Social indicators are a vital tool for planning and social reporting especially in the present era of uncertainty and change. The governing of complex and changing societies not only requires statistical measurements but systems that combine myriad facts into policy guidelines that identify the state of the present and point to future consequences (Frones, 2007).

Policymakers and social services planners are increasingly aware and rely on social indicators to guide the making of social policy (Land, 2000). In the case of children, indicators are used to assess access to basic needs, exposure to risk, the existence of protective factors, welfare and well-being. Indicators track trends along these and other dimensions, making them tools for quantifying investment, evaluating policy implementation and studying the status of children (Ben-Arieh, 2009).

Recent years have brought a dramatic rise in the number of efforts to measure and monitor the status of children (Ben-Arieh, 2006). Yet, despite numerous efforts and reports with “child indicators” in the title, the field of social child indication is fragmented and lacking a unifying taxonomy. The more ambitious the analysis and the more elaborate the statistics, the stronger the need for a common language used by all (Frones, 2007). Yet, often, the term indicator simply refers to statistical measures, with little elaboration on the theoretical concepts or the relationship between indicators and other factors.
What is an Indicator?

Webster’s dictionary defines indicators as something denoting something, a pointing or directing device. To indicate is to refer to or imply, to be a sign of. Like weather warning systems, childhood indicators such as social exclusion and dropout trends can point to what is coming economically and socially. Bauer (1966), described social indicators as statistics and any other forms of evidence that help us assess where we stand and where we are heading. Indicators can be related to factual material domains or evaluation of trends as much as to values and goals. Atkinson et al. (2002, p. 2) defines social indicators as “a parsimonious set of specific indices covering a broad range of social concerns.” As we can see “indicators” refer to a wide range of phenomena including measures, signs, indices and symptoms. Further, indicators take on meaning through theories and models related to their inter-relations between themselves and with a variety of other factors (Land, 2000).

The interactive nature of indicators

In order to understand the concept of child indicators one must look at them in the context of five interrelated contexts. Diagram 1 presents this interrelation as a set of interacting circles.

Diagram 1: Circles of interactions with child indicators

Thus, our journey to define and present taxonomy for child indicators starts with these five contexts: the child indicators; the focus or perspective context; the measurement techniques and tools; the constituency;
and the influencing and structural factors. Hereafter I will attempt to define and describe each of these contexts, from outside to inside, before moving on to the inter-relations.

**Influencing and Structural Factors**

An array of influencing factors is interacting with child indicators. Such factors will include gender, age, religion and a variety of personal characteristics. Further, children’s well being must be understood in both the context of their development and interactions with the environment. Bronfenbrenner’s ecological model of human development (Bronfenbrenner and Morris, 1998) conceptualizes child development on the basis of four concentric of environmental influence, with time as an underlying factor, recognizing both individual changes over time and historic time. The child, with all his or her personal characteristics, interacts first and foremost with the family, but also a range of other people and systems: friends, neighbours, health care, child care, school, and so forth. The different systems are dynamic and interdependent, influencing one another and changing over time (Lippman 2004; Olk, 2004; Stevens, Dickson, Poland and Prasad, 2005). In interacting with the different systems and subsystems, children and their families encounter both barriers and facilitators. These barriers and facilitators can, in many respects, be considered indicators of child well-being (Bradshaw, Hoscher, & Richardson , 2007).

**Constituency**

Indicators are meant to be used. Others have argued that demand from policy makers was among the facilitating factors in the development of social indicators at large and child indicators in particular (Lippman, 2007; Ben-Arieh, 2009), this examples the interaction between the audience and the indicators. However, this interaction is more complex as the constituency is not merely policy makers. Indicators interact with a variety of constituencies such as the general public, the media, professionals working with children, advocates’, the academic world and children themselves (Ben-Arieh & Goerge, 2001).

