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Adaptive Peace Operations: Navigating the Complexity of Influencing Societal Change Without Causing Harm

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ABSTRACT

Complexity theory offers a theoretical framework for analysing how social systems prevent, manage and recover from violent conflict. Insights from complexity suggest that for a peace process to become self-sustainable, resilient social institutions need to emerge from within, i.e. from the culture, history and socio-economic context of the relevant society. Peace operations are deployed to contain violence and to facilitate this process, but if they interfere too much, they will cause harm by inadvertently disrupting the very feedback loops critical for self-organization to emerge and to be sustained. To navigate this dilemma, the paper proposes employing an adaptive approach, where peace operations, together with the communities and people affected by the conflict, actively engage in an iterative process of inductive learning and adaptation. Adaptive Peace Operations is a normative and functional approach to peace operations that is aimed at navigating the complexity inherent in trying to nudge societal change processes towards sustaining peace, without causing harm.

KEYWORDS Adaptation; complexity; conflict resolution; peace operations; resilience

Introduction

We often hear it said that a particular conflict is complex, or that conflict resolution and peace operations are a complex undertaking. Beyond this common-sense use of the term, complexity theory, applied to the social world, offers insights about social behaviour and relations that can improve how we understand and practice conflict resolution and peace operations.

Peace operations is an instrument that is used to influence the behaviour of a social system that has been or are at risk of being affected by violent conflict.

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A society is able to self-sustain peace when its social institutions can ensure that political differences are managed peacefully, and that no significant social or political group use violence to achieve their ends.¹ Peace operations are deployed by international organizations, most notably the United Nations, in an attempt to assist societies to prevent and mitigate the risk of violent conflict.

When violent conflict has erupted this is sometimes done through stabilization or peacekeeping operations that attempt to influence the behaviour of those opting to use violence through persuasion, inducement and coercion.² This can, however, at best only serve as a short-term alleviation of the problem. For peace to be self-sustainable the society itself needs to have sufficiently strong social institutions to identify, channel and manage disputes peacefully. The primary tasks of a peace operation is thus to contain violence and to assist a society to enhance the resilience of its social institutions to the point where it is able to sustain its own peace. Insights from complexity theory about how to influence the behaviour of complex systems, how such systems respond to pressure, and how to avoid harm and unintended consequences, should thus be valuable for those involved in planning, managing and evaluating peace operations.³

This article will introduce complexity theory in the peace operations context and explore how insights from complexity can inform the contextual awareness, analysis, planning, practice and evaluation of peace operations. In the first part of the article complexity will be employed as an analytical device to offer a critical perspective on past and current peace operation practices. In the process we will consider the implications of complexity for how we understand societal change processes, and what peace operations need to do if they wish to influence complex social systems to become self-sustainably peaceful.

The second half of the paper will use complexity as a theoretical foundation for offering policy advice. In this section the paper will consider the implications of complexity for how we undertake peace operations. A new normative and functional approach – Adaptive Peace Operations – will be introduced. It is designed to cope with complexity and uncertainty, and to help navigate the dilemma that will be highlighted in the first part of the paper, namely the elusive search for a balance between, on the one hand the dynamics that drive international interventions to contain violence and stimulate peace, and on the other, the space and time needed for resilient local capacities to sustain peace to emerge.

¹Caplan, *Measuring Peace: Principles, Practices, and Politics*.

²Howard, *Power in Peacekeeping*.

³Ramalingam, *Aid on the Edge of Chaos*; Clemens, "Complexity Theory as a Tool for Understanding and Coping"; Hunt, "All Necessary Means to What Ends?"

Complexity and Peace Operations

The application of complexity theory in political science and international relations is gradually increasing.⁴ The uptake has been more rapid in related fields such as Development Studies⁵ and International Conflict Resolution and Peace and Conflict Studies.⁶ Apart from those that consciously make use of complexity theory, many others have been influenced by the premises and insights derived from the study of complexity. These influences can be traced, amongst others, by the contagion throughout the social sciences of many of the key concepts of complexity theory such as feedback, bifurcations, self-organization and emergence.

Complexity theory describes the characteristics and functions of a particular type of holistic system that has the ability to adapt, and that demonstrates emergent properties, including self-organizing behaviour. Such systems emerge, and are maintained, as a result of the dynamic and non-linear interactions of its elements, based on the information available to them locally, as a result of their interaction with their environment, as well as from the modulated feedback they receive from the other elements in the system.⁷ In this article we regard both the societies that peace operations engage with, and the international system that the peace operation is an instrument of, as empirically complex.

Studying complex systems can help peace operations understand where they can have the most impact when trying to influence social systems. It has been established that we devote most of our energy on aspects that, counterintuitively, only have weak leverage.⁸ In the peace operations context, this will be things such as individual skills training, donating equipment and building police stations, prisons or courtrooms. These are weak leverage points because on their own they do not change the system within which they function. Meadows argues that high leverage entry points in complex systems, where relatively small shifts can have the most impact, would be helping to bring about changes in the rules, structures, goals and paradigms of a society and its social institutions.⁹

Studying complex systems has also taught us that change does not always occur gradually. Pressure for change accumulates, but often without much evidence during the build-up phase. And then suddenly, when a tipping point is reached, a system can change significantly in a relatively short

⁴Axelrod, *The Complexity of Cooperation*; Kavalski, *World Politics at the Edge of Chaos*; Orsini et al., "Complex Systems and International Governance."

