

Peacebuilding in Complex Social Systems

Serge Loode*

Abstract

This article adds to the critical literature on peacebuilding and development by applying a complex systems science perspective to the discussion about success or failure of peacebuilding interventions. It describes the communities that peacebuilders work in as complex social systems and focuses on the interdependence of actors and the systemic patterns that their interactions create. From this background the article argues that peacebuilding and development are non-linear processes that cannot be planned with certainty and that successful peacebuilding ought to be an evolutionary process, which focuses on building and transforming relationships to rebuild multidimensionality in protracted-conflict situations. One way to do this is through intergroup dialogue processes, which apply the abstract principles of complex systems science in small-group interactions and assist in transforming the conflict landscape.

Keywords: Peacebuilding, complex social systems, non-linear processes, evolutionary, social emergence, dialogue, networks.

Introduction¹

Over the past 20 years the number of peacebuilding interventions, often led by the United Nations (UN), has increased significantly.² These peacebuilding missions aim to establish the rule of law, support democratic elections and help to design and implement economic and political reforms.³ With the increase in peacebuilding activities, more and more studies and

* Serge Loode is the Program Director of the Mediation and Conflict Resolution Program at the University of Queensland, Australia. He practices, teaches and researches mediation, dialogue and multi-party facilitation focusing on building relationships across difference, managing uncertainty, and understanding complexity.

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² Oliver Ramsbotham, Tom Woodhouse, and Hugh Miall, *Contemporary Conflict Resolution : The Prevention, Management and Transformation of Deadly Conflicts*, 2nd ed. (Cambridge, UK ; Malden, MA: Polity, 2005), 222.

³ Peacebuilding in this context refers to an attempt, after a peace agreement or ceasefire has been negotiated or imposed, to address the sources of current hostility and build local capacities for conflict resolution. See also Michael W. Doyle and Nicholas Sambanis, "International Peacebuilding: A Theoretical and Quantitative Analysis," *American Political Science Review* 94, no. 4 (2000).

reflections on the effectiveness and success or failure of peacebuilding operations have emerged. When assessed with regards to the goal of preventing future large-scale violence recent peacebuilding operations have not fared particularly well.⁴

The reasons why peacebuilding operations fail are manifold and a great number of academic and practitioner literatures have tried to identify them. Among the central factors that have been identified are the lack of local ownership and the disregard for local practice.⁵ Sending argues that this is due to the privilege of universal knowledge over local knowledge and the assumption that international legitimacy outweighs local legitimacy.⁶

This article provides a different perspective to this argument. It suggests that the prevailing epistemology of peacebuilding and conflict resolution incorrectly assumes that societies can be understood by using linear and reductionist methods of analysis. In contrast to this epistemology it describes the local, national and regional communities that peacebuilders intervene in as 'complex social systems'. Complex systems science has only recently made inroads into the fields of peace studies and conflict resolution,⁷ and its application to the field is still in its infancy.⁸ Lederach identified the complexity of peacebuilding initiatives as "multiple actors pursuing a multiplicity of actions and initiatives at numerous levels of social relationships in an interdependent setting at the same time. Complexity emerges from multiplicity, interdependency and simultaneity".⁹

⁴ Ole Jacob Sending, "Why Peacebuilders Fail to Secure Ownership and Be Sensitive to Context," in *NUPI Working Paper* (Oslo: Norwegian Institute of International Affairs, 2009), Doyle and Sambanis, "International Peacebuilding: A Theoretical and Quantitative Analysis."

⁵ Oliver Richmond, "Liberal Peacebuilding in Timor Leste: The Emperor's New Clothes?," *International Peacekeeping* 15, no. 2 (2008), Oliver P. Richmond, "Constructing the Liberal Peace from Above," in *The Transformation of Peace* (Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2005), Roland Paris, "Peacebuilding and the Limits of Liberal Internationalism," *International Security* 22, no. 2 (1997), Astrid Suhrke, "Reconstruction as Modernisation: The 'Post-Conflict' Project in Afghanistan," *Third World Quarterly* 28, no. 7 (2007).

⁶ Sending, "Why Peacebuilders Fail to Secure Ownership and Be Sensitive to Context," 4.

⁷ Peter T. Coleman, "Paradigmatic Framing of Protracted, Intractable Conflict: Toward the Development of a Meta-Framework-li," *Journal of Peace Psychology* 10, no. 3 (2004), ———, "Conflict, Complexity and Change: A Meta-Framework for Addressing Protracted, Intractable Conflicts - lii," *Journal of Peace Psychology* 12, no. 4 (2006), Peter T. Coleman et al., "Intractable Conflict as an Attractor: A Dynamical Systems Approach to Conflict Escalation and Intractability," *American Behavioral Scientist* 50, no. 11 (2007), Robert Ricigliano, "Networks of Effective Action: Implementing an Integrated Approach to Peacebuilding," *Security Dialogue* 34, no. 4 (2003), Morgan James Brigg, *The New Politics of Conflict Resolution : Responding to Difference*, Rethinking Peace and Conflict Studies. (Basingstoke [England] ; New York: Palgrave Macmillan, 2008).

