

---

# Adapting a Systems Approach to Child Protection: Key Concepts and Considerations

**Fred Wulczyn**  
**Deborah Daro**  
**John Fluke**  
**Sara Feldman**  
**Christin Glodek**  
**Kate Lifanda**



## **Adapting a Systems Approach to Child Protection: Key Concepts and Considerations**

---

**Fred Wulczyn, Deborah Daro, John Fluke, Sara Feldman, Christin Glodek, Kate Lifanda**

**© 2010 by United Nations Children's Fund (UNICEF), New York 2010**

**UNICEF**

**3 UN Plaza, New York, NY 10017**

**January 2010**

**This is a working document. It has been prepared to facilitate the exchange of knowledge and to stimulate discussion. The text has not been edited to official publication standards and UNICEF, UNHCR, and Save the Children accept no responsibility for errors.**

**The designations in this publication do not imply an opinion on legal status of any country or territory, or of its authorities, or the delimitation of frontiers.**

---

## Preface

Historically, particularly in international development cooperation, analysis and programming in child protection have focused on particular issues or specific groups of vulnerable children. Issues that have received attention in recent years include violence against children, alternative care, justice for children, children affected by armed forces and groups, trafficking, child labour, and child separation. While the result of vertical, issue-focused programming can be very effective in serving the specific cohort of children targeted, the approach has serious limitations. Many children have multiple child protection problems and, while fragmented child protection responses may deal with one of these problems, they rarely provide a comprehensive solution. At the same time opportunities are lost to provide more ‘joined up’ and effective support. Focusing on issues alone can result in ineffective programming, which is neither sustainable nor truly able to reach all children who are in need of protection.

UNICEF, UNHCR and Save the Children have initiated a process to complement issue-based approaches with a systems perspective in child protection. Such systems aim to protect all children, to unite all actors behind a common set of goals, and to create a long-term response that is robust, properly coordinated, and adaptable to new problems. The need for issue-based expertise and responses will not go away but it should be placed within the context of the overall child protection system.

A systems approach in child protection is new and unfamiliar to many policy-makers and practitioners. Such systems have traditionally been neither the particular focus of child protection discourse nor that of child protection “practice” or action. The question that often arises when child protection systems, or systemic work in child protection, are mentioned is: what do you mean? To help answer this and other questions, UNICEF contracted Chapin Hall at the University of Chicago, with the Child Protection Research Center of the American Humane Association, to review the academic and professional literature on systems, in order to develop a conceptual framework for the systems approach in child protection.

It is with great pleasure that we present the outcomes of this work to you. We believe that this paper makes an important and helpful contribution to recent efforts to build and strengthen national child protection systems. With input from more than fifty people from eighteen organisations, it is an important reflection on where we are now in our understanding of child protection systems. From this common platform, we look forward to ongoing work in this area by the many actors and partners that we have the privilege to work with and learn from.

## Acknowledgments

The authors would like to thank UNICEF for the support provided for the writing of this paper. We are particularly grateful to Kendra Gregson and Aaron Greenberg, of UNICEF, for their guidance throughout the project. Their input reflected their keen understanding of the complexity of the work and the importance of integrating diverse opinions.

Because of the ongoing work in this area by multiple stakeholders, our initial interviews with key members of the UNICEF reference group on child protection introduced us to various ways in which both international organizations and country and regional leaders frame the concept of systems work within the context of child protection. We would like to thank the following individuals for making time to discuss and share their work with us: Begona Arellano, Bill Bell, Bo Viktor Nylund, Brigitte De Lay, Diane Swales, Gabriella Olofsson, Guillemette Meunier, Jean-Claude Legrand, Joachim Theis, Ron Pouwels, Trish Hiddleston, Moushira Khattab, John Williamson, and Laurent Chapuis.

We would also like to acknowledge the contribution Kimberly A. Svevo-Cianci of the Child Rights and Protection Consultancy for her overall assistance and in interpreting the children's rights perspective.

Our understanding of the scope of the work effort and the ways in which academic descriptions of systems apply to various contexts and situations benefited from the careful review of earlier drafts by both those whom we interviewed as well as other reviewers identified by UNICEF. We are grateful for the candid comments we received from these reviewers and their recommended changes. Reviewers and members of the reference group include:

---

## Reference Group and External Reviewers

Begona Arellano	UNICEF Regional Office – Latin America and the Caribbean
Katy Barnett	UNICEF HQ
Bill Bell	Save the Children UK
Laura Boone	International Rescue Committee
Gary Cameron	Wilfred Laurier University
Christopher Capobianco	UNICEF HQ
Laurent Chapuis	UNICEF Regional Office - Middle East and North Africa
Matthew Dalling	UNICEF Namibia Country Office
Brigitte de Lay	UNICEF Regional Office – West and Central Africa
Margie De Monchy	UNICEF Regional Office - East and Southern Africa
Bob Deacon	University of Sheffield; Comparative Regional Integration Studies Programme of the United Nations University in Bruges
Alessandra Dentice	UNICEF Democratic Republic of Congo Country Office
Chris Desmond	Harvard University
Lena Dominelli	University of Durham
Joanne Doucet	UNICEF Nepal Country Office
Philip Goldman	Maestral International
Anne Grandjean	UNICEF HQ
Trish Hiddleston	UNICEF Regional Office - Middle East and North Africa
Alexander Krueger	Child Frontiers
Jean-Claude Legrand	UNICEF Regional Office Central and Eastern Europe and the Commonwealth of Independent States
Patricia Lim Ah Ken	UNICEF HQ
Birgithe Lund-Henriksen	UNICEF Kenya Country Office
Anthony MacDonald	UNHCR

Robin Mama	International Federation of Social Workers, Monmouth University
Guillemette Meunier	UNICEF Regional Office – South Asia
Lesley Miller	UNICEF Cambodia Country Office
Rajae Msefer Berrada	UNICEF Kyrgystan Country Office
Eileen Munro	London School of Economics
Robin Nandy	UNICEF HQ
Philip O'Keefe	World Bank
Gabriella Olofsson	Save the Children Sweden
Smaranda Popa	UNICEF Pakistan Country Office
Ron Pouwels	UNHCR HQ
Sabine Rakotomalala	Terre des Hommes
Amelia Russo de Sa	UNICEF Tunisia Country Office
Hakan Seckinelgin	London School of Economics
Sheema Sen Gupta	UNICEF Ghana Country Office
Vishanthie Sewpaul	International Association of Schools of Social Work, University of KwaZulu Natal
Stephanie Shanler	UNICEF Kenya Country Office
Justo Solorzano	UNICEF Guatemala Country Office
Paul Stubbs	Institute of Economics, Zagreb
Diane Swales	UNICEF Regional Office - East Asia and Pacific
Joachim Theis	UNICEF Regional Office - West and Central Africa
Bo Viktor Nylund	UNICEF HQ
John Williamson	USAID/DCOF
Rachel Yates	UNICEF HQ
Alexandra Yuster	UNICEF Moldova Country Office

---

## Table of Contents

Executive Summary.....	1
Our Approach.....	1
Key Concepts .....	2
Overview and Introduction.....	5
Purpose and Structure of the Paper .....	7
How Did We Go About Our Work?.....	8
What Is a System? .....	10
A System as a Collection of Components.....	10
Nested, Interacting Structures .....	11
Reciprocity and Reverberation.....	11
Functions, Structures, and Capacities .....	12
Context and Adaptation.....	13
Cooperation, Coordination, and Collaboration .....	14
Process of Care.....	15
Accountability .....	15
Governance of Complex Systems .....	16
A Systems Approach to Child Protection.....	18
The Normative Framework and Child Protection Goals.....	18
Key Components of a Child Protection System.....	21
Conclusion .....	26
References.....	28
Appendix: Annotated Bibliography.....	32
Overview .....	32
Social Work.....	32
Education.....	34
Health .....	36
International Development.....	38
Child Protection .....	41
Child Protection: Selected Papers .....	43
Deep Background.....	46

---

**List of Figures**

Figure 1. Child Protection Systems: Context and Dynamics.....	19
Figure 2. Child Protection Systems: Actors, Context and Components .....	22
Figure 3. Child Protection Systems: Components and Actors.....	29

---

# Executive Summary

Increasingly, international organizations such as UNICEF, Save the Children, and United Nations High Commissioner for Refugees (UNHCR) are turning to what is referred to as a *systems approach* in order to establish and otherwise strengthen comprehensive child protection efforts. As guided by the Convention on the Rights of the Child (CRC), the systems approach differs from earlier child protection efforts, which have traditionally focused on single issues such as child trafficking, street children, child labor, emergencies, institutionalization, or HIV/AIDS. Although such efforts have produced substantial benefits, this diffused approach often results in a fragmented child protection response, marked by numerous inefficiencies and pockets of unmet need.

In 2009, UNICEF contracted with Chapin Hall at the University of Chicago and the Child Protection Research Center (CPRC) of American Humane Association to review these existing efforts and expand the application of system thinking to the task of child protection. Specifically, our project involved reviewing literature from various disciplines that illustrate the potential value of a systems approach to child protection and conducting interviews with key stakeholders engaged in creating or monitoring such systems at either the international or national level. Thus, the paper builds on a broad body of work and conceptual thinking already completed by UNICEF, Save the Children, and UNHCR, among other organizations. Of particular relevance for this project has been a paper known within UNICEF as the “Bucharest paper” developed following a 2008 meeting in Bucharest titled “Global Child Protection Systems Mapping Workshop.” Although this workshop described the minimum functions and structures of a children protection system and placed this system alongside other key governmental structures, the participants at the Bucharest meeting concluded that a common understanding of child protection systems does not yet exist within the field at large and that such common understanding would be an important prerequisite for moving child protection efforts forward.

---

## Our Approach

In building this common understanding, Chapin Hall and CPRC staff reviewed a wide range of literature pertaining to systems, drawing on what the organizational development, social work, education, health, international development, and child protection fields have to say generally about systems theory and systems building. In addition to reviewing the academic literature from these disciplines, we also reviewed a variety of reports published by multilateral organizations and NGOs as well as UNICEF’s regional and country reports addressing the issue of child protection. These written publications were augmented by extended interviews with key stakeholders identified for us by UNICEF as having experience with building and assessing child protection and related systems at the national, regional, and international levels. During these the interviews, we provided respondents with a copy of the Bucharest



paper when needed. For the interviews, we asked respondents to talk about the paper and the extent to which they agreed and disagreed with its substance. We also asked them to identify any gaps in the paper and to share their own views regarding the systems approach.

The paper begins by placing the systems approach to child protection within the broader context of system theory with the goal of identifying, as clearly as possible, the key elements of any system and the underlying tensions and processes that determine a system's ultimate dynamics. With this foundation in place, the paper then outlines a set of characteristics commonly used by stakeholders to define and make choices about the role of a child protection system generally. This two-stage approach helps draw the distinction between what a *system is* in general versus what a child protection *system does* or could do. Our review found enormous variation in what stakeholders perceived as appropriate activities for a child protection system and in the degree to which responsibility for such activities were shared with other community and governmental entities. Ultimately, how these choices are defined and resolved are of central interest to those constructing a specific child protection system. For purposes of this paper, however, we have not placed value on any specific choice or structure. Every family, community, and nation has a child protection system in place that reflects the underlying cultural value base and diversity within that context. As such, a particular child protection system manifests a combination of cultural norms, standards of behavior, history, resources, and external influences that over time reflect the choices participants have made regarding their system. Our goal is not to define these decisions but rather to highlight the key components that will be found in any child protection system and to encourage a robust and transparent conversation among key stakeholders as to how the definition of these components will impact child protection.

---

## Key Concepts

Several elements of all systems apply to the development of child protection systems. These elements include the following:

- Any system involves a collection of components or parts that are organized around a common purpose or goal—this goal provides the glue that holds the system together.
- All systems reflect a nested structure—in the case of child protection, children are embedded in families or kin, which live in communities, which exist within a wider societal system.
- Given the nested nature of systems, specific attention needs to be paid to coordinating the interaction of these subsystems such that the work of each system is mutually reinforcing to the purpose, goals, and boundaries of related systems.
- All systems accomplish their work through a specific set of functions, structures, and capacities. However, the characteristics of these functions, structures, and capacities will be determined by the context in which the system operates.

- All change within a system framework is bi-directional—changes to any system, for whatever reason, will change the context and changes in the context will alter the system.
- Well-functioning systems pay particular attention to nurturing and sustaining acts of cooperation, coordination, and collaboration among all levels of stakeholders, including those managing key activities as well as those performing key functions.
- Systems will achieve their desired outcomes when they design, implement, and sustain an effective and efficient process of care in which stakeholders are held accountable for both their individual performance as well as the performance of the overall system.
- Effective governance structures in any system must be flexible and robust in the face of uncertainty, change, and diversity.

When thinking about a systems approach to child protection, it is important to remember the highly interactive nature between the system and its context. In some socio-cultural contexts, formal system structures may not be considered necessary or appropriate because parents, extended family members, and other members of the community protect children through largely informal mechanisms. In other contexts, more elaborate system structures are needed to coordinate the various actors who have been assigned responsibilities within that system. Regardless, a systems approach is not prescriptive. Child protection systems work best when symmetry exists between the system’s goals, its structures, functions, and capacities and the normative context in which it operates. Children are effectively protected by such systems when both the system and the normative context in which it is embedded place highest priority on assuring children are free from violence, abuse, exploitation, and other forms of maltreatment.

