elasticity continues to make it useful as a plurilateral security objective.Very schematically, the following four recommendations can be made to dictate operational courses of action. These elements can be found, to a greater or lesser extent, in most of the current policy papers on the subject of plurilateral arms control in the broad sense of the term:[61]

- Preserving what can be preserved among existing legally binding instruments;[62]
- Increasing transparency measures as part of new confidence and security building measures;
- Maintaining doctrinal exchanges and clarify risk analyses;[63]
- Maintaining and increasing information sharing at the operational level.

[60] *Moreover,* contrary to what some experts say today, it is not correct to say that " *During the Cold War, the nuclear and non-nuclear domains were largely distinct. Most delivery systems were nuclear or they were conventional, but they couldn't accommodate both types of weapons.*" (James Acton, quoted in Zack Brown, "Why The Next Shooting War Could Go Nuclear," *The National Interest,* 17 September 2020). Indeed, the Soviet theatre nuclear arsenal was largely dual capable, with a potential additional chemical capacity.

[61] See for instance Ulrich Kühn, *Perceptions in the Euro-Atlantic*, Nuclear Risk Reduction Policy Brief No. 3, UNIDIR, Geneva, 2020.

[62] As soon as he took office at the end of January 2021, the new Biden administration took the decision to maintain *New Start* for five years, the time for new teams of negotiators to take up their positions and relaunch the diplomatic dynamic with Moscow.

[63] The meetings of the US-Russian working group on doctrines and nuclear warheads in the framework of the *New Start* discussions in Vienna in August 2020 and in Helsinki in October 2020 illustrate the continuity of this dialogue despite the current strategic environment. Regular doctrinal seminars - in addition to the ongoing discussions in the framework of the "P5 process" - could continue beyond the resumption of the *Start* process.

In more detail, a few simple principles should guide the reflection:

- It is important first of all to reason as Europeans in order to face the immediate risk of a major conflict in Europe, as well as the global risks that concern European security interests: a major conflict in Asia, the breaking of the nuclear taboo, in particular. It is likely that the dynamics of competition between states will continue to prevail in the decade 2020. In this context, proposing a new European arms control agenda to restore strategic stability to the continent would be useful for several reasons. First, it would be the first time that Europeans have really taken hold of the strategic debate. In so doing, a European roadmap would be a way of giving substance to the ambition of a more strategically autonomous Europe. Such a roadmap would provide new cement to the process of European integration and be a way of giving substance to the realisation of common European interests, which do not need, as a matter of principle, to be centralised within the framework of the EU institutions.
- Strategic stability can only be achieved by two or more actors. Understanding of opposing reasoning is therefore essential and must continue to be ensured through strategic dialogues.
- The priority today, as in the past, remains to avoid any use of nuclear weapons. Consequently, strategic stability can and must always be conceived as the set of provisions that minimise the risk of use.[64] As such, the discussions initiated in the P5 subgroup on nuclear risk reduction must continue within the framework of the five-year NPT review process.
- In view of the progressive fragmentation of the notion of stability, promoting a shared conception will be useful for the integration of the different currents of thought that are or claim to be part of it. Continuing to work on common definitions of strategic stability (despite the difficulties in the Chinese case) is therefore useful and necessary.

In a future political context marked by a return to constructive strategic dialogues, some avenues for reflection could be envisaged:

- *Continue to promote legally binding instruments,* which are the only ones that offer a guarantee of predictability (no "quick exit" capacity), mutual surveillance (verification) and consultation (dispute settlement), and whose existence is consistent with the European vision of regulating the balance of power through law.
- *Do not focus exclusively on the nuclear dimension.* American conventional superiority is, in the eyes of Moscow and Beijing, an element of instability: the fear of surprise attack in these two countries concerns both the conventional and nuclear fields. From this point of view, conventional arms control instruments (such as the CFE, CSBMs and Open Skies) are potentially just as important instruments of stability as those concerning the nuclear field.

[64] This is the definition given by Elbridge Colby ("*a situation in which no party has an incentive to use nuclear weapons save for vindication of its vital interests in extreme circumstances* ") in Elbridge Colby, "Defining Strategic Stability: Reconciling Stability and Deterrence," op. cit., p. 55.

- *Focus European efforts on "new fields"*, such as cyberspace or outer space (the problem of offensive weapons).
- Nevertheless, for political reasons, we should not refrain from being a force for proposals, even with little prospect of implementation. This could include proposing global limitations of strategic missile defences, or the prohibition of ground-to-ground nuclear systems of less than 500 km.
- *Promote a global conception of strategic stability, which is only conceivable in a context of restored confidence*. While strategic stability in the usual sense is the result of consistency between adversarial weapons systems, it is also a diplomatic exercise (involving in particular confidence-and security-building measures), which is part of a broader political dialogue.

