1

The Nature of Peace

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At the time that we are writing the introductory chapter to this volume, 100 years after the start of a "war to end all wars" and 70 years after the end of World War II, the world is not at peace. While we are writing this chapter in relative comfort, an untold number of our fellow human beings of all ages are suffering the effects of direct or structural violence. Even here, in one of the most peaceful countries in the world, people suffer these effects when there is bullying, domestic violence, assault, rape, and homicide, and these ill effects extend to those who are victims of discrimination, labor exploitation, and poverty, to name only a few examples. And yet, we believe that this is a promising time for peace. We see new opportunities for peace in behavioral science, in the global policy arena, and in everyday life. And we propose that these basic and applied opportunities for peace are intertwined.

This book develops and advances the behavioral science of peace. It offers new concepts for integrating knowledge systems concerning peace across disciplines, and it provides examples of recent research on behavioral processes and systems of peace that illustrate the integrative framework that we propose. The book grew out of a weeklong interdisciplinary workshop at the Lorentz Center of Leiden University in the Netherlands entitled "Obstacles and Catalysts of Peaceful Behavior" (OCPB). Fifty-three scientists from three continents and a range of disciplines, including anthropology, ethology, evolutionary biology, neuroscience, political science, and psychology, attended the workshop in March 2013. Of the 23 authors in this book, 13 attended the workshop. While previous interdisciplinary gatherings at the Lorentz Center addressed behavioral aspects of peace ("Aggression and Peacemaking in an Evolutionary Context" in 2010 – see Fry 2013; and "Context, Causes and Consequences of Conflict" – see Kruk & Kruk de Bruin 2010), OCPB stood out due to its exclusive focus on peaceful behavior. One of the participants captured the synergistic mixture of topics addressed during the workshop and the promise this holds for the study of peace as follows: "It was very interesting to see how apparently disconnected realities, such as molecular biology, canine ethology, cooperation in primates, oxytocin, and Japan's Article 9, came together and made sense in developing an alternative insight on peaceful behavior." The aim of this book is to channel this synergy further by presenting a peace ethology approach to the behavioral processes and systems of peace.

Operationalizing Peace Concepts

A traditional perspective on peace links it to the absence of direct violence, in particular organized mass killing in war (Galtung 1996, 2012). Other forms of direct violence implied in this *negative* notion of peace include the examples mentioned in this chapter such as physical bullying, assault, and homicide, and extend to torture and the intentional destruction of homes and communities of targeted victims (cf. Opotow 2012). The more recent *positive* notion of peace is based on the absence of structural violence (Galtung 1996, 2012). Structural violence in this context refers to harm caused to people through, for example, social injustice, discrimination, prejudice, social or moral exclusion, and poverty linked to these conditions, and their intended or unintended cultural justifications (cf. Galtung 2012). Christie (2012) interprets these two complementary perspectives on peace as "direct peace" and "structural peace," with the former achieved through peacemaking and the latter through peacebuilding (Table 1.1).

Conceptualizing peace as the absence of violence tends to concentrate intellectual and practical energy on the study of obstacles to peace at the relative expense of the study of catalysts to peace. Moreover, implicit in this approach is the notion of peace as a *state*, specifically a state that occurs with the absence of direct and structural violence. In this volume, we present a dynamic approach to peace. We investigate and discuss peace as *process*, more specifically a complex of *behavioral processes* and the *behavioral systems* that may ensue as a function of these processes. Our treatment of peace as process reflects a contemporary perspective of peace, both in practice and in science, as evidenced, for example, in Nobel Peace Prize Laureate Óscar Arias Sánchez' suggestion, "Peace is a never-ending process, the work of many decisions by many people in many countries. It is an attitude, a way of life, a way of solving problems and resolving conflicts" (Sánchez 1995 cited in Verbeek 2008). This is mirrored by psychologists Morton Deutsch and Peter Coleman, who propose, "Peace is never achieved, but rather is a process that is fostered by a variety of cognitive, affective, behavioral, structural, institutional, spiritual, and cultural components" (Deutsch & Coleman 2012). Going by these two quotes alone, we can identity multiple levels and domains at which the processes of peace can be measured, including "decision-making, attitudes, life-styles, and conflict resolution" (from Sánchez 1995), and "cognitive and emotional functioning,

Table 1.1 Three dimensions of peace: direct, structural, and sociative peace.

