

Towards a Dynamic Theory of Hybrid Conflict: An Exploration with System Archetypes

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ABSTRACT

Hybrid conflict between state actors has been researched for several years. However, investigations of the dynamic interaction between actors involved in a hybrid conflict are mostly lacking. This work builds on literature in international relations and deterrence, conflict analysis, and system dynamics combined with existing analyses and case studies of hybrid conflict.

We propose a set of system archetypes that characterise actor behaviour in hybrid conflict between states. Proposed archetypes of actor behaviour include: raising the threshold and boiling the frog, tit-for-tat escalation and horizontal escalation, deterrence mechanisms, competing narratives and competing spheres of influence. The archetypes are illustrated with vignettes on China's Belt and Road Initiative, Russian interference in Ukrainian society and competing narratives of Iran and the U.S. in Iraq.

The archetypes can be used to analyse hybrid conflict between state actors. Understanding the actions, interactions, perceptions, drivers, and decision making of state actors in hybrid conflict supports a better understanding of relevant dynamics. This should be part of a broader cross-governmental hybrid analysis strategy integrating collation across relevant domains of hybrid conflict with emerging data gathering technology. Such a strategy serves decision making focused on finding sustainable, beneficial outcomes when confronted with hybrid threats.

1.0 INTRODUCTION

Hybrid conflict is a type of conflict, below the level of open violent conflict, in which many means of state power are applied. These measures of state power are directed at fulfilling specific strategic goals. The NATO definition of hybrid conflict is: a type of conflict that “combine military and non-military as well as covert and overt means” to serve its strategic goals (NATO, 2019). In this work the definition by the Dutch National Coordinator for Security and Counterterrorism is used: “A conflict between states that falls largely below the threshold of open armed conflict, and involves the integrated use of means and actors, in pursuit of certain strategic objectives” (NCTV, 2019: 6). The European Union describes hybrid threats more elaborately as “combin[ing] military and non-military activities that can be used in a coordinated manner by state or non-state actors to achieve specific political objectives. They are designed to be difficult to detect or attribute. These threats target critical vulnerabilities and seek to create confusion to hinder swift and effective decision-making” (EU, 2018: 1). In this work we focus on hybrid conflict between states.

1.1 Need for a theory of hybrid conflict dynamics

Analysts of hybrid conflict need to develop and share insights in the nature and course of hybrid conflict. Furthermore, possible courses of action to mitigate effects on society need to be gathered. To do this, a sound theoretical foundation and applied understanding of hybrid conflict is necessary. In the past several years a stream of reports, articles and papers have been published that discuss hybrid conflict (see Bekkers, Meessen & Lassche, 2018). The extent to which hybrid conflict in all its appearances is novel is a matter of intense

debate (see e.g. Galeotti, 2019). However, the research so far puts emphasis on defining hybrid conflict and investigating the challenges hybrid threats pose to effective decision making. Case studies that have garnered attention include: disinformation, foreign influence on free elections, and strategic investment in vital infrastructure by private companies. More detailed studies have looked at technologies used (Danyk, Maliarchuk & Briggs, 2017), the instrumentalization of international law in hybrid conflict (Sari, 2020) and the possibilities of early warning in a hybrid conflict (Rietjens, 2020).

Some authors unpack the timeline of hybrid conflict along phases of priming or shaping, competition and conflict (see e.g. the formulation by Gerasimov available via Galeotti, 2014, and liminal warfare in Kilcullen, 2020). However, the nonlinearity of hybrid conflict cannot be fully understood through the lens of linear phases of conflict. Weismann (2019) also notes this and extends the model showing how opponents can have varying perceptions of peace, open conflict, crisis and war over time. Balaban & Mielniczek (2018) develop a high-level causal loop diagram representing the basic structure of hybrid conflict. In our view a theoretical lens of the interactions between actors in hybrid conflict, divergent perceptions, and reactions over time can indeed strengthen the understanding of hybrid conflict. A dynamic theory of the interaction between actors in hybrid conflict is still mostly absent.

We believe the development of a dynamic theory of hybrid conflict is an important next step, for three reasons. A dynamic theory of hybrid conflict can: 1) provide possible explanations as to why actors in a hybrid conflict make observed strategic and operational choices, 2) provide a better understanding of the complex interactions between actors, and 3) specifically provide possible explanations as to why hybrid conflict escalates or de-escalates over time. Such a theory can support better practical understanding of hybrid conflict that directly supports analysis of hybrid conflict and selection of countermeasures to prevent escalation.

1.2 Literature on conflict dynamics

A number of bodies of literature on conflict dynamics have been of inspiration in this work: game theory of international relations and deterrence, conflict analysis, and the system dynamics literature discussing archetypical conflict dynamics. The relation to each of these bodies of literature is discussed.

