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An Ecological Perspective on the Media and Youth Development

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Abstract

From an ecological perspective, daily activities are both a cause and a consequence of youth development. Research on youth activities directs attention to the processes through which daily activities may have an impact on youth, including: (a) providing chances to learn and practice skills; (b) serving as a forum for identity development; (c) affording opportunities to build social ties; (d) connecting youth to social institutions; and (e) keeping youth from engaging in other kinds of activities. Youth's daily activities, in turn, both influence and are influenced by the multi-layered ecology within which their lives are embedded, an ecology that ranges from the proximal contexts of everyday life (e.g., family, peer group) to the larger political, economic, legal and cultural contexts of the larger society. The paper concludes with consideration of methodological issues and directions for research on the media and youth development.

By all accounts the place of the media in the everyday lives of youth has changed dramatically across the past 50 years and promises to change more, and even more rapidly, across the next 50. Media research has been directed at documenting youth's involvement with media in its many forms and increasingly, in examining factors that influence youth's media-oriented activities. In directing attention to (a) the nature of youth's daily activities and (b) contextual influences on youth development, an ecological perspective (Bronfenbrenner, 1979; Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1998) provides a framework from which to study the role of the media in youth development. The goal of this paper is to provide an overview of the tenets of an ecological perspective and consider their implications for the study of youth and the media. We begin with an overview of the significance of molar activities in youth development. In the second part of this paper, we provide a framework for conceptualizing ecological influences on youth media use. Finally, we discuss methodological issues and corresponding directions for future research on youth and the media that are highlighted within an ecological framework.

In providing examples of an ecological approach we draw on our own research on the family contexts of youth development in middle childhood and adolescence (McHale, Crouter, Kim, Burton, Davis, Dotterer, & Swanson, 2006; McHale, Crouter, & Tucker, 1999; Updegraff, McHale, Whiteman, Thayer & Crouter, 2006)[1]. Because we are not media researchers, most of our examples provide a more general picture of research on the ecology of youth development. Jordan and colleagues have applied these systems ideas to the study of youth media involvement (e.g., Jordon, 1992; Scantlin & Jordan, 2006), however, and in so doing, have begun to document the utility of an ecological systems perspective for this area of work.

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Daily Activities and Youth Development

In his depiction of the ecology of human development, Bronfenbrenner (1979) highlighted the developmental significance of everyday, "molar" activities. Daily activities are a *reflection of development* in that the everyday lives of youth who differ in age or who grow up in different places and times vary considerably (Larson & Verma, 1999). In research on youth media use, for example, a body of work documents differences in youth's involvement in media-oriented activities as a function of factors such as age, gender, and family background characteristics (Hofferth & Sandberg, 2001). In addition, as we elaborate below, daily activities are important *influences on development* in a range of domains, including youth's skills and abilities, their social relationships and behavior, and their identity development. Indeed, a key concern of media researchers has been on the effects of time spent watching television, playing video games and the like, on youth development and well-being.

In his view of molar activities as both cause *and* consequence of development, Bronfenbrenner drew attention to the active role of youth in their own development: Youth make choices about how to spend their time for reasons ranging from their interests (in sports; the arts) and goals (to learn skills; to kill time), to their temperamental qualities (activity level; sociability). Contextual influences, however, also play a role in youth's activities, and in turn, their development: Youth who grow up in different circumstances have access to differing resources and are subject to differing socialization pressures. Medrich, Roizen, Rubin, and Buckley (1982) highlighted the roles of both person and context when they noted that: "Time, like money, is a scarce resource that can be spent in different ways… Time use reflects priorities and predilections, opportunities and constraints" (p. 14).

Grounded in research in cultural anthropology, Weisner (1989) argued that activity settings are the forum within which "culture is instantiated" (p. 14). Based on detailed accounts of the daily lives of youth around the globe, Weisner identified key dimensions of activity settings, including: (a) the nature of the "task," or what activities youth undertake (e.g., leisure versus instrumental activities; play video games versus do homework); (b) the "personnel present," or who else is involved in youth's activities (i.e., are activities undertaken alone? with peers? with adult supervision?); (c) the "cultural scripts" that are incorporated into the activity, or how the activity is carried out (e.g., who initiates the activity; the kinds of social interactions that characterize the activity); and (d) the "goal requirements" of the activity –particularly socialization goals--or why the activity is carried out (e.g., to develop skills; to express rebellion; to keep children occupied when adults are busy). From an ecological perspective, then, to understand the developmental implications of youth's media activities, researchers need to measure not only *what* youth do with their time, but *who* participates in the activity, *how* the activity is carried out, and *why* the activity is undertaken.

