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It Takes a Village to Raise a Child: An Executive Function and
Community Management Perspective

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Abstract

Traditionally developmental psychologists have studied parental socialization in terms of stable characteristics of parents and children related to issues of control and warmth. Such approaches have yielded extensive information about family influences on development. They have also provided a limited view of mechanism of socialization. Family management theorists, for example, argue that parents play a critical role in orchestrating their children's daily lives, providing them with opportunities and resources and protecting them from risks and dangers. These experiences, then, have a major impact on both domain-specific knowledge/skills and self-regulation skills children learn as they mature. In this paper, we elaborate on this perspective and extend it to include the interaction of children and families with the numerous social institutions responsible for rearing and teaching children. A model, analogous to the cognitive executive function system, is used to describe these complicated interactions.

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Traditionally developmental psychologists have studied parental socialization in terms of stable characteristics of parents and children related to issues of control and warmth (Baumrind, 1966; Maccoby and Martin, 1984). Recent studies in cultural psychology and in the interface between sociology and psychology, however, have provided an additional critical perspective: family practices and family management (Furstenberg, Cook, Eccles, Elder, Sameroff, 1999). These authors stress that daily practices and the managerial/organizational functions of parents are important influences on social and cognitive development. Family management theorists, for example, argue that parents play a critical role in orchestrating their children's daily lives, providing them with opportunities and resources and protecting them from risks and dangers. These experiences, then, have a major impact on both domain-specific knowledge/skills and self-regulation skills children learn as they mature. In this paper, we elaborate on this perspective and extend it to include the interaction of children and families with the numerous social institutions responsible for rearing and teaching children.

As the social sciences have become more integrated, the need to study individuals in the contexts in which they live, play, learn, and work has become clear (Eccles, 1992; Furstenberg, et al., 1999; Weisner, 1996). This is especially important to the study of child development (Bronfenbrenner, 1979). Children learn by interacting with their physical and social environments. They take in and process information, leading to cognitive and social learning (Flavell, 1999). This flow of information occurs in a rich set of social contexts and there are multiple avenues through which information and resources reach each child. Early in life this information is generally managed by parents or parental figures through both their daily practices

and the decisions they make concerning the types of information and resources the child receives (Eccles, 1992; Furstenburg, et al., 1999). As the child matures, teachers, religious figures, relatives, peer groups, and other significant people come to influence the informational flow and resources available to the child. Thus, over the years of childhood and adolescence, multiple significant others are engaged in managing the information and resources available to both inform children about their world and shape their growing knowledge and skill repertoire. This paper presents a model that extends the family management literature. It uses the concept of executive processes as an analogical framework for an integrative perspective on how information and resources are funneled through significant individuals in a child's environment and how these individuals need to work together to successfully raise a child into a competent self-regulated adult.

THE CONCEPT OF FAMILY MANAGEMENT

Many parents think it is important to try to influence their children's experiences both within and outside of the family context. But how parents perceive, organize, and manage their children's world and experiences has received relatively little attention, except in the arena of school achievement; and in this arena, parents' engagement in managing their children experiences vis-a-vis intellectual skills (e.g., reading, acquisition of general information, and mastering school assignments) is directly and powerfully related to children's subsequent academic success (see Eccles, Wigfield, & Schiefele 1997). Given the consistency of the evidence in this one domain, understanding the specific ways parents organize and manage their children's experiences across a wide range of activities is a promising approach to understanding how parents shape individual differences in specific skills, self perceptions, interests, and activity

preferences. For example, children should be most likely to acquire those skills that their parents make sure they have the opportunity to learn and practice.

There are various ways to categorize parents' management strategies. One important dimension is whether the strategy is promotive or preventive. Promotive strategies are those designed to create positive experiences or to help the child develop skills and interests, such as assisting with the child's school work, encouraging the development of talents and interests, enrolling the child in special classes and programs, or getting an older sibling or other relative to help the child with homework. Preventive strategies are those intended to minimize behavioral risks and negative outcomes, such as careful monitoring of the child's location, enforcing strong curfew practices, involving the child in protective positive activities, and discussing negative models ("don't be like your Uncle John").