In building its child protection system, local stakeholders will be well served by considering the following planning parameters.

- The boundary (i.e., the structural relationship or embeddedness) between a child protection system and other formal systems (e.g., education, health, mental health) or informal systems (e.g., family, kin, community) is an important feature of the child protection system that has implications for how one goes defines functions, capacities, the process of care, governance, and accountability.
- Externalities and emergencies can have notable impacts on the capacity of any child protection system. Well-designed systems (i.e., those with strong infrastructure) will be better prepared to manage externalities and emergencies; externalities and emergencies may lead to stronger systems in the long run, provided the actors involved respond in a cooperative manner.
- To the extent that systems take shape around the goals of the system, the impact of the child protection system on the status of children (i.e., the well-being of children) is a central dynamic that affects how the system evolves through time. Ideally, where there is a gap between the goals of the system and whether children are being protected, efforts within the system will turn to bringing what the system accomplishes into line with system goals.

- With respect to the process, all child protection systems have to have a means to identify children whose rights have been violated. If the normative framework establishes a boundary around the notion of who is in need of protection, the process of care clarifies the myriad ways children and families may come to the system's attention, including those ways that rely on voluntary engagement and those that rely on some type of reporting mechanisms. The process of care also incorporates assessment strategies, case planning, treatment, and follow up, with the specific processes shaped by whether the underlying services are promotion, prevention, or response.
- Because the child protection system serves children coming from diverse circumstances presenting equally diverse protection needs, it needs a service continuum matched to this diversity. The holistic view of children, families, and communities that is one hallmark of the systems approach to child protection expands what it means to respond to protection needs by adding promotion and prevention as points along the service continuum depending on how other systems with potentially overlapping mandates are structured in relationship to the child protection system.
- When it exists as an organization, the child protection system has to maintain a level of capacity commensurate with what the system requires. Capacity refers to human resources, funding, and infrastructure. A coherent child protection system has the means by which to compel the use of resources towards the goals of the system.

Child protection relies on people and organizations properly equipped to carry out the work. How children, families, communities, states, and formal and informal organizations are assembled around a common purpose is fundamentally a question about the past, the future, and whether the system in place today meets the goals set forth. Specific choices will reflect local preferences, customs, pre-existing structures, laws, and the will of the actors who take on the challenge of protecting children. Within the highly contextualized approach to supporting child protection systems the most important question is: Are children being protected in a manner consistent with their rights? If not, then the focus shifts to why not and how the existing system can be strengthened so as to fulfill those grander expectations.

---

# Overview and Introduction

Every society has to think deliberately about how it will protect its children. Normative standards (laws, culture, religion) may shape how members of a community choose to protect children and the choices made may well affect the very nature of childhood. Nevertheless, the essential question remains: how will children be protected from violence, abuse, exploitation, and neglect, as well as manmade and natural emergencies, as a matter of a child’s fundamental rights?

When it comes to protecting children, the family (including kin) plays a central role, particularly during the child’s earliest days.<sup>1</sup> Children are also part of a broader community where their relationships, engagement, and roles deepen over time and take on increased significance. For this reason, protecting children is both a private and a public responsibility.

Around the world, there is a general recognition that childhood confers a special status upon children, including recognition of their vulnerability and need for protection. How this protection should be and is provided, however, is far from universal. Differences in child protection responsibilities and strategies are tied to geography, political and social history, religion, wealth, social structure, and a more general sense of purpose that blends cultural beliefs about how to protect children with everyday realities. Although there is no one best way to protect children, serious choices are involved and every society stands to do better when the choices it makes are grounded in the rights of children.

For a wide variety of reasons, children are not always sufficiently protected. Sometimes the risks are present within the family sphere, when parents and other family members are either unwilling or unable to protect their children. Other times, the risks are found in the economic, social, and political externalities of the communities in which families live. At yet other times, the risks are situational, an artifact of the fact that children live in a world where emergencies—both natural and man-made—disrupt daily routines to such an extent that children are placed in harm’s way. Moreover, any or all of these risks may coincide. In each of these situations, it is possible to protect children, but doing so requires a deliberate, coordinated effort on the part of the involved actors regardless of whether the actors are families (including kin), communities, states, NGOs, international organizations, or those other stakeholders concerned with the best interests of children.

Increasingly, international organizations such as UNICEF, Save the Children, and United Nations High Commissioner for Refugees (UNHCR) are turning to what is referred to as a *systems approach* in their effort to establish and otherwise strengthen comprehensive child protection programs. As guided by the

---

<sup>1</sup> The preamble to the Convention on the Rights of the Child establishes the family as “the fundamental group of society and the natural environment for the growth and development of all its members and particularly children . . .”

Convention on the Rights of the Child (CRC), the systems approach builds on but differs from earlier child protection efforts in at least one significant way.<sup>2</sup> Historically, global efforts at child protection have focused on single issues such as child trafficking, street children, child labor, emergencies, institutionalization, or HIV/AIDS (Save the Children, *A Rough Guide to Child Protection Systems*; UNHCR, *Inter-agency Expert Consultation on Child Protection Systems*, 2009; United Nations Study on Violence Against Children, 2007), often with substantial benefit. Nevertheless, the single-issue approach can fragment the child protection response, resulting in potential inefficiencies and pockets of unmet need. For example, strategies that target street children can focus on addressing the immediate safety needs of these children or it can address the fact that many of these children are on the street because they cannot live safely at home. One cannot make substantial inroads in reducing the number of street children unless one also addresses the risk factors children face in their own homes. Rather than treat each child safety concern in isolation, the systems approach promotes a holistic view of children and child protection that necessarily engages the full range of actors involved in protecting children's rights.

In this paper, prepared at the request of UNICEF, we explore how the systems approach to child protection fits with shared responsibility for children's protection. The paper draws from work already completed by UNICEF, Save the Children, and UNHCR, among others organizations.<sup>3</sup> With specific reference to the work of UNICEF, the request for the paper emerged from what is known within UNICEF as the "Bucharest paper," developed following a meeting in Bucharest titled "Global Child Protection Systems Mapping Workshop."<sup>4</sup> Those attending this workshop were charged with three tasks: (1) develop a diagram of service types falling within the purview of a child protection system, (2) agree on the key elements and supporting capacities that are needed to successfully implement these service types and (3) reach consensus on the list of outcomes to which a child protection system should contribute.

The workshop was successful in many respects. Via a schematic diagram of a child protection system, the group identified certain core elements or components of a child protection system. With regard to what a child protection system does, the group was able to describe minimum functions and structures along a continuum of services that incorporates both prevention and response. The schematic also placed

---

<sup>2</sup> Article 19 of the CRC directs "States Parties . . . to protect children from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse." States Parties are further directed to pursue legislative, administrative, social, and educational measures deemed appropriate, including the development of social programmes to support children and those who care for them. Finally, Article 19 goes on to call for other forms of prevention as well as procedures for "identification, reporting, referral, investigation, treatment, and follow-up of instances children maltreatment."

<sup>3</sup> See, for example, *A 'Rough Guide' to Child Protection Systems* (draft) prepared by the Save the Children (2009); *Summary Note: Inter-agency Expert Consultation on Child Protection Systems* prepared for the European Commission by UNHCR (2009); *Child Protection Programme Strategy Toolkit*, UNICEF East Asia and Pacific Regional Office, 2009; *Basic Prototype: National Child System*, Inter-American Children's Institute, 2003.

<sup>4</sup> UNICEF. (2009). UNICEF Global Child Protection Systems Mapping Workshop: Summary Highlights. New York City: UNICEF.

the child protection system alongside other government structures that routinely engage in child protection tasks (education, health, social welfare, security, justice).

Nevertheless, the work needed to explicate a systems approach to child protection was left somewhat incomplete. In particular, the participants at the Bucharest meeting concluded that a common understanding of child protection systems does not yet exist within the field at large. To address those concerns, UNICEF opted to further elaborate and develop its approach to defining child protection systems. This paper is a part of that process and focuses on (1) the evidence from various disciplines that illustrates the value and potential of a systems approach to child protection by means of a literature review and (2) presents a refined vision of the key arguments in support of systems approach as well as a (revised) illustration of child protection that can be used to explain the concept to others.

---

## **Purpose and Structure of the Paper**

The paper is organized as follows. We start by placing the systems approach to child protection into a broader context. Specifically, the CRC enumerates the rights of children and functions as an important guide for developing local child protection systems. Second, UNICEF's child protection strategy provides a more refined set of expectations as to what constitutes a child protection system. In addition, as already noted, a number of other efforts have been or are underway that articulate what it means to take a systems approach to child protection. This paper summarizes these efforts and identifies crosscutting themes.

At the same time, we examine the question: What is a system? The word system is used widely but it is often unclear as to whether everyone who uses the term does so with the same meaning in mind. For example, according to Save the Children's *A Rough Guide to Child Protection* (2009), some see child protection systems "as a set of inter-linked components, whereas others see child protection systems more narrowly as a "set of steps for handling individual cases" (p. 12). As a remedy to the problem of shifting usage, we draw on the literature to offer a reasonably concise definition of what a system is, although in doing so it is not possible to resolve differences that exist within the literature itself.

Defining the term first helps draw the distinction between what a *system is* in general versus what a child protection *system does*. In our discussions with stakeholders and from reading a range of literature, there appears to be much greater diversity of opinion regarding the latter. That is, when we asked stakeholders what they would put "inside the child protection system" and what they would leave out (i.e., what they expect a child protection system to do), stakeholders often differed in their response. For example, some experts believe that school truancy is an issue the child protection system ought to address. Others view truancy as an issue for the schools to address. In the end, the choice as to whether a concern like truancy is a child protection issue is critically important because it influences how the system takes shape in a given context. However, why and how this type of specific choice is made, while of general interest, is beyond the scope of the paper.

To help make the definition of a child protection system explicit, a fundamental assumption of our approach is that whether one sees systems as formal or informal, every family, community, and nation has a child protection system in place. This assumption is a useful way to draw a distinction between the recognition of child protection systems and their underlying cultural value base and diversity. From this assumption, it follows that the local manifestation of a child protection system is made up of a combination of cultural norms, standards of behavior, history, resources, and external influences that over time reflect the choices participants have made regarding its system. However, it also follows that to be a system, all child protection systems will exhibit certain components that can be identified and that can potentially be changed. One uses a system approach in order to reveal the system in place.

---

## How Did We Go About Our Work?

The paper was assembled with two types of input—written documents in both the academic and practice fields and interviews with key stakeholders. Because UNICEF is interested in connecting the shift to a systemic response to child protection to a body of knowledge, we reviewed a wide range of literature pertaining to systems. As such, the literature review reflects what the social work, education, health, international development, and child protection fields have to say generally about systems theory and systems building. The review relies mainly though not exclusively on the academic literature. Key search terms included, but were not limited to systems theory, systems perspective, and systems approach, each matched with terms associated with the disciplines under review (i.e., “social work,” “medicine,” “public health,” “international development,” “child protection,” etc). In addition to reviewing the academic literature, we also reviewed a variety of reports published by multilateral organizations and NGOs as well as UNICEF’s regional and country reports addressing the issues of child protection.

In conducting our review of both the academic and practice literature, we proceeded through two stages. We started by reviewing the literature on general systems theory. Systems have been studied for quite some time in disciplines as diverse as mathematics, biology, physics, and computer sciences.<sup>5</sup> Out of that work, a general sense of what a system is has emerged. For our purposes, we focused on basic themes with more or less direct applicability to child protection. We then reviewed the literature pertaining to the use of *systems thinking* in more applied settings such as health care, education, law, social work, and child welfare. Again, the goal was to find common threads that illustrate the virtues of taking a systems approach to child protection.

Our second source of input involved interviews with key stakeholders identified for us by UNICEF. In a global context, UNICEF is one of several international organizations working to promote a systems approach to child protection. With that in mind, UNICEF asked that we speak with a wide range of stakeholders so as to gain the benefit of their practical experience and insights. Prior to the interviews, we

---

<sup>5</sup> We reviewed some of this literature, but do not discuss this literature in detail. However, as part of the supplementary bibliography provided at the end of the paper, we do include a list of useful references.

provided respondents with a copy of the Bucharest paper when needed. For the interviews, we asked respondents to talk about the paper and the extent to which they agreed and disagreed with its substance. We also asked them to identify any gaps in the paper. Finally we asked them to share their own views regarding the systems approach. Several of the individuals we spoke with provided us with additional documents for review.

As a last step in the process, UNICEF distributed both an early outline and the penultimate draft of the paper to a reference group and a group of external reviewers for comment. In turn, those comments were used to shape the final draft.



---

# What Is a System?

To understand what a systems approach to child protection is, one has to start with the definition of a system. References to systems are ubiquitous; many if not most endeavors refer to systems in one way or another. To focus the presentation, the discussion here is based on key cross-cutting themes that emerged from the literature, with a particular emphasis on health care, education, and social service systems.

---

## A System as a Collection of Components

Generally, the systems literature defines a system as a collection of components or parts that are organized (i.e., connected to each other) around a common purpose or goal (Save the Children, 2009; EAPRO, 2009). The common purpose is critical to how one defines the system because the purpose is related to how one identifies the structures, functions, and capacities needed to meet the purpose (see page 12). Systems come in various forms including mechanical, transportation, and biological. Systems also operate at different levels, with each level made up of components that are specific to the level in question.