Originally, during the 1950's and 1960's state-on-state conflict was analysed with relatively simple game theoretic models. These efforts focused on interactions between rational state actors, with applications in nuclear escalation and deterrence between the United States and the Soviet Union (see e.g. Schelling, 1960, Bennett, 1995). Since then, the theory of deterrence has been extended in many directions: research topics included signalling of intentions, credibility of threats and three-party deterrence (Quackenbush, 2010). A recent extension has studied cross-domain deterrence, wherein e.g. diplomatic or cyber instruments and many other instruments of state power are used to deter opponents from action (Sweijts & Zilincik, 2019 provide an overview).

In the conflict analysis literature, various methods have been developed to understand conflict (Oliva & Charbonnier, 2016). Conflict analysis tools are used to assess actors in conflict, understand scenarios for emerging conflict and underlying conflict drivers, and to support conflict resolution. Many methods build on known tools for actor analysis, goal analysis, and causal mapping from the system thinking literature. Conflict dynamics are for instance studied using causal maps describing the dynamics of escalation, struggle for power, and success to the successful (Oliva and Charbonnier, 2016). The use of a causal map to understand the basic structure of hybrid conflict has already been proposed by Balaban & Mielniczek (2018).

The system thinking literature extends on analysis tools to understand societal dynamics, and conflict dynamics more specifically, through the use of system archetypes. Archetypes describe the world from a systemic perspective, thereby modelling structural, causal reasons for actions and reactions to occur (Senge, 1990; Braun, 2002). Causal influences shape the way actors in conflict make decisions and act. From this

perspective, a better understanding of the world and more effective decision-making comes from understanding what structural factors and actor perceptions determine conflict behaviour.

The system dynamics literature quantitatively extends the qualitative work done on conflict dynamics in various directions (Forrester, 1961). A well-known quantitative example from the Cold War period is the mathematical work on arms races by Richardson and many others (Richardson, 1960; Isard and Anderton, 1985). Another direction is the system dynamics work on the rise of insurgencies (e.g. Coyle, 1985; Anderson, 2010). Applications of systems thinking, complexity theory and system dynamics to conflict are numerous. Gallo (2013) discusses many of these applications and shows examples of how the tools of complexity theory can be used to analyse, prevent and act upon conflict.

To develop a dynamic theory of hybrid conflict we propose to use tools from the above mentioned literatures. Firstly, a focus on interactions between states is used to analyse interactions between states and factors playing a role in decision making, as is done in the international relations theory on deterrence. We also use the language of “red” and “blue” as parties in a hybrid conflict. The tools of conflict analysis and systems thinking are specifically applied to reflect actor interactions and decision making.

1.3 Aim and research questions

We aim to apply ideas and tools from the fields of conflict analysis, systems thinking and system dynamics to hybrid conflict, specifically system archetypes described in causal maps. The key research questions in this work are:

- Can the interaction between actors in a hybrid conflict be effectively captured in system archetypes?
- How can archetypes of actor behaviour be applied to analyse hybrid conflict?

The first question is addressed in section 2 and resulting archetypes of actor behaviour in hybrid conflict are presented in section 3. The second question is answered in section 4. Finally, in section 5 some conclusions on the analysis of hybrid conflict are drawn.

2.0 THEORY AND RESEARCH METHOD

2.1 Importance of investigating system behaviour

Archetypes are simple models that capture a bounded part of the real world. These small models describe repetitive patterns of cause and effect observed in actor behaviour (Senge, 1990; Braun, 2002). A familiar example of an archetype is the Limits to Growth archetype (Meadows, 1972; Braun, 2002). It states that a process of reinforcing growth will meet a balancing process once it is approaching system limits, such as e.g. the world’s natural resources. Archetypes help to describe observed behaviour and develop a better understanding by investigating the structure of causal relations hypothesized to create the behaviour. They enable looking beyond separate events, and observe trends in actor behaviour and other societal developments. Identification of trends helps to reduce the focus on single events taking place at a specific time and place. This capability is important for effective decision-making. The discovery of a hack, a speech by an adversary, or a protest by citizens does not help in understanding and structurally mitigating a conflict situation. Only if a worrying trend in events and its structural causes are identified, a proactive stance towards changing behaviour can be found (Senge, 1990).

Behaviour in system dynamics terms comprises all tangible and intangible behaviour of individuals, organizations or societies. Actions, messages, changes of viewpoint can be part of behaviour as well. This broad view of behaviour of individuals, groups and societies fits the context of hybrid conflict. Figure 2-1 shows an example. The figure displays 425 incidents of influence activities, varying from information

operations to political subversion and cyberattacks, performed by the Russian government in 40 countries. The top part of the dashboard shows the incidence of activities over time, this reflects behaviour of the Russian government and associated actors. Most activities took place in or after 2014. However, the underlying reasons for this behaviour to take shape over time are unclear from this visualisation. Understanding what drives behaviour is central in taking a systemic perspective; this makes it possible to more thoughtfully shape the future.