Evidence from more traditional family socialization work and from organizational theory suggests other important distinctions in family management strategies. First, strategies likely vary in the extent to which they are proactive or reactive. Good business managers anticipate the future and take a proactive stance toward managing for the future. The same should be true for effective family management. But to adopt an effective proactive management style, parents need to have long term goals, need to believe that opportunities exist and are obtainable, need to have a "lay-person's theory" of effective parent management, and need to have sufficient financial, social, and psychological "capital" to implement their theory. The contrast in the evidence regarding the beneficial effects of involvement with one's child's school work versus amount of time spent helping one's child with homework is a good example of the importance of this distinction. As noted earlier, there is ample evidence of the positive effects of parental involvement for the children's school achievement. The evidence for time spent helping one's

child with homework is mixed. Several studies report a negative relation between time spent helping with homework and children's school achievement (e.g., Smith, 1992). This counter-intuitive finding makes perfect sense if one distinguishes between proactive and reactive involvement: Time spent helping one's child with homework is likely to be a reactive strategy adopted in response to the child having difficulty doing the homework on his or her own. If this is true, then it is likely that such a child is doing more poorly in school than those children who have little or no difficulty doing their homework without their parents' help. In contrast, studies showing a positive effect of parental involvement in their children's school-related activities may be assessing a more proactive form of involvement.

A wide variety of person-, family-, and community-level characteristics are likely to influence the types of specific parenting practices and family management strategies. For example, it is easy to imagine how middle-class, psychologically healthy parents could manage their children's experiences to their children's advantage. This management task, however, is likely to be much more difficult for parents with fewer financial and psychological resources. Parents with more limited resources often face fewer choices and more constraints in managing their children's experiences. These families also often live in neighborhoods with relatively fewer positive opportunities for their children. The parents themselves also often live stressful lives, making it difficult for them to effectively implement their goals and values. Finally, their neighborhoods may also expose their children to relatively high levels of risky experiences and problematic role models (Garbarino, 1992). Thus, even though it is likely to be harder for these parents to influence their children's extra-familial experiences, the paucity of neighborhood resources, particularly when accompanied by high levels of risk, is likely to increase the importance of parents' ability to effectively manage their children's experiences. How financially

burdened parents living in high-risk neighborhoods manage their children's experiences should have important consequences for their children's chances of escaping poverty.

A recent ethnographic and survey study by Frank Furstenberg and colleagues (1999) provides support for these suggestions. The field workers in this study talked with the families living in five high poverty Philadelphia neighborhoods about their perceptions of their neighborhoods and about the ways they tried to manage their children's experiences both at home and in the neighborhood. The field workers found highly skilled and resourceful parents in all five neighborhoods. Many of these parents were discontent with the resources available for their children and were worried about the risks their children faced in their neighborhood. Many also distrusted their neighbors and felt they could not rely on them to either watch their children or work with them to create a more positive social environment for the children within the neighborhood. Several wanted to move out but were unable to do so because of limited financial resources. Instead, the more resourceful parents adopted individualized styles of family management. At the extreme, some parents resorted to a very restrictive strategy, confining their children to the household unless the children were intensively chaperoned. But even in the most disorganized and high risk neighborhoods, some parents were able to locate safe niches within their neighborhood for their children and were able to take advantage of resources outside their neighborhood to provide their children with growth promoting experiences. In contrast, parents in more socially organized neighborhoods seemed to be able to rely more on neighborhood resources to help them manage their children's experiences. Such neighborhoods often had organized activities available for adolescents; these parents also trusted their neighbors to help monitor and socialize their children.