⁸ For an overview of how complex systems science can be applied in peacebuilding, conflict resolution and development see the following papers: Diane Hendrick, "Complexity Theory and Conflict Transformation: An Exploration of Potential and Implications," in *Centre for Conflict Resolution Working Paper* (Bradford: University of Bradford, 2009), Ben Ramalingam et al., "Exploring the Sciences of Complexity: Ideas and Implications for Development and Humanitarian Efforts," in *Working Paper* (London: Overseas Development Institute, 2008).

⁹ John Paul Lederach, *The Moral Imagination : The Art and Soul of Building Peace* (Oxford; New York: Oxford University Press, 2005), 33.

By viewing communities as complex social systems it becomes apparent that many of the problems that international peacebuilding operations grapple with are caused by a lack of understanding of the systemic relationships within the societies in the host countries and the intervening countries. Complex systems science allows for the development of a theory of change as the basis for future peacebuilding operations which emphasises relationship building with host communities and supports the argument that peacebuilders need to value local knowledge and local processes and need to engage with them in an egalitarian way if peacebuilding will have a chance of generating sustainable outcomes of reduced violence. This paper does not aim to provide a definitive guideline on how to apply complex systems approaches in peacebuilding, however it aims to spark discussion and to highlight some possible applications.

Complex Systems Thinking

Complex systems are phenomena which arise both in the natural, as well as the social world.¹⁰ Examples from nature include ant colonies, the human brain, bird flocks, and the global climate system. Complex social systems can be found in markets, families and villages. What these systems have in common is that they cannot be understood and manipulated by reducing them to their individual components.¹¹ An example for this is the ecosystem in a common garden. If an insect species is eliminated, the vacated niche will often be filled by another species and the ecosystem will continue to function although an agent was removed from the system. Compare this to a merely complicated system, such as a car or an airplane. In complicated systems the various elements that make up the system maintain a large degree of independence from each other. Removing one element leads to either system failure (such as when the car's radiator is removed and the engine overheats), or functioning with reduced effectiveness (such as when the windscreen wiper does not work anymore). At no stage is another part going to take over the function of the missing part to keep the system working close to its previous levels.¹²

Complex systems science challenges the notion that by understanding the behaviour of each component part of a system the system can be understood as a whole. "One *and* one may well make two, but to really understand two we must know both about the nature of the 'one' and the meaning of 'and.'"¹³ In summary complex systems approaches discourage the

¹⁰ John H. Miller and Scott E. Page, *Complex Adaptive Systems : An Introduction to Computational Models of Social Life / John H. Miller and Scott E. Page*, Princeton Studies in Complexity. (Princeton, New Jersey: Princeton University Press, 2007), 9.

¹¹ Hendrick, "Complexity Theory and Conflict Transformation: An Exploration of Potential and Implications," 5.

¹² Miller and Page, *Complex Adaptive Systems : An Introduction to Computational Models of Social Life / John H. Miller and Scott E. Page*, 9.

¹³ *Ibid.*, 3.

overemphasis of either the individual or the environment and allow for the analysis of social actions within and across systems with particular emphasis on the interconnections.¹⁴

Communities as Complex Social Systems

Although peacebuilders constantly work with or within communities, there exist few definitions of the term community in current peacebuilding literature. A common framework for thinking about the target groups of peacebuilders is Lederach's integrated framework for peacebuilding which differentiates between top leadership, middle-range leadership and grassroots leadership.¹⁵ While Lederach acknowledges vertical and horizontal relationships between people in all three groups and argues that post-conflict societies are made up of nested systems and sub-systems, he does not describe how patterns of violence or peace are created from the complex interactions of people. Complex systems science offers an explanation for this phenomenon in the form of 'social emergence'. Novel and coherent structures, patterns and properties arise out of the process of self-organisation in complex systems.¹⁶ The interactions between people in the system can create peaceful patterns of interaction or violent patterns of interaction.

Alison Gilchrist, a British community development scholar and practitioner, emphasises the complexity of community environments characterised by interpersonal connections, fluid networks and small-scale, self-help groups and organisations.¹⁷ Community becomes an experience or capacity that emerges as a result of the interactions within a complex web of overlapping networks.¹⁸ According to Gilchrist communities exist as social systems 'at the edge of chaos' in which people's sense of community, their social identity, emerges from the unpredictable dynamics of mutual influence and interaction.