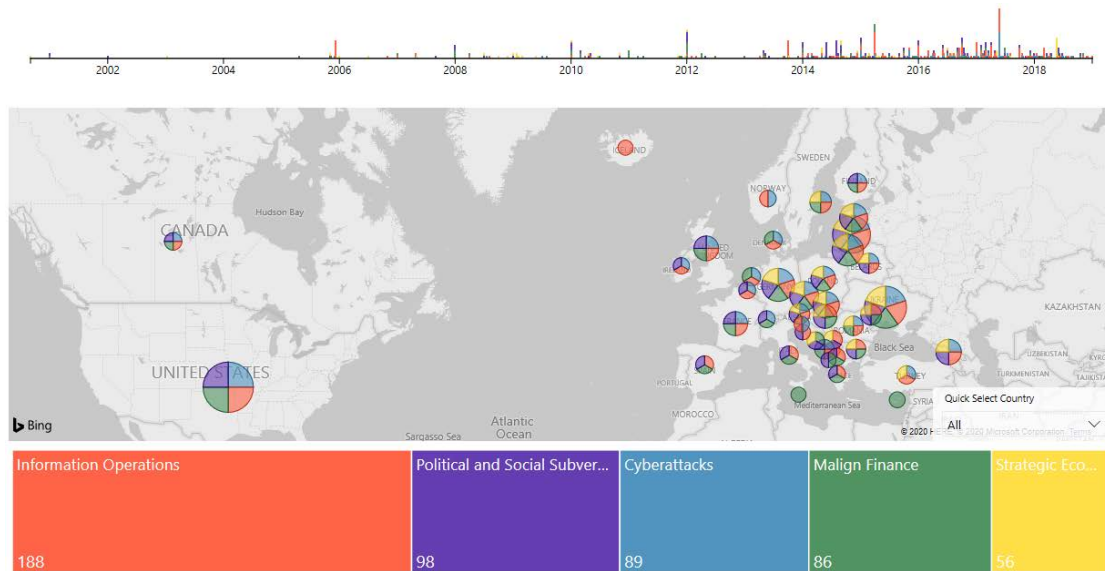


Figure 2-1: All Russian government interference activities in 40 Transatlantic countries, source: <https://securingdemocracy.gmfus.org/toolbox/authoritarian-interference-tracker/>

2.2 Data availability and sketching problematic behaviour

In the example above, data was selected to see a trend in actor behaviour, although each data point is a separate event. Data is not always available; in hybrid conflict many actions are either covert, or difficult to attribute to an actor or difficult to identify as a relevant threat. It is still helpful to place events within the context of behaviour over time. This helps identifying which problematic behaviour of interest is the root of a hybrid conflict.

Common modes of behaviour over time can be observed in complex behaviour, see Figure 2-2 (Vennix, 1996; Saeed, 2003). Sketching graphs over time of historical behaviour and expected behaviour is a powerful starting point in a systemic view of hybrid conflict. Eliciting an escalation dynamic in an arms race between two state actors in conflict shows the core problematic behaviour.

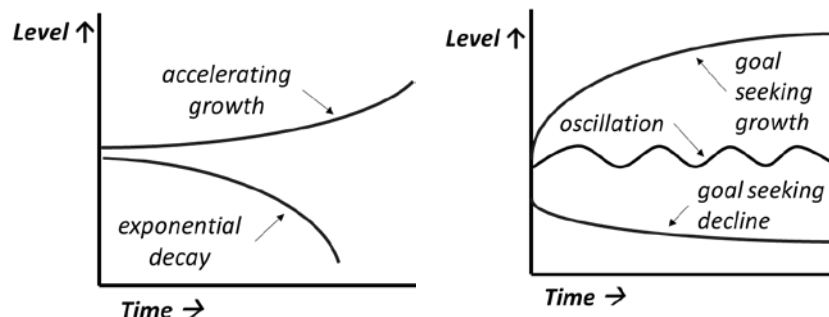


Figure 2-2: Common modes of behaviour over time used to describe system dynamics

2.3 Using archetypes to understand actor behaviour

Behaviour of actors in conflict is not unique, it often follows repetitive patterns seen earlier in historic cases. System archetypes can offer a structural explanation of such behaviour patterns. Archetypes are represented using variables and causal relationships that form feedback loops (Senge, 1990). This section explains the language of archetypes with a step-by-step walkthrough of a classic archetype describing escalation.

Variables describe ongoing activities; they can be tangible or intangible. An example of a variable might be the level of cyber capabilities of an actor or the willingness of an actor to use a capability in an offensive application. The value of variables changes over time, capabilities can be developed, or decommissioned, and offensive actions can be intensified or limited. The value of variables represents the system state at a moment in time. An archetype is not a static image, it describes the structure through which behaviour has emerged in the past and how it might change in the future. The variables in the archetype we present are organized by actor, coded as blue, red and other actors. Capabilities, perceptions, decision-making, and actions are described in archetypes. Archetypes are deliberate simplifications of reality, they focus on a single dynamic within a broader conflict. The intent of this simplification is to reduce noise and focus on explaining a part of observed behaviour; focus on the forest and not the trees. For instance, the ‘willingness to act’ might be represented as a single variable, see figure 2-3, but actually consist of many processes and trade-offs performed by blue.