	Direct	Structural	Sociative
Violence	Direct violence[1]	Structural violence[1]	None/aggression[3]
Peace	**Direct peace**[2]	**Structural peace**[2]	**Sociative peace**[3]
	Negative[1]	Positive[1]	
	(Peacemaking)[2]	(Peacebuilding)[2]	(Peacekeeping)[4]

[1] Galtung (1996, 2012).
[2] Christie (2012).
[3] Gregor (1996), cited in Verbeek (2008).
[4] Verbeek (2013).
Note: Peace terms adopted in this chapter are in boldface font.
Source: Adapted from Christie (2012).

behavior, (social) structures, institutional functioning, spirituality, and culture" (from Deutsch & Coleman 2012).

The process-based concept of peace that we propose here transcends peace as a response to direct or structural violence (*direct peace* and *structural peace*) to include peace concerned with the preservation of harmony in relations, for example through the pursuit, establishment, or deepening of mutual or reciprocal interests, tolerance, helping and sharing, and the active avoidance of aggressive confrontations (*sociative peace*; Verbeek 2008; cf. Gregor 1996). Table 1.1 shows our three-dimensional concept of peace in comparison to previous conceptualizations.

Our approach to peace is comparative and transcends the human condition as we consider the natural origins and behavioral manifestations of peace across species (de Waal 2000; Verbeek this volume, Chapter 16) in conjunction with the evolved human potential for peace (Fry 2006, 2012; de Waal 2012). In nature, aggression and peace are not antithetical but, rather, linked in recurring relationships that express themselves in flexible phenotypes and evolving genotypes (Verbeek this volume, Chapter 16; 2013; Kunneman this volume, Chapter 15). Until about four decades ago, and similar to work on peace in humans, science focused almost exclusively on the aggressive dimension of natural relationships and virtually ignored nature's peaceful solutions to the propagation of life (Verbeek this volume, Chapter 16; 2013). However, the paradigm in behavioral science is shifting toward a new look at the interplay of aggression and peace in nature, and this allows for a fresh perspective on peace in human nature and how to draw on it (Verbeek this volume, Chapter 16; 2013; Fry this volume, Chapter 14; Kunneman this volume, Chapter 15).

We operationally define the natural phenomenon of aggression as behavior through which species, individuals, families, groups, and communities pursue active control of resources and the social environment at the expense of others (cf. de Boer in Kruk & Kruk-de Bruin 2010). In our view, aggression can be *species-typical* or *species-atypical.* The former is context-dependent aggressive behavior that is commonly shown by members of the species, while the latter is context-dependent aggressive behavior that is infrequently shown by members of the species (cf. Haller & Kruk 2006; Verbeek *et al.* 2007; Verbeek 2013). Violence, in our conceptual framework, is escalated aggressive behavior that is out of inhibitory control (de Boer *et al.* 2009). An important question in the context of the study of direct peace is whether war, as an organized form of direct violence, is species-typical or species-atypical for humans. Fry and Verbeek address this question in their respective chapters in this volume (see also Wrangham 1999; Sussman 2013; Verbeek 2013; and Wilson *et al.* 2014 for a range of comparative perspectives on this issue).

Like aggression, we view peace as a natural phenomenon that culture may modify. We operationally define peace as
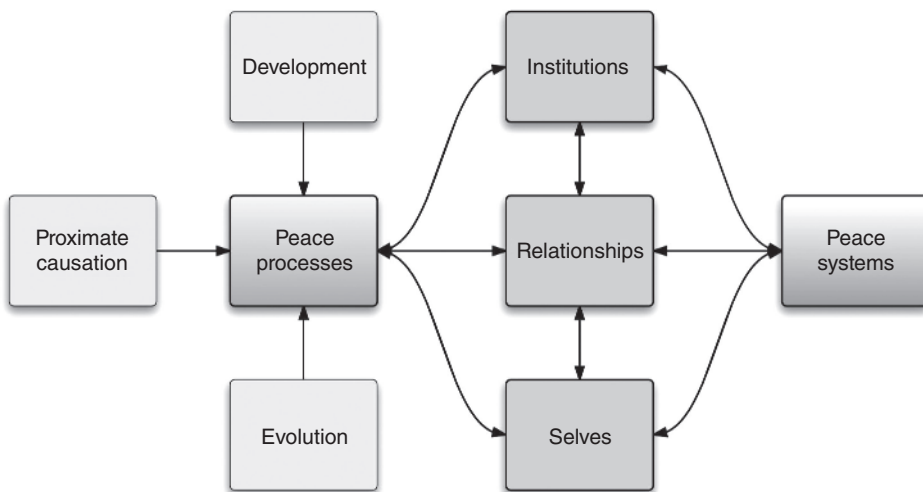
> Behavioral processes and systems through which species, individuals, families, groups, and communities negate direct and structural violence (*direct peace*; *structural peace*), keep aggression in check or restore tolerance in its aftermath (*sociative peace*), maintain just institutions and equity (*structural peace*), and engage in reciprocally beneficial and harmonious interactions (*sociative peace*). (Table 1.1; Verbeek 2008, 2013; cf. Coleman & Deutsch 2012 and definitions contained therein)

