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The SAGE Encyclopedia of Out-of-School Learning

Ecological Systems Theory

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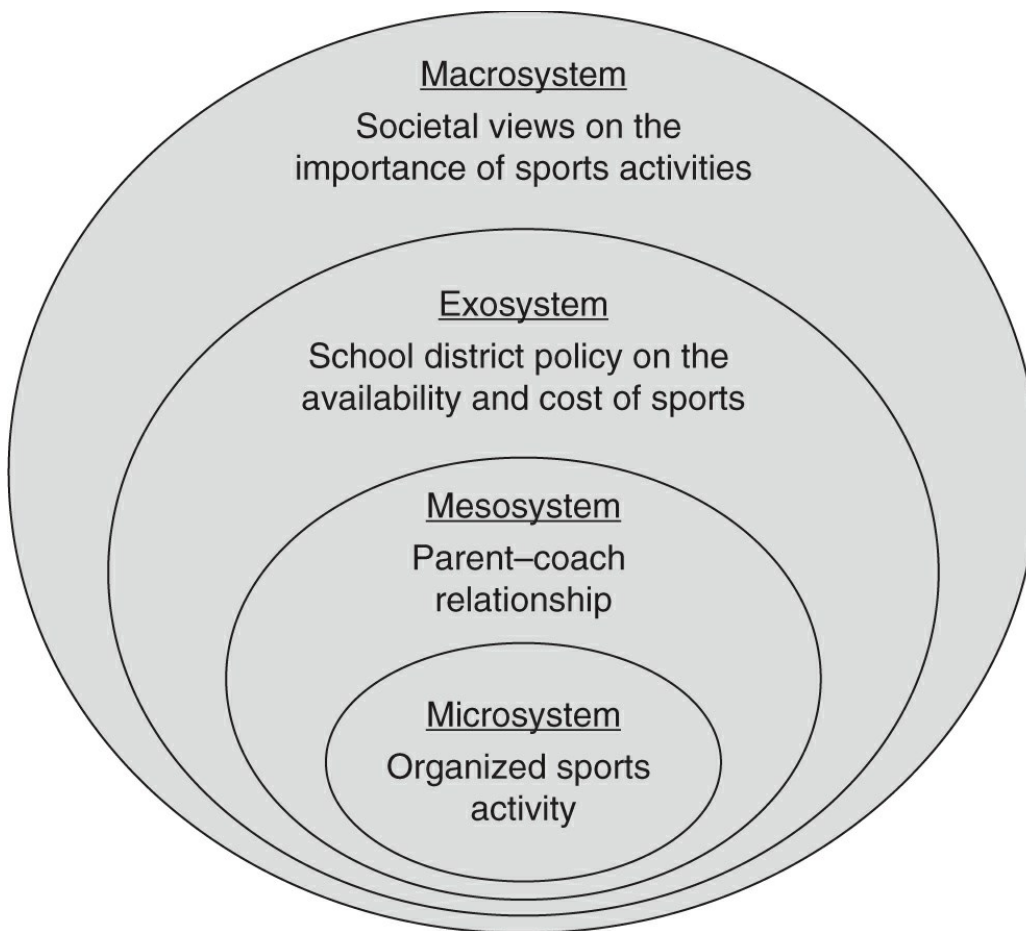
Developed by psychologist Urie Bronfenbrenner, ecological systems theory explains how human development is influenced by different types of environmental systems. Researchers, policy makers, and practitioners are interested in the opportunities and risks associated with how youth spend their discretionary time outside the regular school day. One of the primary settings in which youth spend their out-of-school hours is in organized activities, which include extracurricular activities, after-school programs, and activities at community-based organizations. Much research on out-of-school activities has utilized ecological systems theory to understand how activities foster positive, healthy development of youth from different backgrounds.

Modern theories of human development propose that development occurs over time as part of a complex process involving a system of interactions within the individual and between the individual and the environmental contexts of which he or she is a part. In 1979, Bronfenbrenner's seminal work on ecological systems theory described the child's ecology in terms of a set of nested levels of the environment. In 2006, Bronfenbrenner revised his original theory, adapting the name to *bioecological systems theory*, emphasizing the active role of the individual in the developmental process. This entry discusses what constitutes the ecological system in Bronfenbrenner's original ecological systems theory, the defining properties of bioecological systems theory, the critiques of ecological systems theory, and the implications of ecological systems theory for research and practice.

What Constitutes the Ecological System?

There are four interrelated types of environmental systems in Bronfenbrenner's classic rendition of ecological systems theory, namely, the (1) micro-, (2) meso-, (3) exo-, and (4) macrosystems. These levels range from smaller, proximal settings in which individuals directly interact to larger, distal settings that indirectly influence development. The various levels within ecological systems theory are often presented graphically as a series of four systems nested around a focal individual like a set of concentric circles (see [Figure 1](#)) or a set of Russian dolls (i.e., a *matryoshka* doll). Considering organized out-of-school activities as part of youth's ecology helps elucidate the particular features of activity settings that can promote positive, healthy development and how relations between activities and other settings contribute to the developmental process. Next, each level of the ecological system is described using associated research on out-of-school activities.