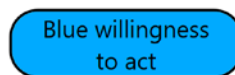


Figure 2-3: The start of a causal map to understand what determines “blue willingness to act”, the willingness is described as a variable that can increase and decrease over time

Variables influence other variables via relations. An arrow between two variables expresses a causal effect of the origin variable on the destination variable. For instance, the actions of a red actor cause an increase in the willingness of the blue actor to respond which in turn will lead blue to respond with actions of its own. The linear view of figure 2-4 represents an initial understanding consistent with human nature; observed events are then combined to form an inductive appreciation on the basis of which to respond. Furthermore, the focus is put on external causes and a decisionmaker’s role in causing the problem is not acknowledged. This is often referred to as open-loop thinking (Sweeney & Sterman, 2007). Archetypes use feedback loops to describe a systemic, endogenous view of a situation.

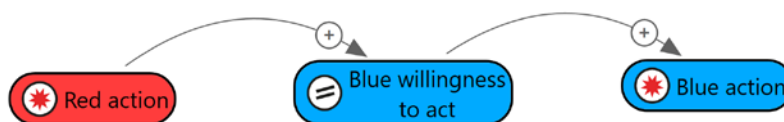


Figure 2-4: Investigating cause and effect of “blue willingness to act”, a cause of an increase in willingness to act is a red action aimed at blue, and an effect of an increase in willingness to act is an increase in blue action

Blue actions have an effect on red. This is the reason feedback loops are introduced. Loops explain that system behaviour emerges from interactions between system components as opposed to from an exogenous force. Thus, the root cause of a problem is often found in the system itself rather than in some outside, corrupting force. The ‘system’ in this case is the relation between two actors and their respective decision-making processes that trap them in an escalatory interaction. This also means that both red and blue are part of the problem and the solution.

Feedback loops are annotated with an R for reinforcing and a B for balancing. The interactions within and between feedback loops provide a systemic explanation of behaviour. Reinforcing feedback loops amplify an initial increase or decrease. In our example, an action by red or blue might trigger a response by the other actor, setting off an escalation in activity by both actors, see figure 2-5. Balancing feedback loops dampen effects. They form goal seeking mechanisms in the system. For example, an actor will eventually discover the effects of the actions by an adversary, in response it will take counter-measures to protect itself and to enhance defences, leading to a reduction in the effectiveness of the action, see figure 2-6.

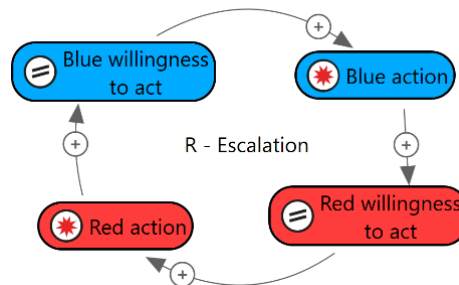


Figure 2-5: Example of a reinforcing feedback loop describing escalation of actions between the red actor and the blue actor

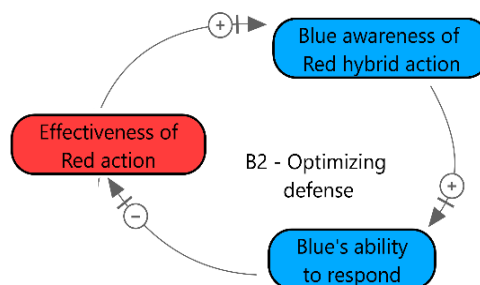


Figure 2-6: Example of a balancing feedback loop describing the optimisation of blue's defences in reaction to the awareness of red actions (notice the minus sign of the causal arrow to 'effectiveness of red action')

2.4 Research method: identification of archetypes

The identification of system archetypes for this research was performed in an iterative process based on conceptual literature and on earlier case studies in the context of scenario analysis. Initially a larger set of archetypes (up to 20) was identified. However many of these dynamics contained overlapping characteristics of hybrid conflict. The eventual set of ten archetypes was found by loosely following the three criteria of (1) representing distinct dynamics, (2) relevance to understanding the essence of hybrid conflict, and (3) together providing a representative view of hybrid conflict.

3.0 RESULTS: TEN ARCHETYPES OF HYBRID CONFLICT

Each archetype, found and discussed below, describes a specific aspect of the reality of hybrid conflict. Every archetype describes multiple aspects of actor behaviour, interactions, perceptions and decision-making. Not one single archetype offers a complete understanding of a conflict situation; in all cases, multiple or even many archetypes are necessary to sufficiently understand a situation. Either to describe different perspectives on a situation or as alternative hypotheses of the drivers of actor behaviour.

3.1 Description of archetypes of hybrid conflict

In this section all ten archetypes are described briefly, see table 3-1. Three of these archetypes are presented in detail – showing a causal diagram, explaining their constituent parts, and providing illustrative vignettes on China’s Belt and Road Initiative, Russian interference in Ukrainian society and competing narratives of Iran and the U.S. in Iraq respectively.