Peace processes, in our conceptual framework, are sequential and interrelated behaviors that enable peaceful relations within and across social domains. Flourishing peace processes can give rise to and arise from *peace systems*, which we define as institutions or arrangements that pattern their members' interactions toward peace. Fry (2012) introduced the concept of peace systems at the level of nations and cultures, and we extend it herewith across species and social domains. Peace systems, thus defined, are patterns of social behavior that promote or sustain peace.

Observing Peace

Considering that peace transcends individual species and social domains, as the chapters in this volume demonstrate, we need a multidisciplinary or even transdisciplinary (Kunneman this volume, Chapter 15) approach to study and understand peace. This raises the issue of how to integrate different systems of knowledge (Galtung 2010). We deal with this by following up on ethologist Niko Tinbergen's call to apply the "aims and methods" of ethology to the study of war and peace (Tinbergen 1968). We scaffold our conceptual framework with an ethology of peace that applies ethology's four principal questions about the *proximate causation*, *development*, *function*, and *evolution* of behavior to the study of peace processes and systems (Tinbergen 1963; Verbeek 2008). Figure 1.1 models our approach.

Our peace ethology model shown in Figure 1.1 visualizes the flow of evolutionary (biological and cultural) and developmental inputs on behavioral peace processes and their proximate causes and consequences on individuals (selves), relationships, and institutions. It is in this interplay between and among individuals, relationships, and institutions that the functions of peace processes and systems come to the fore. The model is a feedback model, as initial effects of peace processes on individuals,

Figure 1.1 A peace ethology model of behavioral processes and systems of peace. *Note*: Peace processes as between and among individuals, families, groups, and communities.

relationships, and institutions are expected to generate and give form to subsequent peace processes. Positive-feedback loop reiterations involving individuals, relationships, and institutions can give rise to peace systems, which, in turn, feed back to pattern peace processes in space and time.

Selves, Relationships, and Institutions

Selves, *relationships*, and *institutions* are in themselves seen as processes in our model. For example, *selves*, in our conceptual framework, can develop as peaceful selves, in part as a function of peace process behaviors and experiences. We define the peaceful self as characterized by virtuous dispositions for benevolence and justice and efficacious in nonviolent conflict transformation and peacemaking (Verbeek *et al.* 2015). We suggest that the peaceful self is *enabled* by our evolved dispositions for peace as expressed, for example, in social behavioral dispositions (e.g., Jaeggi *et al.* 2010; Fry this volume, Chapter 14; Kunneman this volume, Chapter 15; Verbeek this volume, Chapter 16), emotional functioning (e.g., empathy: Preston & de Waal 2002; Decety & Jackson 2006), and associated brain mechanisms (e.g., Immordino-Yang *et al.* 2009; Krill & Platek 2012; Piper *et al.* 2015), *nurtured* in our evolved developmental niche (Narvaez this volume, Chapter 6; cf. Leckman *et al.* 2014), and *shaped* by narratives of solicitude and justice (e.g., Peters this volume, Chapter 11; Kunneman personal communication; cf. Ricoeur 1992; Howell & Larsen 2015). As the bidirectional arrows in the model indicate, selves, including peaceful selves, result from – and continue to be reciprocally affected by – relationships with others and the institutions in which these relationships may be embedded.

Relationships. Hinde (1979, 1987) proposed a useful distinction between social "interactions" and social "relationships." According to Hinde, an interaction (or relation) involves a series of interchanges over a limited span of time, and the behavior can be described in terms of the content of the interchanges (fighting, talking, kissing, etc.). Hinde proposed that if two individuals (and, by extension, families, groups, and communities) who know each other have a series of interactions over time, the course of each interaction might be influenced by experience in the preceding ones. In this case, we speak of those interacting as having a relationship. Inherent to Hinde's definition is the notion that relationships are behavioral processes, and we apply this notion to our model.

