Promoting Sustainable Peace

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Abstract
Decades of research has taught us a great deal about conflict - escalation, stalemate, and de-escalation. However, in contrast to the abundant research on conflict, relatively little research has focused directly on sustainable peace. There is often a basic assumption in conflict studies that a thorough understanding of the problem of destructive conflict will, by default, provide insight into the conditions and processes that foster and sustain peace. This assumption, however, has been found by scholars and practitioners to be erroneous. Although the lessening of openly destructive or violent conflict is likely a necessary condition for stable peace, there is reason to believe it is not a sufficient condition. In fact, psychological research on emotion, evaluation, and social behavior has shown that positive processes (like peace) and negative processes (like destructive conflict) function independently and often involve very different precipitating conditions, temporal scales, weights, and dynamics. This means that there may be important differences between ending conflicts, on the one hand, and bringing about and sustaining peace on the other hand. The dearth of research on sustainable peace is regrettable. It has left us with a very limited understanding or a misunderstanding of this state, and consequently, a reliance on approaches for promoting peace that may be insufficient, misguided, or that may even bring about unintended negative consequences.

Dynamical Systems Approach to Sustainable Peace
In 2006, our international team of scholar-practitioners was funded by the James S. McDonnell Foundation to develop a theory of enduring conflicts from the perspective of dynamical systems and complexity science. Subsequently, we became interested in the direct study of peace. Accordingly, the current project applies the principles and methods of complexity and dynamical systems to the study of the fundamental parameters underlying sustainable peace. The project is being conducted by a multidisciplinary research team consisting of 1) a specialist in the study of peace and conflict (Peter T. Coleman); 2) two social psychologists with expertise in the application of dynamical systems to cognitive, interpersonal, group, and societal phenomena (Andrzej Nowak and Robin Vallacher); 3) a physicist with expertise in formal descriptions and the modeling of system dynamics (Larry Liebovitch); and 4) a social anthropologist (and practitioner) who specializes in peace processes and NGOs (Andrea Bartoli).

Our approach to understanding and promoting sustainable peace is informed by the efforts of our multidisciplinary research program (See Coleman, 2006; Coleman, Bui-Wrzosinska, Vallacher and Nowak, 2006; Coleman, Vallacher, Nowak, & Bui-Wrzosinska, 2007; Coleman, Vallacher, Nowak, Bui-Wrzosinska, Bartoli, (forthcoming); Nowak, Vallacher, Bui-Wrzosinska, & Coleman, 2006). We have discovered that qualitative differences in the dominant patterns of social behavior (such as those found in peaceful societies versus hostile or warring societies) can be accounted for by a few basic factors. Accordingly, our research attempts to identify, from scholarship and practice, the fundamental factors that promote sustained peaceful dynamics in communities or, put another way, that make societies immune to prolonged destructive or violent conflict.

Our basic model centers on the concept of attractor. In a dynamical system composed of many parts or “elements,” an attractor is a relatively stable state or pattern of behavior that coordinates or integrates
the elements. In a mental system, an attitude or a belief functions as an attractor if it integrates and provides common meaning for different events, memories, and pieces of information, even if these mental “elements” by themselves might be interpreted in very different ways. In a social system (e.g., a group or society), an ideology functions as an attractor if it provides a shared reality and frame of reference for collective action, even if the members of the group or society each have divergent needs and interests. Metaphorically, an attractor “attracts” the system’s elements to a common state or pattern, providing coherence and stability in the face of new and confusing experiences (e.g., ambiguous information, unexpected events). Once a system is governed by an attractor, it actively resists threats that would change the way the elements (e.g., thoughts, individuals) are organized. From a dynamical perspective, then, attempts to challenge a person’s firmly held attitude or a group’s ideology are likely to backfire, strengthening rather than weakening the attractor, and thus may intensify rather than reduce antagonism and violence in a situation characterized by conflict.

We have found that groups (e.g., communities, gangs, societies) typically have more than one attractor governing the way they think about and behave toward other groups (see Figure 1). This means that hostile and destructive interaction patterns between groups may co-exist with the potential for peaceful interactions between such groups. At any one time, however, only one attractor (e.g., negative) is likely to be manifest, with the other attractors (e.g., positive) virtually invisible to observers, or even to the participants themselves. The existence of latent attractors suggests that under the right conditions, the groups may demonstrate a sudden and dramatic change in their thoughts, feelings, and actions vis à vis one another. Thus, the interactions within a community can move from one manifest attractor (such as peace) to another previously latent attractor (such as war), sometimes even in response to a rather minor incident that triggers the latent pattern of thought, feeling, and action. This scenario of nonlinear change is evident both in sudden outbreaks of group violence in situations of relative peace (such as is occurring in Northern Ireland at the time of this writing) as well as in sudden outbreaks of peace in situations of protracted conflict (such as occurred in the 1990s in Mozambique after 16 years of civil war).
Figure 1: An attractor landscape for community relations with one manifest attractor (the current state of relations - location of the ball), two latent attractors (currently unoccupied potential states), and one repellor (the opposite of attractors such as social taboos – in red).