⁵Rihani, *Complex Systems Theory and Development Practice*; Ramalingam, *Aid on the Edge of Chaos*.

⁶Hendrick, *Complexity Theory and Conflict Transformation*; Korppen, Ropers, and Giessmann, *The Non-Linearity of Peace Processes*; Millar, "Toward a Trans-Scalar Peace System."

⁷de Coning, "From Peacebuilding to Sustaining Peace"; Cilliers, *Complexity and Post-Modernism*.

⁸Meadows, *Leverage Points: Places to Intervene in a System*.

⁹de Coning, "Complexity Thinking and Adaptive Peacebuilding."

period of time.¹⁰ Thus, working towards more inclusive political and social processes will not necessarily show signs of steady progress. This is partly due to the importance of path dependency in system dynamics.¹¹ The choices that individuals make, even powerful leaders and political elites, are constrained by initial conditions and the choices they or others have made earlier.¹² This helps explain why higher-order system changes usually occur during periods of turbulence when path dependency is disrupted.

Societies, or social systems, are empirically complex.¹³ This means that they demonstrate the ability to adapt and that they have emergent properties, including self-organizing behaviour. As social systems are highly dynamic, non-linear, and emergent, it is not possible to find general laws or rules that will help us predict with certainty, how a particular society or community will behave.¹⁴ We cannot undertake a project, for example a reconciliation initiative in Somalia, and predict with any certainty what the outcome will be. Nor can we use a model that was assessed to have performed relatively well elsewhere, for instance the Truth and Reconciliation Commission in South Africa and expect that it will have the same effect in another context, or even in the same country, but at a different time.

Coping with Uncertainty

This uncertainty is an intrinsic quality of complex systems, not a result of imperfect knowledge or inadequate analysis, planning, or implementation. Recognizing this uncertainty when attempting to influence complex social systems has significant implications for the way we think about and undertake Peace Operations. One contribution of a complex-systems approach is ‘that it shifts our understanding away from static, simplified views of conflict’ and helps us to appreciate the ‘complex, multilevel, dynamic, and cyclical nature of these phenomena’.¹⁵

Until fairly recently the international conflict resolution and peace operations community was confident in its ability to diagnose the problems affecting a society emerging from conflict, and to prescribe the steps such a society needed to take to achieve peace.¹⁶ The outcome was believed to be more or less guaranteed if the design was followed, and uncertainty was seen as risk that could be managed with good planning.¹⁷

¹⁰Coleman, Bui-Wrzosinska, and Nowak, “Protracted Conflicts and Dynamical Systems.”

¹¹Mitchell, *Complexity: A Guided Tour*.

¹²de Coning, “Complexity Thinking and Adaptive Peacebuilding.”

¹³Byrne, *Complexity Theory and the Social Sciences*.

¹⁴Cilliers, “Why We Cannot Know Complex Things Completely.”

¹⁵Coleman, “Paradigmatic Framing of Protracted, Intractable Conflict.”

¹⁶World Bank, “World Development Report 2011: Conflict Security and Development.”

¹⁷Eriksen, “The Liberal Peace Is Neither.”

Complexity provides us with the theoretical framework for understanding the hubris of these assumptions. Recognizing uncertainty as a starting point is what Barnett refers to as cultivating ‘a spirit of epistemological uncertainty’. Hughes specifically applies it to the peace context and argues that ‘an explicit, reflexive awareness of the incompleteness of our understanding is (...) vital so that decisions are taken with a large degree of caution (and humility) while at the same time demanding that we think through the possible ramifications’.¹⁸

One of the central lessons that emerged from the peacebuilding and peacekeeping literature over the last two decades, was that peace interventions are less effective or successful when they are top-down and template-driven,¹⁹ when they fail to sufficiently take local context into account,²⁰ and when they do not cede space for local ownership and self-determination.²¹

These kind of peace operations are often counter-productive because they complicate or undermine the process of better connecting missions and communities.²² This can prevent more inclusive forms of peacebuilding and hinder the conflict resolution potential of peace operations.²³

Uncertainty is an intrinsic quality of complex systems and it is not possible to overcome uncertainty by replicating or imposing a pre-designed model. Uncertainty can only be navigated, not controlled. Peace operations thus need to invest in the tools that will help it to monitor and adapt to changes in the system as they occur, so as to minimize, as far as possible, the lag time between changes in the dynamics of the system the operation is engaging with, and the adaptive response of the mission. One such tool – the Comprehensive Performance Assessment System (CPAS) for UN peacekeeping operations – are discussed later in this article.

