

A Mutual Understanding of Behaviour

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ABSTRACT

This paper reports on the application of quantitative analysis to subjective data on NATO's perception of Russian behaviour and Russia's perception of Allied/NATO behaviour from before Russia's annexation of Crimea to the end of 2021. These two perceptions are then compared to each other to develop a mutual perspective. The paper concludes that the use of quantitative analysis of subjective data shows sufficient utility to merit further investigation to support strategic analysis on deterrence and situational awareness of hybrid threats.

1.0 INTRODUCTION

Since Russia annexed Crimea in 2014 NATO has made several attempts to assess 'deterrence'. In 2014 SHAPE initiated the development of an assessment framework and metrics that was subsequently the focus of an ACT led experiment [1]. The experiment concluded that the framework and metrics were applicable but not feasible.

Assessing deterrence has multiple challenges:

- What act is being deterred? One interpretation of deterrence is nuclear deterrence, another is to deter Russia from large-scale conventional attack against one or more NATO Nation(s) using regular forces, another is to deter Russia from the use of hybrid threats against one or more NATO Nation(s) and yet another interpretation is to deter Russia from any action that disrupts the rules-based international order (RBIO).
- How to assess the absence of something? If deterrence is successful then the act being assessed hasn't occurred, which leads to the philosophical debate about what counts as evidence of absence.
- Deterrence is both an act and an effect, which means that assessing deterrence requires assessing the action, the effect, and proving causation.

SHAPE recognises countering hybrid threats as part of deterrence [2] and has identified the requirement for situational awareness of hybrid activity:

Improving situational awareness entails:

- a) Understanding adversary actions and effects across all IoP.*
- b) Understanding NATO and Allied actions and effects across all IoP.*
- c) Understanding NATO and Allied extant and emerging vulnerabilities across all IoP.*

Including hybrid activity presents an additional practical challenge in how to aggregate such disparate activities as cyber-attacks, political assassinations and snap exercises.

This work is a continuation of work on 'Applying Soft OR to Assessing Conduct' presented at the SAS-141 Research Symposium in January 2019 [3]. One development from the previous analysis is the refinement of 'conduct' to 'behaviour' based on the Conflict Triangle, see below.

This is not an assessment of deterrence, it is an assessment of behaviour that could inform an assessment of deterrence and contribute to situational awareness on hybrid threats.

2.0 ANALYTICAL METHODS

The JFCBS political advisor (POLAD) convened a workshop of Russia experts on 23rd/24th January 2022 in Brunssum, The Netherlands. The experts came from countries across JFC Brunssum's vigilance area and were a mix of military and political analysts. The purpose of the workshop was to discuss different countries' views on deterrence. The POLAD agreed to allow some data gathering at the workshop but the primary requirement was to facilitate a structured discussion and data gathering was secondary. This impacted the experimental design in several ways. It limited the number of behaviours to be included and it also limited the data gathering to a single value on behaviour. Other methods of scoring considered were to score behaviour and attitude separately and to score different aspects of behaviour separately. For example a behaviour could have different deterrence and provocation values. It was considered that these approaches were too complicated and that they would detract from the discussion so the simplest approach was used, i.e. a single score per behaviour.

The experts were presented with a series of Russian and Allied/NATO behaviours covering the period 2002 to the end of 2021 and asked to score each behaviour. The start date was set based on the formation of the NATO Russia Council (NRC) to establish a pre-crisis level of competition.

A hybrid-Delphi method was used. First round scores were collected using electronic voting. This enabled the scores to be visualised and discussed. This facilitated the discussion. Then judges could amend their scores but they were not forced to reach consensus. Each judge scored independently. Second round scores were collected on paper. There were 21 judges in total but not all judges could attend the entire period and there were some technical issues in recording scores.

2.1 Allied Joint Doctrine

The conceptual framework for the method was derived from Allied Joint Doctrine [4]. NATO doctrine is reviewed regularly and the capstone of NATO doctrine is AJP-01. AJP-01 has recently been reviewed due to the changes in the strategic security environment and is now under ratification. It provides the theoretical basis for further doctrine development. It introduces several elements that are relevant to deterrence, most notable for this analysis are the Conflict Triangle and the Continuum of Competition.