Recognition that the current state of communal life can co-exist with other potential but latent patterns of interaction (each with differing degrees of “attracting” power) underlies our research agenda and provides the foundation for the following set of recommendations for promoting sustainable peace.

“Stable Peace: A situation in which the probability of war is so small that it does not really enter into the calculations of any of the people involved”


**Recommendations**

The following set of recommendations for fostering sustainable peace has been generated by our multidisciplinary team of scientists (psychologists, anthropologists, complexity scientists, and physicists). These recommendations derive from a combination of practical experience, theory development, and empirical research, including case-based and laboratory research on sustainable peace.

1. **War and peace can co-exist.** As the attractor landscape in Figure 1 indicates, groups and communities typically hold the potential for dramatically different types of interaction patterns simultaneously. One attractor may capture the state of the system for extended periods of time (as is seen during protracted periods of conflict). However, this does not mean that peacebuilding initiatives (peace education, dialogue groups, intergroup cultural exchanges, common community
projects, etc.) during this period are for naught. Here, the idea of latent attractors provides an important new perspective for understanding peace. In this view, the malignant thoughts, feelings, and actions characterizing a group’s dynamics during conflict represent only the most salient and visible attractor for the group. Particularly if there is a long history of interaction with the out-group, there may be other potential patterns of mental, affective, and behavioral engagement vis a vis members of the out-group, including those for positive relations. With this in mind, identifying and reinforcing latent (positive) attractors, not simply disassembling the manifest (negative) attractors, should be the aim of conflict prevention in service of sustainable peace. In other words, in addition to attempts at achieving negative peace (an end to destructive conflict and violence), and the goal of positive peace (establishing fair systems of opportunity and justice) we must also strive to enhance promotive peace—the establishment of strong attractors for positive, constructive social relations.

2. **“Reverse engineer” negative, destructive attractors.** When conflicts do arise, the most obvious need is to quell any violence and contain actively destructive processes. This is often done by introducing police support, peacekeeping troops, or other forms of regional or international military interventions. However, even when systems de-escalate and appear to return to a state of peace, the potential for destructive interactions (destructive attractors) still exists. It is important, then, that we work actively to deconstruct and dismantle the negative attractors. In generic terms, the deconstruction of an attractor entails focusing on the elements comprising the pattern of behavior rather than focusing on the pattern itself. In the context of conflict, this means calling attention to specific actions, events, and pieces of information without noting their connection to the pattern in which they are embedded. When decoupled in this fashion, the lower-level elements may become re-configured into an entirely different pattern (e.g., a positive view of the out-group and a benign or peaceful interaction pattern). The important point is this: attacking the pattern itself is likely to intensify rather than weaken the pattern because of the tendency for attractors to resist change, so one should focus instead on isolating elements and thereby weakening or eliminating the positive feedback loops among them. We are investigating a variety of ways in which this can be accomplished in real-world settings. A variety of such initiatives can be envisioned, including: introducing negative feedback loops (early-warning systems, cross-cutting structures, international monitoring, etc.); institutionalizing more nuanced, alternative conflict narratives (through media, textbooks, official accounts, etc.); and limiting the pervasive spread of conflict by allowing movement of the parties.

3. **Increase complexity for peace.** Research has also shown that constructive social relations are characterized by relatively high levels of cognitive, emotional, behavioral, and structural complexity. Such complexity is advantageous when groups face problems or conflicts with other groups. As conflicts intensify, there is a strong tendency for the parties’ thoughts, feelings, and behaviors to become more simple and black and white (which is evidence of strong attractor dynamics). If the conflict spreads to the community level and persists, then we see the same polarization occur in social networks, groups, and institutions. However, communities and groups who maintain more complex cross-cutting (intergroup) structures and social networks, who hold more complex (multiple group) social identities, and who display more complex cognitive, emotional, and behavioral (adaptive) patterns, have been found to be more tolerant of outgroups, display less violence when conflicts spark, and engage in a more constructive manner when conflicts become difficult. Thus,
sustainable peace requires structures and processes that foster increased contact and complexity.