The Local-International Binary: A Necessary but Unsatisfactory Coupling

As complex systems are open systems it is always problematic to draw precise boundaries between distinctions such as local/international or internal/external.²⁴ From a complexity theory perspective, change processes are emergent from within a given system and evolutionary in nature. The system adapts to its environment through a continuous process of inductive adaptation, regulated by its own self-organizing processes. Local in this context thus

¹⁸Hughes, “Peace Operations and the Political.”

¹⁹Richmond, “Resistance and the Post-Liberal Peace”; Ginty, *International Peacebuilding and Local Resistance*.

²⁰Autesserre, *Peaceland: Conflict Resolution and the Everyday Politics*.

²¹de Coning, Karlsrud, and Troost, “Towards More People-Centric Peace Operations.”

²²Hunt, “All Necessary Means to What Ends?”; Gelot, “Civilian Protection in Africa.”

²³Hunt and Curran, “Stabilization at the Expense of Peacebuilding in UN Peacekeeping Operations”; Gelot and Sandor, “African Security and Global Militarism.”

²⁴Cilliers, “Boundaries, Hierarchies and Networks in Complex Systems.”

refers to those processes that are emergent from this internal experience, whilst external refers to the environment with which the elements in the system in question are interacting with and responding to.²⁵

In the peace operations context, local describes a society or community that is affected by conflict. International refers to external actors, like a UN peace operation, that are engaging with the local system. It is understood that all complex systems are open systems and that in this context it is not possible to isolate a local conflict system, e.g. the Somali society, without taking into account the various regional and global influences that have shaped and that continue to influence that society. Still, there is analytical value, from a complex systems perspective, to draw a distinction, to the degree possible, between what can be perceived as Somali society and what can be perceived as external actors, even when it is understood that these are very open and fluid categories. At some point the UN peace operation will withdraw, and when it does it will be up to the Somali societies' institutions to sustain the peace, including managing exogenous shocks. If the essential ingredient of a self-sustainable peace is resilient self-organized Somali social institutions, then there is value in the peace operations context in trying to identify, support and safeguard such local institutional processes.

Resilience, Self-organization and Adaptive Capacity

Another concept we need to factor into our understanding of how societies manage change and sustain peace is resilience.²⁶ If a society is fragile, it means that the formal and informal social institutions that govern its politics, security, justice and economy lack resilience. Resilience refers here to the capacity of social institutions 'to absorb and adapt in order to sustain an acceptable level of function, structure and identity under stress'.²⁷

Adaptive capacity is defined as the capacity to thrive in an environment characterized by change.²⁸ In the conflict resolution context, it refers to the ability of a society to adjust to disruptive change, to take advantage of opportunities, and to respond to consequences.²⁹ Self-organization, in this context, refers to the ability of a complex system, like a society, to organize, maintain and sustain itself without an external or internal managing or controlling agent.³⁰ Self-organization facilitates and modulates the flow and processing of feedback information, for instance through developing shared understandings, participatory decision-making and monitoring mechanisms.

²⁵Bargués-Pedreny, "Realising the Post-Modern Dream."

²⁶Chandler, *Resilience: The Governance of Complexity*.

²⁷Dahlberg, "Resilience and Complexity."

²⁸Joseph, *Varieties of Resilience: Studies in Governmentality*.

²⁹Engle, "Adaptive Capacity and Its Assessment."

³⁰Mitchell, *Complexity: A Guided Tour*.

Resilience, adaptive capacity and self-organization are complementary and mutually reinforcing. The more adaptive capacity a society has, the more resilient it will be. Resilience, self-organization and adaptive capacity rely on social capital. Social Capital refers to the resources and other public goods that individuals and social institutions can access via networks and communities.³¹ Social capital is defined by the OECD as networks together with shared norms, values and understandings that facilitate co-operation within or among groups.³² In other words, it refers to how social networks facilitate understanding and trust, and in the process enable people to work together.

The World Bank's World Development Report of 2011 defined institutions as 'the formal and informal "rules of the game", which include formal rules, written laws, organisations, informal norms of behaviour and shared beliefs'.³³ The concept of social institutions that is used in this article is a fusion of the concepts of social capital and institutions. Social institutions thus encompass the formal and informal institutions and networks that individuals, communities and societies can access and use to collectively manage societal change or respond to exogenous shocks.

A society's vulnerability to disruption is gradually reduced as their social institutions develop higher levels of resilience, which means that they will be in a better position to cope with the shocks and challenges they are exposed to.³⁴ Resilience is increased when social institutions and networks become more diverse and interconnected, so that they can share and process more information. Robust self-organized networks distribute vulnerability across their social networks. If one node fails under pressure, others can carry the load, thus preventing system collapse.

One aspect of self-organization that is strongly associated with resilience and sustaining peace is inclusion. Societies that have developed political and social models that are sufficiently complex to accommodate multiple ethnic, religious, language, race, gender and sexual orientation and other identities have been found to be more resilient and less likely to experience violent conflict.³⁵ For example, Tania Paffenholz and colleagues at the Inclusive Peace and Transition Initiative have found that when a broad range of actors beyond the principle conflict parties were included, and these actors were able to assert influence over the process, their inclusion was vital for preventing violence and for sustaining peace.³⁶

Susanna Campbell goes one step further and argues that the capacity of international actors to successfully pursue their peace operations aims relies

³¹Aldrich and Meyer, "Social Capital and Community Resilience."