Table 3-1: Ten archetypes of hybrid conflict describing actor behaviour

| Archetype | Description |
|--|--|
| 1. No smoking gun | Hybrid actions are difficult to attribute. If actions cannot be attributed there is no reason for red to refrain from further actions. However, if the smoking gun is finally found, the risk of counteractions by blue steeply increases. This might lead red to reduce its actions. |
| 2. Raising the threshold and boiling the frog ¹ | Aggressors in hybrid war conduct their actions by constantly finding ways to maximise effects whilst not causing conflict escalation. Red seeks ways to increase blue’s threshold to act. Prolonged exposure to red desensitises blue to red’s actions. Red also targets blue’s decision-making decisiveness. |
| 3. Tit-for-tat escalation | Hybrid operations performed by a red actor directed at blue cause an increase in the willingness of blue to respond, provoking a reaction by blue. In turn, this increases the willingness of red to act, causing further actions by red. This reinforcing dynamic causes tit-for-tat reactions. |
| 4. Horizontal shifting | Horizontal shifting occurs when an actor employs a different instrument of state power. This occurs if red decides its goals are better met using other instruments. Two dynamics trigger horizontal shifting: (1) an increase of the perceived costs of using an instrument or (2) countermeasures taken by blue. |
| 5. Endogenous societal developments | Endogenous societal developments (e.g. polarisation between groups) shape hybrid conflict in two ways. A development can create a vulnerability that can be exploited by red via targeted hybrid actions. A societal development can also be unintentionally perceived as the result of malign actions by red, triggering a blue response. |
| 6. Deterrence-by-denial and by-punishment | Blue can deter actions in hybrid conflict by using two mechanisms: reducing the benefit red perceived to obtain by conducting a hybrid action, and increasing the perceived cost of action for red. |
| 7. Targeting capability to defend | Red aims to degrade blue’s defence capability. Applying this tactic before or during an actual hybrid action can result in a slow degrading of blue capability to defend until blue is suddenly confronted with an effective red action. |
| 8. Conflicting narratives | Narratives play a major role in hybrid conflict. At the micro-level (what happened?) and at the level of ideologies (what is just?). If the blue narrative undermines the legitimacy of the red narrative, this is perceived as a threat by red. Red responds by promoting its own narrative or attacking blue’s (counter)narrative. |
| 9. Friend or foe | Actors in hybrid conflict weigh the cost and benefit of acting and reacting on the basis of multiple interests. A mutual beneficial relation is a moderating factor on the preservation or breakdown of cooperative attitudes between blue and red. When collaboration is reduced, escalation can suddenly arise. |
| 10. Competing spheres of influence | Actors in hybrid conflict can vie for influence over a third country; this causes a dynamic of competing spheres of influence. Red and blue conduct hybrid operations aimed to secure the allegiance of Green. This increases red and blue activity that can destabilize Green’s society. |

¹ Boiling the frog is a well-known fable that describes a frog being boiled to death while slowly turning up the heat in a pan of water, not noticing the danger through gradual action. When putting the frog into boiling water at once, it would jump out.

3.2 Example archetype: raising the threshold and boiling the frog

Aggressors in hybrid war conduct their actions by constantly finding ways to achieve as much effect as they can whilst not causing an escalation in the conflict. Here, multiple interlinking interactions between red and blue play a role. In this archetype, red attempts to conduct as many hybrid actions as possible, without causing an escalatory response by blue. The result is many limited hybrid activities by red probing blue's threshold to act. If red detects an increase in the willingness of blue to respond, red will quickly reduce its level of activity to prevent escalation (B1 in figure 3-1). Red seeks ways to increase the threshold of blue, thus enabling more red actions against blue without risking escalation. Prolonged exposure to the action of red desensitises blue to red's actions, raising the threshold for blue to respond. The frog has been metaphorically boiled (R1). A second strategy for red is to take deliberate actions to raise blue's threshold, for example by attacking the decisionmaker's decisiveness (R2).

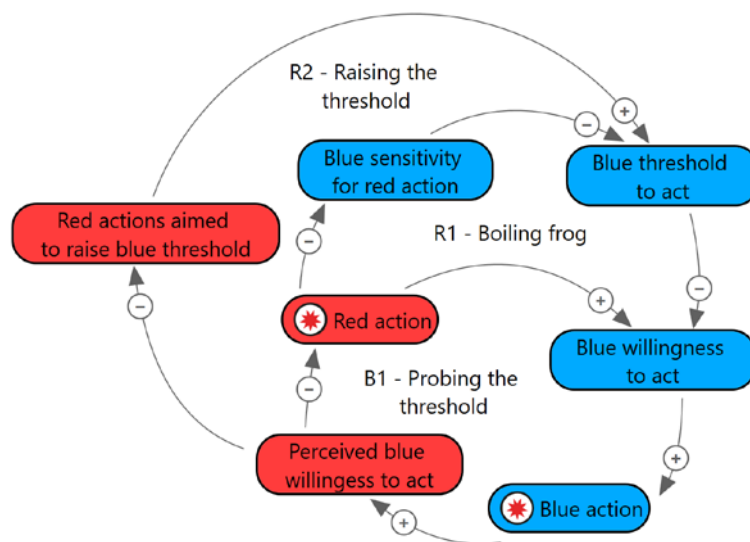


Figure 3-1: Archetype 2 'Raising the threshold and boiling the frog' describing a dynamic of probing actions of red and desensitising of blue with respect to red actions