2.1.1 The Conflict Triangle¹

AJP-01(F) states that "Understanding the causes of conflict underpins the ability to de-escalate and resolve disputes. There are three fundamental causes of conflict, as illustrated in Figure 1 and explained below.

- **“Contradiction** is an issue over which conflicting beliefs and aims exist and there might be disagreement.
- **“Attitude of the actors** – the perception of actors is shaped by their emotions, judgements and desires towards the contradiction, combined with their perceived advantage relative to a competitor. Whether the perception is accurate or not is immaterial; neither is the merit of the contradiction. What matters is how actors perceive things, and what their beliefs are.
- **“Behaviour** that arises from attitudes and beliefs in a contradiction.”

¹ The theory was created by Johan Galtung and was published in Journal of Peace Research in 1969. https://en.wikipedia.org/wiki/Conflict_triangle

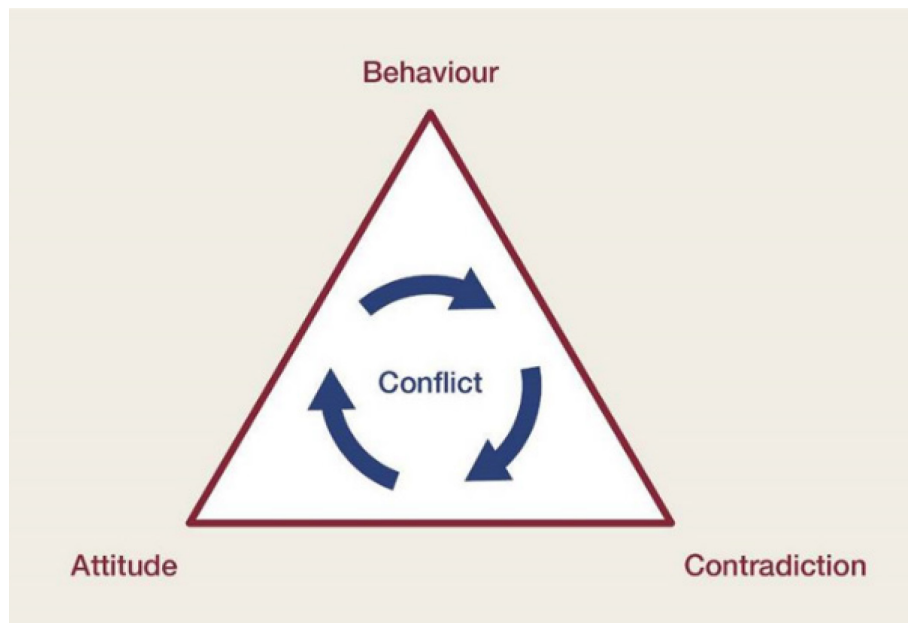


Figure 1: The conflict triangle.

The panel of experts agreed that the fundamental contradiction between NATO and Russia is that NATO believes in a RBIO whereas Russian foreign policy is based on:

- Regime survival.
- Greed & ego: Opportunities for financial benefit for members of the regime (kleptocracy) and perceived slights against the empire/tsar.
- Pursuit of the Primakov foreign policy goals. These foreign policy will be pursued based on a risk/cost benefit basis.
 - View of Russia as an indispensable actor with an independent foreign policy
 - Vision of a multipolar world managed by a concert of major powers
 - Insistence on Russia's primacy in the post-Soviet space and the pursuit of Eurasian integration
 - Opposition to NATO expansion
 - Partnership with China

This means that Russia and NATO have different attitudes and exhibit different behaviour. It is difficult to discern attitude because an actor may conceal their attitude or present a false front to gain advantage; however, behaviour can be observed. In accordance with the Conflict Triangle behaviour “arises from attitudes and beliefs in a contradiction” and, as such, is an indicator of attitude. This method assesses behaviour to infer attitude. For this analysis the arithmetic mean of the behaviours was used as the indicator for attitude. This is the simplest approach. Further analysis could investigate other approaches.