³²Keeley, *Human Capital: How What You Know Shapes Your Life*.

³³World Bank, "World Development Report 2011: Conflict Security and Development."

³⁴Kaufmann, "Emergent Self-Organisation in Emergencies."

³⁵de Coning, "Complexity Thinking and Adaptive Peacebuilding."

³⁶Paffenholz, "Civil Society and Peace Negotiations."

to a large degree on the ability of their people in the field to make their organization more responsive to local people and local contexts.³⁷ Thus, not only is sustaining peace dependent on the resilience of local communities, but international efforts to support peace processes are also more successful when they are accountable to local populations and informed by feedback from local communities.³⁸

Emergence

Another important concept in complexity theory is emergence. Emergence explains how the elements in a system, e.g. the people that make up a society, are not just merely interacting with each other in order to maintain themselves, their interactions generate new collective effects. These effects would not have occurred if the different agents acted on their own. Hence the notion, ascribed to Aristotle, that a whole is more than the sum of its parts. The dynamic and non-linear relationships among the elements in complex systems generate new emergent properties, i.e. properties that cannot be predicted merely by analysing the individual components of the system.³⁹

A growing sense of distrust in a government, or an increase in confidence in a peace process or in economic recovery are all examples of the emergence of a new shared or collective understanding that develop and spreads, through negative or positive feedback, among many people in a network or society. This is not a process that the government or any one element in the system can control. It emerges from a process of self-organization among the members of a community or society. Another example is the emergence of a tipping point for sustaining peace, namely when a sufficient number of people in a community or society agree that violence is not, under any circumstance, a legitimate vehicle for pursuing group interests. Such a shared understanding becomes more resilient when the community start to act accordingly, e.g. by introducing social sanctions on those that act outside this new emerging norm, and when they develop formal and informal social institutions to enforce it, e.g. via a peace committee or arrangements to enforce a weapons-free town or city.

Complicated systems do not have emergent properties, and the way in which they work can potentially be fully understood, and predicted, by analysing their components and the rules that govern their interactions. In a complicated system, disorder is understood as entropy, namely as the loss of energy in the system that, if unchecked, will result in the gradual collapse

³⁷Campbell, *Global Governance and Local Peace*.

³⁸de Coning, "Complexity Thinking and Adaptive Peacebuilding."

³⁹Morel and Ramanujam, "Through the Looking Glass of Complexity."

of the system into disorder, e.g. the way a complicated machine like an aeroplane will stop functioning if not maintained. In contrast, non-linearity and dynamism play a critical role in creating and sustaining order in complex systems, that is to say in enabling order to emerge.⁴⁰ This spontaneous change over time – how a system adapts on the basis of its internal processes as well as its interaction with its environment and the way in which it generates new structures, forms and functions – is what is meant by emergence and self-organization.⁴¹ A key characteristic of complex systems is thus that they emerge and maintain themselves spontaneously, without the intervention of an external designer or the presence of some form of internal or external controlling agent.⁴²

Christine Bell and her colleagues at the Political Settlements Research Programme have shown that from Aceh and Mindanao to Colombia and Mali, national and local peace agreements reached through self-renewing and inclusive peace processes have proven to be more resilient when roles and responsibilities, including for implementation, are distributed among a broad group of participants.⁴³ In other words, a more complex system, that distributes functions and responsibilities across a diverse and self-organizing network, is likely to be more resilient, adaptive and self-sustainable.⁴⁴

A complexity informed approach to societal change thus recognize that the essential ingredient for self-sustainable peace is local emergent self-organized complexity.⁴⁵ It is possible for a society to become peaceful on its own,⁴⁶ but it is not possible to resolve a conflict or to build peace on behalf of a society from the outside. External fixes will not stick if they have not been internalized, and it is thus the internal adaptation process that is the critical element for self-sustainability.⁴⁷ Complexity thus provides us with a theoretical framework for understanding why self-sustainable social-political order can only emerge from within its own context.⁴⁸

What Then Is the Role of International Peace Operations?

Local systems that are vulnerable to outbreaks of violence are often trapped in a conflict cycle that can be resilient to change, and they may need help to break free from it. External intervention may at times be necessary to disrupt the political economy of such a conflict system, so that the society

⁴⁰Cilliers, *Complexity and Post-Modernism*.

⁴¹Luhmann, "The Autopoiesis of Social Systems."

⁴²Cilliers, *Complexity and Post-Modernism*.

⁴³Bell, "Political Power-Sharing and Inclusion."

⁴⁴de Coning, "Complexity Thinking and Adaptive Peacebuilding," 20.

⁴⁵de Coning, "From Peacebuilding to Sustaining Peace."

⁴⁶Autesserre, *The Frontlines of Peace*.

⁴⁷de Coning, "From Peacebuilding to Sustaining Peace."