Institutions. As the number and frequency of interactions increase over time, and as relationships become routinized, implicit or explicit rules of behavior may emerge that pattern behavioral processes in the individuals embedded in those relationships. When these rules develop and persist to the point that individuals who did not participate in the original set of interactions that gave rise to them learn and follow the rules, we can say that an institution is emergent. As the bidirectional arrows of the model indicate, as changes in individual behaviors and relationships evolve, the institutions evolve as well. In this way, institutions can temporally transcend the lifetime of any one individual or relationship while remaining in a process of emergent flow. They persist to the degree that they underpin and shape the behavioral processes of individuals new to the institution. Thus, institutions structure subsequent behavioral processes including peace processes, and through ongoing changes, whether subtle or punctuated, they themselves change (Thelen 2003).

Research Questions

Our peace ethology process model affords and scaffolds a multilevel investigation of the behavioral processes and systems of peace by addressing ethological questions along and across its conceptual links. In terms of *proximate causation*, it allows us to ask: what biological, psychological, political, cultural, and environmental factors make peace processes happen at any given time, and how can learning and experience modify them? Regarding *development*, we can ask: when and how do peace processes first emerge in the behavioral repertoire of species, individuals, groups, communities, and cultures? And what is the capacity for change or transformation of peace processes within these developmental domains in response to different environmental conditions? Concerning *function*, we can ask: what are the immediate and delayed benefits of peace processes, and how do they affect the survival, well-being, and lifetime success of individuals, groups, communities, and cultures? And finally, with regard to *evolution*, we can ask: why and how did the ability to engage in peace processes evolve over generations and evolutionary time in species, individuals, groups, communities, and cultures? And how do peace processes compare across extant species, communities, and cultures? In the four subsections that follow, we review how the contributors to this volume address a number of these questions in their accounts of behavioral processes and systems of peace.

Answers from Research

Proximate Causation

In Part One of the volume, our contributors seek to identify and analyze biological, psychological, cultural, or environmental factors that make peace processes happen at a given time, and how learning and experience can modify them. In Chapter 2, Nurit Shnabel approaches these questions through social-psychological research on interpersonal and intergroup reconciliation by testing the Needs-Based Model. Shnabel shows how restoring victims' sense of agency and perpetrators' sense of moral-social standing through the apology–forgiveness cycle increases the willingness of both to reconcile. With important implications for restorative justice interventions, Shnabel's work demonstrates how restoring parties' positive identities is a proximate cause of peace after conflict.

In a related vein, but informed by theories from social, organizational, and evolutionary psychology, Sabine Otten, Juliette Schaafsma, and Wiebren Jansen present findings on inclusion in culturally diverse settings as a pathway to peace in Chapter 3. Exclusion has negative costs related to well-being and group functioning and increases the probability of conflict and aggression, whereas behavioral processes of inclusion enhance peace. As their work shows, the successful promotion of all-inclusive multiculturalism and cognitive processes like self-anchoring act as proximate causes for peace between minority and majority members of culturally diverse groups. These findings have obvious importance in an age when diversity has become increasingly common in social organizations.

Turning to the proximate causes of peacekeeping and peacemaking in chimpanzees (*Pan troglodytes*), in Chapter 4 Teresa Romero presents findings on causal factors that

lead uninvolved bystanders to initiate friendly contact with recent recipients of aggression. Specifically, she presents three hypotheses about the function of bystander affiliation and examines the possible underlying causes of each. These include: consolation, which may begin with some level of emotional perspective-taking; mediated reconciliation, which would follow from knowledge of third-party relationships; and self-protection, the underlying mechanisms of which may be individual recognition, associative learning, and responses to aversive stimuli.

Chapter 5 concludes the unit and presents the findings of scholar-practitioners Saleem Ali and Todd Walters on the Experiential Peacebuilding Cycle. Focusing on the Balkans, Iraq, Indonesia, and the United States, they show how a problem–solution proposition focused on a common environmental concern can act as a proximate cause of peaceful behaviors. In addition, they explain how learning and experiential peacebuilding modify behavioral processes toward resilient relationships and sustainable peace.