A behaviour could be an individual action or a sequence of similar actions towards a common purpose. Behaviour by NATO Nations was included because from Russia's perspective they are the same actor. To be included in the analysis a behaviour had to have a degree of significance. To reduce selection bias the annual summaries of key events on Wikipedia were used. This provided a peer-reviewed list of what constituted ‘key events’ and, although Wikipedia contains biases, those biases are consistent. Additional behaviours were nominated by subject matter experts and then reviewed to ensure a degree of consistency.

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- A key consideration was to keep the number of behaviours manageable for a subjective analysis over a period of one or two days. A limit of 100 behaviours per actor was initially set.
- A second consideration was to ensure that some example of the use of all diplomatic/ information/ military/ economic/ financial/ intelligence/ legal (DIMEFIL) instruments of power were used.
- A third consideration was to consider behaviours that impacted across the operating environment, across all political/ military/ economic/ social/ information/ infrastructure (PMESII) domains.

2.1.2 The Continuum of Competition

AJP-01(F) states that the “continuum of competition is a model depicting how attitudes and behaviours shape international relations. The continuum depicts four types of relationships between states/groups of people: cooperation, rivalry, confrontation and armed conflict. The boundaries between cooperation, rivalry and confrontation, and the threshold between confrontation and armed conflict, are complex and dynamic; the progression between each is neither linear nor easily defined. Interstate relations are typically sectoral: two or more states may cooperate in one sector and be in confrontation in another. The continuum is described below and illustrated in” Figure 2.

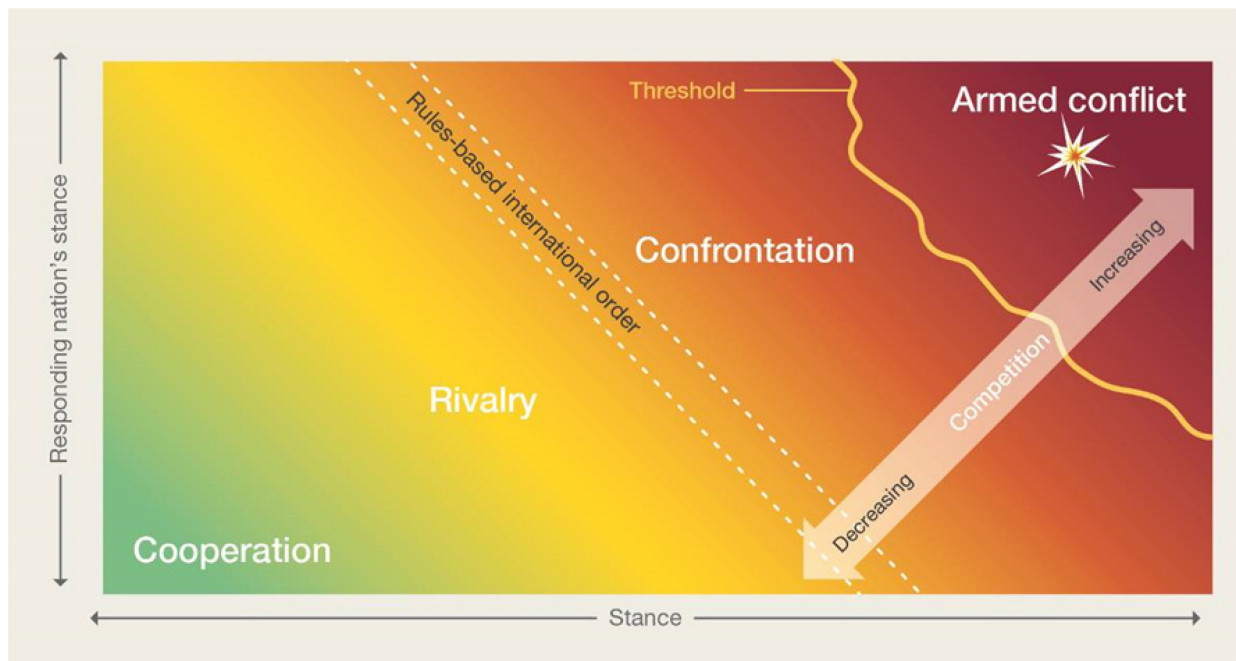


Figure 2: The continuum of competition.