Figure 1 Nested Model of the Micro-, Meso-, Exo-, and Macrosystems in Bronfenbrenner's Ecological Systems Theory With Organized Sports Activity as the Example



Microsystem

The most proximal ecological level is the *microsystem*, which includes the settings in which individuals directly interact. Organized out-of-school activities represent one microsystem, encompassing different types of activities, such as sports, academic clubs, service projects, and faith-based youth groups. Overall, youth who participate in any activities display more positive social, emotional, psychological, and physical outcomes than their nonparticipating counterparts. Among activity participants, certain types and patterns of activities are associated with more positive outcomes than others. Adolescents report more positive developmental experiences in faith-based activities than in any other type of activity, particularly for identity formation and acquiring prosocial norms. Moreover, participating in a combination of sports and youth development programs (which may or may not be faith based) seems most beneficial, at least compared with participation in only sports or other combinations of solely nonsport activities. Superficially, this might suggest that certain types of activities are the most beneficial. However, research on program quality alludes that quality is likely more important than activity type, though little systematic research has addressed type and quality jointly.

Program quality is defined as the set of activity features known to foster positive youth development. There are a variety of measures available to assess program quality, such as the Youth Program Quality Assessment, which can be used in researchers' or practitioners' efforts to improve and promote the quality of activities. In general, these measures assess the degree to which activities are asset-rich environments that provide youth life skill-building opportunities, adult leaders who serve as mentors, and leadership opportunities. Moreover,

high-quality activities foster healthy identity development and positive social relationships of youth with peers and leaders. These features are important to build youth's sense of belonging in the activity and to create a safe environment where youth have the confidence to try new things. Scholars studying out-of-school activities as microsystems may ask questions specific to the activity setting, such as "Why do youth participate in certain types of activities versus others?" "Why are certain types of activities linked with certain developmental outcomes?"

Mesosystem

Moving outward in Bronfenbrenner's ecological levels is the *mesosystem*, which involves processes that occur between the multiple microsystems in which individuals are embedded. There are many microsystems that interact with activities to affect development. The key point is that what happens in one microsystem affects what happens in another microsystem. Thus, to truly understand development within activities, it is important to understand youth's developmental settings beyond activities.

Families and schools are the central microsystems interacting with youth's organized out-of-school activities. Research on families highlights the importance of coordination across settings. Parents are more likely to support and encourage their children when the goals and norms of the activity align with those of the home setting. Coordination between activities and schools may be more easily achieved because many activities are school based and are led by school teachers. Nevertheless, clear communication between activity leaders and parents and teachers is necessary to foster alignment across settings. Researchers interested in the mesosystem might extend this research by asking questions such as "Do the norms of programs align with family values or school mission statements?" "Is participation in out-of-school activities affected by school experiences or familial responsibilities, such as caring for younger siblings?"

Exosystem

The *exosystem* is the next outermost level and includes the microsystems in which individuals are involved but not directly embedded. The exosystem "trickles down" to influence development through the other people involved in individuals' lives. Research at the exosystem level is rather limited in out-of-school activities, but an example line of research elucidates how parents affect their children's activities. One way in which parents matter is through their previous experiences with activities. Parents often expose their children to activities they are familiar with, and thus, children tend to participate in the same types of activities that their parents participated in as children. However, even for parents with knowledge of the depth and breadth of activities available, increasingly demanding work schedules impede opportunities for participation. Children from families with working parents participate in fewer activities than children with at least one nonworking parent at home. This line of research is important to pursue as factors in the exosystem can be the gateway to accessing activities, particularly for young children. Examples of research questions include "How can activities be designed to overcome barriers to participation, such as parents' inability to provide transportation to and from activities due to work schedule conflicts?" "What other constructs or variables explain the relation between parents' work and activities?"

Macrosystem

Finally, the outermost system is the *macrosystem*, which is defined as the set of overarching beliefs, values, and norms, as reflected in the cultural, religious, and socioeconomic organization of society. The macrosystem influences development within and among all other systems and serves as a filter or lens through which an individual interprets future experiences. Research on macrosystems provides insight into what predicts participation, why some individuals in the same activity have different experiences, and issues related to fit-in activities.

Social class and culture are important macrosystems influencing out-of-school activities, though social class has received considerably more attention than culture. Social class refers to individuals' or families' economic and educational positions occupied within the larger, hierarchical society, whereas culture is defined as the set of values, practices, and beliefs that characterize a specific ethnic group. Findings suggest that youth from lower social-class families are less likely to participate in activities than wealthier families, often because they have fewer monetary resources, have more family responsibilities (e.g., child care), and tend to reside in neighborhoods with fewer resources and where safety is a concern. Research on the role of culture has unveiled important information about fit-in activities, particularly for adolescents. Participating in activities aligned with one's cultural background, such as by celebrating cultural holidays during the activity or by speaking the primary language used at home with activity leaders and coparticipants, is associated with more positive experiences and outcomes than participating in activities in which one's cultural background is not reflected. These areas of research on macrosystems should be explored more in-depth and extended to questions such as "How should activities be tailored for targeted populations, such as ethnic minorities or youth in high poverty schools?" "How do social class and culture intersect to predict activity participation?"