Illustrative case 'China's Belt and Road Initiative' – precarious balance of investment and security

In the recent decade China has become a dominant player in global trade, while heavily investing in foreign companies. Chinese Foreign Direct Investments (FDI) can be associated with a red action in the archetype shown in figure 3-1: China probed the threshold of what Western countries deem acceptable levels of foreign investment (B1).

Countries have been willing to sign Chinese trade deals and memoranda of understanding when lured by the promise of investments associated to the Belt and Road Initiative. Some countries got accustomed to increased Chinese FDI, the frog was boiled (R1), seeing this as a logical consequence of China's role in global trade. Meanwhile the West realises the implications of dependence on foreign actors. Financial gains from Chinese FDI, have raised blue's threshold to take efforts to mitigate the risks of dependence on China. China now holds a majority stake in multiple key enterprises and sensitive sectors. China used a vast PR campaign to dissuade Western initiatives directed at their investments. The perceived threshold of allowable Chinese FDI in Western countries was probably raised (R2). Exemplary actions include: organisation of BRI summits, showcasing of successful BRI projects including the port of Piraeus; and using (ex-)politicians to promote investments in the West.

Some Western countries have expressed concern about Chinese investments in critical infrastructure, including cellular networks and harbours. France, Germany, United Kingdom, United States and the European Union introduced legislation on foreign investment screening. And many countries have recently also countered Chinese influence over e.g. cellular networks. This may be considered as China crossing a threshold.

3.3 Example archetype: endogenous societal developments

Hybrid actors frequently use existing societal vulnerabilities. This archetype describes the role of endogenous societal development. They shape a hybrid conflict in two ways. Firstly, a development in the blue society (e.g. civil unrest) can create a vulnerability that can be exploited by the red actor via hybrid actions. These actions can in turn further increase the vulnerability (R1 in figure 3-2). Secondly, a societal development can be unintentionally or intentionally (*casus belli*) perceived as the result of malign actions by a red actor triggering a blue response (R2); this is visualized in a swift way through blue actions causing more red actions.

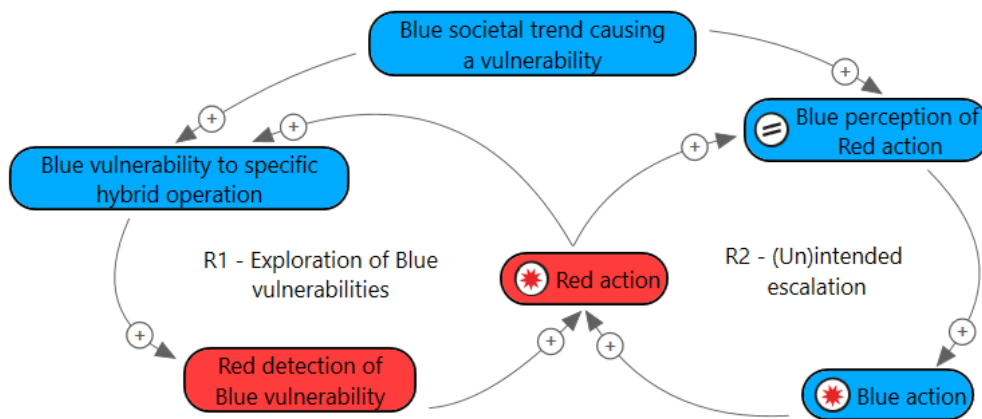


Figure 3-2: Archetype 5 ‘Endogenous societal developments’ describing a dynamic of exploration of vulnerabilities and deliberate actions directed at blue vulnerabilities

Illustrative case ‘Ukrainian polarisation post-Soviet collapse’ – Exploiting social vulnerabilities

In 2014, the Maidan Revolution took place in Ukraine. In the same year, the Russian Federation annexed Crimea, using pro-Russian sentiment. This sentiment had been strong on Crimea ever since Ukrainian independence. The Russian Federation justified its intervention claiming that it was protecting the interests of Russian nationals abroad, enabled by polarization of pro-Russian and pro-Atlanticist sentiments in Ukraine. This polarisation of Ukrainian popular opinion was identified as a vulnerability to be exploited. In response, the Russian Federation has instrumentalised the pro-Russian sentiment of its kinsfolk in many former Soviet countries. The Kremlin has used pro-Russian groups through the so-called “Law of the Compatriot” (Grigas, 2016; Kozin, 2015).