In this regard special attention should be paid to the two-direction interaction between indicators and their constituencies. Different constituencies create demand for different indicators. For example, Kunkel, et.al, (2006) presented the agenda-setting effect of the media and its role in regard to child well
being indicators. Others, showed how indicators should be composed in order to be understood and used by policy makers (Moore & Brown, 2006) or the interaction between indicators, policy makers and the public (Torney-Purta, et al., 2008; Jack & Tonmyr, 2008). Further, studies have looked on the interaction between indicators and the academic and professional world (Hanafin & Brooks, 2009), Communities (Korbin, Coulton & McDonell, 2009) and children (Ben-Arieh, 2005; Fattore, Mason, & Watson, 2009).

Measurement Techniques and Tools

Indicators are interacting with measurement techniques and tools. Ben-Arieh (2009), noted that a few methodological issues supported the development of child indicators. In that regard the interactions must be analyzed within the measurement circle and any taxonomy of child indicators needs to refer to the following sub-fields: the unit of observation; the source of information; and whether the indicators are direct or indirect. These sub-fields are interacting between themselves in a reciprocal way.

The Unit of observation. This statistical phrase is referring to the focus of the data collection. The unit of observation can vary from the parents or adult care-giver, to the family, the community or even a program or service. The child indicator movement began incorporating child-centered indicators separating, at least for measurement purposes, the child from his or her family. Such perspective can yield a quite different finding having important consequences for children's lives (Sauli, 1997).

Source of information. The mechanism used to collect data for the indicators was affected by the richness of children's lives that meant no single source of information would have been complete. Thus there was a need for using three different sources of information: census and surveys, social research (longitudinal and ad hoc) and administrative data. As for the source of information (i.e. the informer) today, more studies are moving toward using the child as their source of information instead of a proxy reports. While some researchers raised doubts, ample research shows that studies directly involving children have yielded just as good response rates and reliability as studied using adults (Melton, 2005).

Direct or indirect measures. Indicators of children’s well being could and probably should include both direct and indirect measures. Indirect measures, such as housing density or expenditure on education or
even health, still bears considerable importance for children’s well being. Yet, recent years have witnessed a move toward more direct measures which naturally had an impact on the indicators.

**The Perspective or Focus**

It seems this circle has gone through the most dramatic changes in recent years and through its interaction with the indicators had a major influence on them. It is in regard to this level that major shifts and changes have been identified in studies, shifts like from survival to beyond basic needs, from negative to positive, from well being to well becoming and from “objective” to subjective, all shifts are interrelated (Ben-Arieh, 2009).

**From Survival and Basic Needs to Well-Being.** In the past, much attention has been paid to children’s physical survival and basic needs, focusing often on threats to children’s survival (Ben-Arieh, 2000; Bradshaw et al., 2007). However, a fundamental shift occurred when the focus moved from survival to well-being, as scholars argued for indicators that moved beyond basic needs and promote child development (Aber, 1997; Pittman and Irby, 1997).

**From Negative to Positive.** The absence of problems or failures does not necessarily indicate proper growth and success (Ben-Arieh, 2005; Moore, Lippman, & Brown, 2004). Measures of risk factors or negative behaviors are not the same as measures that gauge protective factors or positive behaviors (Aber and Jones, 1997). Thus, the challenge became developing indicators that hold societies accountable for more than the safe warehousing of children and youth (Pittman and Irby, 1997).

**From Well-Becoming to Well-Being.** In contrast to the immediacy of well-being, well-becoming describes a future focus (i.e., preparing children to be productive and happy adults). Qvortrup (1999) laid the foundation for considering children's well-being, claiming that the conventional preoccupation with the next generation is a preoccupation of adults. In this view children are instrumentalized by the forward-looking perspectives in the sense that their "good life" is postponed until adulthood (De Lone, 1979).
**Objective or subjective.** Much of the research on children’s lives has until recently focused on objective descriptions, treating children as passive objects who are acted on by the adult world. As the child indicators movement grow it became clear that a new role for children had emerged, one that coupled the search for objective measures with a subjective view of childhood (Casas et al., 2004; Mareš, 2006).