The outcomes one uses to assess how well a system is doing are also derived from its purpose. In the case of social systems, the purpose attached to the system serves to legitimate the system within a particular normative framework of “laws, policies, and commitments” (EAPRO, 2009). When citizens support the system because of their affinity for its goals, the system is able to command the resources needed to carry out its functions. Ideally, because system components are assembled with goals in mind, system adequacy (i.e., is the system working?) can be assessed by determining whether the goals are accomplished. The latter feature helps to establish the logical need for a knowledge base and accountability mechanisms within a system. The connection between system components and their adequacy relative to a set of goals is also tied to the question of change. Where the in-situ system fails to meet normative expectations, efforts to change the system may be more easily justified. The manner in which change is pursued depends to a very large extent on the nature of the goal and what systemic failure means within a given normative context. When outcomes fall far short of expectations (typically expressed as a goal or purpose), the level of effort expended to close the perceived gap will differ depending on whether one is talking about sanitary conditions in a refugee camp versus the failure to meet caseworker visitation requirements for children placed in out-of-home care. Senge (1990) in his treatise on system thinking, refers to this condition as *creative tension*.

---

## **Nested, Interacting Structures**

All systems are nested within other systems (Mizikaci, 2006). That is, a given system (e.g., the child protection system) has embedded within its boundaries other systems (e.g., foster care, child protective services reporting, case management). The nested quality of systems may vary by discipline, but the central idea remains: subsystems exist at various levels and are embedded within the larger system environment (Mulroy, 2004; Lemke & Sabelli, 2008). For example, educational systems are structured such that the classroom is nested within individual schools, which are nested in a larger educational system (Bowen, 2004). Health systems, too, tend to include various levels of care that fit one inside the other (Bennett & Eichler, 2006). Social service systems often have this same quality (Dale & Davies, 1985; Cohen, 2002).

As a system, the child protection system also exhibits a nested structure: children are raised in the context of a family, which has a duty to protect their children. The family itself is nested within family system, which is nested within a local community (itself a system) and the wider social/societal system (Stevens, 2008; Mulroy, 2004). Sometimes the nested structure of children, families, and communities is portrayed as a series of concentric circles (UNICEF EAPRO, 2009). The nested, interdependent nature of children, families, and communities is a key element of the ecological perspective advanced by Bronfenbrenner (1979), among others. With respect to child protection systems, actors at each level (child, family, community, etc.) play a vital role in shaping what the system looks like in its totality. Moreover, the strength of the system depends on effective interaction across various system levels.

---

## **Reciprocity and Reverberation**

Systems and system components interact with each other, with the effects of these interactions reverberating throughout the system as a whole. For example, Lemke and Sabelli (2008) describe the importance of understanding the interplay between the educational system and other drivers of change, such as research (knowledge building), parent groups, technology, and externalities (i.e., shifts in administration, funding, etc). Social work, as a field of practice, has long emphasized the extent to which agents in a system behave in ways that continually affect one another (Stevens, 2008). In their discussion of health systems, Begun, Zimmerman, and Dooley (2003) talk about how relationships among agents in complex systems are “massively entangled,” altering and being altered by other actors in the system.

Systems components interact with each other and other systems, which make up the environment or context of a given system. The interaction between parts of the system requires coordination and other actions that are organized or formed in relation to the goals of the system (UNICEF, 2008). Each of the (sub)systems adapts to and influences the other parts (i.e., bi-directional influences are present). Given the nested, interacting nature of systems, there has to be an integration of values across systems. That is,

the work of each system has to be mutually reinforcing with respect to the purpose, goals, and boundaries of the other systems.<sup>6</sup>

An important question in this context has to do with basic boundaries: Where does the child protection system end, in a manner of speaking, and where does the health care system begin? In some cases, the lines separating the systems are quite clear; in other instances, the division of responsibility is less clear. Where the boundary is set is a matter of local choice, determined in part by preexisting structures, local culture, and other aspects of the normative framework. The system approach makes it clear that there is a choice to be made and that in making a particular choice, one has to understand how other parts of the system are affected.<sup>7</sup>

---

## Functions, Structures, and Capacities

Systems do “things” in accordance with their purpose and goals. A system accomplishes its work through functions, structures, and capacities. System *functions* are generally thought of as organized activities that promote the achievement of system goals. In the particular case of human service systems, some examples of system functions include the delivery of particular services; provision of technical support to system actors; monitoring of various system activities; and establishment of standards of care or professional behavior, among others (Cohen, 2002; Begun, Zimmerman & Dooley, 2003; Hmelo-Silver & Pfeffer, 2004; Bennett & Eichler, 2006; Glisson, 2007).

With specific respect to child protection systems, system functions have been described as falling into one of two categories: those related to case decision making (e.g., assessments, gate-keeping, investigation, placement, etc.) and those designed to support system performance (e.g., capacity building, research and evaluation, allocation of resources, cross-sector coordination, etc.; Save the Children, 2009). Although child protection systems typically serve a wide variety of functions, the effective and efficient operation of the system hinges, at least in part, on a clear statement of how functions and systems are related (Skinner & Bell, 2007).

The definition of structure is somewhat less precise. Whereas system functions refer to what a system does to achieve its goals, system *structure* sometimes refers to how the fundamental elements of the system are connected—that is, the framework or context within which system functions (e.g., services) are carried out (Hmelo-Silver & Pfeffer, 2004; Green & Ellis, 2007). In the field of international development, the notion of *system structures* refers to the framework within which agents in the system

---

<sup>6</sup> Here again we see the distinction between how a system works and what the system does. It may be that, in certain contexts, the goals and values used to govern a system are at odds with prevailing opinion. Where this is true, somehow new goals and values will have to be introduced. Once that happens, however, the parts of the system will have to work in concert with each other.

<sup>7</sup> For example, the juvenile justice and child welfare systems clearly share a boundary. Indeed, the efficacy the child protection system is often connected to whether children are ultimately served by the juvenile justice system (Save the Children, 2009).

interact and form relationships (Brunner, 2007). Structure is at other times used to describe more concrete features of a system, such as physical space. For example, the structure of the education system includes physical space in which children can learn (i.e., schools).

For the field of child protection, the structure of the system has been described as including laws, policies, standards, regulations, and the mechanisms to facilitate coordination across service sectors (Save the Children, 2009). More fundamentally, the structure of the child protection system has been discussed in terms of “the organization or structure of institutions . . . They include the different departments and agencies and their capacities” (UNICEF, 2009, p. 14). This latter definition comes closer to definitions of structure that regard structure as the relationship between components within the system (Senge, 1990).

System functions and structures are, in many ways, interdependent. The ability of system functions to be faithfully executed rests, in large part, on the strength of system structures (Gaad, 2006). Indeed, scholars have discussed system functions and structures such that one function of the system is to monitor and promote the enhancement of system structures (Begun, Zimmerman, & Dooley, 2003).

*Capacity* refers to the facilities, material resources, skilled personnel, and funding needed to operate the system. These capacities have to be allocated in relation to the purpose of the system. One important capacity is decision making. At an organizational level, decision making is used to allocate capacity to meet the purpose of the system. Procurement of capacity is another important aspect of what an organization has to do. Structures and capacity for monitoring, management, and decision making are especially critical, particularly in view of the need to interact with and adapt to any externalities present in the environment.

Arguably, the extent to which a system is able to achieve its goals is more heavily dependent on capacity than any other factor. Although child protection systems across the world often struggle to build and maintain adequate capacity, there is consensus among scholars, advocates, and program planners that this particular feature of child protection systems is critical to the achievement of system goals and the protection of children (Save the Children, 2009; UNICEF, 2008; Mathew & Bross, 2008; Keeping Children Safe Coalition, 2006; Allen Consulting Group, 2008; Darlington, Feeney & Nixon, 2005; Kernan & Lansford, 2004).

---

## **Context and Adaptation**

It is important to note that systems do not exist in a vacuum; rather systems are embedded within a broader context or environment (Rothery, 2007). The fields of social work and education are particularly mindful of this theme, though the child protection literature also recognizes the embedded nature of systems. Glisson (2007), discussing social work systems, and Gaad (2006), discussing educational systems, stress that systems are inextricably linked to the social, economic, religious, and other contexts in which the system is located. Other authors have cited the local context as an important component to consider when embarking on system evaluation and reform efforts (Lemke & Sabelli, 2008; Mizikaci, 2006).

The literature emphasizes that the systems environment is in a state of “constant and discontinuous change” (Stevens, 2008; Leischow et al., 2008; Begun, Zimmerman, & Dooley, 2003). Mulroy (2004) argues that it is the structures within the system that allow them to adapt to changing conditions, although specific structures, functions, and capacity have to be built into the system in order to detect the need for change and promote positive adaptations. This idea is also proposed by Begun, Zimmerman, and Dooley (2003) who posit that complex adaptive systems provide “multiple and creative pathways for action,” making them robust and adaptive structures within a changing environment, provided the structure and capacity for change management exist.

Systems adapt to their multilevel context (environment) in ways that are generally favorable to their continued operation and success. However, the context in which the system operates poses certain risk and protective factors relative to the system. For example, the strength of existing systems relative to risk factors is protective for the system and the children it serves. At the same time, externalities such as emergencies pose risks if the nature of the risk is such that current structures and capacities are inadequate given the nature of the externality. In relation to the context, the influence is bi-directional: Changes to the system, for whatever reason, change the environment; changes to the environment alter the system (a process known as feedback in the systems literature). Planning, or the capacity to anticipate how the environment will change so that structures, functions, and capacities adapt to changing contingencies, is essential.

Contextual influences include children, the family, and the community as well as larger socio-economic and political influences. For example, in China, children left behind by parents leaving rural communities in order to find work in urban areas are straining the capacity of the local child protection system. Historically, communities were able to care for those few children whose parents, for whatever reason, could not care for them. With the shift from a farm to a manufacturing economy in the context of globalization, new migration patterns and the lack of adequate housing have disrupted normal family patterns. As a consequence, child abandonment has increased along with the need for a more formal system to address the situation. Systems have to adapt to the realities these externalities present. The structures, functions, and capacities used to meet the various environmental challenges are specific to the nature of the challenge, which in this case was a change in the demand for a particular form of care.

---

## **Cooperation, Coordination, and Collaboration**

Systems are composed of a multiple actors working at multiple levels, from the individual level to the level of transnational organizations. Though these organizations engage their role in the systems by means of a diverse set of activities and behaviors, each is working toward a common goal as part of the system (Leischow et al., 2008; Ivery, 2007). Systems literature discusses acts of cooperation, coordination, and collaboration as pivotal to the successful functioning of systems (Leischow et al., 2008; Cohen, 2008; Ivery, 2007).

Indeed, Meyer and Rowan (2007) argue that a *lack of* coordination between and within education structures and institutions results in resistance to change and a reverberating weakness in the education

system overall. Horwath and Morrison (2007) elaborate the continuum of relationships that exist among child protection organizations from low-level cooperation to the highest levels of collaboration: coalition and service integration.

Though it is the trend to encourage increased levels of collaboration among child protection services at the agency level, it is equally important to foster relationships and build interpersonal networks at all levels including service providers and the community (Horwath & Morrison 2007).

---

## **Process of Care**

It is often the case that assessment of system functioning focuses heavily on structural aspects of the system: the extent to which the necessary infrastructure is in place for actors to perform their designated roles. However, studies of service systems and the extent to which they achieve the outcomes for which they were designed reveal that it is the process of care that promotes an effective and integrated preventive approach to child protection and delivers better overall service to clients (Green & Ellis, 2007; Allen Consulting Group, 2008). Specific elements of process are also delineated in the CRC (e.g., identification, reporting, referral, investigation, treatment and follow-up) and underscore the importance of addressing issues of child participation and child rights within the context of how these decisions are framed and ultimately made.

According to the Child Protection Programme Strategy Toolkit (2009), process components refer to how the system functions and the overall management of it. The process refers to the day-to-day factors associated with actual practice or operational dynamics. “Specific elements of a process might include the organizational culture, guidelines and protocols, workflow and communication and feedback systems as well as the ways in which the different parts of the structure interact together (p.14).”

In line with the findings noted above, the UNICEF Toolkit notes that, “...the functional agenda of the system is frequently determined by what the process enables” (p. 14).

There is apparent consensus in the literature around the necessity of a clear process of care. Processes of care, as they pertain to child protection, have the advantage of protecting children, the individuals working to protect children, and the organizations overseeing those activities (Keeping Children Safe Coalition, 2006). Indeed, processes of care become particularly important with respect to child protection work with vulnerable populations, and for those whose protection falls to informal systems that may be less likely to have highly developed protocols (Higgins & Butler, 2007).

---

## **Accountability**

The definition of accountability as it pertains to systems can be as elusive as the definition of systems themselves. Fundamentally, *system accountability* refers to mechanisms or operations designed to ensure that system goals are met. Accountability is mentioned as frequently in the literature as capacity is (Brinkerhoff, 2004; Allen Consulting Group, 2008; Mansell, 2006; Save the Children, 2006; Ruger, 2006;

Save the Children, 2009). Maintaining accountability is itself a key capacity (e.g., information has to be gathered, held onto in some fashion, and then interpreted). In particular, holding actors responsible for adhering to policies, procedures, and standards is a key part of the accountability process (Save the Children, 2009).