American sociologist Keith Sawyer has further defined the characteristics of such complex social systems. As such, communities are made up of many components that interact in densely connected networks, global system functions cannot be localised to any one subset of individuals or groups, but rather are distributed throughout the entire system, the overall system cannot be decomposed into sub-systems and these into smaller sub-subsystems in any

¹⁴ Karen Healy, *Social Work Theories in Context : Creating Frameworks for Practice* (Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2005), 146, Ray Ison, "Systems Thinking and Practice for Action Research," in *The Sage Handbook of Action Research : Participative Inquiry and Practice*, ed. Peter Reason and Hilary Bradbury (Los Angeles ; London: SAGE, 2008).

¹⁵ John Paul Lederach, *Building Peace : Sustainable Reconciliation in Divided Societies* (Washington, D.C.: United States Institute of Peace Press, 1997), 39.

¹⁶ Jeffrey Goldstein, "Emergence as a Construct: History and Issues," *Emergence* 1, no. 1 (1999): 49.

¹⁷ Alison Gilchrist, *The Well-Connected Community : A Networking Approach to Community Development* (Bristol: Policy, 2004), 119.

¹⁸ *Ibid.*, 90.

meaningful fashion, and the components (i.e. individuals) interact using a complex and sophisticated language.¹⁹

Fritjof Capra argues that complex social systems are never fully separate from other complex social systems, often they are nested within each other. Capra refers to the network of communication which recursively produces and reproduces itself in the social system as 'autopoietic'. Multiple feedback loops of communications produce a shared system of beliefs, explanations and values among a group of people, which gives them identities and creates flexible boundaries delineated by expectation and self-identification.²⁰

Peacebuilding in Complex Social Systems

Viewing the communities that peacebuilders enter and which they aim to change towards violence reduction and peace as complex social systems at the edge of chaos has implications for the objectives and processes of peacebuilding. The following section will highlight some of these implications, which are particularly prevalent in peacebuilding situations.

Interactions and Effects Are Non-Linear

One of the observations about complex systems is that system effects are non-linear and unpredictable, because they emerge from the large numbers of interactions in the network of agents. Therefore it is impossible to predict results in political systems from separate actions.²¹ Contemporary peacebuilding practice, on the other hand, commonly uses a framework of conflict and needs assessment, intervention planning, intervention implementation and monitoring, and finally evaluation.²² In addition to this, broad programme objectives are often decided by officers manning the country desks of donor agencies who may have little experience with, or direct connection to the communities in the host countries. The result is the ongoing disconnect between international objectives and local social reality that is so often criticised by scholars and practitioners worldwide.

Rihani suggests that control of development and peacebuilding in complex systems is limited to the observation of outputs and the encouragement for the elements to interact in a way that moves the system towards reduced violence and improved living conditions.²³

¹⁹ R. Keith Sawyer, *Social Emergence : Societies as Complex Systems* (Cambridge ; New York: Cambridge University Press, 2005), 5.

²⁰ Fritjof Capra, *The Hidden Connections : Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability*, 1st ed. (New York: Doubleday, 2002), 83.

²¹ Robert Jervis, *System Effects : Complexity in Political and Social Life* (Princeton, N.J.: Princeton University Press, 1997).

²² Luc Reyhler and Thania Paffenholz, *Peacebuilding : A Field Guide* (Boulder, Colo.: Lynne Rienner Publishers in association with the Field Diplomacy Initiative, 2001), 9-10.

²³ Samir Rihani, *Complex Systems Theory and Development Practice : Understanding Non-Linear Realities* (London ; New York: Zed Books, 2002), 9.

Management of such systems through intervention is a reiterative process that relies on slow and uncertain evolution. Command-and-control methods, detailed forecasts and plans are effective only for linear systems and fail to achieve desired outcomes in complex environments that involve vast numbers of interactions where the results cannot be traced to specific causes.²⁴ In practice this means that even sophisticated peace and conflict impact assessments cannot guarantee that particular programs and projects will improve the situation in the host country. Peacebuilders are well advised not to rely too much on logical frameworks and project plans and to be able to change or abort projects.²⁵ It also follows that short-term projects may be of little use and that instead funding arrangements should be made for long-term assistance that is constantly adapted and changed according to local needs. Just as the eradication of a specific type of insect in the garden does not save the plants from being eaten, because another insect can take over the function, eradicating a certain root cause for conflict and violence does not necessarily change the community to a more peaceful state.

Hierarchical Structures Are Ill-suited to Perform Complex Tasks

A complex environment is an environment in which actors have to make the right choice among a large number of possible wrong choices.²⁶ This makes decision-making in a complex environment very difficult. One way to perform better in these environments is to aggregate the knowledge and skills of many people in organisations. Organisations can often make better choices than individuals and can implement those choices on a far larger scale than individuals. However the complexity of decision-making in an organisation directly depends on the organisational structure. Bar-Yam illustrates this concept by referring to the example of the manufacturing factory as it was envisioned by Henry Ford:²⁷ Ford started by simplifying what each worker had to do. Each person performed a simple task over and over again, with different people performing different tasks. These tasks were coordinated to produce a single product, the Ford Model-T automobile. While the product is very complicated, it is not complex. Because the scale of action is large, the factory is able to produce en masse. The hierarchy that controls this process can depend on one individual at the top of the company communicating with and giving instructions to a small number of upper level managers, which in turn control and communicate with a larger number of lower level managers, all the way down to the largest number of factory workers on the work floor. Decisions in this system are ultimately made at the top of this hierarchy and communicated down. This means that the complexity of decision-making in the organisation is ultimately limited to the complexity of the individual at the top.²⁸ In reality organisations are rarely controlled by one single individual. A board of directors, for

²⁴ Ibid.