**The child indicators**

It is time now to move to the last level – that of the child indicators themselves. Again one must acknowledge the fact that different types of indicators co-exist within this level. The literature usually refers to outcome measures; to indicators of inputs and to indicators of children status. Diagram 2 below portrait the three types of indicators and their interaction.

**Diagram 2. Three types of indicators and their relations**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Status of children</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective factors</td>
<td>Economic</td>
<td>A result of interventions</td>
</tr>
<tr>
<td>Risk factors</td>
<td>Emotional</td>
<td>In relation to investment</td>
</tr>
<tr>
<td>Interventions</td>
<td>Physical</td>
<td>A mean to explore</td>
</tr>
<tr>
<td>Investments</td>
<td>Social and Legal</td>
<td></td>
</tr>
</tbody>
</table>

**Indicators of Inputs.** Child indicators have long been used for monitoring investment in child services and programs. Expenditure on education, health and social services on the national, regional or local level are examples of such input indicators. Allocations of social workers, teachers as well as class size are all examples for input indicators. Similarly, evaluations of programs and services are utilizing intervention indicators, such indicators that are monitoring the effect of an intervention or program. One example would be the rate of children succeeding in tests out of the whole participants of the test’s preparation program.
Yet, input indicators encompass more than just measures of investment of evaluation of intervention. Child indicators have long been about risk factors in children lives, measurement carried out in an effort to prevent such hazards. Recent years have brought yet another type of input indicators into focus, they are indicators of protective or positive factors in children lives (i.e. sense of belongingness) aimed at monitoring children well being and not merely them being safe from risks.

**Outcome indicators.** Building on the input indicators and especially on the investment and intervention indicators recent years has seen a spurge of outcome indicators. In essence these are measures trying to connect a series of desired outcomes in children lives to the level of investment or to specific programs or services showing there consequences and at their best they are tools that could present causality. However, in some cases these indicators might be misleading. For example, outcome based indicators for evaluating the educational system focus on the achievements of children who are enrolled in the educational system, and do not measure the general education system effectiveness (Vanderwood et. al., 1995). One good example can be seen from the table presented below.

**Table 1. Percentage of Children Entitled to Matriculation Certificate in Israel (1999)**

<table>
<thead>
<tr>
<th>The population group</th>
<th>% of children entitled to matriculation certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the 17 years old</td>
<td>41.1%</td>
</tr>
<tr>
<td>All the 12th grade students</td>
<td>69.1%</td>
</tr>
<tr>
<td>All the students which took the matriculation exams</td>
<td>79.9%</td>
</tr>
</tbody>
</table>

Source: Ben-Ariei, Zionit & Bistock-Rivlin, 2000

**Indicators of Children Status.** In the above table the same measure is used in three different populations. Even a brief look shows that the change in the evaluated population (i.e. the indicator type) change the results. A narrow perspective looking at only the students, which took the exams, indicate that the system is efficient – it has succeeded in preparing almost 80% of the students to their exams. When looking at the whole relevant child population a different picture is obtained. The results indicate not only
the system efficiency but also its effectiveness (how well it fulfills the target of educating all the children in Israel).

As can be seen from this one example, indicators of children status are of immense importance for both the research results and its practical applications. Such indicators need to be developed and used in various domains of children lives including their economic, social, emotional, legal and physical status.