Brinkerhoff (2004), in his discussion of accountability in health systems, highlights three applications of accountability: financial accountability, performance accountability, and political/democratic accountability, each of which is relevant to child protection systems.

Financial accountability refers to “tracking and reporting on allocation, disbursement, and utilization of financial resources, using the tools of auditing, budgeting and accounting” (Brinkerhoff, 2004, p. 373). Performance accountability “refers to demonstrating and accounting for performance in light of agreed-upon performance targets” (Brinkerhoff, 2004, p. 374). Related to both of these, yet more difficult to operationalize, is what Brinkerhoff (2004) calls political/democratic accountability, which “has to do with ensuring that government delivers on electoral promises, fulfills the public trust, aggregates and represents citizens' interests, and responds to ongoing and emerging societal needs and concerns” (p. 374). In many ways, it is the application of accountability that is most closely aligned with the overarching rights framework within which the current international discussion of child protection systems is situated.

---

## **Governance of Complex Systems**

Several different terms are used to describe the governance of complex systems. For example, research on sustainable development uses the concept of “adaptive governance,” health researchers use the phrase “stewardship,” and child protection scholars employ the idea of “integrated governance.” At a minimum, these terms describe the governance of a multiple and diverse set of actors operating at various levels within a constantly, if not rapidly, changing system environment. (Lemos & Agrawal, 2006) The literature on sustainable development downplays the leadership role of government and market actors, instead focusing on connections between, “individuals, organizations, agencies, and institutions at multiple organizational levels.” (Folke, et al., 2005) The health literature takes an alternative approach, emphasizing the government’s role to provide guidance and oversight to the whole health system including public and private actors (WHO, 2007). A recent study of stewardship in developing health systems commissioned by the Rockefeller Foundation emphasized the role that national governments must play as effective stewards of the complex relationships that exist between private and public entities working within their country’s health system. (Lagomarsino, Nachuk, & Kundra, 2009).

The field of child protection also acknowledges the need for collaboration and cooperation among a wide range of actors at various levels in the child protection system. (Allen Consulting Group, 2008; UNICEF, 2008; Save the Children, 2009; Inter-American Children’s Institute, 2003) These actors range from the supranational (such as UNICEF) to nation, state, community, NGO, family, and individual children. The relationships between these actors *may be* characterized by cooperative, as opposed to individual, action. In “Inverting the Pyramid: Enhancing Systems for Protecting Children,” the authors describe this

relationship as one of mutuality, “in terms of consultation as well as shared responsibility and accountability for policy and program development, planning, implementation and evaluation.” (Allen Consulting Group, 2008) Nevertheless, it is important to remember that because actors within the system see the system from different perspectives (often as a result of having different roles), have different experiences, occupy different positions, the view of the system (e.g., system boundaries, problem focus, and system purpose) may also differ (Foster-Fishman & Yang, 2007). In turn these differing perspectives may affect how actors respond to conditions affecting the system. For example, as a general rule (although the extent to which this is true depends on the context), adoption agencies may have a view toward international adoptions notably different from the position taken by national governments even though the public and private sectors are united around the goal of improving the well-being of children. Moreover, the perspective within the public or nongovernmental sector may differ, again depending on the role and position of the actor within they system.

Whatever the terminology used, there seems to be agreement that effective governance models must be flexible and robust in the face of uncertainty, change, and diversity. Ideally, learning, innovation, and institutional linkages within complex systems should emerge (Simonsen 2007; Lemos & Agrawal 2006; Folke et al. 2005).



---

# A Systems Approach to Child Protection

By definition, a child protection system has certain structures, functions, and capacities, among other components that have been assembled in relation to a set of child protection goals (Save the Children, 2009; UNICEF 2008). In this section, we articulate a set of specific structures, functions, capacities, and other related system components. Our aim here is to develop a list of components that is comprehensive, but not necessarily exhaustive. When thinking about a systems approach to child protection, it is important to remember the highly interactive nature of the parts in relation to the whole in a given context. Minimum requirements depend to some extent on the system's scope. In some socio-cultural contexts, formal system structures are not necessary or appropriate because parents, extended family members, and other members of the community protect children through largely informal mechanisms. In other contexts, more elaborate system structures are needed to coordinate the various actors who have been assigned responsibilities within that system. That is to say, a systems approach is not prescriptive. Instead the language is meant to take on a functional hue—In what ways are children being protected? What is the boundary between the child, parent, and larger community when it comes to judging whether a child is being protected? What is the mechanism or process used to determine whether a violation of children's rights has taken place? Systems work best when symmetry exists between the system's goals, its structures, functions, and capacities and the normative context in which it operates. Children are effectively protected by such systems when both the system and the normative context in which it is embedded places the highest priority on assuring children are free from violence, abuse, exploitation, and other forms of maltreatment.

---

## The Normative Framework and Child Protection Goals

With regard to child protection, the systems approach starts with a purpose or goal. Goals are seen as starting points in large measure because actors within the system are joined together through a sense of common purpose. To understand/interpret how the parts of the system function together, whether at the level of informal community structures or at the level of multinational organizations, one has to identify the common purpose toward which the effort in the system is being placed.

As depicted in Figure 1, child protection goals emanate from the normative framework embedded in the context in which the child protection system operates. From an assessment/mapping perspective, child protection systems differ with respect to the normative framework a given culture draws upon. The normative framework need not be codified in law or other formal instruments, although that is increasingly the case in part because of increasing acceptance of the CRC. Among other things, the

consensus behind the expressed rights of children legitimates the pursuit of child protection as a deliberate aim of the state, even though child protection is not solely the responsibility of the state. Without such legitimacy, advocates for child protection systems may lack the institutional (i.e., political) leverage needed to define its scope, except by some other, less formal means. The symbiosis between legitimacy and system structures, at any level (i.e., formal or informal) is dynamic and an inextricable feature of the systems approach.

**Figure 1. Child Protection Systems: Context and Dynamics**

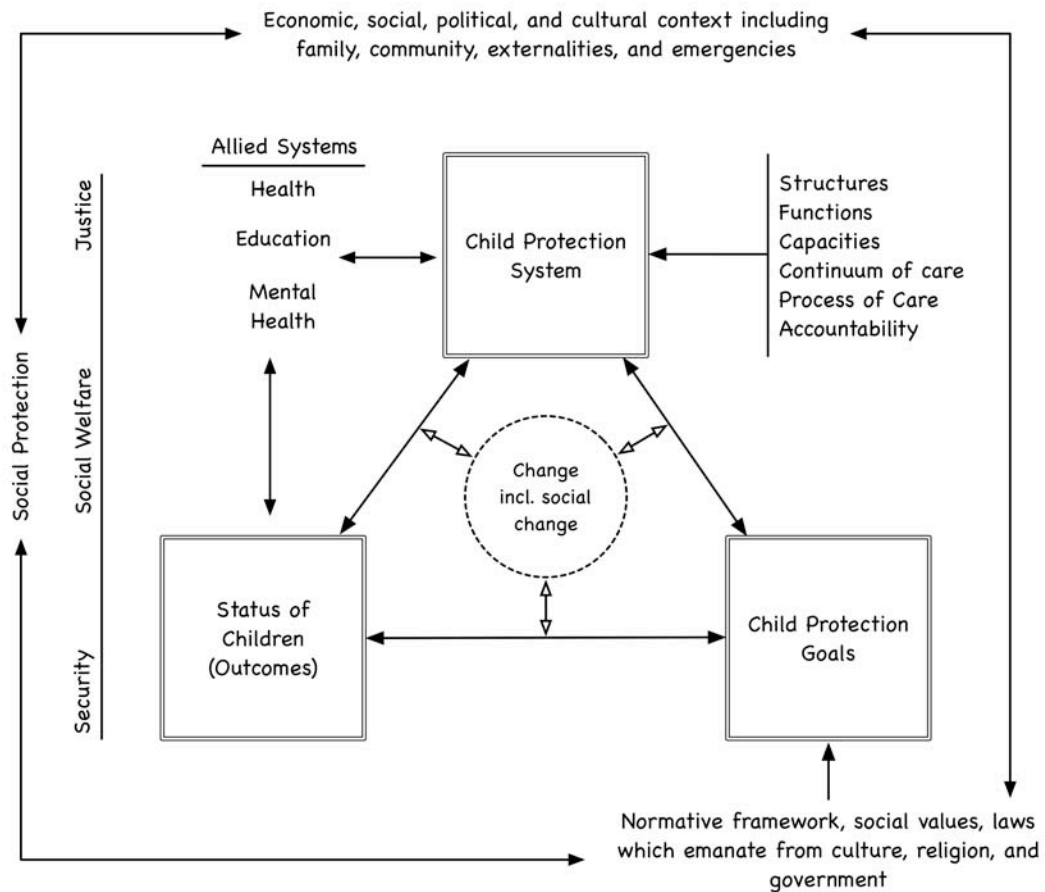


Figure 1 depicts other important high-level features of child protection systems, including the dynamic that exists between the status of children (measured as outcomes), child protection goals, and the child protection system in relation to change, including social change. First, however, it is important to point out the placement of the child protection system within an economic, social, political, and cultural context that shapes not only the normative context but also the relationship of the child protection system to the broader system of social protection. In essence, child protection systems do not exist in isolation. Nor are child protection systems the only system working to influence the well-being of children.

Within a given context, the boundary between (i.e., the structural relationship or embeddedness) the child protection system and those other systems (e.g., education, health, mental health) is an important feature of the child protection system that has implications for how one goes on to define functions, capacities, the process of care, governance, and accountability. For example, day care for young children may be located within the child protection system; in other contexts, day care may fall within the purview of the education system. Both approaches have implications for how children are protected and how accountability is managed.

Figure 1 also places externalities and emergencies within the context that influences the child protection system. In large measure, from the system perspective, the central issue is one of interaction with and adaptation to the context within which the system exists. Externalities and emergencies are contextual in the sense that they alter the operating context of the system in ways that affect the ability to protect children.<sup>8</sup> As with other such contextual influences, the influence is bi-directional (i.e., reciprocal) such that the context defines the system even as the system shapes the context. Well-designed systems (i.e., those with strong infrastructure) will be better prepared to manage externalities and emergencies; externalities and emergencies may lead to stronger systems in the long run, provided the actors involved respond to such challenges in a cooperative manner (Save the Children UK, 2009).<sup>9</sup>

The impact of bi-directional influences between the child protection system and its context raises the final feature of Figure 1. To the extent that systems take shape around the goals of the system, the impact of the child protection system on the status of children (i.e., the well-being of children) is a central dynamic that affects how the system evolves through time. Where there is a gap between the goals of the system and whether children are being protected, efforts within the system will turn to bringing what the system accomplishes into line with system goals. The impetus for change may manifest itself as changes in the goals (e.g., expectations can be raised or lowered) or changes in the system structures, functions, and capacities (i.e., system building and system reform). Again, the role of bi-directional influence (i.e., feedback) is key to understanding how the change process is initiated and maintained over time. Finally, whether the change process leads to social change on a large scale is itself a function of context: what are the child protection failures in a given context, why do the failures persist, and what structures, functions,

---

<sup>8</sup> As used here, externalities are factors that are in one sense outside the boundaries of the child protection system yet influence the system in some way. Externalities can operate on short or long time scales as in the case of economic globalization and short-term economic downturns. Both situations influence local economies in ways that could alter funding, for example. In turn, fewer services could adversely affect children. With respect to emergencies, Save the Children U.K. (2009) has outlined the specific challenges humanitarian emergencies pose for child protection system. The fundamental question is one of capacity and the need to manage the shift in demand for child protection services. Moreover, normal processes/procedures may breakdown, depending on the nature of the emergency. In emergencies, developments on the ground may call for new processes (e.g., for gate keeping); from a systems perspective, process remains a key feature of the system. Thus anticipation and adaptation are capacities the system has to have. Finally, emergencies and externalities highlight the importance of tying the goals of child protection to a legal framework that legitimates claims on behalf of children.

<sup>9</sup> It is important to point out, of course, that the influence of emergencies and externalities need not be positive with respect to how the system adapts.

and capacities have to change in order to better protect children? When cultural norms place children at risk (e.g., female genital cutting), aligning cultural goals with the stated goals of the child protection system can have effects throughout the social structure.

---

## Key Components of a Child Protection System

In this section, we begin to delineate the set of components one might find in a child protection system. As we noted above, the aim here is to identify a comprehensive list rather than an exhaustive one. The nuances of time and place may mean that the list of components should be longer or shorter. If so, it is a choice most easily made when studying a particular child protection system. A second point, which is related to the first, has to do with the distinction between *what a system is* and *what a system does* cited earlier. Within the current discussion, components are relatively fixed. In practice, however, how a given component is made manifest will reflect choices that are highly dependent on the context in which the choice is being made. It is a perspective that captures structure and flexibility, a feature that is vital to the systems approach if it is to have relevance in the diversity of contexts in which its application is expected.

As suggested earlier, the systems approach to child protection begins with a normative framework.<sup>10</sup> The framework helps define the formal boundaries of the system and legitimates the work of the system in a given social, political, and economic context. The framework also establishes the basis for accountability and forms the basis for making claims of duty bearers on behalf of children (i.e., enforcement). The normative framework also connects the child protection system to broader system of social protection by drawing attention to the interdependencies.