Table 1 shows the descriptions for the levels of the Continuum of Competition, but the panel of experts agreed that the Russia world view is so different that these descriptions did not apply. As such alternative descriptions were developed to describe a Continuum of Competition from Russia’s perspective.

2.2 Scale

It was anticipated that most behaviours would be within the confrontation space. It was decided that the scale should allow differentiation within each ‘space’ as well as between ‘spaces’. A scale of 1-100 was used since most people are familiar with 1-100 as a scale. Judges were advised that if they felt that they could not differentiate to that level of precision then they could round to the nearest 10 (in effect a 10 point scale) or 5 (in effect a 20 point scale.) Most judges used the 1-100 point scale.

Table 1: The continuum of competition.

NATO's Continuum of Competition [Reference D]	Score	Russia's Continuum of Competition
<p>“Armed conflict. Armed conflict occurs when escalation cannot be prevented or contained, leading to one party resorting to military force to compel their enemy to resolve the contradiction in their favour. Armed conflict is a special kind of competition because it is not enduring; its role is to set the conditions for other forms of competition. Since armed conflict includes acts of nationally directed military violence, it invariably has an exponential effect on human emotions, uncertainty and friction. Moreover, armed conflict is an extreme trial of physical and moral strengths, and tests both institutional and individual resources of endurance and resilience.”</p>	76-100	<p style="text-align: center;">Non-permissive or High risk/cost</p> <p>War Russia must employ military force to pursue its policy goals Existential threat to the regime</p>
<p>“Confrontation. Confrontation occurs when differences have not been reconciled and adversaries oppose each other with hostile intent or behaviour such that a state of crisis develops. Adversaries use hostile behaviour or attitudes, including posturing, threats and perhaps violence, as a competitive tool to resolve the contradictions in their favour. There is no defined threshold that separates confrontation from armed conflict because many actors intentionally try to obscure or confuse exactly where this threshold lies. Adversaries will consciously strive to stretch or constrict the threshold to increase their freedom of action or to restrict that of others. Proxy warfare, brinkmanship, terrorism and economic coercion are all examples of sub-threshold activity within the confrontation zone. In response, other states will conduct deterrence and defensive activities to reduce the confrontation or alternatively escalate the violence to armed conflict.”</p>	51-75	
<p>“Rivalry. Rivals exist in a state of peace but have conflicting aims or contradictions. The actors compete with an attitude or behaviour in accordance with the RBIO. The RBIO is a shared commitment by all countries to conduct their activities in accordance with agreed rules that evolve over time through multinationally agreed processes. Rivalry is not necessarily negative, it is the normal state in international relations, and when it exists within the RBIO framework it can be beneficial to all parties and the international system. For example the United Nations (UN) rules on the global commons and freedom of navigation activities.”</p>	26-50	<p style="text-align: center;">Permissive or Low risk/cost</p> <p>Limited Russia is limited in the ways & means that it may exert influence, or Russia is limited in the extent (geographically or otherwise) to which it can pursue its policy goals</p>
<p>“Cooperation. Cooperation occurs when states or non-state actors work together to achieve the same objectives. Often this occurs when actors’ attitudes on a contradiction align. NATO is an example of cooperation to protect and defend member states’ security. Cooperation provides the ideal basis for enduring stability.”</p>	1-25	

2.3 Ordinal Data

The use of a scale from one to a hundred may give the impression that the scale is linear or ratio but it is actually an ordinal scale. As such, care must be taken in how the data is manipulated and analysed. Arithmetic means of the scores of behaviours were calculated to graphically represent the results but non-parametric statistics were used to test the agreement between judges and hypothesis testing.