⁴⁸Rosén and Haldrup, "By Design or by Default."

can break free from its destructive path. Peace operations are deployed to contain violent conflict, to provide security guarantees during periods when the local system is not resilient enough yet to do so on its own, and to nudge a peace process along by offering positive incentives and support to the people and institutions that can sustain peace. They do so by trying to influence the knowledge, attitudes and behaviour of a society away from violent conflict and towards self-sustainable peace.

Peace operations influence local systems by trying to disrupt those that seek to use violence to pursue their interest and by supporting those that wish to strengthen institutions that deter violence and peacefully resolve tensions and conflict. In complex systems terminology, the role of the peace operation is to modulate positive and negative feedback to influence system behaviour to within desired parameters. The peace operation thus functions like an external controlling agent that helps to regulate a system. This does not mean that it is in control of the system, but that it attempts to regulate the system to stay within certain pre-determined parameters, in the same way a thermostat controls the temperature of a building.

Peace operations thus have to manage a very delicate inherent tension, on the one hand they should safeguard, stimulate, facilitate and create the space for societies to develop resilient capacities for self-organization, and on the other hand they should intervene in the system when it crosses certain thresholds. The obvious example is when a peace operation acts to prevent or contain violence but in reality, there are many subtler ways that a peace operation tries to nudge a society away from violent conflict. This may include training individuals, building the capacity of institutions, helping to reform policies and legislation and trying to influence attitudes, for instance by trying to get a society to adopt a social norm against using violence as a legitimate instrument for pursuing ones interest, at home, in the community and in politics.

However, too much external interference will undermine self-organization. From a complexity perspective one can say that every time an external or controlling agent intervenes to solve a perceived problem or to bring the system back within prescribed parameters, they interrupt the internal feedback process and thus deny the local system from responding to its own stimuli. The result is a missed opportunity to contribute to the further development or emergence of self-organization and resilience. Social institutions develop more sophisticated or complex forms of self-organization through trial and error over generations. Too much filtering and cushioning slow down and inhibit these processes and generate weak institutions that are vulnerable to shocks and setbacks. External interventions lead to dependency and need to be employed only as a last resort. There is a thus fine balance between helping to nudge the system in the desired direction and helping so much that you end up creating dependency and undermining self-organization.

External interventions can inhibit, interfere and even disrupt the self-organizing process in a social system, or they can nurture, enable and stimulate self-organization, depending on the choices those leading and managing peace operations make.⁴⁹

Peace operations are primarily held accountable for containing violence. At the same time, a successful peace operation is one that have achieved its mandate and have withdrawn on completion of its mission. The benchmark for success and exit is the extent to which the society is able to sustain peace on its own. Recognizing this dilemma – the elusive search for a balance between, on the one hand the dynamics that drive international interventions to contain violence and stimulate peace, and on the other, the space and time needed for resilient local capacities to sustain peace to emerge – helps us to understand why some international peace operations have failed. They have made the mistake of interfering so much that they end-up undermining, the ability of the society to self-organize.

In the first part of this article we have considered the implications of complexity theory for how we understand societal change and, in that context, have considered how complex social systems can be influenced to achieve self-sustainable peace. In the second part of the article we will consider some of the implications of complexity for how we undertake peace operations.

Adaptive Peace Operations

In this section of the paper we will introduce and explore one specific type of approach, namely Adaptive Peace Operations, that can potentially provide us with a normative and functional approach for navigating this dilemma and the related uncertainties that arise when a peace operation attempts to influence and facilitate societal changes. It is a specific approach to influencing complex social systems where an international peace operation, together with the communities and people affected by the conflict, actively engage in a structured process to sustain peace and resolve conflicts by employing an iterative process of learning and adaptation.⁵⁰

People-Centred Adaptation

In Adaptive Peace Operations, the core activity of a peace operation is one of process facilitation. The aim of a peace operation is to stimulate the processes in a society that will lead to strengthening the resilience of those social institutions that manage internal and external stressors and shocks, and in so

⁴⁹De Weijer, *Resilience: A Trojan Horse for a New Way of Thinking?*

⁵⁰de Coning, "Adaptive Peacebuilding."

doing prevent violent conflict and sustain peace. As established earlier, local self-organization is a pre-requisite for sustainable peace and the societies and communities that are intended to benefit from a peace operation intervention thus need to be fully involved and engaged in the initiative.

The specific arrangements will differ from context to context, but the principle should be that no decisions are taken about a particular peace process without sufficient participation of the affected community or society. Sufficiency here implies that the community should be engaged in such a way that the diversity and variety of their interests, needs, and concerns inform every step of the adaptation cycle. Adaptive Peace Operations can therefore not be free or distinct from the dynamics of politics or power. The process is not technical or abstract. It is a process that engages with all aspects and elements of societal change that is needed for self-sustainable peace to emerge, and it lends itself to a relational approach that seeks to account for how power is distributed through and within relationships.⁵¹

Whilst an international peace operation can influence complex social systems by facilitating and stimulating the processes that enable resilience and inclusiveness to emerge, the prominent role of self-organization in complex system dynamics suggest that it is important the affected societies and communities have the space and agency to drive their own process.⁵² This is why local adaptation processes are ultimately the critical element for inclusive political settlements to become self-sustainable.⁵³

Adaptive Peace Operations thus require a commitment to engage in a structured learning process together with the society or community that has been affected by conflict. This commitment comes at a cost, in terms of investing in the capabilities necessary to enable and facilitate such a collective learning process, in taking the time to engage with communities and other stakeholders, in giving them the space for self-organization to emerge and consolidate, and in making the effort to develop new innovative systems for learning together with communities as the process unfolds.