Development

The contributors in Part Two present findings on two related developmental questions. First, they identify when and how peace processes first emerge. Second, they present findings on the relationship between environmental conditions and the capacity for change or transformation of peace processes. Darcia Narvaez addresses these questions in Chapter 6 by analyzing how *Homo sapiens*' cultural and childbearing heritages provide the evolved developmental niche through which peaceful behaviors and relations emerge. Starting with anthropological data on small-band hunter-gatherer societies, she identifies core social elements that affect the development of humans' optimal peaceful behaviors and follows this by analyzing the adverse effects of more historically recent childbearing and childrearing practices.

In Chapter 7, Cary Roseth approaches the questions that structure this section through a review of the literature on children's social development as it pertains to experiences of conflict. Such experiences likely promote the development of peaceful behavioral processes, and studies of these processes provide evidence for a natural tendency among children to resolve conflicts through peacemaking and to maintain peaceful relations.

Chapter 8 and Chapter 9 concern the development of peaceful behavioral processes in the context of postconflict societies. Ellen Furnari provides evidence in Chapter 8 that the development of robust relationships characterized by trust, cooperation, and acceptance enhances effective peacekeeping after conflict. Focusing the analysis at the community level, Furnari's research highlights the development of such robust relationships as a core strategy and practice of peacekeeping. Her study also offers insights into the comparative benefit of cooperative, unarmed civilian peacekeeping versus coercive, military peacekeeping.

In a related vein, Mike Wessells and Kathleen Kostelny examine the role that communities play in reintegrating former child soldiers in postconflict environments. In Chapter 9, they take a community resilience approach to show how this specific peace process, the sustained reintegration of child soldiers, develops through peacebuilding, restorative justice, education, child protection, and mental and psychosocial support.

Function

The contributors in Part Three assess the function of behavioral processes and systems of peace in order to identify and analyze their immediate and delayed benefits. Additionally, they investigate how these affect the survival, well-being, and success of communities. In Chapter 10, Otto Adang, Sarah Stronks, Misja van de Klomp, and Gerard van den Brink use the Relational Model (de Waal 1996) to assess the function of particular behavioral processes in peacemaking after police–citizen group confrontations. In particular, they emphasize the function of face-to-face meetings between the police and citizens following conflict. Such "critical moments" function to promote reconciliation by altering the meaning of events and redefining the relations of the parties involved. Furthermore, they show how the behavioral processes of assessments of value, compatibility, and security (cf. Cords & Aureli 2000) function to enhance community relationships in postconflict peacemaking.

In Chapter 11, Benjamin Peters assesses the function of constitutions as systems of peace and of peace constitutions in particular. Specifically, he shows how liberal democratic constitutions function to limit the species-atypical behaviors of state- and war-making, and how peace constitutions do so with optimal effectiveness by prohibiting war and the maintenance of military forces, protecting the right to live in peace, and promoting the development of cultures of peace. Using the cases of Costa Rica and Japan, he demonstrates how peace constitutions have benefited national communities by preventing their participation in war and by eliminating organizations of violence at the disposal of the state for use against civil society.

In an analysis that reaches both prior to and beyond the state, in Chapter 12 Joám Evans Pim examines how decentralized peace systems function to reduce violence and killing and enhance peaceful coexistence with neighboring societies. Using empirical evidence from our nomadic forager past and historically recent and contemporary cases, he shows how decentralized, self-governing communities function to achieve peaceful societies akin to what Gandhi termed "Oceanic Circles."

In Chapter 13, Daniel Hyslop and Thomas Morgan follow with an examination of how investing in eight key areas of social and institutional development that are related to structural peace can increase a country's overall resilience and level of peace. They term these eight areas the Pillars of Peace and estimate the benefit of "perfect peacefulness" to the global economy at $9.8 trillion US dollars.

Evolution

In Part Four, our contributors ask why and how the ability to engage in peace processes evolved over generations or evolutionary time in species, individuals, groups, communities, and cultures. Furthermore, they demonstrate how peace processes compare across extant species, communities, and cultures. In Chapter 14, Douglas Fry reviews evidence that confirms *Homo sapiens*' evolved capacity to cooperate, manage peaceful relationships, and resolve disputes without violence. Reviewing findings from nonhuman animal behavior as well as archeological and nomadic forager data, he demonstrates that humans share these evolved capacities for peaceful behavior with other animals, and he connects them to the very real possibilities of abolishing war and handling disputes justly and nonviolently.