3.0 RESULTS

3.1 Agreement Between Judges

The strength of agreement between judges was calculated using Kendall’s Concordance. The level of agreement between judges was statistically significant with a confidence level of 90% for both sets of behaviours. Statistical significance was tested using a Chi-squared test.

- For NATO’s perception of Russian behaviour $W = 0.58, p = 1.33 \times 10^{-82}$
- For Russia’s perception of Allied/NATO behaviour $W = 0.54, p = 1.05 \times 10^{-97}$

This indicates a high degree of agreement between judges.

3.2 Trends

NATO’s perception of Russian behaviour is shown in Figure 3. The figure shows a linear trend line for the data and a line showing the change in average value for each period. Due to the data being ordinal the linear trend line is for illustrative purposes only but it is informative. Similarly, Russia’s perception of Allied/NATO behaviour is shown in Figure 4. Both Figure 3 and Figure 4 show a pre-crisis level of competition and a clear escalation in 2014. Since 2014 there has been some fluctuation in the level of competition but it has remained at an escalated level compared to the pre-crisis level.

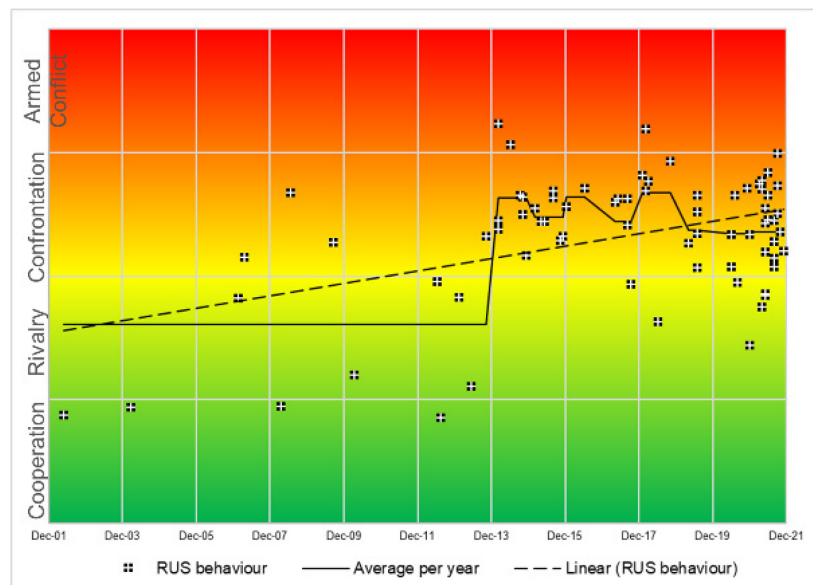


Figure 3: NATO’s perception of Russian behaviour.

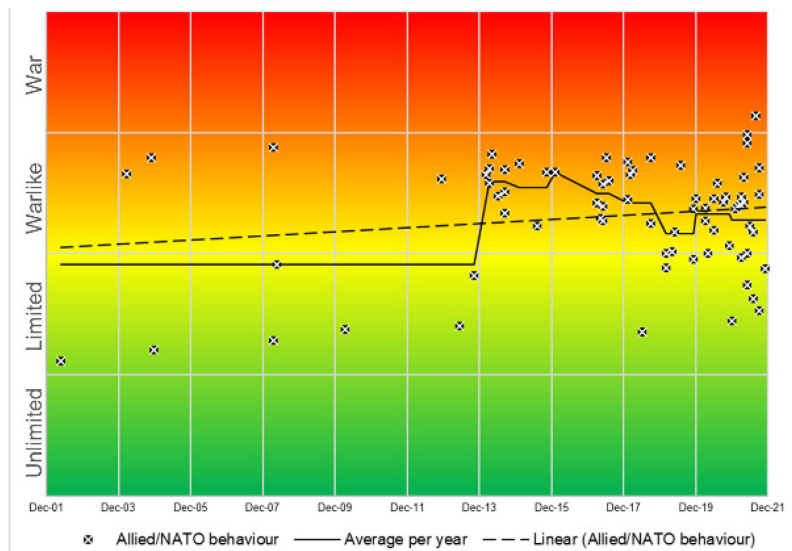


Figure 4: Russia's perception of Allied/NATO behaviour.