²⁵ Hendrick, "Complexity Theory and Conflict Transformation: An Exploration of Potential and Implications," 59.

²⁶ Yaneer Bar-Yam, *Making Things Work : Solving Complex Problems in a Complex World* (Cambridge, MA: NECSI, Knowledge Press, 2004), 67.

²⁷ Ibid., 64.

²⁸ Ibid., 66.

example, is one way to increase the potential complexity of decision-making. Using hybrid structures of hierarchies and networks is another one.

However, traditional hierarchies are often unable to make the right decisions in complex situations since the decision-making power is effectively delegated to an individual or a small group at the top. To a certain extent this is the case with most international peacebuilding institutions, from the UN Peacebuilding Commission to major donors like the United States Agency for International Development (USAID) or the Australian Agency for International Development (AusAID). While there may be a large number of people involved in a peacebuilding intervention on the ground, the decision about which project or programme receives funding and which does not is often made by a select few people in the higher echelons of a donor organisation. The more expensive the project the higher is the level of decision-makers (and therefore their number is smaller and they are likely to be further removed from the local project or program conditions). The question arises whether these people are really the best decision-makers and whether even a group of experienced and intelligent country desk officers is able to make an ultimately complex decision. An organisational form that is better suited to make decisions in the complex environment of peacebuilding would be a decentralised network structure.²⁹ In decentralised networks communication and decision-making are managed by a large number of individuals who are connected through personal relationships. Because the number of individuals is larger they can deal with more complex decisions. Organisations that rely on networks and are built using decentralised structures are often better able to respond to the complexities on the ground. Problems do not need to be communicated all the way to the top, because decisions can be made at the level, where the problem arises, by people, who are close to and familiar with the situation. What organisations with strong hierarchical structures could do to support this is to provide more responsibility and access to resources to the people who are actually working on the project or programme. One way to implement this is through what Ricigliano calls the building of 'networks of effective action' for peacebuilding.³⁰

Complex Social Systems Cannot be Built According to Blueprints

Often development assistance and peacebuilding interventions succumb to what is called 'the planning trap'. An example of this is the World Bank's Comprehensive Development Framework (CFD), but it can also be applied to the use of logical frameworks in peacebuilding.³¹ Since the host countries have often weak infrastructures, social support, economic activity and governance institutions (at least from the perspective of the Western 'developed' nations which often fail to recognise resilient customary social structures which take up these functions), the economic matrix of the CFD or logframe amounts to planning the structure of a functioning society.³² However it is not possible to plan a functioning society since we do not know exactly

²⁹ Ricigliano, "Networks of Effective Action: Implementing an Integrated Approach to Peacebuilding," 456.

³⁰ Ibid.

³¹ Bar-Yam, *Making Things Work : Solving Complex Problems in a Complex World*, 206.

³² Ibid.

how such a society works. There is an abundance of social problems in most Western countries, such as crime, corruption and lack of social support for vulnerable groups to name only a few. Interveners cannot even plan functioning societies in their own countries, so how can they assume that this is possible in post-conflict societies?³³ When we look at the development of societies and institutions in Western 'developed' nations, then we look at the results of hundreds of years of evolution in governance, economics and social relationships. Complex social systems cannot be built or planned, they develop through social evolution.

Because social systems cannot be planned and predicted and because each environment and case is unique, it is an erroneous belief to expect that the replication of Western institutions in post-conflict societies will assist in moving these societies to less violence-prone ways of interaction. But that is exactly what a large number of peacebuilding and development initiatives do.

Violent Systems Can Be Stable and Resilient Systems

Current discourse often refers to 'fragile states' as governance systems with weak institutions in which the monopoly of violence is not held by formal state institutions, in which the rule of law is under threat, and which are unable to provide basic social services and protection to their citizens.³⁴ In a more general sense, a lack of social order prevails (again as viewed from a Western perspective). These so-called fragile states are then perceived as providing breeding grounds for transnational terrorism, weapons proliferation and organised crime and hence state fragility also affects neighbouring states and the international community at large.³⁵ This view of fragile states as dysfunctional social systems has caused the international community to focus their attention for peacebuilding and development projects on improving effectiveness, capability and legitimacy of (formal) state institutions, in particular the law and order institutions. Policy-making in peacebuilding and development often focuses on developing functioning states, capable of protecting citizens, and delivering a range of social and educational services, which are meant to create legitimacy and citizen obedience to power and authority.³⁶

This concept of state fragility does not sit well with recent research into the causes and dynamics of protracted social conflict situations. Coleman identified more than 50 variables in the literature, which are associated with protracted social conflict.³⁷ Weak state institutions and lack of social services are only some of the factors identified. There are many others. A paradox that can be identified in some protracted conflict situations is an essential stability despite

³³ Ibid.