**The Interactions between Different Circles**

We have discussed so far the various levels affecting child indicators and the inter-relations between them. Yet we have made it clear from the beginning that these different circles interact in and between themselves. The diagram below presents a general scheme of these interactions. It suggests that the different contexts are interactive between themselves and that the child indicators are both a consequence of the various context levels but also an influencing factor on them.
Indeed, all levels of the diagram are interacting with each other and in a two-way direction. Others have argued already that the major shifts in the perspective and focus have led to the rapid development of new indicators and the child indicators movement (Ben-Arieh, 2009) and as a result new advancements in measurement and methodology (Ben-Arieh, in press). Yet, less attention was paid to the interactive relations between these two contexts (i.e. the influence of the perspective and focus on the measurement and vice versa). Further, while we know the constituency and structural factors many times determine not only what to measure but also how and in what perspective (Ben-Arieh, in press; Little, 2006), very little has been written on the interaction between the other context levels.

**Putting the Taxonomy into Use**

So far I have suggested taxonomy for child well-being indicators. I now turn to a short exercise of putting this taxonomy into use by trying to identify where the field stands today. The current state of the child indicators field can be generally characterized by the following features:

(1) Indicators, their measurement, and use are driven by the universal acceptance of the Convention for the Rights of the Child. The convention calls for more positive aspects of children’s lives and encourage the measurement of children current status, their well being and not well becoming. The convention has also brought a new constituency to the forefront of the field that of the children themselves.

(2) Indicators have broadened beyond children’s immediate survival to their well-being. In this regard, it seems a geographic difference still exists, while developing countries (appropriately) tend to focus more on survival indicators. Thus, the context of the environment influences in this example the indicator’s focus.

(3) New domains for child well-being indicators have emerged. Effected by new perspectives traditional domains, which were more profession and service oriented, shifted into new domains, which are child-centered and interdisciplinary such as a focus on children’s life or civic skills.

(4) Efforts to measure and monitor children’s well-being today start from the child and move outward. These efforts desire to include subjective perceptions. Recent efforts acknowledge the usefulness of both
quantitative and qualitative studies, as well as multiple methods, in order to suit the measurement techniques to the indicator's new focus.

(5) Expressing the influence of the different ecological levels, local and regional reports are multiplying.

(6) Trying to face the complicated structural contexts as well as the constituency of policy makers, the media and advocacy groups efforts to develop composite indices are underway at all geographic levels, local, national, and international.

(7) As major criterion for selecting indicators is their usefulness to community workers and policymakers. Policy-oriented efforts include policymakers often in the process of developing the indicators and discussing the usefulness of various choices.

**Future Perspectives**

The field is clearly growing. The quantity of “State of the Child” reports alone is an indicator of this growth. Between 2000 and 2005, twice as many reports were published than in the entire decade of the 1980s (Ben-Arieh, 2006). While the growth of these reports may be nearing its peak in the West, it is safe to say that its growth will likely continue in non-Western countries, where the emergence of State of the Child reports is still relatively new. Furthermore, studies have found that most of the State of the Child reports are a one-time episode. Although no particular pattern in regard to the reports’ time spans was found, it is possible that eventually the growing activity will lead to the establishment of periodical reports (Ben-Arieh, 2006). Similarly, perhaps more local and regional reports will emerge in these countries, as they have in the West (O’Hare and Branstedt, 2003).

Although the field has indeed dramatically changed it seems we are still in the midst of the process. None of the above mentioned shifts has reached its final destination. However, all have definitely left the station. Therefore, the first reasonable conclusion is that the field will continue to move in these directions. Some have claimed that the continuation of the trends described here will eventually lead to the creation of a new role for children in measuring and monitoring their own well-being. In a field that looks to the full range of child well-being, children and their own perspectives would naturally have to be
included. This in turn will lead to making children active actors in the effort to measure and monitor their own well-being rather than being an object to study (Ben-Arieh, 2005).

Finally, the field is definitely maturing and getting more organized. What started in the last third of the 20th century through a number of international and national projects (see for example Qvortrup, 1992; Hauser, Brown and Prosser, 1997; Ben-Arieh et al, 2001) developed in 2006 to the International Society for Child Indicators (ISCI) and to the publication of the Child Indicators Research journal.

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