The differences between periods were tested for statistical significance see

Table 2 and Table 3. Each table shows the average score for the behaviours in that period and which years are statistically significantly different from each other, or not. For example, NATO's perception of Russian behaviours in the period 2002-2013 had an average score of 40 and was statistically different from all other years. The years 2014, 2016 and 2018 were not significantly different from each other but all these years were significantly different from other years.

Table 2: Table of statistically significant differences in NATO's perception of Russian behaviour between periods.

Score	Period		
66-67	2014	2016	2018
61-62	2015	2017	2020 2021
59	2019		
40	2002-2013		

Table 3: Table of statistically significant differences in Russia's perception of Allied/NATO behaviour between periods.

Score	Period		
65-67	2014	2015	2016
60-62	2017		2018
58	2020		
57	2021		
54	2019		
48	2002-2013		

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NATO perceives the most competitive Russian behaviours to be:

- The annexation of Crimea in Mar-2014
- The use of Nerve agent to poison of Sergei and Yulia Skripal in Mar-2018
- The shoot down of flight MH17 in May-2014
- The deployment of troops to the border of Ukraine commencing in Oct-2021
- The incident in Nov-2018 where Russian naval vessels fired on and captured three Ukrainian naval vessels transiting through international waters

Russia perceives the most competitive Allied/NATO behaviours to be:

- NATO military support to Ukraine since Sep-2021
- The re-affirmation in Jun-2021 that Ukraine has the right to apply to join NATO
- The demonstration of freedom of navigation by HMS DEFENDER in the Black Sea in Jun-2021
- The discussion of the expansion of NATO at the Bucharest Summit in Apr-2008
- The conduct of Assurance Measures from May-2014 onwards

One way to display a mutual perspective of both actors is to put Figure 3 against Figure 4, as shown in Figure 5. This clearly shows both actors escalating, de-escalating and re-escalating towards mid-Confrontation and mid-Warlike levels of competition.

Another way to show a mutual perspective is to plot the average score of behaviours for each period for one actor against the average score of behaviours for the other actor for the same period, as shown in Figure 6. In this format, time is not represented on an axis but by the movement of the line. This format is similar to Figure 2. The pre-crisis level of competition is the point in the Rivalry vs Limited square and then the mutual perspective escalates to the Confrontation vs Warlike square. Since 2014 the mutual perspective has remained at elevated levels.