Defining Properties of Human Development

The process of human development can be more precisely defined by Bronfenbrenner's revised bioecological theory. Development is hypothesized to be the joint product of four defining properties: (1) *person*, (2) *context*, (3) *process*, and (4) *time*. First, person factors refer to the individual characteristics, such as age, gender, and competency, that interact with the setting to influence development. Person factors help explain who participates versus who does not participate in activities (also referred to as "selection" effects) as well as the roles that different youth occupy within the activity setting and how activity effects vary across individuals (termed *moderating* effects). The second property, context factors, includes the four systems of Bronfenbrenner's original ecological systems theory described earlier. The primary mechanism of development is engendered in the third property, termed *process* factors, and represents the interactions between person and context factors. Process factors are the complex reciprocal exchanges between an active, evolving human organism and its immediate external environment, termed *proximal processes*. Development is largely induced by proximal processes that occur on a regular basis over extended periods of time.

However, to adequately describe the dynamic nature of development, proximal processes must be understood with reference to the fourth defining property of development, namely, time. Proximal processes occur in a specific time and place and within a specific historical context. Time is construed at various levels of the ecological system. Microtime refers to specific episodes of proximal processes (e.g., minute-by-minute exposure), whereas mesotime captures the periodicity of proximal processes, such as over longer intervals like days or weeks. Time is conceptualized at the macrolevel as the *chronosystem* and is concerned with

the historic changes in society across generations. In general, greater intensity (minutes or hours per week) and longer durations (consistency across months or years) of participation are found to predict larger program effects than does less exposure.

Critiques of Ecological Systems Theory: Nested Versus Networked Systems

In recent years, network scholars have challenged the notion of nesting in ecological systems theory. As shown in [Figure 1](#), the various systems are represented as a nested arrangement, each contained within the next. However, *nested* may not be the precise way to conceptualize the interrelatedness of the various systems. For example, out-of-school activities represent a microsystem, and policy surrounding funding allocation for out-of-school activities is an exosystem. From an ecological systems theory perspective, activities would be conceptualized as a subset of activity policy. Conversely, a network approach would conceptualize these as two distinct systems, arising in distinct settings (one that contains the focal individual and one that does not) that influence each other through the patterns of social interactions among individuals directly and indirectly involved in the two systems. The latter network approach shifts the focus away from the place where social interactions occur (i.e., the activity is the microsystem) to the individuals engaged in social interaction within that place (i.e., the set of relationships between individuals within the activity is the microsystem). The network approach has been argued to more accurately represent the complex overlap among individuals' ecological environments.

Implications for Research and Practice

Taken together, out-of-school research situated in ecological systems theory provides insight into how youth engage with activities, how other settings affect development in activities, and the role of the broader society in activities. Knowledge about how the various ecological levels affect out-of-school activities should be considered in program design. Research findings indicate that it is ineffective to take a "one-size-fits-all" approach to designing activities. Practitioners should place high emphasis on using research to design high-quality activities that foster positive youth development and provide professional development for staff to positively and effectively lead youth. Practitioners should be trained about youth development processes generally (e.g., typical cognitive, social, emotional, and physical development), as well as have working knowledge of the characteristics of the population of youth served by the activity. Moreover, practitioners should have some understanding of the other primary settings in youth's lives, such as families or schools. The scientific community should take an active role in forming collaborative partnerships with practitioners to codevelop and share this knowledge. Ultimately, no given out-of-school activity is beneficial for all youth, and all youth do not necessarily benefit from participating in activities. These findings help identify which activities are most beneficial for which youth and provide insight into designing optimal activity settings.

See also [Extracurricular Activities](#); [Out-of-School Time](#); [Positive Youth Development](#); [School-Based Programs](#); [Systems Thinking](#)

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Further Readings

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and*

design. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of child development*

(6th ed

., pp. 793–828). New York, NY: Wiley.

Mahoney, J. L., Vandell, D. L., Simpkins, S. D., & Zarrett, N. R. (2009). Adolescent out-of-school activities. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development* (3rd ed., Vol. 2, pp. 228–267). Hoboken, NJ: Wiley.

Mahoney, J. L., & Warner, G. (Issue Eds.). (2014). *A practical guide to the science and practice of after-school programming: New directions for youth development* (Vol. 144). San Francisco, CA: Jossey-Bass.

Neal, J. W., & Neal, Z. P. (2013). Nested or networked? Future directions for ecological systems theory. *Social Development*, 22, 722–737.

Vandell, D. L., Larson, R. W., Mahoney, J. L., & Watts, T. R. (2015). Children's activities. In W. F. Overton & P. C. M. Molenaar (Editors-in-Chief) and M. H. Bornstein & T. Leventhal (Vol. Eds.), *Handbook of child psychology and developmental science: Ecological settings and processes in developmental systems* (Vol. 4, pp. 305–344). New York, NY: Wiley.