With a normative framework in mind, it is possible to give greater specificity to the components found in a typical child protection system. Figure 2, which expands Figure 1, reveals several additional important features of the child protection system. First, as illustrated on the left of the figure, the system itself operates at several levels (ranging from the formal to the less formal), involves several nested contexts, and relies on different actors. As depicted, key actors include, among others, the family, the community, and the state. Children are also included to reflect the fact that children have an important voice in the child protection system. Actors within the system may operate at one or more of the implied levels, with the system taking shape around cross-level influences.

---

<sup>10</sup> To be clear, when we say the systems approach begins with a normative framework we are not thinking prescriptively. The normative framework is in a sense a center of gravity (one of several) that draws together the various elements of a system, giving the system an overall coherence. From the perspective of an adaptive system, whether one builds out from a normative framework or toward a normative framework from what all ready exists depends on the circumstances.

**Figure 2. Child Protection Systems: Actors, Context, and Components**

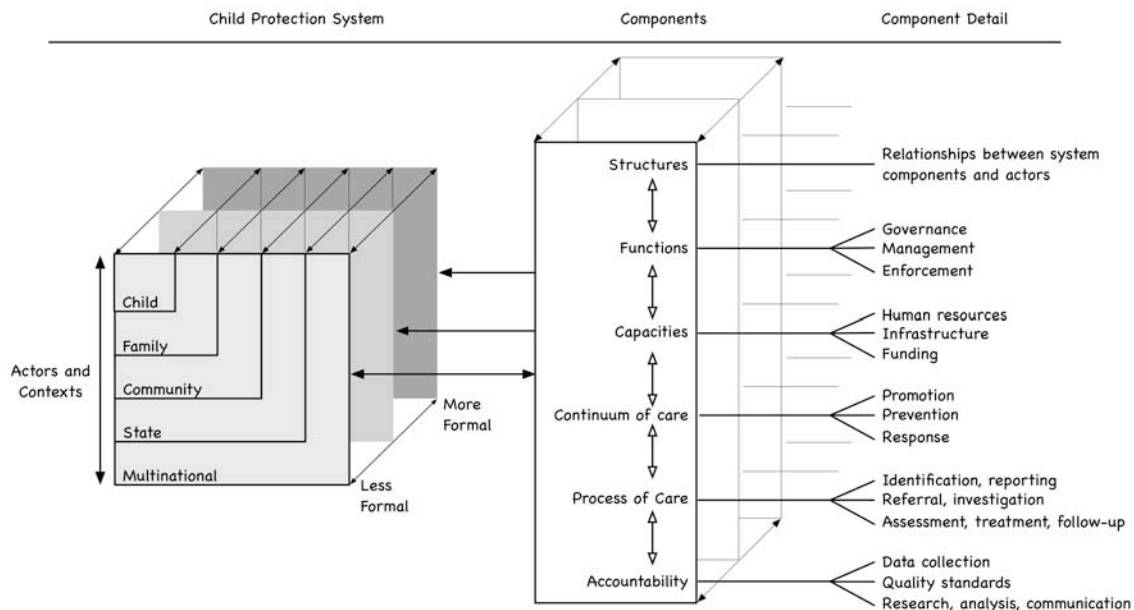


Figure 2 also implies that even though the system exhibits different levels, each level is expected to manifest the basic features of a system. Structures, functions, and capacities are the basic building blocks. The continuum of care delineates the specific ways in which the system responds to rights violations whereas the process of care specifies the procedures that are followed when the system engages children, families, and communities. With respect to the process, all child protection systems have to have a means to identify children whose rights have been violated (CRC, 1990). If the normative framework establishes a boundary around the notion of who is in need of protection, the process of care clarifies the myriad ways children and families may come to the system’s attention, including those ways that rely on voluntary engagement and those that rely on some type of reporting mechanisms. The process of care also incorporates assessment strategies, case planning, treatment, and follow up, with the specific processes shaped by whether the underlying services are promotion, prevention, or response.

How the elements of the process are organized specifically depends to a very large degree on the children and families in question. Because the child protection system serves children coming from diverse circumstances, presenting equally diverse protection needs, the child protection system needs a service continuum matched to the range of protection needs. The holistic view of children, families, and communities that is one hallmark of the systems approach to child protection expands what it means to respond to protection needs by adding promotion and prevention as points along the service continuum depending on how other systems are structured in relationship to the child protection system. The service continuum also takes shape around the fundamentally developmental nature of work with and on behalf of children. Finally, each point along the service continuum is a subsystem within the larger system and

therefore subject to the same design considerations as the larger system: structures, functions, and capacities have to stand in symmetry with the purpose of the subsystem.<sup>11</sup>

In system terms, structure is often thought of as the relationships between components of the system. Although not specifically referenced in Figure 2, the multisectoral nature of the social protection system means that structural relationships between component parts of the system have to be identified or established. The components, within the context of the community and the state, may include formal (e.g., NGOs) and informal organizations (neighborhood watch groups) dedicated to protecting children. How the relationships are formed and how they are maintained (or changed) is a matter of local context, efficacy, and other factors affecting child protection.

As noted above, systems do things. How the activities are bundled or organized can usually be interpreted through a functional lens. In the child protection system, certain functions are essential to the basic operation of the system, although the observation alone is not unique to the child protection system. Governance, management, and enforcement are the listed functions, although the specific manifestation of each depends, again, on the context. In more formal systems, management of the system may be split between branches of the government (at the national level) together with local managers. Families and other community members may share responsibility for child protection in less formal systems (e.g., voluntary associations). The structural form exhibited may be different but the specific function fits with the overarching system goals. Figure 2 illustrates the self-similar properties of the systems by connecting the components to the levels within the system.

As an organization, the child protection system has to maintain a level of capacity commensurate with what the system requires. Capacity refers to human resources, funding, and infrastructure. A coherent child protection system has the means by which to compel the use of resources towards the goals of the system. Staff complement management in that staff implement policy and practice directives (i.e., direct the use of resources) through interactions with children and families in a community setting.

Together with the normative framework, system capacity, the process of care, and system goals, there has to be an accountability mechanism that incorporates data collection, research and management analysis, and communication with stakeholders within and outside the formal system (i.e., the public). Without accountability, the system has no way of knowing how well it is doing, no way of knowing how the context has changed, and no way to adjust its structures, functions, and capacities. In other words, without systemic mechanisms of accountability, the system has no way to move forward.

Of particular importance, quality speaks to how well basic tasks are performed. Quality standards also speak to basic system capacity: Is the workforce trained? Do family members and community residents have the knowledge and capacity to protect children? Is the physical plant (bricks and mortar) attached to the system suited to the work it is asked to do? Does the physical structure of the community provide children basic protection? Do workers have the equipment they need to perform the job? Quality is

---

<sup>11</sup> For example, the foster care system is a subsystem of the child protection system.

elusive. Systems without quality standards invite a high degree of variability in how processes are executed. That variability can in some instances threaten the integrity of the system as in those instances when a child who has been removed from his or her family dies because the child protection system failed to carry out basic responsibilities well enough.

Last, Figure 2 highlights the interactive nature of the system components. As is the case with other aspects of the system, components are not formed in isolation. Rather the design, maintenance, and alteration of the system components affect other parts of the system. To understand the system, one has to understand how the parts of the system are related to and influence all of the other parts as emergent properties.

Figure 3, which adds detail to Figure 2, draws explicit attention to the relationship between system components (along the side) and the actors (along the top) who work in and with the system. Child protection relies on people and organizations properly equipped to carry out the work. How children, families, communities, states, and formal and informal organizations are assembled around a common purpose is fundamentally a question about the past and the future, and whether the system in place today meets the goals set forth. The question marks are meant to convey the extent to which a system's design is a function of choices that interact with each other, opening and closing opportunities for system building and reform, based on what is currently in place. Specific choices will reflect local preferences, customs, preexisting structures, laws, and the will of the actors who take on the challenge of protecting children. Within the highly contextualized approach to supporting child protection systems, the most important question is: Are children being protected in a manner consistent with their rights? If not, then the focus shifts to why not and how the existing system can be strengthened so as to fulfill those grander expectations.

**Figure 3. Child Protection Systems: Components and Actors**

Child Protection System Component Detail	Actors				
	Child ↔	Family (inc. kin) ↔	Community	State	National/Multinational
			Informal community organizations ↔	↔	Formal community organizations
Relationships between system components and actors	?	?	?	?	?
Physical structures	?	?	?	?	?
Governance	?	?	?	?	?
Management	?	?	?	?	?
Enforcement	?	?	?	?	?
Human Resources	?	?	?	?	?
Infrastructure	?	?	?	?	?
Funding	?	?	?	?	?
Promotion	?	?	?	?	?
Prevention	?	?	?	?	?
Response	?	?	?	?	?
Identification, reporting	?	?	?	?	?
Referral, investigation	?	?	?	?	?
Assessment, Treatment, follow-up	?	?	?	?	?
Data collection	?	?	?	?	?
Quality standards	?	?	?	?	?
Research	?	?	?	?	?



---

## Conclusion

The requirements of operating a child protection system are at once simple and complex. In remote villages or central cities, communities need to know when the rights of children are being violated, how best to respond, and whether rights violations are being addressed equitably. Creating the capacity to meet the challenge on a scale commensurate with the challenge requires a dedicated, systematic response tied to the rights of children.

In this paper, we have highlighted the essential elements of a systems approach to child protection as reflected in the academic and practice literature. The literature suggests that each child protection system has to have certain core functions, capacities, and structures to go along with processes and service continua that ultimately define what a specific community does to protect its children. How a community chooses to define those structures, capacities, functions, and continua will be as unique as the normative framework in which it operates. A system's framework or perspective does not guarantee a particular outcome or ensure that a system will take a particular form. Rather, the particular contribution of the systems approach to child protection is the manner in which it accommodates diverse perspectives and creativity within a rigorous analytical framework that favors accountability.

A second purpose of this paper has been to offer countries a framework for initiating conversations about the child protection choices they confront. When starting the conversation, it is important to recall that systems interact with their context in a bi-directional exchange of influence. Interactions between the system and its context drive the system's evolution over time. The formal and informal mechanisms that are a child protection system in the aggregate—even the very notion of child protection—emerge from these same interactions. That said, the process of building or otherwise altering child protection systems is neither a passive nor a deterministic process. On the contrary, the systems approach suggests that the system itself is revealed when one considers the following:

Clarity regarding a shared understanding of the boundary (i.e., the structural relationship or embeddedness) between a child protection system and other formal systems (e.g., education, health, mental health) or informal systems (e.g., family, kin, community) is an important aspect of the child protection system that has implications for how one goes on to define functions, capacities, the process of care, governance, and accountability.

Externalities and emergencies can have notable impacts on the capacity of any child protection system. Well-designed systems (i.e., those with strong infrastructure) will be better prepared to manage externalities and emergencies; externalities and emergencies may lead to stronger systems in the long run, provided the actors involved respond to such challenges in a cooperative manner.

To the extent that systems take shape around the goals of the system, the impact of the child protection system on the status of children (i.e., the well-being of children) will have an impact on how the system evolves through time. Ideally, where there is a recognized gap between the goals of the system and whether children are being protected (e.g., through accountability infrastructure), efforts within the system will turn to bringing what the system accomplishes into line with system goals.

With respect to the process, all child protection systems have to have a means to identify children whose rights have been violated. If the normative framework establishes a boundary around the notion of who is in need of protection, the process of care clarifies the myriad ways children and families may come to the system's attention, including those ways that rely on voluntary engagement and those that rely on some type of reporting mechanisms. The process of care also incorporates assessment strategies, case planning, treatment, and follow up, with the specific processes shaped by whether the underlying services are promotion, prevention, or response.

Because the child protection system serves children coming from diverse circumstances, presenting equally diverse protection needs, it needs a service continuum matched to this diversity. The holistic view of children, families, and communities that is one hallmark of the systems approach to child protection expands what it means to respond to protection needs by adding promotion and prevention as points along the service continuum depending on how other systems with potentially overlapping mandates are structured in relationship to the child protection system.

When it exists as an organization, the child protection system has to maintain a level of capacity commensurate with what the system requires. Capacity refers to human resources, funding, and infrastructure. A coherent child protection system has the means by which to compel the use of resources towards the goals of the system.