In sum, the family management approach provides a way to integrate several perspectives on social development within the family in a way that focuses attention on parents as agentic and thoughtful managers of their children's experiences. Although this has not been a focus thus far, the family management perspective also focuses attention on the relation of parents as managers to all of the institutions that affect theirs and their children's lives. As children get older and move increasingly out of the house, parents need to interact and coordinate with other institutions such as faith-based institutions, schools, after school programs, workplaces, etc. A wide variety of characteristics of both the families and these other institutions either facilitate or hinder these interactions. We believe that effective child rearing depends on close coordination of the actors in these various institutions, coordination and interaction that is analogous to smooth functioning of the multiple subsystems in the human body and brain. Recent work in cognitive psychology has documented the importance of executive function in the brain to allow such coordination and management to occur (Borkowski & Burke, 1996). In the remainder of the paper, we use this analogy to discuss how the family management perspective can be extended to the study of child development in multiple contexts.

EXECUTIVE FUNCTION: AN ANALOGY

The approach we are taking to understanding the management of information and resources to the child is directly related to work in cognitive psychology and systems theory focused on the integration and coordination of complex systems. We believe that the hypothetical construct of executive function provides an especially useful conceptual tool to understand the coordination processes involved in successfully scaffolding the cognitive and social learning that must take place during childhood and adolescence to set the stage for successful transition into adulthood. First, at the individual level, it provides a powerful

framework for analyzing how people manage their own interactions with the worlds in which they live. Second, by extending the analogy of executive function into realm of socialization, it provides a framework for understanding both how individuals work together to manage the socialization of others and how individuals work together to provide adequate scaffolding for the learning that must take place for children to develop their own executive functioning skills.

Executive Functioning at the Individual Level. Most of the work in cognitive psychology has focused on executive functioning at the individual, and often non-conscious, level. Within this research tradition, executive functioning is defined as the planning, organizing, evaluating (task analysis), monitoring, coordinating, and executing of cognitive tasks (Borkowski & Burke, 1996; Dennis, Barnes, Donnelly, Wilkinson, & Humphreys, 1996; Fletcher, 1996; Romans, Roeltgen, Kushner, & Ross, 1997; Zelazo, Carter, Resnick, & Frye, 1997). Executive functioning is the management of information and resources coming into, and being distributed within, the cognitive system; it constantly evaluates and monitors the performance of various subsystems to make necessary adjustments for required tasks to occur. Effective executive functioning is critical for managing both the flow of information coming into the cognitive system from the physical and mental world and the flow of information out of the brain to the relevant subsystems throughout the body. To the extent that this work has had a developmental focus, it has investigated changes in the efficiency of executive functioning with aging.

Within developmental psychology, research most relevant to the idea of executive functioning has focused on three topics: the metacognitive skills of problem solving and school learning, the developmental nature of acquiring and perfecting executive skills, and cognitive disabilities as examples of deficits in children's executive functioning systems. For example, developmental and educational researchers have used the concept of metacognition to describe

and study the conscious manifestations of executive function for facilitating learning in and out of school (Salomon, 1993).

We are most interested in the developmental nature of effective and efficient executive functioning. As suggested by the research in metacognition, children become better executive functioners on their own behalf as they mature, leading to better independent problem-solving and self-regulated learning and behavior (Zelaszo & Frye, 1998). But, the system begins at a fairly immature level. Initially, efficient executive control of children's interactions with their external world needs to be scaffolded by more mature individuals for two reasons: (1) to protect the child and make sure the child has the resources necessary for survival and growth, and (2) to help the child learn both the content-specific skills/knowledge and the executive functioning skills necessary to manage their own survival. We return to these external agents of executive functioning later.

The notion of dysfunction in the executive system is also important for this analogy. The most obvious research instantiation of this aspect of executive functioning is the work on learning disabilities, for example, work ranging from minor reading and verbal disabilities (Denckla, 1996) to disabilities caused by brain or head injuries (Fletcher, 1996) and genetic disabilities such as Turner's syndrome (Romans et al., 1997). Within the executive functioning metaphor, such learning disabilities can be conceptualized loosely to terms of situations in which information and resources are not adequately flowing to, and being processed by, a child, leading to the possibility of a learning disability if no compensation is provided. What is important for our use of this metaphor is the idea that such disabilities may reflect either immature functioning at the individual level (which may be amenable to training and better scaffolding) or inefficient

external executive functioning leading to the child being provided with inadequate resources, information, and monitoring.