In 2010, the Russian Federation acted upon this Ukrainian vulnerability (R1) by enabling individuals to claim Russian compatriot status. Its tactic was to conflate pro-Russian attitude, Russian ethnicity, speaking Russian, and Russian descent into a single compatriot status. The Ukrainians had long perceived this as a vulnerability, but mostly refrained from escalating tensions (R2 was not completed). Russia and Ukraine have recently mutually escalated their tit-for-tat battle of legal status by providing fast-track citizenship to nationals of the other’s country.

3.4 Example archetype: conflicting narratives

Narrative plays a major role in hybrid conflict. At the micro level (*what happened?*) but also at the level of ideologies (*what is just?*). If the narrative of blue undermines the legitimacy of the red narrative this might be a threat to red's powerbase. Thus, the blue narrative is perceived as a threat by red. Red can respond to reduce the threat in two ways. Firstly, by promoting its own narrative, strengthening the attractiveness of its narrative (B1 in figure 3-3). Secondly, by attempting to undermine the blue narrative (B2). This reduces the attractiveness of the blue narrative, which reduces the perceived threat of this narrative. This archetype can also be construed reasoning from blue actions that promote blue narrative and undermine red narrative.

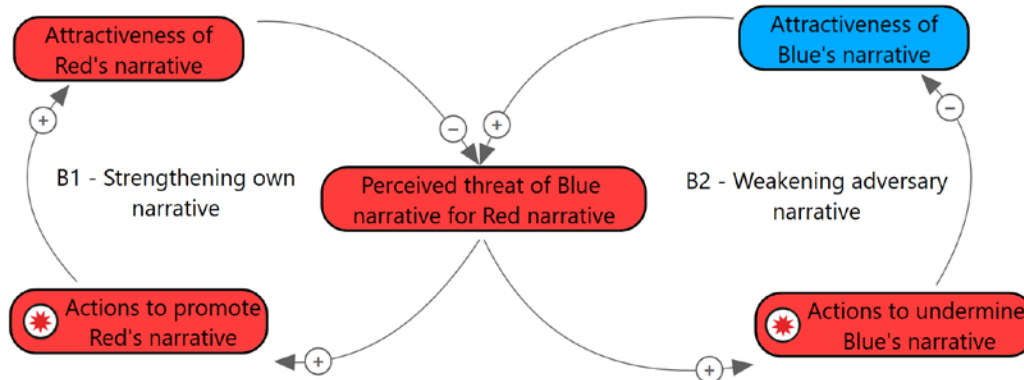


Figure 3-3: Archetype 8 'Conflicting narratives' describing a dynamic of competing narratives and perceived threat on the part of the red actor

Illustrative case 'Intervention in Iraq' – Iranian contrarian narratives

Interactions between the US and Iran are part of a hybrid conflict. The United States redeployed troops to Iraq in 2014, after having officially withdrawn its forces in 2011. This redeployment was a response to the Iraqi government's request for aid when confronted with ISIL capturing Mosul. The West and regional rival forces such as Iran have concurrently projected conflicting narratives of their activities in Iraq.

In his August 7th 2014 statement, President Obama emphasised that the redeployment was aimed at reinforcing the effectiveness of the Iraqi Security Forces and preventing massacres at the hands of ISIL. In addition, he stressed that despite the redeployment he would "not allow the United States to be dragged into fighting another war in Iraq. [...] American combat troops will not be returning to fight in Iraq, because there's no American military solution to the larger crisis in Iraq. The only lasting solution is reconciliation among Iraqi communities and stronger Iraqi security forces."²

Iranian efforts to gain a foothold in Iraq by lobbying Iraqi political parties and expanding its paramilitary operations since the withdrawal of US troops were challenged by the return of the US. Even more so since the Iraqi government requested the US forces presence. Iranian perceptions of the US narrative have led to parallel Iranian campaigns to discredit the US narrative, emphasizing US forces in Iraq as occupiers (B2). Whilst promoting its own narrative for Iraqi interventions, that Iran is only present in Iraq to support local authorities in fighting ISIL, protecting Shi'a religious sites, and strengthening Iraqi security efforts (B1).

² Source: <https://obamawhitehouse.archives.gov/the-press-office/2014/08/07/statement-president>

4.0 APPLICATIONS IN ANALYSIS OF HYBRID CONFLICT

An archetype is an elegant and simple explanation of a pattern of behaviour and its underlying structure in hybrid conflict between two actors. Archetypes provide a template for swift analysis of observed behaviour and reflection on proposed actions. Any real-world situation of hybrid conflict will be unique in its details, and a single archetype will never describe a situation completely nor prescribe an easy fix. Analysts and decisionmakers can use archetypes to take a systemic perspective on the interaction between actors and develop effective courses of action. Archetypes can be applied both through internalisation of the archetypes presented by analysts of hybrid conflict and by applying them in specific analyses.