---

## References

- Australian Research Alliance for Children and Youth (2008). *Inverting the pyramid: Enhancing systems for protecting children*. Allen Consulting Group: Melbourne.
- Begun, J., Zimmerman, B. & Kooley, D. (2003). "Health care organizations as complex adaptive systems," in Mick, S.M. and Wyttenbach, M. (Eds.) *Advances in Health Care Organization Theory*. San Francisco: Jossey-Bass.
- Bennett, S. & Eichler, R. (2006). *Taking Forward the Health Systems Agenda: Report on a Consultation Developing the Health Systems Action Network*. Washington, D.C.: USAID.
- Bowen, G. L. (2004). "Social organization and schools: A General Systems Theory perspective." In P. Allen-Meares, *Social Work Services in Schools* (4th ed.). Boston: Allyn and Bacon.
- Brinkerhoff, D. W. (2004). Accountability and health systems: Toward conceptual clarity and policy relevance. *Health Policy and Planning, 19*(6), p. 371.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, Massachusetts: Harvard University Press.
- Brunner, H. (2007). *Application of Complex Systems Research to Efforts of International Development*. Asian Development Bank. Available at SSRN: <http://ssrn.com/abstract=957529>.
- Cohen, B. J. (2002). Alternative organizing principles for the design of service delivery systems. *Administration in Social Work, 26*(2), p. 17.
- Cohen, E. (2008). "Breaking the cycle: Addressing children's exposure to violence." Public Health Without Borders: American Public Health Association Annual Meeting and Expo. October 25-28, 2008. San Diego, CA.
- Dale, P. & Davies, M. (1985). A model of intervention in child abusing families: A wider systems view. *Child Abuse and Neglect, Vol 9*, pp. 449-455.
- Darlington, Y., Feeney, J. A., & Rixon, K. (2005). Interagency collaboration between child protection and mental health services: Practices, attitudes and barriers. *Child Abuse and Neglect, 29*(10), p. 1085.
- Folke, C., Hahn, T., Olsson, P., & Norberg, J. (2005). Adaptive Governance of Social-Ecological Systems. *Annual Review of Environment and Resources, 30*, p. 441-473.
- Foster-Fishman, P. G., Nowell, B., & Yang, H. (2007). Putting the system back into systems change: A framework for understanding and changing organizational and community systems. *American Journal of Community Psychology, 39*(3-4), p. 197.
- Gaad, E., Arif, M., & Scott, F. (2006). System analysis of the UAE education system. *International*

*Journal of Education Management*, 20, 4, p. 291.

Glisson, C. (2007). Assessing and changing organizational culture and climate for effective services. *Research in Social Work Practice*, 17(6), p. 736.

Green, R. S. & Ellis, P. T. (2008). Foster youth evaluate the performance of group home services in California. *Evaluation and Program Planning*, 31(2), p. 174.

Higgins, J. R. & Butler, N. (2007). *Indigenous responses to child protection issues*. 'Promising Practices in out-of-home care for Aboriginal and Torres Strait Islander Carers, Children and Young People' (Booklet 4). Melbourne: Australian Institute of Family Studies.

Hmelo-Silver, C. E. & Pfeffer, M. G. (2004). Comparing expert and novice understanding of a complex system from the perspective of structures, behaviors, and functions. *Cognitive Science*, 28.

Horwath, J. & Morrison, T. (2007). Collaboration, integration, and change in children's services: Critical issues and key ingredients. *Child Abuse and Neglect*, Vol. 31, pp. 55-69.

Inter-American Children's Institute (2003). Basic Prototype: National Child System. INN/OAS: Montevideo, Uruguay.

Ivery, J. M. (2007). Organizational Ecology: A theoretical framework for examining collaborative partnerships. *Administration in Social Work*, 31(4), p. 7.

Keeping Children Safe Coalition (2006). Standards for Child Protection, Tool 1. [Brochure]. United Kingdom: Keeping Children Safe Coalition.

Kernan, E. & Lansford, J. E. (2004). Providing for the best interests of the child? The Adoption and Safe Families Act of 1997. *Journal of Applied Developmental Psychology*, 25, p. 523.

Lagomarsino, G., Nachuk, S., & Kindra, S. S. (2009). Public stewardship of private providers in mixed health systems. Synthesis report from the Rockefeller Foundation—Sponsored initiative on the role of the private sector in health systems in developing countries. Washington, D.C.: Rockefeller Foundation.

Leischow, S. J., et al. (2008). Systems thinking to improve the public's health. *American Journal of Preventative Medicine*, 35(2S).

Lemke, J. L. & Sabelli, N. H. (2008). Complex systems and educational change: Towards a new research agenda. *Educational Philosophy and Theory*, 40, 1.

Lemos, M. C. & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, 31, p. 297-325.

Mansell, J. (2006). The underlying instability in statutory child protection: Understanding the system dynamics driving risk assurance levels. *Social Policy Journal of New Zealand*.

Mathews, B. & Bross, D. C. (2008). Mandated reporting is still a policy with reason: Empirical evidence and philosophical grounds. *Child Abuse and Neglect*, 32, p. 511.

Meyer, J. W. & Rowan, B. (2007). "The Structure of Educational Organizations" in Ballantine, J.H and Spade, J.Z (Eds.) *Schools and Society: A Sociological Approach to Education*. Pine Forge Press.

- Mizikaci, F. (2006). A systems approach to program evaluation model for quality in higher education. *Quality Assurance in Education*, 14 (1), p. 37.
- Mulroy, E. A. (2004). Theoretical perspectives on the social environment to guide management and community practice: An organization-in-environment approach. *Administration in Social Work*, 28(1), p. 77.
- Munro, E. (2005). Improving Practice: Child protection as a systems approach. London: LSE Research Articles Online. Available at: <http://eprints.lse.ac.uk/archive/00000359>.
- Rothery, M. (2007). "Critical Ecological Systems Theory." In Coady, N. and Lehmann, P. (Eds.) *Theoretical Perspectives for Direct Social Work Practice*. Springer Publishing Company.
- Ruger, J. P. (2006). Ethics and governance of global health inequalities. *Journal of Epidemiology and Community Health*, 60, p. 998.
- Saba, F. (2007). "A systems approach in theory building." In Moore, M.G. (Ed.) *Handbook of Distance Education*. New York: Routledge.
- Save the Children (2006). Why effective national child protection systems are needed: Save the Children's key recommendations in response to the UN Secretary General's Study on Violence Against Children. United Kingdom: Save the Children.
- Save the Children (2008). *A 'Rough Guide' to Child Protection Systems*. London: Save the Children.
- Save the Children (2009). Child protection systems in emergencies: A review of current thinking and experience. United Kingdom: Save the Children
- Senge, P. (1990). *The Fifth Discipline*. New York, NY: Doubleday/Currency.
- Simonsen, S. H. (2007). Adaptive Governance of Dynamic Land and Seascapes. <http://www.stockholmresilience.org/research/researchthemes/adaptivegovernance.4.aeea46911a3127427980006994.html>. Accessed on August 17, 2009.
- Skinner, K. & Bell, L. (2007). Changing structures: Necessary but not sufficient. *Child Abuse Review*, 6(4), p. 209.
- Stevens, I. & Cox, P. (2008). Complexity theory: Developing new understandings of child protection in field settings and in residential child care. *British Journal of Social Work*, 38, p. 1320.
- United Nations High Commission on Refugees (2009). Summary note: Inter-agency expert consultation on child protection systems. 19 and 20 January 2009. Centre for Humanitarian Dialogue: Geneva, Switzerland.
- UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3, available at: <http://www.unhcr.org/refworld/docid/3ae6b38f0.html> [accessed 27 October 2009].
- UNICEF (2008). UNICEF Child Protection Strategy. Annual Session, 2008.
- UNICEF EAPRO (2009). East Asia and Pacific Child Protection Programme Strategy Toolkit. East Asia and Pacific Regional Office. Bangkok, Thailand: UNICEF.

World Health Organization. (2007). Everybody's Business: Strengthening Health Systems to Improve Health Outcomes. A Framework for Action. World Health Organization.

---

# Appendix: Annotated Bibliography

---

## Overview

This annotated bibliography offers a deeper look at the social work, education, health, international development, and child protection literature cited in the paper. For the review, we relied heavily (but not exclusively) on academic literature when conducting our review. Key search terms included, but were not limited to, **systems theory**, **systems perspective**, and **systems approach**, each matched with terms associated with the disciplines under review (i.e., social work, medicine, public health, international development, child protection, etc). In addition to the annotated citations, we also provide a list of readings that delve more deeply into systems theory. We note however the list is rather short relative to the breadth and depth of writing in the field.

---

## Social Work

There is a long history of systems-related thinking in the field of social work. Rooted in Bertalanffy's work (begun in the 1920s and extending through the 1960s), the systems approach to social work has developed over time, to include ecological theory (Germain); the ecosystems perspective (Bronfenbrenner, Meyer); and, more recently, complexity theory, to name but a few.<sup>12</sup> Although a systems perspective in social work has traditionally focused on micro-level rather than macro-level systems (i.e., families as opposed to larger structures), more contemporary models can be—and have been—fit to meso- and macro-level “systems” thinking.

**Cohen, B.J. (2002). *Alternative organizing principles for the design of service delivery systems. Administration in Social Work, 26(2), p. 17.***

Cohen uses three examples (school system, child welfare system, and juvenile justice system) to explicate his ideas vis-à-vis the (dis)organization of human service systems today and the need for reform. The underlying “grouping by function” approach (also referred to as the functional structure of human service systems), the author contends, is due in large part to a long history of categorical funding and traditional approaches to monitoring and quality assurance. Instead, Cohen argues for “grouping by market,” so that

---

<sup>12</sup> Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge: Harvard University Press; Germain, C.B. (1979). *Social Work Practice: People and Environments, An Ecological Perspective*. New York: Columbia University Press; Gitterman, A. and Germain, C.B. (1980). *The Life Model of Social Work Practice*. New York: Columbia University Press; Von Bertalanffy, L. (1968). *Organismic Psychology and Systems Theory*. Worcester: Clark University Press.

systems are set up to serve individuals with similar needs, with multiple service components working together “to perform all of the functions for a given set of services, clients or places” (p. 29).

**Glisson, C. (2007). Assessing and changing organizational culture and climate for effective services. *Research in Social Work Practice, 17(6), p. 736.***

The effectiveness of social service interventions is inextricably linked to the social context within which organizations operate. A recursive model for mental health and social services is presented which includes the policy and systems context, technical skills/monitoring capacities, information related to the organizational climate, consumer behavior, implementation and service quality, and—lastly—outcomes. This paper lends further support to the idea of contextual nesting, of there being levels of activity that are in near-constant interplay with one another. When practitioners get behind this way of thinking about social service systems, improved outcomes for children and families can be maximized.

**Ivery, J.M. (2007). Organizational Ecology: A theoretical framework for examining collaborative partnerships. *Administration in Social Work, 31(4), p. 7.***

According to organizational ecology, itself an outgrowth of systems theory, organizations (or groups of organizations), along with their functions, structures, goals, and activities, develop within the context of and in response to the wider community and the other organizations existing therein. The importance of cooperation, coordination, and collaboration, often used interchangeably but each associated with different behaviors, is underscored in terms of how organizations can work together to achieve a common goal.

**Mulroy, E.A. (2004). Theoretical perspectives on the social environment to guide management and community practice: An organization-in-environment approach. *Administration in Social Work, 28(1), p. 77.***

Mulroy presents an “Organization-in-Environment” framework for understanding how agencies function within and respond to various levels within the larger environment (i.e., local community, societal/policy context, demands for social justice). In her discussion of the model, Mulroy relies on systems language when she refers to the “dynamic” nature of the environment within which agencies operate and the need for agency structures and functions to be adaptable to changing conditions within the environment. Mulroy enumerates the six dimensions in the external environment that influence different aspects of organizational change. The influence of social justice concerns on organizations/organizational change is also addressed.

**Rothery, M. (2007). “Critical Ecological Systems Theory.” In Coady, N. and Lehmann, P. (Eds.) *Theoretical Perspectives for Direct Social Work Practice. Springer Publishing Company.***

In this book chapter, Rothery affirms social work’s long-standing allegiance with systems theory, suggesting that the eco-systems perspective (a close relative to general systems thinking) vis a vis clinical



practice has its roots in early social work practice. Rothery goes on to offer a brief overview of the eco-systems perspective, making note of such concepts as the reciprocity of system components; the idea that systems possess structure, have boundaries, and demonstrate predictable patterns of behavior; the importance of understanding the function(s) of system components; the need to identify system strengths and competencies; and the embeddedness of systems in broader contexts.

**Stevens, I. and Cox, P. (2008). Complexity theory: Developing new understandings of child protection in field settings and in residential child care. *British Journal of Social Work*, 38, p. 1320.**

Stevens and Cox offer a brief and coherent overview of complexity theory, noting how complexity theory differs from traditional systems theory. In the parlance of complexity theory, there are agents of a system who behave in ways that affect one another, all of which occurs within an environmental context, and all of which is subject to change at any given moment. According to complexity theory, a system is built upon “dissipative structures” that need to be flexible in order to adjust to shifting circumstances. Because the children and families requiring of services from the child protection system are themselves examples of complex adaptive systems, the institution designed to work with these individuals must be appreciative of these dynamics.

---

## **Education**

Systems thinking is alive and well in the field of education. Most commonly expressed in the form of “complex systems theory,” scholars interested in this topic have emphasized the interplay between the various components of the educational system and the broader contexts within which the system operates (i.e., local and/or state regulations, trends in education, community characteristics, etc). There appears to be widespread appreciation for the embeddedness of the educational system in what is frequently termed “supersystems” within a given society.

Despite this point of consensus, there is a fair amount of variability in terms of the way in which the educational system is discussed. While there may be agreement as to what goes into an educational system (i.e., students, educators, schools, books, curriculum, etc), the language used to talk about the educational system vis-à-vis systems theory is not fixed.

The following citations offer a sample of how systems thinking is applied to the field of education.

**Bowen, G.L. (2004). “Social organization and schools: A General Systems Theory perspective.” In P. Allen-Meaers, *Social Work Services in Schools* (4th ed.). Boston: Allyn and Bacon.**

The author describes the organizational structure of schools according to General Systems theory. In this application, an individual school is nested in a district, which is nested within a local community, which is then nested within a larger educational system or institution. Using classic general systems language, the author draws on prior research done on the influence of social organizational features on student

achievement; the question is, what are the throughputs that, combined with educational inputs (i.e., student-teacher ratios), lead to positive educational outputs (i.e., achievement)? Research consistently demonstrates the importance of taking the community context into account and the need for evidence-based social organizational interventions (i.e., educators working together with social workers and other health and social service professionals).