In sum, we believe that the idea of executive functioning provides a useful metaphor for conceptualizing individuals' interactions with their own bodies and social worlds.

Understanding the developmental processes underlying the ontogeny of an efficient executive function system is critical to understanding successful social and cognitive development.

Borkowski and Burke (1996) discuss the development of executive functioning skills in terms of repetition or multiple redundancies. Once a child has acquired a skill, they then use it in different contexts, thus expanding their skill and knowledge. Using this strategy allows the child to learn to apply the skill correctly in multiple situations. As the child continues to develop, he/she begins to select strategies, independent of adult assistance, from his/her own growing repertoire and implement them appropriately for the context. This sequence is considered to be the basis of adaptive learning and the beginning of self-regulated behavior (Borkowski & Burke, 1996). They also hypothesize that without the correct developmental maturation, an individual can develop problems with higher order processing and mature executive functioning. This is an important characteristic of the systems maturation so that the lack of abilities at one time point is not construed as permanent sources of dysfunction.

SOCIALLY ORGANIZED EXECUTIVE FUNCTIONING

As discussed earlier, a child's life revolves around various context and significant individuals as well as institutions. Recently, developmentalists have sought to integrate information from the psychological, sociological, anthropological, and ethnographic traditions in an effort to understand the complex world in which a child develops. The idea of socially organized executive functioning is a continuation and incorporation of these traditions with an

explicit focus on the management (or mismanagement) of children's lives and development. The analogy, then, to the cognitive executive functions is that parents/caregivers, significant individuals, and institutions act as external executive functionaries to organize, evaluate, and distribute information and resources for children as they develop.

Extending the notion to the social developmental level raises two critical issues: (1) Because a primary goal of socialization within this framework is to facilitate the development of mature executive functioning within the child, socializers must gradually turn over their role as external executive functionaries to the maturing child; and (2) Because the number of potential external executive functionaries expands as the child matures, there is a need for systems-level executive functioning (that is, who manages the managers). We discuss each of these in turn below.

First, because we are developmentalists, we assume that significant others plan, organize, monitor, and help problem solve situations with children as they develop with the intent that children can gradually take over these activities as they mature. In most cultures, it is expected that children will become self-regulated, socially integrated adults who are able to function as effectively as possible within their cultural context given their own personal capacities.

Consequently, as development progresses, the external/social executive functionaries should begin to relinquish some of the management to children so that the children can provide their own resources and seek out information for their own cognitive and social learning.

Orchestrating this shift is likely to be difficult because it requires extensive knowledge about the world at large and about individual children's strengths and weaknesses. Recent work on Stage-Environment Fit (Eccles, Midgley, Buchanan, Wigfield, Reuman, & Mac Iver., 1993) highlights

both the importance and difficulty of the timing and coordination of transferring executive functioning from the adult executive functionaries to maturing children and adolescence.

Second the issue of whom “ages” the “managers” is important. Within the framework of executive functioning, systems need to be coordinated and evaluated as interconnected units. It is easy to imagine how a parent can do this coordination and evaluation on behalf of a child during the preschool years. But what happens when the child goes to school? The importance of this dilemma has received considerable attention in the recent debates about the need for better parent-school cooperation. The issue becomes increasingly complex as the number of institutions and social actors in children’s lives increase and become increasingly disconnected from another.

Cognitive scientists have introduced the notion of distributed cognitions as one way to think about how problem solving tasks such as the coordination of multiple actors can be shared in cultures and networks of people. This research has been used to explain socially-coordinated behaviors as diverse as how shipmates work together to sail a ship and how individuals problem-solve when new situations occur and no single individual person has sufficient knowledge to solve the problem alone (Hutchins, 1995). Several important themes emerge out of this metaphor: (1) multiple redundancy and shared goals are good, the ship runs better if everyone shares a common goal and if this goal is reinforced throughout the system; (2) specialization of function can be an asset but it needs to be managed; (3) coordination of subsystems is critical, one needs a captain; and (4) adequate information flow and accessibility is important.