Further broadening the peace horizon in Chapter 15, Harry Kunneman recognizes *Homo sapiens*' place within a wider, evolutionary transspecies peace heritage. He does so by distinguishing three evolved social patterns into which all life forms fall and identifies one, ergopoietic relations, as the most promising route to the future evolution of transspecies peace.

Research conducted during the past decades suggests that peaceful behavior is ubiquitous in nature. In the final chapter of this section, Chapter 16, Peter Verbeek reviews and discusses peaceful behavior in a wide range of nonhuman animals. He discusses how explaining the evolution of peaceful behavior has become a chief challenge for behavioral science. Psychiatrist and environmentalist Ian McCallum points out that, "strictly speaking, there is no such thing as human nature. There is only nature and the very human expression of it" (McCallum 2012). Verbeek follows this line of reasoning and makes the case that studying the role of peaceful behavior in the survival and propagation of nonhuman animal life has direct significance for improving our understanding of the evolved abilities for peace in humans.

Shifting Paradigms: Three Dimensions of Peace and Global Issues

The work of the 23 authors united in this volume sheds new light on how species (Chapters 4, 14, 15, and 16), individuals (Chapters 2, 7, and 14), families (Chapter 6), groups (Chapters 3 and 5), and communities (Chapters 8, 9, 10, 11, 12, and 13) can, and do, make, build, and keep peace. The basic and applied work in the volume reflects a paradigm shift in behavioral science: away from a singular focus on direct peace and toward an integration of direct, structural, and sociative peace. As Fry comments on this paradigm shift, "the point is not to deny the obvious human capacity to engage in war and acts of violence, but rather to balance the traditional overemphasis on competition and violence with a brighter view of human nature that is consistent with the evidence from anthropology to zoology" (Fry this volume, Chapter 14). We add that the paradigm shift shows that *scientifically* we are finally getting serious about finding out how peace works.

Paradigm shifts in science do not come about in a social vacuum, and recent developments in the global policy arena mirror the new thinking about peace in behavioral science. Traditionally, (direct) peace has been seen as a necessary condition for policy work on global issues to succeed. For example, in a recent report from the Sustainable Development Solutions Network (SDSN) for the Secretary-General of the United Nations (SDSN 2013), the authors state, "The most important public good is *peace*." They add that "personal security, ending conflict, and *consolidating peace* are all necessary components of good governance for sustainable development" (our italics).

This one-dimensional focus on direct peace as a condition for policy work is changing to a multidimensional view of peace as part and parcel of policy work, as the case of global health policy illustrates. Like peace, health is more and more seen as a process, specifically as "a process leading to physical, mental, social, and spiritual well being" as well as a "resource for the full realization of the human potential" (Simonelli *et al.* 2014). Health is also increasingly seen as the product of respect for universal rights, including

the rights to food, housing, work, education, human dignity, life, nondiscrimination, privacy, access to information, and the freedoms of association, assembly, and movement, among others (cf. CESCR 2000, cited in Cotter *et al.* 2009). As the implementation of universal rights is meant to negate structural violence, implementing universal rights to health is an obvious aspect of structural peace. This is perhaps nowhere as apparent as in efforts to tackle climate change, which a panel of medical and health experts recently described as the greatest global health opportunity of the twenty-first century (Watts *et al.* 2015). Simply put, then, working for health is working for peace.

Like global health, sustainable development is also linked to universal rights. In a recent letter to all permanent UN missions, for example, the UN High Commissioner for Human Rights emphasized the need to make all sustainable development policies and goals consistent with international human rights law and called for efforts "to chart a fresh course, and to embrace a new paradigm of development built on a foundation of human rights, equality and sustainability" (Pillay 2015; see also Office of the High Commissioner for Human Rights 2012). The UN Secretary-General (2014) mirrors this position in a synthesis report on the post-2015 sustainable development agenda. It follows that, like working for health, working for sustainable development is working for peace.

As we mentioned at the start of this chapter, we believe that this is a promising time for peace. Paradigm shifts in behavioral science and the public policy arena are changing traditional one-dimensional views of peace into multidimensional conceptual perspectives. To move from the conceptual to the practical, we now need to work on a better understanding of the behavioral processes that foster peace through universal rights and create conditions for sustained health, sustainable development, and human flourishing. We believe that our peace ethology model can be instrumental in these efforts.

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