[1]Participants in our research include 200 European American families from central Pennsylvania that we have followed for about 10 years (McHale, et al., 1999), 200 African American families from urban and suburban communities in the mid-Atlantic region that we have followed for three years (McHale, et al., 2006) and 246 Mexican American families living in the southwest that we have followed for two years (Updegraff, et al., 2006). At the beginning of each study, all families included two parents and at least two siblings and were working and middle class. In each year of these studies, mothers, fathers and two siblings completed home interviews during which they reported on their personal qualities and family relationships. In about half of the years of each study, following the home interviews, families were telephoned on seven evenings and interviewed about their activities—including media-oriented activities such as watching television and playing video games. Importantly, in our research we were interested in youth's free time activities so did not ask about activities during the regular school day; we also telephoned youth 30-60 minutes prior to their bedtimes and thus did not collect information on the entire day; finally, we only collected data on primary activities, so, for example, if television was on in the background as youth did homework or played, television time was not counted. As such, our indices of time are best understood as youth's relative rather than absolute amount of time spent in particular activities. These data are the source of the empirical examples we discuss throughout this paper.

The empirical roots of research on youth's daily activities date back over half a century and more (e.g., Barker & Wright, 1951; Muchow, 1935). After a period of neglect, the past decade or two has witnessed a burgeoning of interest in youth's daily activities, or time use, by researchers from a range of disciplinary perspectives, including cultural anthropology (e.g., Weisner, 1989; 2002), demography (Bianchi & Robinson, 1997; Hofferth & Sandberg, 2001), developmental psychology (Eccles & Barber, 1999; Larson & Verma, 1999), economics (Klevmarken, Stafford, & Smith, 1999), education (Holland & Andre, 1987; Marsh, 1992) and sociology (Osgood, Wilson, O'Malley, Bachman, & Johnston, 1996). An ecological perspective is not a theory, and thus researchers have drawn on theories grounded in these several disciplines in efforts to explain the influence of daily activities on youth development. Daily activities have been described as: (a) an opportunity for knowledge and skill acquisition; (b) a forum for self expression and identity development; (c) a setting for building social ties; (d) a chance to develop affiliations with social institutions; and (e) given that time is finite, a constraint on involvement in alternative activities. Each of these causal processes may be invoked in efforts to understand the developmental implications of youth's media activities, and we consider them in detail below. Importantly, although these causal processes have been offered as explanations for the effects of activities on youth development, they are rarely measured directly. Thus, an important direction for media research would be to assess hypothesized activity→mediating process→development linkages.

First, daily activities are a forum for the *development of abilities* ranging from cognitive/ intellectual (e.g., Bianchi & Robinson, 1997) to perceptual-motor (Greenfield, Brannon & Lohr, 1996; Deutch & Newell, 2005), to social-emotional competencies (McHale, Kim, Whiteman & Crouter, 2004). Larson and Verma (1999) note that the kinds of work allocated to children beginning in middle childhood (school work in industrial societies; economically productive work in pre-industrial societies) provide opportunities for the acquisition of skills necessary for making a living in a particular culture or society. By some accounts, the structured "leisure" activities of economically advantaged youth in contemporary U.S. society (e.g., music lessons, sports teams) have begun to play a role previously allocated to school in youth's acquisition of job-related skills, including confidence in interacting with authority figures, self regulation, and time management (Laureau, 2003). Some media research has been focused on the process of skill development. For example, media researchers have documented cognitive benefits of educational television (Wright, Huston, Murphy, St Peters, Piñon, Scantlin, & Kotler, 2001). Our newcomers' read of the literature, however, suggests pervasive concerns that the power of the media to build positive personal and social skills has not been realized, and that media use may take youth away from activities that are better at building productive abilities (e.g., Huston & Wright, 1998). In addition, other work suggests that what youth may be learning from many of their media experiences are aggressive, antisocial, and otherwise risky behaviors (Anderson & Bushman, 2001; Brown, Steele, & Walsh-Childers, 2002).