One could certainly argue that these characteristics of efficient group-level functioning are currently rare in this country for the social task of raising children. Given that this is true, we believe it would be useful to analyze many of the developmental problems we are concerned

about in this culture in terms of “dysfunctional” socially-organized executive functioning than in terms of individual-level “dysfunctions” throughout the various systems affecting children’s development.

Details of the Metaphor. The contextual influences and number of significant individuals in a child’s life are vast and difficult to fully capture in any model. Nonetheless, Figure 1 is an attempt to schematize some of these complexities. The model highlights the role of significant individuals and social institutions as the managers (executive functionaries) of children’s daily lives. What isn’t depicted is the critical importance of these various individuals and institutions working closely together so that all actors have sufficient information and feedback mechanisms to allow each actor to be an effective executive functionaries for each child. Consequently, it is assumed in this model that all elements interact and affect each other and that the distance of any particular element from the individual child is not indicative of the magnitude of influence. For example, the impact of community context will vary across communities and will depend on the effectiveness of the family’s and the school’s executive functioning on behalf of the child. Similarly, the demands on the family’s executive functioning will depend on the characteristics of all of the other social contexts experienced by the child. Thus, the model should be viewed as a dynamically interacting model with each individual child having their own configuration of how much he/she is influenced by the different spheres.

At the heart of the model is the individual child who is receiving resources and processing information from his/her world. This individual brings to the situation his/her own cognitive processing ability, temperament, gender, and other constitutional factors. This is where the connection is made between the socially organized executive functioners and the child’s internal executive functioning. The information and resources from the outside spheres

present themselves to the child who must then process and incorporate the information into his/her own cognitive processes.

The next sphere represents the groups most likely to be interacting directly with the child. They are the significant influences and people in the child's life. These groups manage information coming in from the other spheres and adjust them in response to the child characteristics. In the early years of life, the management and resources generally flow through the parents or primary caregivers. These caregivers provide information, transportation, food, values, safety, teaching, health care, teaching, social support, discipline, motivation and other important physical and psychological resources to the child. When the child begins daycare or school, some of the management activities and executive functioning shifts to other significant figures. The daycare or school institution, for example, begins to provide information, safety, transportation, food, values, and other physical and psychological resources. Similarly, the teacher or caregiver provides for social support, discipline, attention, motivation, teaching as well as the psychological and physical resources. However, for these new caregivers to be effective executive functionaries for the child, they must coordinate their functioning with the executive functioning of the family-level caregivers. Without this connection, neither set of social executive functionaries has the information it needs to be an effective executive functionary for the child. Recent calls for greater collaboration between school and families is an example of the growing awareness of the need for coordination among the child's various social executive functioners. But for this collaboration to occur, the two systems must have access to the same sources of information and must have shared goals against which each system is evaluating progress and potential problems.

As the child gets older, the number of potential individuals (e.g., peers, counselors, religious leaders, coaches) who can act as social executive functioners and the number of institutional settings (e.g., community programs, Head Start, juvenile court) in which executive functioning needs to occur increase. In addition, the number of opportunities and dangers that need to be managed by both the child and his/her social executive functionaries increase and, in many cases, become increasingly more risky and difficult to manage. Consequently, the demands on the child's executive functioning and on his/her social executive functionaries increase, leading to a need for even stronger coordination across the various executive functionaries. Unfortunately, in our society at this historical period, such coordination usually becomes increasingly difficult due to the marked independence of the various contextual systems through which our children/adolescents must navigate.

The outermost sphere represents the community contexts that indirectly influence the child through the executive functionaries. Community contexts include both the neighborhood and the larger community characteristics; it also includes the shared cultural context. These contexts interact with the primary caregivers own demographics and put certain constraints on what is proximally available to the significant people in a child's life to manage. Community contexts vary in the extent to which their potential impact on the child needs to be, or can be, managed by the child's primary caregivers. Resource rich and safe communities with consistent norms and values can be used by the primary caregivers to provide their children with many positive opportunities. To the extent that the primary caregivers both agree with the norms and values of the community and trust their neighbors to help them "raise" their children, the primary caregivers' executive functioning for the child is more easily distributed and shared with other members of the community. At the other extreme, primary caregivers may have to exert

considerable energy as executive functioners to protect their children from the risk and dangers in their neighborhood.