³⁴ Kevin Clements, "Internal Dynamics and External Factors," *Peace Review* 21, no. 1 (2009): 1.

³⁵ Volker Boege, Anne Brown, and Kevin Clements, "Hybrid Political Orders, Not Fragile States," *Peace Review* 21, no. 1 (2009): 153, Stephen D. Krasner and Carlos Pascual, "Addressing State Failure," *Foreign Affairs* 84, no. 4 (2005).

³⁶ Clements, "Internal Dynamics and External Factors," 1.

³⁷ Peter T. Coleman, "Characteristics of Protracted, Intractable Conflict: Toward the Development of a Meta-Framework-I," *Journal of Peace Psychology* 9, no. 1 (2003).

tremendous volatility and change. An example for this is the conflict in the Middle East, which is by all accounts protracted and intransigent, and which has shown a remarkable resilience despite the myriad efforts by the international community to progress a roadmap for peace.³⁸ Conflict progresses towards intractability as the elements relevant to the conflict self-organise into a structure and the elements become connected by positive feedback loops. Positive feedback loops in complex systems bind together elements that are necessary for action initiation and maintenance. They are normally balanced by negative feedback loops, which dampen system dynamics and constrain actions by other elements that are linked.³⁹ A balance is necessary for effective self-regulation and social regulation. Examples of negative feedback loops are mutually hurting stalemates or the recognition of conflicting parties that they have inflicted serious hurt or damage to others. These situations provide limits for conflict escalation and dampen the action initiation of further violent acts.⁴⁰ Examples of positive, conflict-reinforcing feedback loops are retaliatory strikes or dehumanising propaganda. If the positive feedback loops promote conflict and violence and there are not enough negative feedback loops that can counter this system effect, then violent conflict can become a stable self-reinforcing state of the system and the system loses its multidimensionality.⁴¹ The state of destructive conflict then represents what Coleman et al. call a 'strong attractor'. Removing one or more causal elements of the conflict as part of peacebuilding initiatives will likely not result in a conflict de-escalation because the remaining elements continue to fuel the conflict.

Towards an Evolutionary Approach to Peacebuilding

Although one might be tempted to argue that because of its essentially non-linear nature peacebuilding is condemned to failure when viewed from a complex systems perspective this does not have to be the case. Complex systems science itself provides a number of perspectives on how complex social systems can be changed towards reduced violence and improved social cohesion.⁴² Many of these perspectives explain successful interventions, such as third party mediation, problem-solving workshops and dialogue processes. Changing system dynamics involves studying the system including the nature of the linkages and feedback loops. Peacebuilding interventions can then aim to reduce positive conflict-enhancing feedback loops and build or improve negative conflict-decreasing feedback loops. This can restore the multidimensionality and balance of the system.⁴³ Interventions can either be aimed at moving

³⁸ Coleman et al., "Intractable Conflict as an Attractor: A Dynamical Systems Approach to Conflict Escalation and Intractability," 1455.

³⁹ Ibid., 63, Ramalingam et al., "Exploring the Sciences of Complexity: Ideas and Implications for Development and Humanitarian Efforts," 15.

⁴⁰ Coleman et al., "Intractable Conflict as an Attractor: A Dynamical Systems Approach to Conflict Escalation and Intractability," 1462.

⁴¹ Ibid., 1463-65.

⁴² Ibid., 1468.

⁴³ Ibid.

the system to a different (more peaceful) attractor or at changing the attractor landscape itself. This change is gradual and may be hard to observe in the short term. While peacebuilding or conflict resolution measures may seem to be ineffective, they may help to strengthen negative feedback loops over time and move the system towards a more peaceful attractor.⁴⁴ Coleman recommends three broad strategies to deal with complex and intractable conflict situations.⁴⁵ Firstly, peacebuilders need to complexify seemingly simple situations to gain a better understanding of the attractor landscape and to identify networks of peace already in existence. Secondly, violence promoting attractors should be decoupled and peace promoting attractors should be strengthened. Focusing on emotions and relationships is an important part of this approach. Thirdly, peacebuilders need to recognise that it can take a long time to change the attractor landscape and that every system intervention can also have unforeseen or negative effects. Change processes need to be multidimensional and need to be constantly reviewed and adapted to have effect in a dynamic and changing environment.