From another perspective, what children learn from their daily activities is a building block in their *identity development*. For example, according to Erikson (1959), in middle childhood, or the period of industry, children hone the skills that they will need to make a living. What children learn during this period, coupled with their sense of what kinds of tasks they are good at, in turn, give rise to the sense of identity that emerges in adolescence (e.g., Kleiber, 1999). Building on Eriksonian ideas, Waterman's (1984) identity discovery perspective highlights the importance of "personal expressiveness" in daily activities as a basis for identity development. Specifically, engaging in activities that give rise to feelings of intense interest, flow, self-realization, and/or competence promotes identity development (Coatsworth, Sharp, Palen, Darling, & Cumsille, 2005). Importantly, in their daily activities youth can develop and express a sense of self that is prosocial --or one that is anti-social:

Some research suggests, for example, that youth may choose free time activities as a means of expressing feelings of rebellion (Kleiber, 1999). This recognition may be one basis for concerns about youth involvement with media that celebrate violence, risky sexual practices or antisocial activities: In their media use, youth are exposed to models of behavior, attitudes and lifestyles with which they may identify. Several decades of research on the identity formation process reveals its complex and its methodological and conceptual challenges (e.g., Waterman, 2004). This body of work, however, may provide grounding for future theory and research on the role of the media in an important domain of youth development.

Building social ties is a third way in which daily activities may have implications for youth development (Eccles & Barber, 1999; Kleiber, Larson, & Csikszentmihalyi, 1986). Youth's activities may bring them into contact with peers and adults who share their enthusiasms, and joint involvement in activities, in turn, may foster feelings of closeness and affiliation which are central in psychological well-being. Our research has shown, for example, that adolescents who spend more time in family activities (i.e., activities shared with their mothers, fathers and siblings), report higher levels of warmth and lower levels of conflict with their parents, and their parents also evaluate their marital relationships more positively (Crouter, Tucker, Head & McHale, 2004). In establishing positive social ties, youth also may learn social skills and abilities, and they may look to activity leaders as role models and sources of identification. At the most general level, this body of work directs attention to the interpersonal element of youth media involvement, including their companions in their media-oriented activities and the extent to which youth choose particular media-oriented activities in an effort to build or express their affiliation with friends or other significant persons in their lives. From this perspective, studying the social contexts of youth media use and youth's perspectives on the social benefits of their media involvement (e.g., status accruing to position of new media; fitting into a peer group) would be an important direction for research.

A fourth way in which activity involvement has implications for youth development is by connecting youth to social institutions and systems—including family, school, or a political and economic system--and the goals and values that those institutions represent (e.g., Finn, 1989; Hirschi, 1969). For instance, by participating on school sports teams, student government, and the like, youth may develop a stronger sense of affiliation with their school; these feelings, in turn, may motivate youth to achieve academically as they come to assume the values and goals conveyed by their teachers and coaches and that are symbolized by the school as an institution (e.g., Dotterer, McHale, & Crouter, in press). Similarly, through their media involvement youth may come to learn and identify with the values of particular social organizations (e.g., the entertainment industry; sports teams). The news media and advertising media also may instruct youth about the values and lifestyles attached to particular social organizations and institutions. Because learning through the media is vicarious, however, the lessons are likely to differ from what youth would acquire from direct experiences. For instance, views of the criminal justice system may be glamorized in their television portrayals, but youth may acquire a more nuanced view via direct exposure.

The substantial amount of time youth spend in media-oriented activities (Hofferth & Sandberg, 2001; Huston & Wright, 1998) directs attention to a fifth mechanism through which daily activities have implications for youth development: Because time is finite, participation in one activity can set constraints on youth's involvement in other activities. In this way, media-oriented activities may limit youth's knowledge and skill development, their social relationship development, and their direct contact with social institutions. Some research on youth's time use, however, finds limited support for such a process. In reviewing the literature on youth's daily activities, for example, Larson and Verma (1999) concluded that children watch television when they have nothing better to do. Consistent

with this idea, our own data show that, during the school-age years, children growing up in Central Pennsylvania watched more television in the winter than in the spring months, but played outdoors and participated in sports more often in the spring than in the winter months (McHale, Crouter, & Tucker, 2001). Our longitudinal study of these youth's daily activities from about ages 10 to 19 (see Figure 1) showed further that, although watching television consumed a large amount of youth's time, as youth became increasingly involved in hanging out in adolescence, time spent watching television, along with time spent in constructive activities like sports, declined. In turn, although hanging out may be "something better to do" than watching television from the perspective of an adolescent, a body of work documents that such unsupervised and unstructured time has its own risks (e.g., Osgood, et al., 1996). In thinking about the trade-offs youth make in choosing media over other kinds of activities, this work, taken together, suggests that we cannot assume youth's time will be spent more productively, and thus, that researchers should directly assess what alternative activities are available to youth at different times and in different places.