The presented archetypes can be used firstly to recognise patterns of actor behaviour and interactions between actors in hybrid conflict. Patterns of escalation, decision-making by actors in a conflict, and risk trade-offs performed by actors can be analysed in a dynamic way. Furthermore, awareness of thresholds of observation, attribution and acting can support understanding of conflict dynamics. Identification of patterns of behaviour then firstly supports an understanding of drivers of actor behaviour in hybrid conflict. E.g. escalation is caused by the tit-for-tat reactions of two actors in conflict, perceiving each other's actions. The feedback mechanisms that create a conflict dynamic can thus be understood.

The archetypes can also support the investigation of new actions to create sustainable beneficial outcomes. Knowing how actor behaviour in conflict is caused structurally can show the path towards actions that 'break the loop'. For instance, an escalation dynamic can be interrupted by recognising that escalation is not mutually beneficial, leading to refraining from a reaction. Explicitly gathering information about malevolent actor activities can serve the purpose of lowering decision-making threshold. And signalling deterrence capabilities can strengthen the balancing dynamics of deterrence. For every one of the developed archetypes such actions can be derived.

5.0 DISCUSSION, CONCLUSION AND FURTHER RESEARCH

In this research the start of a theory of hybrid conflict dynamics was presented building on literature on deterrence, conflict analysis, system thinking and system dynamics. This has resulted in a set of ten archetypes describing typical interactions between state actors in hybrid conflict. These system archetypes help in understanding hybrid conflict dynamics in practical applications.

5.1 Limitations

This research does have a number of limitations. The current set of archetypes is limited, more archetypes can be formulated that cover other aspects of hybrid conflict. Archetypes assume there is order in interaction between actors, but they do not account for chaotic events nor for irrational decisions. The true motivation for action in hybrid conflict is often obscured due to the secret nature of decision-making in conflict. Thus, the correspondence between an archetype and a real situation will merely be a working hypothesis. There is a possibility that this working hypothesis turns into a biased view of a part of the conflict. A working hypothesis should therefore be tested by confronting expected actor behaviour with reality. These hypotheses are beneficial if they serve analyst understanding.

Hybrid conflict, by definition, is complex, spanning the whole-of-government or the whole-of-society; hybrid campaigns include many instruments of state power. This creates new and sometimes unique situations in every future hybrid conflict. Thus, archetypes do not cover every relevant interaction between actors in conflict. In some situations an archetype might appear to describe the observed interactions, but a more intricate dynamic is actually at play. At the same time, the use of archetypes will help analysts learn how to look at hybrid conflict in a systemic way. This serves a better understanding of underlying actor behaviour in general.

Furthermore, in hybrid conflict often more actors are involved. The archetypes focus on the interaction between two main actors without addressing all the surrounding actor complexities, since adding all these complexities doesn't necessarily create more understanding on the systemic feedback structures. However a more detailed actor analysis can also be very helpful tool in understanding hybrid conflict.

This paper addresses qualitative causal loop diagram archetypes. To capture and investigate more intricate dynamics in hybrid conflict, quantitative simulation models can be applied to hybrid conflict as well. This makes it possible to include more sources of conflict dynamics. E.g. in system dynamics modelling, the concepts of stock and flow are used to model accumulation causing complex dynamic behaviour. Only after thoroughly understanding dynamics from the quantitative model, qualitative causal loop diagrams are used (Forrester, 1994). This type of simulation model has been used before for decision support in military mission environments (Veldhuis, de Reus, Keijser, 2020). However, application of quantitative simulations of hybrid conflict is complicated by the diversity, complexity and obfuscation of hybrid conflict.

5.2 Conclusion and avenues for further development

The set of archetypes of hybrid conflict can support a deeper understanding of relevant dynamics at play between state hybrid actors. The ten archetypes, of which three were presented here in detail, can be used to unravel patterns of behaviour, to investigate root causes of escalatory dynamics, and to propose effective strategic actions to escape from conflict. There are of course avenues of further development to increase the added value of the above presented work on hybrid conflict dynamics.

The use of the above archetypes can be extended to include the formulation of potential future actions of an opponent and the identification of indicators in order to find patterns in behaviour. This line of work can build on earlier work on archetypes in the system thinking literature (e.g. Braun, 2002). Furthermore, the set of archetypes can be scrutinised, tested and extended to better reflect the characteristic intricacies and complex dynamics of hybrid conflict. Extension of the set of relevant archetypes can also be informed by monitoring current events taking place in different hybrid conflicts around the world. A different test of the set of archetypes is to select one or multiple current hybrid conflicts and perform archetype analyses, to investigate whether the current set sufficiently captures the conflict dynamics.

The application of system archetypes can only be properly done in a broader analysis strategy of hybrid conflict. Of course, this is but one of many techniques in the toolbox. Analysis of actor behaviour should be performed complimentary to for instance vulnerability analysis and capability analysis. Security agencies should be capable of performing these types of analysis to detect, monitor, understand and react to hybrid campaigns taking place.

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