Another perspective on how systemic changes can be initiated can be drawn by way of an analogy to what Bar-Yam calls 'enlightened evolutionary engineering' in complex socio-technological systems.⁴⁶ Evolutionary engineering involves an agreement to cooperate and to compete at different levels of organisation. At the local level different teams of individuals initiate a number of projects to improve the system. Based on the existing social relationships and local capacities for conflict resolution, governance and provision of social services, these teams aim to improve the local situation in their part of the system. To a certain extent these projects will possibly even compete with each other. The local projects are connected through a network of individuals who can share experiences and compare results. In that way, successful local processes can be implemented in other communities and adapted to the local situation in these parts. Interventions can be used to build small communities of peace with increased social cohesion and multidimensional resilience against the conflict-promoting structures around the community. By strengthening communication and networks with other communities the peace-promoting factors may spread and help in forming other 'peaceful communities' in other parts of the larger society. Thereby the system as a whole can evolve to a less violent state. Examples for this practice are zones of peace in Colombia and other Central and South American countries.⁴⁷ Instead of scaling up projects and developing national or regional programs systemic peacebuilders can support initiatives at the local level and, if successful, encourage the sharing of experiences with other local groups to build networks across the system.

The increased attention on relationships between the elements or agents of a system is perhaps the greatest contribution that complex systems science can make to peacebuilding and conflict resolution. It is not so much the issues, like root causes and social and economic

⁴⁴ Ibid., 1469.

⁴⁵ Peter T. Coleman, *The Five Percent: Finding Solutions to Seemingly Impossible Conflicts* (New York: PublicAffairs, 2011). Chapter 6.

⁴⁶ Bar-Yam, *Making Things Work : Solving Complex Problems in a Complex World*, 229-31.

⁴⁷ Lederach, *The Moral Imagination : The Art and Soul of Building Peace*, 16.

deprivation, that need to be the focus of interventions, but rather the relationships between people in the groups and communities of the host countries as well as the relationships between the interveners and the host societies. Brigg argues for the recognition of 'networked relationality' in conflict resolution. This concept combines the insights of emergence phenomena in networks with the idea of becoming-other as referred to in the dialogue literature⁴⁸ to constructively engage across difference. The idea of networks emphasises relationships and their mutual interdependencies instead of individuals and institutions alone.⁴⁹ The nodes in a network can only function because of their relationships with other nodes. Changing the quality of feedback between nodes to reduce positive and increase negative feedback in complex social systems can take the form of changing interpersonal interaction. The idea of becoming-other refers to "encounter with difference wherein selves unfold to the world and difference in ways that lead them away from their socially sanctioned and familiar selves".⁵⁰ While Brigg refers to experiences of interacting with forces beyond usual or normal boundaries of the sovereign self, the concept can also be applied to an extension of self through experiencing others in intergroup dialogue processes. Where individuals, through the sharing of story, open themselves and let the other in, while at the same time sharing some of their inner selves with other dialogue participants, this 'becoming-other' can occur. At this level of interpersonal interaction the emergence of new social phenomena is possible.

Strengthening Relationships through Intergroup Dialogue

While the idea of dialogue processes in conflict resolution and peacebuilding is not new the use of dialogue to encourage emergence in complex systems provides a different context for this practice. It also links directly to Coleman's discovery of the importance of emotion in protracted conflict situations.⁵¹

Banathy and Jenlink define dialogue as a "culturally and historically specific way of social discourse accomplished through the use of language and verbal transactions." It builds on principles of community, mutuality and authenticity and aims to establish an egalitarian relationship.⁵² The root of the word dialogue itself stems from the Greek word 'dialogos'. This refers to a penetration of the word or the meaning of the word ('logos') through the participants. Bohm envisions a "streaming of meaning flowing among and through us and between us".⁵³ It is collective communication that allows for the sharing of thought, can transform existing beliefs

⁴⁸ David. Bohm, *On Dialogue*, Routledge Classics (New York: Routledge, 2004), Martin Buber, *Between Man and Man* (New York: Collier Books/Macmillan Publishing Company, 1985).

⁴⁹ Brigg, *The New Politics of Conflict Resolution : Responding to Difference*, 151.

⁵⁰ *Ibid.*, 135.

⁵¹ Coleman, *The Five Percent: Finding Solutions to Seemingly Impossible Conflicts*. Chapter 4.

⁵² Bela H. Banathy and Patrick M. Jenlink, *Dialogue as a Means of Collective Communication* (New York: Kluwer Academic/Plenum Publishers, 2005), 4.

⁵³ Bohm, *On Dialogue*, 7.

and create new innovations and cultural artifacts.⁵⁴ In dialogue the participants examine and share their own and others' views, experiences and the characteristic patterns that lie behind their thoughts, opinions, beliefs, feelings and roles.⁵⁵ In conflict situations participants bring the characteristic patterns of the conflict system that they are part of into the dialogue and can expose and investigate them together. In dialogue practitioners encourage participants to suspend opinions and judgment in lieu of seeking clarification and understanding of others' worldviews and beliefs.