The Adaptive Process: Variation, Selection and Iteration

Complex systems cope with challenges posed by changes in their environment by co-evolving together with their environment in a never-ending process of adaptation.⁵⁴ This iterative adaptive process utilizes experimentation and feedback to generate knowledge about its environment. This is essentially the way natural selection works in the evolution of complex systems. The two key factors are variation and selection. There needs to be variation, i.e.

⁵¹Day and Hunt, "UN Stabilisation Operations and the Problem of Non-Linear Change."

⁵²Burns, *Systemic Action Research: A Strategy for Whole System Change*.

⁵³de Coning, "Complexity Thinking and Adaptive Peacebuilding."

⁵⁴"Development, Complexity and Evolution."

multiple parallel interventions, and there needs to be a selection process that replicates and adapts effective interventions and discontinues those that do not have the desired effect. The analysis-planning-implementation-evaluation project cycle is already well established in the development and peace operation context. However, these communities of practice are not good at generating sufficient variation. They are also notoriously bad at selection based on effect, and they are especially poor at identifying and abandoning underperforming initiatives.⁵⁵ To remedy these shortcomings Adaptive Peace Operations utilize a structured iterative adaptation methodology to help generate institutional learning.

This adaptive methodology builds on the work of Andrews, Pritchett and Woolcock, who have pioneered the problem-driven iterative adaptation (PDIA) approach as an alternative to the linear causal logic of the log-frame in development planning and evaluation.⁵⁶ This adaptive approach consists of iterative cycles of learning, starting with analysis and assessment. Based on the analysis, multiple possible options for influencing a social system are generated. For instance, a peace operation such as the UN mission in the Democratic Republic of the Congo may choose to undertake several interventions that have more or less the same broad aim, such as supporting the extension of state authority in a given region. These can include, to name a few that was undertaken in this example, building roads and bridges, building or refurbishing police stations, courts and other administrative buildings, training police officers and magistrates and other officials, and supporting their deployments in a variety of ways, including by providing transport, resupply and means of communication.

When the selected options are developed into actual campaigns or programmes, their design must be explicit about the theory of change each will employ, so that their effects can be assessed. A theory of change should be clear about how it intends to contribute to change in the behaviour of the social system it intends to influence, i.e. how a series of activities are anticipated to generate a particular outcome.⁵⁷

A selected number of these intervention options are then implemented and closely monitored, with a view to identifying and processing the feedback generated by the system in response to each intervention. The feedback is then analysed, after which those responsible for the intervention, together with the affected communities and key stakeholders, decide which initiatives to discontinue, which to continue, and, in addition, what adaptations to introduce for those that will be continued. The ineffectual ones, or those that have generated negative effects, need to be abandoned or adapted. Those that appear to

⁵⁵Rosén and Haldrup, "By Design or by Default."

⁵⁶Andrews, Pritchett, and Woolcock, "Building State Capability."

⁵⁷Valters, Cummings, and Nixon, "Putting Learning at the Centre: Adaptive Development Programming in Practice."

have the desired effects should be continued and can be expanded or scaled-up, but in a variety of ways, so that there is a continuous process of experimentation with a range of options, coupled with a continuous process of selection and refinement. It is thus important that this process is repeated in regular relatively short cycles. The traditional annual or multi-year planning cycles are too slow for coping with highly dynamic social change processes, and most peace operations will have to employ adaptive planning and assessment cycles that repeat 3 or 4 times a year.

In practice, the degree to which this method is explicitly employed may vary, but the basic tenants of the adaptive approach are usually already at work in most peace operations contexts. For instance, the UN peace operations in the Central African Republic and South Sudan, together with local communities, employ a range of strategies to pursue local peace agreements, improve local security, disrupt local conflict dynamics and encourage local economic activity. The people involved are continuously learning from their experiences and are adapting their approaches based on their assessment of which initiatives are more or less effective. Adaptive Peace Operations in these contexts do not necessarily imply following a specific methodological approach like PDIA. What they do have in common, however, is a pattern of practices that rely on inductive, iterative and adaptive approaches to cope with complexity and uncertainty.⁵⁸ Some form of inductive adaptation is already taking place in most peace operations, but what Adaptive Peace Operations offers is a clear approach or methodological process that can help to enhance and institutionalize the rigour and effects of the adaptations that are already taking place in some missions, or stimulate the uptake of adaptive thinking in others where this type of approach to planning and assessment is new. In the next section we will discuss an example of how an Adaptive Peace Operations approach has been institutionalized in the peace operations context.