In sum, by identifying a range of potential mechanisms of influence, the literature on daily activities and youth development provides one framework for studying media effects. Importantly, in addition to directing attention to study of the *processes through which* the media may affect youth development, this literature highlights how daily activities may have an impact on different *domains of youth development*. It also underscores the *dimensions of daily activities* that should be measured if we are to understand the links between youth's time use and their development: In addition to learning what activities youth are engaged in, researchers also should assess who those activities are done with, the "scripts" that characterize particular activities, and the reasons why youth engage in the activities they do. As we elaborate in our discussion of methodological issues in the study of youth activities, designing studies to determine whether activities *cause* adjustment problems or positive development is fraught with difficulties. Another potential benefit of this conceptualization of the mechanisms through which daily activity exert their influence is that measuring putative mechanisms or mediating processes directly, and documenting activity→mediator→youth outcome linkages empirically, provides for more convincing evidence of causal linkages than do simple activity—outcome correlations.

Studying Development in Context

In addition to its emphasis on molar activities, an ecological perspective directs attention to the multi-layered context within which individuals are embedded. Figure 2 is modeled after Bronfenbrenner's (1979) conceptualization of the ecology of human development and depicts the nature and range of contextual influences on youth media use. From this ecological perspective, youth are seen as subject to contextual forces ranging from the proximal influences that operate in their everyday activity settings, to increasingly distal (and abstract) contextual forces. Importantly, from an ecological perspective, environments are not entities, but rather reflect *processes* of influence. Thus, for example, social class may be a marker of the availability of financial resources for purchasing lessons and equipment needed for particular activities, flexible work schedules that allow parents to transport their offspring to organized activities, or a value system that motivates parents to involve their offspring in constructive activities. Simply measuring social class status provides little insight into *how* social class has its effects on youth. From an ecological perspective, environments influence development largely by affording opportunities or setting constraints on individuals' everyday experiences and activities, and such processes should be directly measured.

As the bidirectional arrows pointing to and from "the child" in Figure 2 suggest, another tenet of an ecological perspective is that children are not passive recipients of contextual

influences. Instead, they are seen as playing an active role in their own experiences and development. For instance, *temperament characteristics* such as activity level or sociability, characteristics which are apparent early in development and are thought to have a strong genetic component (Dunn & Plomin, 1990), may have implications for youth's media activity involvement: Some children may be drawn to more sedentary activities like television watching or reading whereas others prefer more active play and leisure activities. Children's *interests in particular kinds of activities* also begin to emerge early in development; children's gendered activity interests, for example, emerge in the first few years of life (Huston, 1985). Thus, whereas activities with a heavy visual-spatial component (like videogames) appeal to boys, activities with a social-relational component (e.g., doll play) are more appealing, on average, to girls (McHale, Shanahan, Updegraff, & Crouter, 2004). Bronfenbrenner and Morris (1998) describe such dispositional characteristics of individuals as "force characteristics" because they motivate behavior. "Resource characteristics" refer to qualities such as abilities and expertise which likewise have an impact on children's activity involvement.

By virtue of their own characteristics, children play an increasing active role in their own development as they mature (Scarr & McCartney, 1983). Early in development, children who grow up with their biological parents are likely to be born into environments that fit with their own dispositions: To the extent that some characteristics have a familial component, children with high activity levels or advanced motor skills are more likely to grow up in families in which parents and siblings engage in sports activities and where footballs, basketball hoops, and the like, are found around the house. In this way, there is a *passive correlation* between children's dispositions and their rearing environments. As children develop, they begin to display characteristics to which others in the social environment react, such as visual spatial skills that make for video-game expertise, or physiques that get them chosen last for the kickball team. In other words, by virtue of their personal qualities, children *evoke reactions* from the social world that, in turn, provides opportunities or sets constraints on their activities. Bronfenbrenner and Morris (1998) invoke such a process in their discussion of the role of individuals' "demand characteristics" in their own development. Finally, with development, children acquire increasing autonomy and begin to make more deliberate choices about their daily activities. This *niche picking* process helps to set youth development along particular pathways, as when daily activities provide opportunities to develop some kinds or skills or certain social bonds, but keep youth from acquiring others. In short, in the face of our consideration of multi-level contextual influences in the following pages, readers should not lose sight of these important ways in which youth direct the course of their own development.