**Gaad, E., Arif, M., & Scott, F. (2006). System analysis of the UAE education system. *International Journal of Education Management, 20, 4, p. 291.***

This paper presents a case study of the educational system in the United Arab Emirates. It is an example of how systems thinking is being applied to emerging educational systems. It is used in this paper to deconstruct and evaluate the organization and effectiveness of the UAE system. The ideal against which the UAE educational system is compared has social, economic, religious, and other factors impacting the goals, policies, behaviors, and evaluation of the system. It is another example of how context matters, and the interplay between those contexts and the extent to which designated system functions can be faithfully executed.

**Hmelo-Silver, C. E. & Pfeffer, M. G. (2004). Comparing expert and novice understanding of a complex system from the perspective of structures, behaviors, and functions. *Cognitive Science, 28.***

The authors advocate for using the Structures, Behaviors and Functions (SBF) framework when thinking about education systems. Their paper lends support to the usage of such terms as “structures” (used to describe fundamental elements of a system), “behaviors” (used to describe “how the structures of a system achieve their purpose”) and “functions,” which is thought of as the purpose of a given element (i.e., schools are a structure of the education system, whose function it is to serve as the environment within which students can learn.) Thinking about complex systems in this way is considering useful for lay people trying to understand how complex systems operate.

**Lemke, J. L. & Sabelli, N. H. (2008). Complex systems and educational change: Towards a new research agenda. *Educational Philosophy and Theory, 40, 1.***

The relationships between subsystems within the larger education system are explored; the idea of system components being embedded in one another is reinforced. The importance of cross-system thinking is emphasized. In this instance, the authors highlight the interplay of the education system with other sectors (research, parent groups, innovations in technology, and external factors such as shifts in administrations, funding, etc). The authors underscore the importance of understanding and appreciating local conditions when engaging in any kind of system reform effort.

**Meyer, J. W. & Rowan, B. (2007). “The Structure of Educational Organizations” in Ballantine, J.H and Spade, J.Z (Eds.) Schools and Society: A Sociological Approach to Education. Pine Forge Press.**

The modern education system is nested in a large, public bureaucracy which itself is nested in a larger corporate/economic system. The authors describe a system wherein system functions are “decoupled” from activities and the overall monitoring of the system. Coordination in the modern education system is lacking. The authors argue that the status quo (or, in the parlance of systems theory, homeostasis), both within the education system and between the education system and the larger society it feeds, is maintained by this lack of coordination and oversight.

**Mizikaci, F. (2006). A systems approach to program evaluation model for quality in higher education. *Quality Assurance in Education*, 14 (1), p. 37.**

Classic systems theory is applied to program evaluation for higher education systems. The author describes the educational system from a systems perspective. She describes the embeddedness of systems within systems and identifies system inputs (i.e., structures, functions), throughputs (i.e., behaviors, processes), and outputs (outcomes, desired goals). The author emphasizes the importance of context when considering full-scale evaluations of educational systems, as well as the need to engage in mapping activities with individual educational systems to understand what a particular system’s needs are vis-à-vis program evaluation and quality assurance.

**Saba, F. (2007). “A systems approach in theory building.” In Moore, M.G. (Ed.) Handbook of Distance Education. New York: Routledge.**

The field of distance learning has taken off in recent years. The book in which this chapter appears is dedicated to this approach to education. Saba’s chapter goes into some detail about how a systems approach is applied to distance learning, emphasizing the hierarchy of nested distance education system levels. Saba argues in favor of using this framework to think about distance learning as it offers scholars, policy makers and educators the necessary breadth to appreciate this educational approach in context while offering a general roadmap for everyday practice.

---

## **Health**

The use of systems thinking with regard to health and public health systems is increasing. The literature emphasizes the need for a broader look at the social and political forces that impact health and health systems, though such a perspective does not replace the need for specialized studies. These two approaches (systemic and specialized) are seen as complementing one another. Some of the common themes that permeate the literature on health systems, to varying degrees, include: the complex, changing, and discontinuous nature of systems; systems are (or should be) multidisciplinary; the presence of subsystems within the larger system structure; a need to understand linkages within and among systems; and, the impact that system structure has on information flows and feedback loops.

**Begun, James, W., B. Zimmerman, & K. Dooley. (2003). "Health care organizations as complex adaptive systems," in Mick, S.M. and Wyttenbach, M. (Eds.) *Advances in Health Care Organization Theory*. San Francisco: Jossey-Bass.**

Rejecting the use of a mechanical metaphor as an effective model for examining health care systems, the authors propose that a "living" biological or complex adaptive systems approach (CAS) can better approximate the reality of how health systems work. Four common features shared by all complex adaptive systems are advanced. First, complex adaptive systems exist in a dynamic state of "constant and discontinuous change," which occurs as the result of complex interactions by all elements within the system. Second, the relationships in complex adaptive systems are "massively entangled," whereby agents within the system alter and are altered by the other agents. This interaction creates feedback loops that will either stabilize or change the system. Third, complex adaptive systems are characterized by self-organizing behavior. Agents within the system will organize and adapt their own behavior based on other agents' behaviors or characteristics. Networks help to organize the flow of information and create structures that spread normative behavior. Finally, complex adaptive systems provide "multiple and creative paths for action," that allow them to be robust and adaptive structures. The authors go on to discuss the evolution of "complexity science," its applications, and implications for research methodology.

**Bennett, S. & Eichler, R. (2006). *Taking Forward the Health Systems Agenda: Report on a Consultation Developing the Health Systems Action Network*. Washington, D.C.: USAID.**

Following a 2005 meeting held by the World Health Organization aimed at increasing global attention on strengthening health systems, USAID agreed to sponsor a consultative process in order to establish a direction forward. This report outlines the current project-driven environment of global health initiatives; the need to acknowledge health as a larger, multidisciplinary system composed of several smaller subsystems; and, interactions between health systems and the changing landscape of international aid. A framework for the Health Systems Action Network and core functions to best promote stronger, coordinated action around health systems are proposed. These functions include enhancing creation and flow of credible information; promoting networking and exchange; promoting a sense of professional identity among health system practitioners; and, strengthening global coordination and collaboration at a high level within the system.

**Leischow, S. J., et al. (2008). *Systems thinking to improve the public's health*. *American Journal of Preventative Medicine*, 35(2S).**

The authors argue that health systems must collaborate across a wide range of disciplines and fields in order to improve public health outcomes. In order to do this, stakeholders must develop an understanding of complex adaptive systems: changing societal structures and functions and the forces that seek to undermine positive health outcomes. Illustrations of issues (i.e., weather forecasting, the spread of viruses, and tobacco use), which can help our understanding of interdisciplinary collaboration and

systems approaches, are given. Four key areas of systems thinking are proposed for further development and articulation: 1) management and transfer of shared knowledge, 2) understanding linkages between diverse stakeholder individuals and groups, 3) the development of models that can examine and explain systems dynamics, and 4) systems organizing.

**Leischow, S. J. & Milstein, B. (2006). Systems thinking and modeling for public health practice. *American Journal of Public Health, Vol. 96(3), pp. 403-405.***

In an editorial introduction to a special issue of the *American Journal of Public Health*, Leischow and Milstein outline the challenges, considerations, and promises of applying systems thinking and modeling to the field of public health. They discuss the multidisciplinary nature of systems thinking, its emphasis on relating the various structures present in our lives (biological, organizational, political), and the importance of seeing health as a system of structured relationships that evolve over time. When applying systems thinking to the health arena, four critical points are highlighted: 1) a systems approach emphasizes relationships (social, information, and family networks among them), 2) specialized studies should not be abandoned since they are necessary to identify parts of the whole, 3) traditional academic and disciplinary boundaries must be transcended and information linked in order to avoid creating “silos” of information, and 4) appropriate and potentially mixed methodologies must be matched with a given public health problem. The use of systems approaches is increasingly being recognized and used at the highest levels of public health.

**Trochim, W. M., et al., (2006). Practical challenges of systems thinking and modeling in public health. *American Journal of Public Health, 96(3), pp. 538-546.***

Trochim et al. discuss the use of systems thinking to examine problems encountered in public health through the dynamic interactions that make up these systems. Drawing on the fields of system dynamics and complexity theory, the article outlines two broad organizing ideas (dynamics and complexity), two metaphors for understanding systems (mechanical and biological), and dispels two common myths about studying systems (that systems thinking rejects traditional scientific views and that it lacks scientific rigor). The article outlines public health initiatives using systems thinking and modeling. Particular focus is placed on the Initiative for the Study and Implementation of Systems (ISIS) and its application to problems related to tobacco use. The use of concept mapping as a systems methodology is used to understand the complex systems that surround tobacco use.

---

## **International Development**

Systems thinking in international development is being used to investigate a variety of contexts at different levels of analysis (though mostly concentrated at the meso- and macro- levels). A search of the development literature revealed some common themes with regard to complex systems. These themes suggest that 1) systems are made up of smaller subsystems that are linked together through actions and patterns of behavior, 2) systems are self-organizing, 3) systems are characterized by imperfect

information, and 4) systems have boundaries (and thus endogenous and exogenous forces acting on and within them).

**Brunner, H. (2007). Application of Complex Systems Research to Efforts of International Development. Asian Development Bank. Available at SSRN: <http://ssrn.com/abstract=957529>.**

Brunner argues that traditional development efforts are based on false assumptions of perfect information flows and complete, evenly distributed networks that are impacted to the same degree during a development intervention. Applying complex systems models to international development would suggest that effective development interventions should be directed at structural change: finding a suitable network structure of interactions and relationships between agents in the system. Targeted interventions should then be directed at meso-level agents who can stimulate the system enough to overcome change resistance but not so much that the system becomes overwhelmed. The self-organizing nature of change within a system and examples of system approaches to stimulate international development are discussed.

**Freymond, N. & Cameron, G. (Eds.). (2006). Towards Positive Systems Of Child And Family Welfare: International Comparisons Of Child Protection, Family Service, And Community Caring Systems. Toronto: University of Toronto Press.**

The need for services that respond to the “maltreatment” of children and to the struggles of families is at the core of social service systems in all developed nations. While these child and family welfare systems confront similar problems and incorporate common elements, there are substantial differences in philosophy, organization, and operation across international settings and models. In this new collection of essays, Nancy Freymond and Gary Cameron have brought together some of the finest international minds to provide an original and integrated discussion of child protection, family service, and community caring models of child and family welfare. The volume not only examines child protection and family service approaches within Western nations—including Canada, the United States, England, the Netherlands, France, and Sweden—it is also the first comparative study to give equal attention to Aboriginal community caring models in Canada and New Zealand. The comparisons made by the essays in this volume allow for a consideration of constructive and feasible innovations in child and family welfare and contribute to an enriched debate around each system.

In discussing systems, the authors note that all systems struggle with achieving an appropriate balance between a set of challenges and choices. These challenges and choices include:

- The relative priority given to children, families, community and society—what set of needs trump what other sets of needs;
- The appropriate scope of a system’s mandate to act;
- The appropriate balance between local discretion and bureaucratic control;

- Determining how separate the child protection system will be from the general welfare system;
- The types and extent of authority that will be used when working with children;
- The appropriate linkages and relationships between child welfare and the justice/police systems; and,
- The appropriate emphasis on individual change versus collective empowerment/culture to achieve desired outcomes.

**Hjorth, P. & Ali, B. (2006). Navigating towards sustainable development: A system dynamics approach. *Futures*, Vol 38, pp. 74-92.**

The authors argue for approaching sustainable development in terms of complex systems rather than through a reductionist lens which limits our thinking of the problem and, consequently, of solutions to the problem. Systems are seen as self-organizing and composed of five essential properties: bounded rationality, limited certainty, limited predictability, indeterminate causality, and evolutionary change. The authors show how causal loop mapping can be used to find leverage points for intervention within the system.

**Kelly, K.L. (1998). A systems approach to identifying decisive information for sustainable development. *European Journal of Operational Research*, Vol. 109, p. 452-464.**

While many large international development organizations are adopting (or are considering adoption of) a Pressure-State-Response approach to sustainable development, Kelly argues that such an approach inadequately captures information about the structure and behavior of the systems in which strategic decisions are made. Alternatively, four arguments are made in favor of a systems approach to sustainable development decision making. A system approach: 1) explicitly identifies linkages among indicators, 2) develops a model that highlights areas where relationships are poorly understood, 3) supports learning and changes in the mental models of decision makers, and 4) provides a common language to facilitate communication across disciplines.

**Meadow, D. H. (1999). Leverage Points: Places to Intervene in a System. *Sustainability Institute*.**

The article is an exploration of systems thinking and the opportunities for decision makers to affect systems change. Drawing on the work of Jay Forrester and through discussions with systems analysts and activists, Meadows developed a list of twelve “Places to Intervene in a System,” developed point-by-point in the paper. Meadows emphasizes that using leverage points as a way to affect systems change can be counterintuitive and must be approached through rigorous system analysis and casting off old paradigms.