Anticipate Entropy and Side-effects

It is important to recognize that those interventions that appear to be effective today, will not continue to be so indefinitely. Even successful programmes need to be monitored for signals that may indicate that an intervention is no longer having the desired effect or is starting to generate negative side effects. Jervis observes that we often intuitively expect linear relationships.⁵⁹ For example, if foreign aid increases economic growth, we tend to expect that more aid should produce greater growth. However, complex systems display non-linear behaviour that cannot be understood by extrapolating

⁵⁸de Coning, "Complexity Thinking and Adaptive Peacebuilding."

⁵⁹Jervis, "Complexity and the Analysis of Political and Social Life."

from the units or their relations, and many of the effects generated are unintended. Non-linearity, in this context, thus refers to behaviours in which the relationships between variables in a complex social system are dynamic and disproportionate.⁶⁰ It is therefore important to not only monitor for intended results, but also for unintended consequences, and be ready to take steps to try to deal with the perverse effects that may come about due to an intervention.⁶¹

Assessing Effects and Scaling-up

In Adaptive Peace Operations, assessing progress, effectiveness or impact is not an afterthought, but is a critically important part of the adaptive process. The role of evaluation or assessment is to generate evidenced-based feedback on the effects generated by the mission's actions, so that the commanders, managers and leadership can make ongoing course-corrections to their planned activities. Most peace operations report regularly but this kind of monitoring is typically based on political analysis, not on some form of evaluation methodology. At critical junctures some missions have been externally reviewed, for instance to inform mandate renewal processes. The Adaptive Peace Operations approach integrates monitoring and assessment into the daily rhythm and operational cycle of a mission, so that both ongoing planning and periodic strategic reviews are informed by an ongoing process of generating evidence of the effects of the mission as the result of an iterative learning process. The process generates the information and the structure necessary to make operational and strategic leadership more adaptive.

This aspect of the adaptive approach also addresses the concern that a focus on resilience may decrease accountability.⁶² Some worry that the resilience approach favours a much more flexible approach towards results, and that this may imply that it would be much more difficult to assess the success/failure of international operations or projects. Adaptive Peace Operations recognize that peace operations have mandates and strategic objectives, and the approach favours a clear articulation of the theory of change behind each intervention. The adaptive approach also relies heavily on monitoring, feedback, evaluation and organizational learning. The net result is a strengthening of accountability under the Adaptive Peace Operations approach. The dimension will be further discussed in the next section when the article considers the Comprehensive Performance Assessment System (CPAS) for UN peacekeeping operations.

Adaptive Peace Operations are scalable at all levels; the same basic method can be applied to individual programmes, to projects, to regional or national-

⁶⁰Kiehl, "Chaos Theory and Disaster Response Management."

⁶¹Aoi, de Coning, and Thakur, *Unintended Consequences of Peacekeeping Operations*, 199.

⁶²Chandler, *Resilience: The Governance of Complexity*.

level campaigns, or multi-year strategic frameworks or compacts. From a complexity perspective, the feedback generated by various interventions at different levels should be shared and modulated as widely as possible throughout the system, so that as broad a spectrum of initiatives as possible can self-adjust and co-evolve based on the information generated in the process.

Six Principles of the Adaptive Peace Operations

The adaptive approach for coping with complexity in peace operations can be summarized in the following six principles. These principles are not meant to be exhaustive, but they highlight the critical elements of the approach that taken together constitute the Adaptive Peace Operations approach.

- First, the actions taken to influence the sustainability of a specific peace process have to be context and time-specific, and they have to be emergent from a process that engages the societies themselves.
- Second, the Adaptive Peace Operations approach is a goal-orientated or problem-solving approach, so it is important to identify, together with the society in question, what the project should aim to achieve.
- Third, Adaptive Peace Operations follow a specific methodology – the adaptive approach – that is a participatory process that facilitates the emergence of a goal-orientated outcome.
- Fourth, one critical dimension of the Adaptive Peace Operations approach is variety; as the outcome is uncertain, one must experiment with a variety of options across a spectrum of probabilities.
- Fifth, another critical dimension is selection; one has to pay close attention to feedback to determine which options have a better effect. Adaptive Peace Operations require an active participatory decision-making process that abandons those options that perform poorly or have negative side-effects, whilst those that show more promise can be further adapted to introduce more variety or can be scaled-up to have greater impact. At a more strategic level this implies reviewing assumptions and adapting strategic planning.
- Six, the Adaptive Peace Operations approach is an iterative process. It is repeated over and over because in a highly complex context, our assessments are only relevant for a relatively short window before new dynamics come into play.

The Comprehensive Performance Assessment System (CPAS)

One example or case study that show how complexity and an adaptive approach can be incorporated into peace operations is the Comprehensive

Performance Assessment System (CPAS) for peacekeeping operations that was launched in 2018, in order to give UN peace operations a tool with which to measure their impact.⁶³ CPAS is a context- and mission-specific planning, monitoring and evaluation system. It enables the mission leadership team to make decisions aimed at improving performance by maintaining or scaling up those activities that have a meaningful impact and adapting or ending those that do not.