When the executive functionaries manage resources and information well for the child, the child should become a self-regulating, socially integrated adult. When there is a “failure” in the socially organized executive functioning systems, it is increasingly likely that the child will have problems in obtaining the information or resources needed to develop into a self-regulating adult. In this way, we consider dysfunctional socially organized executive functioning systems as analogous to a cognitive disability or a dysfunction due to lack of information and/or efficient evaluation and coordination. This analogy is very similar to the idea of social disorganization or lack of social capital (Furstenberg, et al., 1999).

Social capital is the availability of resources in the environment for individuals to draw on to reach their desired goals (Furstenberg, et al, 1999). When the resources and information do not exist, then the ability to reach these goals is diminished. In the case of the executive functionaries, if a primary caregiver, institution, or significant other does not have access to needed resources then the likelihood that the child will learn to effectively self-regulate is reduced. Sometimes, however, resources not available in one social context (such as the family) may be provided in other contexts. As with the concept of family management, other significant individuals or institutions may compensate for lost or missing resources. Schools, for example, may provide resources not available in the home or community. Free lunch programs are one example of such resources; expert knowledge is another. Individuals at school can also connect families and children with other organizations or programs that may provide this assistance. Community outreach programs can provide assistance to families who are not able to provide certain resources to their children. Conversely, if the schools are not doing an adequate job of

teaching a child, parents can supplement this teaching by providing it themselves or seeking out tutoring from other institutions. Hence, there is a certain amount of compensation that can and should occur between the executive functionaries to aid in the development of a self-regulated adult. Within the framework of executive functioning such compensation is likely to work best when the various systems are working together on behalf of the child.

DISCUSSION

The social and psychological processes that lead to the development of a self-regulated, independent adult are complex. The socially organized executive functioning model is an attempt to understand the complexities that surround the management of the flow of information and resources needed to facilitate the formation of a self-regulating child, that is an individual who can effectively and efficiently be one's own executive functionary.

This integrated perspective focuses our attention on the interconnections among the various social contexts that influence children's lives. Understanding what facilitates efficient coordination among the various contexts in which children develop is critically to understanding how a village can raise a child and why "villages" often do a less than optimal job at this social task. There are often barriers that can lead to inadequate coordination of executive functioning across individuals and organization, such as, differences in socialization goals, lack of knowledge about others' goals, strengths and weaknesses, lack of coordinate problem-solving goal setting and lack of access to information. Dornbusch and colleagues (1985), for example, found that parents and adolescents in California don't know what courses are required for getting admitted into the university system. The adolescents believed they were taking, and doing well in, the right courses; they found out too late that the courses would not meet the requirements and that they were not being taught the information needed to do well on the entrance exams. As

a consequence, they had to change their post high school plans despite their parents best efforts to be good executive functionaries on their behalf. We consider this situation a prime example of dysfunction in the socially organized executive function systems. Our perspective would lead one to ask a series of questions about the origin of this dysfunction and the needed repairs.