4.3. Focus on the European theatre

European calls for the resumption of arms control or the preservation of multilateral agreements cannot be limited to incantations. This was the case before the end of the INF Treaty, after the United States withdrew from the Joint Comprehensive Plan of Action (JCPoA) with Iran and before they withdrew from the Open Skies Treaty.[65] As well as being unsuccessful, these calls underlined the inability of European diplomacy in the face of American and Russian inertia.

The German Federal Foreign Minister, Heiko Maas, has made the resumption of arms control in Europe one of his priorities. As such, the annual "*Rethinking Arms Control*" conference is one of the significant recent initiatives. More operationally, the 22 "*Stepping Stones*" of the Stockholm Initiative for Nuclear Disarmament[66] formulated in February 2020 also illustrate this willingness to play a more active role. It should also be recalled that President Macron's War College speech in February 2020 called for a resumption of European arms control.[67]

The objective of strategic stability on the European continent is primarily to reduce military tensions and increase predictability between states, focusing on ways to reduce potentially dangerous military activities.

The first task is to identify precisely the new factors that are destabilising the existing balances, particularly with regard to technological and military developments, on the European continent. If a new security architecture is to emerge in Europe in the coming years, it must first provide a precise diagnosis of the state of risks, threats, mutual interests and ambitions.

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[65] The US withdrew from the Treaty on Sunday 22 November 2020.

[66] The Stockholm Initiative was launched in 2019 with the aim of strengthening disarmament diplomacy within the context of the NPT.

[67] Generally speaking, the Trump Presidency has had the usefulness of making it clearer to all European audiences that Europe must increase its own participation in the various dimensions of its collective security. There is no need to mention the phrase "European strategic autonomy" to designate what must continue to progress if Europe is to strengthen its own decision-making and means of action. Whatever the strategic policy pursued by the new American Democratic administration, this distinctly European variable in the equation will now become part of Europe's history in the first half of the century. Arms control is one of its components.

In the short and medium term, a new roadmap can be drawn up on the basis of the following assumptions:

- Russia has once again become a threat to the security interests of Western and Central Europe.
- Strategic deterrence is a necessity, accompanied by transparency and strategic risk reduction measures.
- The search for arms control agreements should be pursued as a set of pragmatic means to ensure strategic stability on the continent.
- The search for strategic stability and the adoption of new initiatives are necessary approaches that must be implemented in parallel.

On this basis, future initiatives should pursue the following strategic objectives, which are essentially reminders of the fundamental principles of arms control:

- To ensure the survivability of second-strike forces;
- To clarify postures and limit the risks of misunderstandings linked to the practice of strategic ambiguity;
- To strengthen all means, cooperative or unilateral, to guarantee transparency on the ground;
- To prevent by all means the possibility of surprise attacks;
- To strengthen the means to prevent *fait accompli* policies.

Depending on these priority objectives, many concrete initiatives can be proposed. The keyword for these initiatives, in the short term, is to be limited to confidence-and security-building measures (CSBMs). Arms control measures in the strict sense cannot be envisaged in the current context of mistrust between Russia on the one hand and the United States and most European states on the other. Another reason is that the development of Russian and American capabilities is no longer solely linked to the European strategic scene but increasingly involves Asia.

Focusing attention on conventional armaments and confidence-building measures in Europe may be a useful way, as a first step, to find points of agreement and allow for compromise.

CSBM suggestions for conventional armaments in Europe

- Promote briefings on planned military exercises.
- Adopt measures to prevent incidents arising from the interaction of military assets engaged by NATO and Russia in large-scale military exercises.
- Avoid large-scale exercises near the borders of Russia and NATO, and agree to reduce the scale of exercises, both in number and geographical area.
- Promote direct military contacts at operational headquarters level (management of communications, flight planning, exercises at sea, etc.).
- Maintain communications between troops at unit and detachment level. Establishing communications at the unit level would clarify unclear situations much faster than going through the chain of command.
- Discuss moratoria on the deployment of land-based cruise missiles.
- Revise the Vienna Document which, as it stands, covers only land forces and only those elements of the air force participating in joint operations, but does not include military exercises involving, for example, naval forces and air force formations.
- Update the security agenda reflected in the NATO-Russia Founding Act. According to the terms of this Act, a non-legally binding political commitment, " *NATO and Russia affirm their shared desire to achieve greater stability and security in the Euro-Atlantic area*."[68] In particular, it would be useful to clarify what is meant by "*large-scale exercise"* or "*significant forces*".

The question arises as to the format for the implementation of these initiatives, of which the above list is very indicative. A coalition of highly committed European countries, including at least France and Germany, would probably be the appropriate framework for action, with a highly functionalist approach to inter-state cooperation.

[68] *Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation* signed in Paris, 27 May 1997, updated on 12 October 2009.

Les opinions exprimées ici n'engagent que la responsabilité de leur auteur.