4. **Increase movement for peace.** The findings from our research and from the scholarship of many others support the basic idea that peace is associated with movement. When people and groups get trapped in narrow attractors for social relations, whether in patterns of destructive conflict, oppressor-oppressed dynamics, or even in patterns of isolation and disengagement from others, their well-being tends to deteriorate and their level of resentment tends to build. These traps may be constituted by physical structures such as segregated spaces, or by social-psychological constraints such as norms, attitudes and ideologies. When trapped in such a well, people can be creative at becoming ever more destructive, oppressed, independent, etc., which acts to deepen the attractor and makes it less likely they will be able to escape its pull. Of course, any pattern of behavior may be functional in certain situations; a destructive orientation fits very well in times of armed conflict. But these patterns can become dominant and pervasive, so that when the current situation changes, or when people move to different situations, it is critical for people to adapt – to take up different patterns of behaviors that are appropriate to the varied situations they face. From this perspective, sustainable peace requires the establishment of conditions that allow for movement and adaptation. At times, even “jiggling” the system—almost random movement—can break patterns and restore flexibility.

5. **Peace is associated with a sufficient yet tolerable rate of movement toward justice.** Decades of research on the psychology of justice has found that movement is also central to justice and peace. First, a sense of relative deprivation has been found to be a fundamental source of ethnopolitical conflict and instability in otherwise peaceful communities. This is the injustice felt when people experience a gap in what they feel their group deserves and what it can achieve – in comparison to similar groups. This experience is typically triggered by change – shifts in the status quo that affect what groups expect, what they can get, and with whom they compare themselves. However, it is the need for procedural justice, or the sense that there exist fair processes for the allocation of goods and for recourse against grievances, that has been shown to be critical to addressing injustice, even more so than actually receiving fair outcomes. Furthermore, the rate at which justice is achieved is also critical. Peace scholars have found that minority groups who feel that the channels for fair recourse are blocked or too unresponsive are more likely to revolt. However, they have also found that when particular minority groups ascend to justice and equal treatment very rapidly, this can raise the aspirations, envy, and resistance of other groups (including those in power), and thus destabilize communities. Thus, procedures of justice that provide a sufficiently steady response to the grievances of all stakeholders are a necessary condition for sustainable peace.

6. **Foster repellors for violence.** Anthropological research has shown that communal taboos against violence have existed for the bulk of human history, and were a central component of our ancestors, the pre-historic nomadic hunter-gatherer bands. Indeed, a key characteristic of peaceful societies, both historically and in the contemporary world, is the presence of non-violent values, norms, ideologies, and practices. Although non-violent norms are practiced in many communities around the globe, they are often overwhelmed by more violent ideologies, messages, and social modeling. There are a wide-variety of parenting and educational methods for fostering more non-violent, prosocial attitudes and skills in children, such as violence-prevention, tolerance, cooperative
learning, conflict resolution, and peace education curriculum, just to name a few. However, **sustainable peace will require a much more concerted effort to both teach non-violent values, norms, and practices to young people and to better limit exposure of youth to gratuitous forms of violence and to destructive social modeling by adults and public leaders.**

7. **Realize that peace is never achieved.** Peace is a dynamic process, not an outcome. It requires a set of fair processes and procedures that allow all stakeholders to negotiate for their needs and rights, in order to create unity out of diversity. Indeed, peace initiatives uninformed by an ongoing process of reading feedback are destined to do more harm than good. Research has found that the most effective decision-makers are those who are able to continually adapt; by remaining open to feedback, they can reconsider their decisions and alter their course if necessary. These leaders make more, not fewer, decisions as their plans unfold, and ultimately are able to enhance the well-being of the communities with which they work. Thus, effectiveness comes from flexibility not rigidity. In this way, we can work to increase the probabilities that peace will emerge and be sustained.

**Call to Action and Conclusion**

Today, very few scholars study peace. However, the few that do tell us that today there are approximately 80 societies world-wide who could be categorized as having low-levels of internal aggression, and 70 societies who are peaceful in their relations with other groups and communities in their regions (Fry, 2006). Unfortunately, our understanding of such groups, and of the conditions that foster prosocial relations, is extremely limited. There is often an unarticulated assumption in research on war and conflict that a thorough understanding of the problem of destructive conflict will provide insight into conditions and processes which foster and sustain peace. This assumption has been found by researchers to be unfounded and incorrect (see Gottman, Murray, Swanson, Tyson, & Swanson, 2002; Losada, 1999; Losada & Heaphy, 2004). Conflict and peace are not endpoints of a single dimension but rather often co-exist as separate dimensions. It is clearly time to champion the study of peace in its own right.