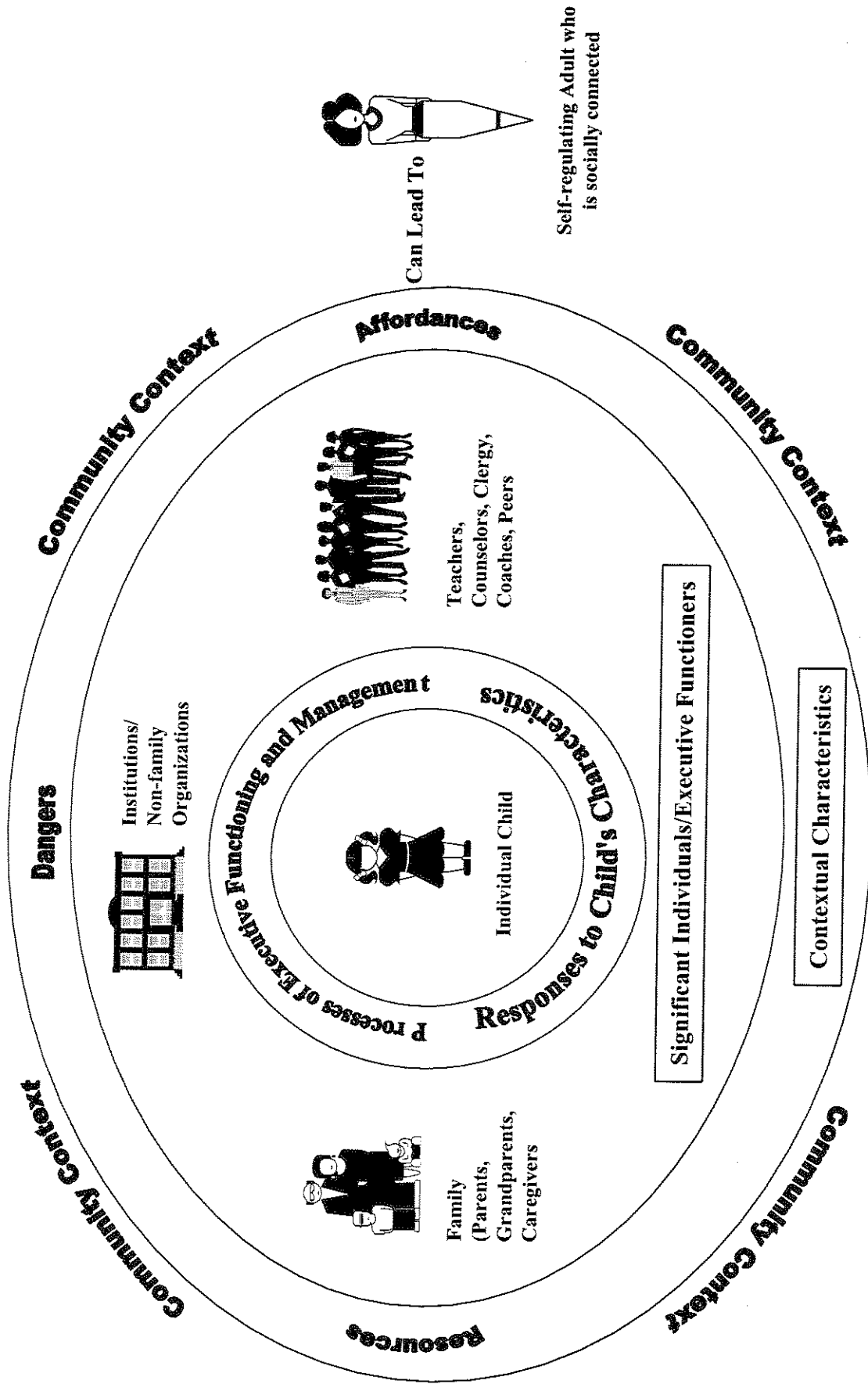
In the future, we plan to use the socially organized executive functioning model to understand how these individuals work together to create a self-regulated, independent adult. Currently, we are collecting data on how parents, schools, and community organizations act as executive functioners to coordinate children's engagement in school activities. This study will be the first explicit use of this model. The model could easily be used to guide analyses of existing databases that have information on the participation of children in multiple contexts, datasets such as the new children's supplement to the Panel Study on Income Dynamics. This dataset has explicit information on parents' engagement in managing their children's participation in multiple contexts. Hence, another avenue of research on this topic will come from secondary analyses of these databases using the model as a way to understand the complicated interactions of the significant individuals and institutions surrounding the developing child. Such approaches will focus our attention on: (1) the agentic role of social agents in children's lives as they try to manage the opportunities, barriers, dangers and affordances present in each child's environment, and (2) the need to understand what facilitates and what undermines the interconnections and coordination among the various contexts in each child's life.

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Figure 1: Model of Socially Organized Executive Functioning for a Child



Note: The spheres are dynamically interacting such that context are affecting and being affected by executive functioners and the individual child.

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