CPAS assess mission performance by analysing its effect on the knowledge, attitudes and behaviour of the people and institutions the mission needs to influence in order to prevent violent conflict and sustain peace. It does so by analysing the relevance, extent and duration of the mission's actions on selected outcomes, identified during the planning process. CPAS provides the leadership team with evidence of the impact the mission is having, and analysis of where adjustments may be necessary to improve performance. This enables the leadership team to optimize the allocation of resources and to direct the mission's focus in ways that can maximize performance and continuously improve mandate implementation.

The CPAS system is an iterative adaptive cycle that 'starts' with a planning process and that 'ends' with adjustments made to future plans and operations, based on an assessment of performance, and then the next cycle starts again. In large multidimensional peace operations the system will generate quarterly performance assessments in order to enable these operations to adapt with more agility to their fast-changing circumstances.

The concept, methodology and design approach of CPAS represents a significant shift in peace operation planning and performance assessment. It moves away from a deductive top-down linear causal planning logic and embraces an inductive complexity informed iterative adaptive learning approach to planning and performance assessment. CPAS is aimed at assessing the impact of the overall effect of the peace operation, as opposed to evaluating the delivery of outputs, and puts in place the methodology and tools to regularly measure progress and adapt to changes in context.

The CPAS has now been introduced to almost all UN peacekeeping operations in 2018 and 2019. It will take a number of iterations before the people involved and the mission leadership becomes fully conversed in the process and with interpreting and analysing the data that it generates for mission leadership. However, early indications are that the people and teams involved report heightened awareness of why the peace operation is undertaking certain actions and what it intends to achieve; greater awareness across teams of how synergies and collective effort contribute (or not) towards shared goals, and much more nuanced planning as the people engaged

⁶³de Coning and Brusset, "Towards a Comprehensive Results-Based Reporting and Performance Assessment Framework."

become more aware of the causal assumption that earlier planning relied on, and the gaps created between actual outputs and the ambitious goals these limited outputs were meant to achieve.

The introduction of the CPAS system thus shows, even at this early stage, that it is possible for a large bureaucracy – involving approximately 100,000 people from 121 nations in 13 mission and several regional service centres and the UN Secretariat in New York⁶⁴ – to adopt and utilize and Adaptive Peace Operations approach, and that this type of iterative-adaptive methodology can be used to plan and assess the performance of a wide variety of missions that operate in very complex and challenging environments. The COVID-19 pandemic is an additional stressor that will significantly affect all peace operations, and it will be interesting to see to what degree the CPAS system helps these missions to adapt to the new challenges this pandemic will introduce.

Conclusion

This paper has tried to contribute to a number of important debates in the peace operations literature, including questions on how intrusive peace operations should be, how to measure peace, and what the appropriate balance should be between local ownership and international obligations and mandates. The paper has also tried to show how complexity theory can be utilized in the peace operations context, both as an analytical tool and as a theoretical foundation for policy advice. The paper has introduced a new approach, namely Adaptive Peace Operations, and argued that it can help peace operations cope with complexity and uncertainty, as well as assist with navigating the local self-organization vs. international interference dilemma.

Complexity theory helps us understand how social systems lapse into violent conflict, how they can prevent or recover from conflict, and what can be done to strengthen their resilience. A core insight from complexity for peace operations is that for a peace process to become self-sustainable, resilient social institutions need to emerge from within, i.e. from the local culture, history and socio-economic context. External actors, like an international peace operation, can assist and facilitate this process, but if they interfere too much, they will undermine the self-organizing processes necessary to sustain resilient social institutions. A complexity informed approach to peace operations suggests that those engaged in international conflict resolution and peace operations should focus their effort on safeguarding, stimulating, facilitating and creating the space for societies to develop resilient capacities for self-organization.

⁶⁴Data as of 31 January 2020, see <https://peacekeeping.un.org/en/data>.

Adaptive Peace Operations is an approach that can help to navigate this dilemma. It is an approach where peacekeepers, together with the communities and people affected by the conflict, actively engage in a structured process to sustain peace by employing an iterative process of learning and adaptation. The Adaptive Peace Operations approach is aimed at supporting societies to develop the resilience and robustness they need to cope with and adapt to change, by helping them to develop greater levels of complexity in their social institutions.

Adaptive Peace Operations implies that international actors engaged in conflict resolution and peace operations have to take responsibility – ethically – for their choices and actions. Taking responsibility means that peacekeepers and peacebuilders need to think through the ethical implications of both their macro theories for resolving conflict and sustaining peace and the specific choices and actions they make in any given context. They have to be conscious of the knowledge claims and assumptions that inform the choices they make, and the potential consequences – intended and unintended – of their actions. The primary directive that should guide all conflict resolution initiatives and peace operations is, above all, to do no harm.

Adaptive Peace Operations is thus a conscious normative and functional approach to peace operations that is aimed at navigating the complexity inherent in trying to nudge societal change processes towards sustaining peace, without interfering so much that it ends up causing harm by inadvertently disrupting the very feedback loops critical for self-organization to emerge and to be sustained.

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