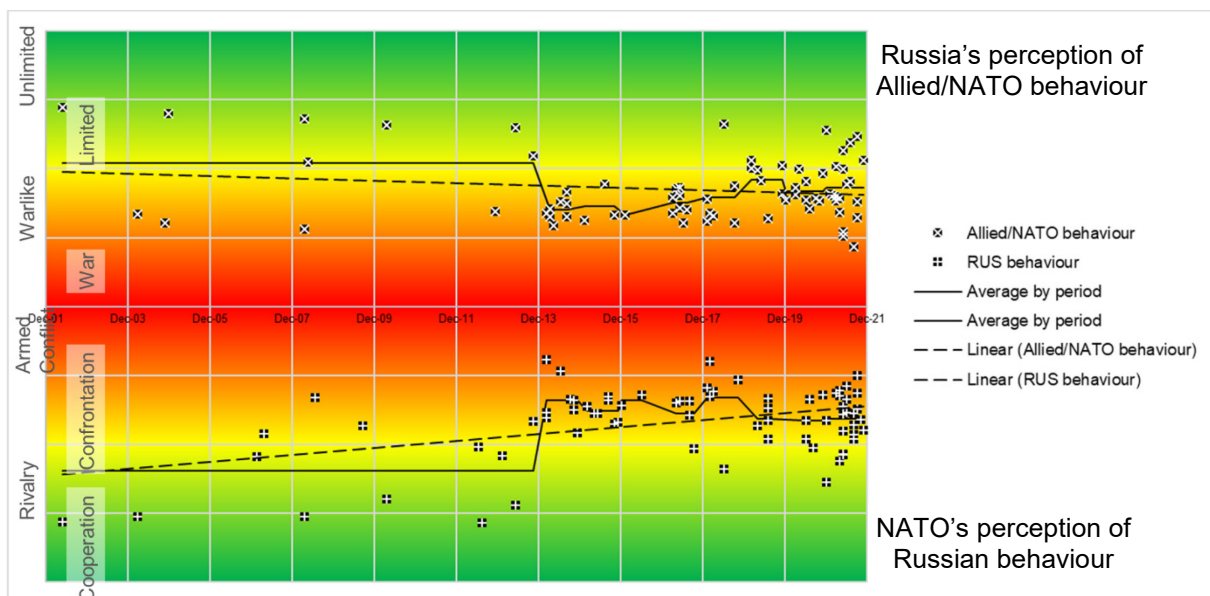


Figure 5: A mutual perspective over time.

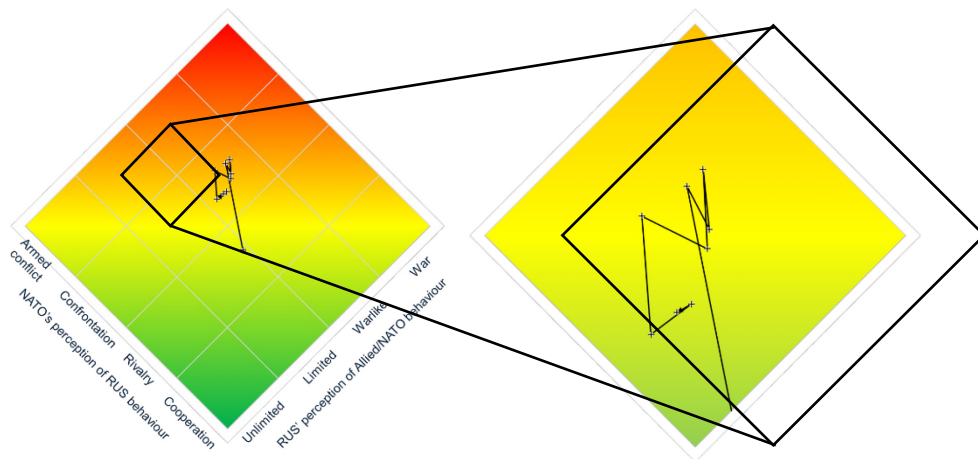


Figure 6: A mutual perspective.

3.3 Themes

Behaviours were also grouped by theme and averages for each theme were calculated. Table 4 and Table 5 show the average score by theme and which themes were statistically significantly different from each other. The theme that NATO perceived as most aggressive was the use of CBW including the attempt to interfere with the OPCW investigation.

Given that a theme is simply a set of behaviours it is also possible to present a mutual perspective by theme. Figure 7 shows a mutual perspective comparing NATO’s perception of Russia’s security modernisation against Russia’s perception of NATO’s Collective Defence.

Table 4: Table of statistically significant differences in NATO’s perception of Russian behaviour between themes.

Score	Theme		
72	CBW		
66	UKR	BLR	political interference
60	cyber		
59	SYR	sanctions	RUS security modernisation
57			energy security
55	internal control		
33	arms control		
23	NRC		

Table 5: Table of statistically significant differences in Russia's perception of Allied/NATO behaviour between themes.