Although the idea of 'coming together for dialogue' originated in Western cultures, dialogue aims to provide an opportunity to understand the influence of existing cultures and the differences that distinguish them without letting a particular culture or cultures dominate the discourse. Participants are prompted to step away from negotiation positions and to tell their life stories, which led them to take these positions. This can assist conflicting parties in gaining understanding of 'the other' and to see them as human beings again. A transformation of relationship can occur.⁵⁶ Participation in dialogue can strengthen negative feedback loops and the multidimensionality of the social system towards more peaceful interaction.

Dialogue processes are used in a variety of conflict and post-conflict settings to assist in conflict transformation and reconciliation, ranging from grassroots-level to Track I diplomacy.⁵⁷ Pruitt and Thomas provide an extensive overview of public dialogue projects since 1994.⁵⁸ Citing Gadamer, Ramsbotham et al. suggest, that dialogue is a "repeated process of reciprocal translation which eventually forges a common meaning and establishes the basis for a new community." This new community is not equal to the world of either participant in the dialogue but a transformation of the fundamental relationship of the participants.⁵⁹ As such, dialogue does not aim to replicate or roll out one worldview but engages participants to develop a new and shared social reality in a process of social evolution.

Often new ideas – which are more than just the sum of the ideas of each participant – emerge and provide a new way forward. Interaction in dialogue provides the basis for a process of social emergence, which can lead to a change in social structure.⁶⁰ By changing the

⁵⁴ Banathy and Jenlink, *Dialogue as a Means of Collective Communication*, 5.

⁵⁵ David Bohm, Donald Factor, and Peter Garrett, "Dialogue - a Proposal,"(1991), http://www.david-bohm.net/dialogue/dialogue_proposal.html.

⁵⁶ Michelle LeBaron, *Bridging Cultural Conflicts : A New Approach for a Changing World* (San Francisco, Calif.: Jossey-Bass, 2003), 256.

⁵⁷ Norbert Ropers, "From Resolution to Transformation: The Role of Dialogue Projects," in *Berghof Handbook for Conflict Transformation*, ed. David Bloomfield, Martina Fischer, and Beatrix Schmelzle (Berlin: Berghof Research Center for Constructive Conflict Management, 2004), 2.

⁵⁸ Bettye. Pruitt and Philip. Thomas, *Democratic Dialogue - a Handbook for Practitioners* (Washington, Strömborg, New York: Canadian Development Agency (CIDA); International IDEA; Organization of American States (OAS); United Nations Development Program (UNDP). 2007), 188-213.

⁵⁹ Ramsbotham, Woodhouse, and Miall, *Contemporary Conflict Resolution : The Prevention, Management and Transformation of Deadly Conflicts*, 294.

⁶⁰ Sawyer, *Social Emergence : Societies as Complex Systems*, 210-25.

interaction of individuals in a community through a dialogue process, new networks and relationships can be formed, which lead to a change of emergent patterns and have the potential to influence the system towards more peaceful behaviours and new social agreements between groups and communities.⁶¹

Critique of Complex Systems and Dialogical Approaches

Complex adaptive systems theory is not uncontroversial in sociological and social work literature. There exists a lack of clarity about core systems concepts, in particular, such as what constitutes a system and what the boundaries are. Claims by practitioners that a particular methodology provides a 'whole system' view are often overstated.⁶² This leads to the reliance on central claims derived from systems theories, such as the claim that all parts of a system are complexly intertwined and that changes in one part of the system inevitably lead to changes in other parts without any external justification of these claims.⁶³ No consensus exists among systems scientists on what the central tenets or concepts of complex systems are, causing further confusion in literature and practice.⁶⁴ In addition, the concepts complex systems science is based on often require the use of advanced mathematics which may alienate practitioners and interveners.⁶⁵ Thirdly systemic perspectives provide little guidance on how to move from holistic analysis of the situation to systemic intervention. Glenda Eoyang suggests that not all action interventions require a deep understanding of the non-linear mathematics of complex adaptive systems. Practitioners can make use of surface-level phenomena such as pattern recognition to diagnose complex social systems from a systemic perspective and use tools such as descriptive or dynamic metaphors for systemic interventions.⁶⁶ Burns suggests that systemic practitioners should strive to see and understand 'enough' to make sense of the world they interact with while acknowledging that a 'whole system' perspective is unachievable.⁶⁷

Dialogue processes and other postmodern approaches to conflict resolution have also been criticised for a number of reasons:⁶⁸ they sometimes engage in abstract intellectualism which is hard to operationalize and may be ill suited to deal with pragmatic real life conflict. Dialogue processes are not designed to lead to direct action plans or to organise large numbers

⁶¹ Pruitt and Thomas, *Democratic Dialogue - a Handbook for Practitioners*, 36.