In dynamical terms, the co-existence of malignant and (potential) peaceful possible relations is tantamount to the co-existence of two attractors constraining the dynamics of the parties to a conflict. Although effort should be devoted to the deconstruction of the negative attractor, attention should also be devoted to strengthening the positive attractor for inter-group relations. There may be little immediate effect of fostering opportunities for positive relations between the groups, but such efforts plant the seed for a possible transformation should conditions change in a way that destabilize existing mental, affective, and behavioral patterns. If such a seed is not planted, it cannot take root even if the negative attractor is somehow discredited or otherwise destabilized. A dynamical system does not change unless it has a new space to occupy. A latent attractor essentially represents a new space for inter-group relations.

The approach we advocate includes the following components:

- Movement beyond the focus on conflict, violence and war (problems) to the study of sustainable peace (*solutions*).
• Movement away from simple, linear models of cause-and-effect toward more complex, holistic models of sustainable peace situated within constellations of ecological, biological, psychological, social, economic, and other structural forces.

• An enhanced capacity to work collaboratively across a variety of disciplines to better understand and foster sustainable peace through multiple perspectives and complementary approaches.

• A shift in emphasis away from achieving particular short-term outcomes (peace treaties, agreements, etc.) toward establishing and maintaining the conditions for sustainable peace processes in communities over time.

• An enhanced capacity to communicate and build partnerships from science to policy/practice and from policy/practice to science.

• The establishment of local, regional, and global networks of support and information on best practices for increasing the probabilities of sustainable peace.

What is required at this stage is an investment in a concerted effort to bring together scholars, practitioners, and policy-makers from a variety of disciplines to work to understand sustainable peace beyond the level of case-based descriptions, to get at the essence of their underlying dynamics. Collaborative, multidisciplinary work of this nature requires a common language based on an integrative platform to facilitate communication and coordination across the legendary disciplinary and theory-practice divides. The approach of dynamical systems, a scientific paradigm widely employed across scientific disciplines, provides such a platform.

About the Authors

Dr. Peter T. Coleman, PhD, Director of the International Center for Cooperation and Conflict Resolution and Associate Professor of Psychology and Education at Teachers College, Columbia University. Dr. Coleman was the first recipient of the Early Career Award from the American Psychological Association, Division 48: Society for the Study of Peace, Conflict, and Violence, co-edits The Handbook of Conflict Resolution: Theory and Practice (2000; 2006), and has authored over fifty journal articles and chapters. Dr. Robin R. Vallacher, PhD, Professor of Psychology, Florida Atlantic University and Research Affiliate at the Center for Complex Systems, Warsaw University. Dr. Vallacher has published 5 books and uses experimentation and computer simulations (cellular automata, attractor neural networks, coupled dynamical systems) to investigate the dynamism and complexity associated with such phenomena as self-regulation, social judgment, close relations, inter-group conflict, and the emergence of personality from social interaction. Dr. Andrzej Nowak, PhD is Professor of Psychology at the Warsaw School for Social Psychology, where he is Director of the Institute of Social Psychology of Informatics and Communications. He is also Professor of Psychology at University of Warsaw, where he directs the Center for Complex Systems at Institute for Social Studies, and Associate Professor of Psychology, Florida Atlantic University. Dr. Nowak has published five books, and his primary focus is on the dynamical approach to social psychology. Dr. Andrea Bartoli, PhD is currently Director of the Institute for Conflict Analysis and Resolution at George Mason and was the founding director of the Center for International Conflict Resolution at Columbia University. He is the coeditor of Somalia, Rawanda, and Beyond: The Role of International Media in Wars and International Crisis (Italian Academy for Advanced Studies 1995). Dr. Larry Liebovitch, PhD is a Professor at
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About the ICCCR

The International Center for Cooperation and Conflict Resolution (ICCCR) at Teachers College, Columbia University is an innovative center committed to developing knowledge and practice to promote constructive conflict resolution, effective cooperation, and social justice. We partner with individuals, groups, organizations, and communities to learn to resolve conflicts constructively so they may develop just and peaceful relationships. We work with sensitivity to cultural differences and emphasize the links between theory, research, and practice. More information at:

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