Score	Theme		
69	NATO expansion / Colour Revolutions		
66	Collective Defence	UKR	
63	diplomatic expulsions		
60	terrorist groups	sanctions	SYR
59		BLR	
58	attribution	lawfare	arms control
49	disinformation		
39	NRC		

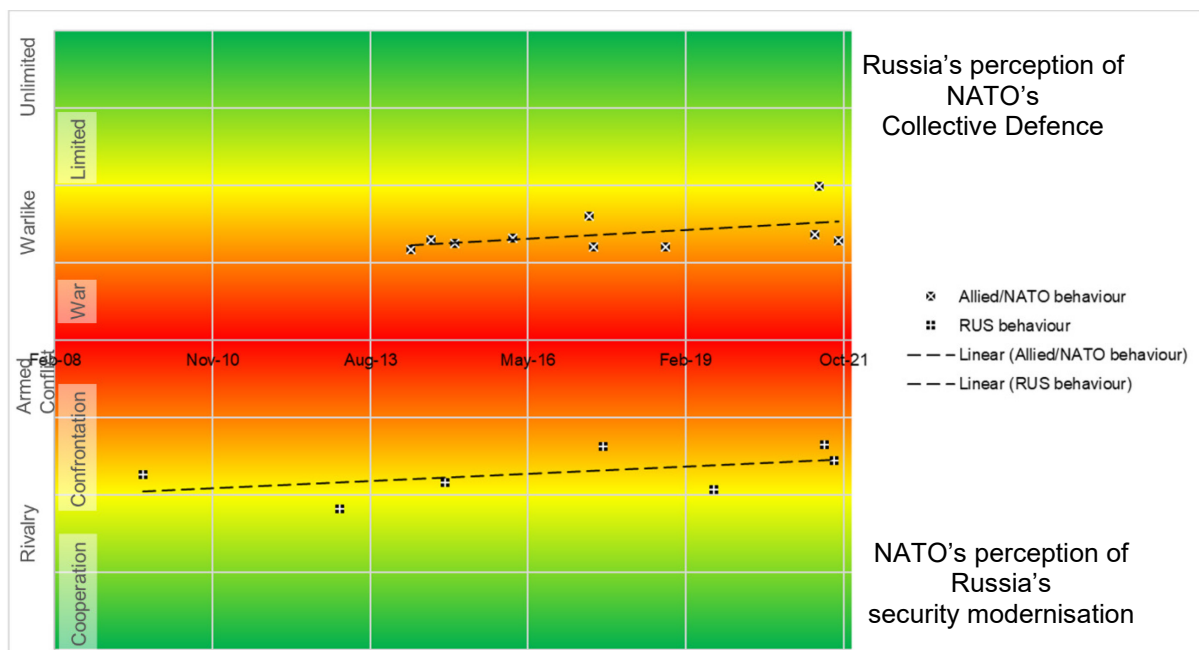


Figure 7: A mutual perspective of NATO's perception of Russia's security modernisation versus Russia's perception of NATO's collective defence.

4.0 CONCLUSIONS

This analysis has demonstrated that quantitative analysis of subjective data can be used to assess each actor's perception of the other actor's behaviour:

- Including actions employing all diplomatic/ information/ military/ economic/ financial/ intelligence/ legal (DIMEFIL) instruments of power,
- Including actions that have effect across the operating environment in one or more political/ military/ economic/ social/ information/ infrastructure (PMESII) domains,

- To establish a pre-crisis level for comparison,
- To compare one time period to another,
- To compare themes, and
- To develop a mutual perspective of NATO's and Russia's perceptions.

As such, this method merits further investigation to support strategic analysis on deterrence and situational awareness of hybrid threats.

5.0 REFERENCES

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- [2] SH/SEM/CCOMC/DET/HYBRID/20-005577/ ACT/SPP/STRTP/LP/TT-2511/Ser:NS0034, Military Proposals for Comprehensive Preventive and Response Options to Counter Hybrid Threats, dated 23 July 2020
- [3] Applying Soft OR to Assessing Conduct, Stuart Smith, STO-MP-SAS-141
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6.0 ACKNOWLEDGEMENTS

The author would like to acknowledge CPT Gilles Castets, Arnis Cimermans, Eliza Elerte, Danielle Fenning, LTC Paul Hooker and Catherine Royle in developing the lists of behaviours and conducting the workshop and the Russia experts for their participation.