⁶² Danny Burns, *Systemic Action Research: A Strategy for Whole System Change* (Bristol: The Policy Press, 2007), 22.

⁶³ Healy, *Social Work Theories in Context : Creating Frameworks for Practice*, 147-48.

⁶⁴ Hendrick, "Complexity Theory and Conflict Transformation: An Exploration of Potential and Implications," 18.

⁶⁵ Healy, *Social Work Theories in Context : Creating Frameworks for Practice*, 147-48.

⁶⁶ Glenda H. Eoyang, "The Practitioner's Landscape," *Emergence: Complexity, and Organizations* 6, no. 1 & 2 (2004): 57.

⁶⁷ Burns, *Systemic Action Research: A Strategy for Whole System Change*, 22.

⁶⁸ Coleman, "Paradigmatic Framing of Protracted, Intractable Conflict: Toward the Development of a Meta-Framework-li," 222.

of people into action. The aim of including as many voices as possible in the dialogue has alienated elites who may play an important role in conflict situations. The central ideas of postmodernism and the emphasis on meaning-making, deconstruction and reconstruction through communication have been criticised as vague and abstract. To a certain degree the criticisms voiced against the application of complex systems science in the social sciences and the criticism of postmodern epistemologies strike a similar chord. Nevertheless these approaches provide important insights into the emergence of complex conflict phenomena and point the way for innovative theories of change.

Conclusion

This article has attempted to interpret common criticisms of peacebuilding and development interventions from a complex systems perspective. It has argued that contemporary peacebuilding practice is still governed by a positivist, reductionist and linear understanding of social change. This leads to the assumption that programme and project outcomes can be predicted and planned with certainty. In complex social systems such planning is impossible. Therefore donor agencies and peacebuilding organisations are well-advised to reconsider their often immense logical framework approaches which demand detailed project pre-planning which often bears little resemblance to the situation on the ground. While it is certainly important that donor agencies work with accountable and reliable groups and individuals on the ground and that programmes and projects are not planned and implemented arbitrarily, they should invest in more relationship building with local partners instead of highly detailed project proposals and evaluation methodologies.

Moreover peacebuilders need to admit that it is impossible to plan a “peaceful society” and that such a system is the ongoing product of social evolution. This evolution starts at the local level, and rarely do imposed social structures gain any traction on the ground (unless they are completely transformed into a new institution in a process of social evolution). Assisting local groups to form ‘networks of effective action’⁶⁹ and to replicate successful small-scale projects to spread peaceful ideas is more effective than supporting hierarchical structures and institutions that are limited in their complexity and cannot deal with conflict and violence appropriately. In particular the practice of re-building local government structures by replicating Western institutions in Non-western social systems needs to be reconsidered.

Quite often social systems that exhibit violence against individuals and where the monopoly on violence is not held by the state are considered as ‘fragile’ and dysfunctional. Research has shown that this is a misnomer.⁷⁰ Violent systems can be extremely stable and functional (in maintain the violent status quo) over time because of strong attractors, which keep the system in the violent state. Positive violence-supporting feedback loops within the system

⁶⁹ Ricigliano, "Networks of Effective Action: Implementing an Integrated Approach to Peacebuilding."

⁷⁰ Boege, Brown, and Clements, "Hybrid Political Orders, Not Fragile States."

need to be researched and weakened to strengthen negative feedback loops which may help the system to change to a different and now peace-promoting attractor. The examination of attractors and the effects of violent social structures which constrain the emergence of new peaceful ideas may also help to assess project viability better and encourage the building of relationships across dividing lines to decrease conflict escalating positive feedback loops.

One way to change these relationships and to make use of complex systems thinking is through increased use of grassroots dialogue projects as part of multi-stranded systemic peacebuilding initiatives. Dialogue aims to change relationships and to harness the dynamics of collective interaction. By helping participants to learn about each other they establish new patterns of relationships and they can harness the increased complexity of groups versus individuals to create new and more peaceful social structure.

While complex systems science provides intriguing perspectives for peace and conflict studies researchers and practitioners, it must be acknowledged that it is just one paradigm among many. And like every paradigm it highlights certain aspects of conflict situations by neglecting others. Although systems approaches claim to integrate other paradigms into one coherent meta-system they have often been criticised for losing focus on the details in favour of a birds-eye view and for providing little guidance to apply theory on the ground.⁷¹

Complex systems science is unlikely to provide all the answers to the problems of contemporary peacebuilding and development. Most likely there will be other paradigms in the future that will assist peacebuilders in reflecting on their practice. However complex systems science provides a number of important insights into the practice, which confirm some of the critiques that are being voiced against current peacebuilding initiatives and will hopefully spark more discussion and research.

⁷¹ Healy, *Social Work Theories in Context : Creating Frameworks for Practice*, 147-48.