**Rammelt, C. F., Nikolic, I., Boes, J., & Van Dam, K.H. (2005). Complex Systems Approach to 'Development Aid'. Proceedings of the 11th Annual International Sustainable Development Research Conference. June 6-8, Helsinki, Finland.**

Using Galtung's (1971) "Center-Periphery" model of globalization and development, the authors apply a complex systems methodology to the investigation of problems in international development. The goal of the paper is to see if complex systems modeling is an effective method for looking at international development issues (drawing on a case study conducted in Bangladesh) and to formalize our understanding of Core-Periphery issues. The paper's methodology included the identification of the system; describing the properties of the system; defining system boundaries (what's *in* and what's *out* of the system); identification of and creating linkages between subsystems; and determining directionality and feedback between linkages. The authors conclude that using systems methodology allowed them to see that positive development efforts in peripheral countries were hindered by strategic actions (well-meant or otherwise) taken by core countries.

---

## **Child Protection**

A search for writing and research within the academic literature on how a systems perspective has been applied to child protection demonstrates how much cross-system, collaborative work has been done over the past 20 years. Formal linkages (sometimes, but not always, referred to as "systems of care") between child protection, domestic violence, substance abuse, and juvenile justice—to name but a few—have been forged in jurisdictions spanning the U.S. and beyond. This collaborative work relates directly to the systems approach to child protection advocated for by the UNICEF team and its partners. Research on these models of care has often produced practical, applied writing that can be used directly by communities interested in utilizing such approaches to addressing their child protection and other social problems.

**Cohen, E. (2008). "Breaking the cycle: Addressing children's exposure to violence." Public Health Without Borders: American Public Health Association Annual Meeting and Expo. October 25-28, 2008. San Diego, CA.**

Cohen is the Director of the Safe Start Center, a federally funded initiative dedicated to promoting the use of evidence-based practices for preventing and reducing the impact of children's exposure to violence. Safe Start communities either improve upon or develop systems of care designed to address issues related to children's early exposure to various forms of violence. Coordination between social services, medical centers, mental health care, domestic violence services, courts, and other youth advocacy programs is typical. Lessons learned are described.



**Dale, P. & Davies, M. (1985). A model of intervention in child abusing families: A wider systems view. *Child Abuse and Neglect, Vol 9, pp. 449-455.***

This paper looks at how the Rochdale National Society for the Prevention of Cruelty to Children (NSPCC) in England combines the general principles of systems theory and modern psychotherapy techniques to assess and treat cases of serious child abuse. Dale and Davies argue that abusing families operate within a social context composed of various statutory, professional, and community agencies that can reinforce and sustain child risk factors. The paper identifies the wider child protection system as the family system, therapeutic system, team system, interagency system, and family-agency system (the family and agencies) and then discusses the neglected importance of the interagency system and family-agency systems. The process by which the NSPCC team uses a systems approach to assess families in their first 3 years of operation is described.

**Horwath, J. & Morrison, T. (2007). Collaboration, integration, and change in children's services: Critical issues and key ingredients. *Child Abuse and Neglect, Vol. 31, pp. 55-69.***

Horwath and Morrison examine the continuum of care that exists in children's service collaboration with a focus on the highest levels of collaboration: coalition and service integration. The paper describes this continuum and presents a model of collaborative endeavors ranging from low-level collaboration, a focus on agency autonomy, and limited or no formal agreements between organizations, to collaboration focused on service integration and characterized by a highly formalized set of relationships and agreements between organizations. While a positive emphasis is placed on increased levels of collaboration in the literature, it is important to also emphasize nurturing relationships, and building trusted networks. Development of such collaborative relationships can also be characterized by a loss of focus on working relationships and outcomes.

**Lee, A. C. W., et al. (2006). The impact of a management protocol on the outcomes of child abuse in hospitalized children in Hong Kong. *Child Abuse & Neglect, 30(8).***

In Hong Kong, where reporting of child abuse is not mandated and the primary care system is not well developed, children who are suspected victims of abuse are often brought to public hospitals where they are treated in conjunction with other children who are experiencing acute medical problems. This study examines the effects of a group of medical practitioners at the Tuen Mun hospital in Hong Kong who organized and developed a protocol for the investigation of child abuse to strengthen the clinical management of abused children. Their protocol included three components: 1) a designated group of medical professionals and social workers to coordinate and manage all cases of child abuse in the hospital, 2) early communication between the medical staff and community professionals such as child protection workers and the police who investigate suspected cases of abuse, and 3) a focus on physical and medical history and de-emphasis of clinical interventions.

**Munro, E. (2005). Improving Practice: Child protection as a systems approach. London: LSE Research Articles Online. Available at: <http://eprints.lse.ac.uk/archive/00000359>.**

Paralleling examples of error in the fields of medicine and engineering with those found in child protection, Munro contrasts the traditional approach of examining errors in these fields with a systems approach. Traditional investigations into child protection problems, often concluded with the determination of “human error,” lead to the development of tools, manuals, and closer scrutiny of front line workers and do not necessarily improve outcomes. The systems approach, Munro argues, uses human error as a *starting* point, leading investigators to examine the entire system within which a person is operating. A systems approach looks at the caseworker as “part of a constant stream of activity, often spread across groups, and located within an organizational culture that limits their activities, sets up rewards and punishments, provides resources, and defines goals that are sometimes inconsistent.” Using a systems approach is proposed as the first step to finding better solutions to problems encountered in child protection.

**Stevens, I. & Hassett, P. (2007). Applying complexity theory to risk in child protection practice. *Childhood, 14*(1), p. 128.**

The authors give a useful overview of complexity theory and explain its application to the field of child protection. Key terms from complexity theory are explained using a child protection framework. The authors argue for the use of complexity theory as a way to understand and approach risk assessment activities. The goal, according to the authors, is to develop a child protection system that is focused on “process and systems not procedures and tasks” (p. 143).

**Wilson, S. (2009). Proactively managing for outcomes in statutory child protection: The development of a management model. *Administration in Social Work, 33*, p. 136.**

Wilson argues for the use of logic models to guide the development or enhancement of child protection systems. The specific model of system management described in this paper is centered on a child protection system focused on child safety, child well being, and family functioning. Using systems-related language, Wilson talks about the need to explicitly link system “inputs” “activities,” “outputs” and “outcomes” in order to promote rational planning. Implementation of the model described in this paper is discussed through the lens of organizational linkage theory, a close cousin of systems theory in that it is primarily concerned with how changes in one system component affect other components and the importance of context when considering how changes within any part of the system will reverberate throughout the system as a whole. Related concepts (outcome coupling, metric dissimilarity, feedback and redesign systems) are explained in the context of child protection system management.

---

## **Child Protection: Selected Papers**

The following documents are also germane to our review of how a systems approach has been applied to child protection.

**Keeping Children Safe Coalition (2006). Standards for Child Protection, Tool 1. [Brochure]. United Kingdom: Keeping Children Safe Coalition.**

The Keeping Children Safe Coalition members developed a self-audit tool on standards for child protection. It is loosely based on child rights' principles. The tool was developed to guide practitioners in the way they intervene with children and families.

**Save the Children. A 'Rough Guide' to Child Protection Systems. [Brochure]. United Kingdom: Save the Children.**

This report outlines in great detail the need to move from an issues-based approach to a more comprehensive system approach vis-à-vis child protection. Citing systemic problems in service coordination and cross-agency communication, as well as in the extent to which governments have responded to their countries' child protection needs, this Save the Children document outlines a number of goals of a systems approach to child protection. These include, but are not limited to the following:

- Promoting a clearer understanding of the risk factors facing all children in order to better ensure that adequate preventive and reactive programs are made available;
- Implementing a system that is more comprehensive, adaptable, and sustainable than what is currently in place in many locales around the world;
- Strengthening the quality of collaboration between child protection and other systems;
- Being better prepared for disasters and emergencies, as countries with preexisting child protection systems are better able to recover from such events.

**Jones, N. (2008). "Child protection and broader social protection linkages in West and Central Africa: Regional thematic report 5 of a study on social protection and children in West and Central Africa." London, UK: Overseas Development Institute.**

This paper takes a social protection approach to child protection, with a particular focus on what is termed "vulnerability risks." The paper identifies six major drivers of risk to children: poverty and other economic shocks; rapid urbanization and economic globalization; discriminatory social-cultural attitudes regarding children; harmful traditional or religious attitudes and practices; armed conflict; and institutional weaknesses. This paper stands out from others like it in that it defines child protection systems more broadly, to include prevention and awareness raising.

**Njoka, J. M. (2008). Accelerating work with children in Kenya: Towards the formulation of a national child protection system**

This paper is primarily concerned with documenting progress and the challenges of implementing certain components of a child protection system. The author outlines three levels of services that a functional child protection system should have.

- Primary services, such as education and health care services;
- Secondary services, aimed at preventing the occurrence of child abuse among vulnerable groups by strengthening the capacities of families and community structures to more ably identify various forms of child abuse; and,
- Tertiary services, which are described as reactive and geared towards meeting the special needs of children who have been abused, exploited, and/or neglected. This approach is unique in that it goes beyond protection to emphasize child well-being, underscoring the importance of children's education and health.

This paper also includes a description of guidelines and procedures for handling cases at different levels of government. It highlights the role of what is referred to as “the informal sector,” noting how this branch of society can strengthen or weaken a child protection system.

**Landgren, K. (2004). *Creating a Protective Environment for Children: A Framework for Action*. New York, NY: UNICEF.**

This report provides an overview to UNICEF's approach to child protection, arguing that the organization should move from focus on responding to instances of abuse to creating a more comprehensive, protective environment for children. Eight elements are proposed that, when considered individually and collectively, protect children from violence, exploitation and abuse. These are: 1) governmental commitment to fulfilling protection rights, 2) legislation and enforcement, 3) attitudes, traditions, customs, behavior, and practices, 4) open discussion, including the engagement of media and civil society, 5) children's life skills, knowledge, and participation 6) the capacity of those in contact with the child, 7) services for prevention, recovery, and reintegration, and 8) monitoring and oversight. Evidence of success in child protection services is given.

**UNICEF (2007). *East Asia and Pacific Region Child Protection Programme Strategy: Toolkit*. East Asia and Pacific Regional Office. Bangkok: Thailand.**

The EAPRO Child Protection Programme Strategy toolkit tries to take into account two new aspects of child protection: (1) the need for maximum flexibility in order to accommodate societies and cultures in constant flux as they respond to internal and external stimuli and (2) the enormous diversity of children (i.e., age, sex gender, ethnicity, social issues, etc). It proposes a three-tiered child protection framework, including the socio-economic, political, and cultural context; the child's immediate environment; and the prevention and response system available to children. The prevention and response system is further divided into three interrelated systems that include a social-behavioral change system, a social welfare system, and a legal regulatory system. The child is situated in the center, with family, community, and peers forming a protective network around him/her. This is a user-friendly paper that attempts to allow for the practical application of ideas.

## **World Health Organization. (2007). Everybody's Business: Strengthening Health Systems to Improve Health Outcomes. A Framework for Action. World Health Organization.**

The paper is a framework for action in that it attempts to clarify and strengthen work in the health system for the benefit of countries and partners who support them. This is done in recognition that health problems are becoming more complex in a changing world with multiple goals and limited resources, hence the need for a global response. In this paper, WHO attempts to outline the opportunities and challenges of the health system as well as provide responses to these challenges. The paper acknowledges the role of governments to seek innovative ways of managing existing human and financial resources at all levels, and to improve coordination between partners and between sectors in order to achieve better health outcomes.

---

### **Deep Background**

The following articles provide background on the development and evolution of systems thinking more generally.

Forester, J. (1968). *Principles of Systems*. Cambridge, MA: Wright-Allen Press, Inc.

Giddens, A. (1979). *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*. Berkeley: University of California Press.

Hasenfeld, Y. (1992). *Human Services as Complex Organizations*. Newbury Park: Sage Publications.

Holdaway, E. A., Newberry, J.F., Hickson, D.J., and Heron, R.P. (1975). Dimensions of organizations in complex societies: The educational sector. *Administrative Science Quarterly*, 20 (1), pp. 37-58

Hoos, I. R. (1972). *Systems Analysis in Public Policy: A Critique*. Berkeley: University of California Press.

Jervis, R. (1997). Complexity and the analysis of political and social life. *Political Science Quarterly*, Vol 12(4) pp. 569-593

Jervis, R. (1997). *System Effects: Complexity in Political and Social Life*. Princeton: Princeton University Press.

Litschert, R. J. (1971). The structure of long-range planning groups. *The Academy of Management Journal*, 14 (1) pp. 33-43

Merton, R. K. (1968). *Social Theory and Social Structure*. New York: The Free Press.

Morgan, G. (1986). *Images of Organizations*. Newbury Park: Sage Publications.

Morgeson, F. P. & Hofmann, D. A. (1999). The structure and function of collective constructs: Implications for multilevel research and theory development. *The Academy of Management Review*, 24(2), pp. 249-265.

Nowak, S. (1971). *Methodology of Social Research*. Boston: D. Reidel Publishing Company.

- Parsons, T. (1956). Suggestions for a sociological approach to the theory of organizations-I. *Administrative Science Quarterly*, 1(1), pp. 63-85.
- Senge, P. (1990). *The Fifth Discipline*. New York, NY: Doubleday/Currency.
- Simon, H. (1960). *The New Science of Management Decisions*. New York, NY: Harper and Row.
- Wiener N. (1948). Cybernetics. In *Mathematical Thinking in Behavioral Science: Readings from Scientific American*. W. H. Freeman and Co.