As Figure 2 illustrates, within Bronfenbrenner's ecological model, the most proximal level of influence, the *microsystem*, encompasses settings in which youth are directly involved. Features of the family context, for example, range from the number of television sets in the home, to parental and sibling models of and companions in media use, to family rules about media use and parents' encouragement and orchestration of their offspring's involvement in activities other than media use. The peer group is another part of the microsystem of most youth's lives. Like family members, peers provide models for, companions in, and reinforcement of youth's involvement in media-oriented activities. Peers also may provide children with access to media resources (game systems, cable television) that are not available at home. As youth develop from childhood into adolescence, peers become an increasingly important reference point—a source for social comparison and identification--and in this way, the media diet of the peer group may have important implications for how youth spend their time. Neighborhoods, schools and other community settings are additional components of the microsystem; as youth mature, their direct involvement in a range of community contexts is likely to become more frequent and more diverse. Schools may play

an important role in youth media use through modeling and explicit encouragement (e.g., assignments that involve conducting research on line; use of news media or videos in the classroom), through instruction on how media should be used (e.g., teaching rules of internet use safety), or through providing alternatives to media-oriented activities such as by establishing school sports teams, theater and music groups, and the like. Similarly, communities differ in the resources available for positive youth development including youth programs, safe parks and playgrounds, and controls for underage access and exposure to films at movie theaters and video-rental stores.

The social contexts of youth's daily lives are interconnected: Peers from the neighborhood often attend a child's school, and teachers or other school staff may have relationships with the family through community organizations. The *mesosystem* refers to points of connection between children's everyday contexts. One reason why the mesosystem is important in development is because youth may experience similar, or quite different and even contradictory socialization experiences, in different microsystem settings. When parent and teacher or family and peer norms and expectations are congruent, youth will likely learn socialization messages more easily and quickly. Incongruent messages, however, can be a source of problems, as youth must deal with conflicting values, rules for behavior and the like. For instance, when a child is the only one in his peer group whose parents set limits on the television programming he may watch, video games he may play, internet sites he may visit, or music he may listen to, he may be teased or even ostracized by peers; in contrast, status among peers may accrue to a child who is the first in her neighborhood to acquire new technologies, view newly released videos, or download popular songs. Problems of mismatch and incongruence in the mesosystem may present special childrearing challenges for parents who see their children being subject to socialization processes that are beyond parental control.

Children also are affected by contextual influences that they do not experience directly. The third level of the ecology of human development, the *exosystem*, encompasses such indirect influences. As an example, a body of research shows how parents' experiences at work have implications for their children's experiences at home: Work demands and pressures are tied to the quality of parents' interactions with their children, long hours may affect parents' ability to share activities with their children or to monitor their children's activities, and the kinds of work parents do, such as a job's level of self-direction and autonomy, are associated with parents' child-rearing styles (Crouter & McHale, 2005). Research on the role of parents' workplace experiences in their socialization of children's media use may be a fruitful direction for research: Parents may use television to entertain their children after a long and stressful day at work; in the course of work, they may be exposed to media that they bring home to their children; through their work experiences, parents may develop ideas about the characteristics and skills their children will require to be successful in their adult lives, and these ideas may have implications for the kinds of "leisure" activities they encourage in their children. Parents' workplace experience is just one example of exosystem forces that have implications for youth development. Other examples are shown in Figure 2 and together underscore the complexity of studying contextual influences on youth media use: There are many influences that emanate far from children's everyday lives, and have important but only indirect effects on children's opportunities and choices about media activities.

The *macrosystem*, the next layer of Bronfenbrenner's ecological model, refers to larger and more abstract influences on youth development, including cultural values and attitudes and the nature of the political, legal, and economic system. Such forces include, for example, laws that privilege children's well-being and safety over an industry's ability to make money, status accruing to individuals based on their purchasing power or ownership of

particular possessions, values pertaining to child characteristics, such as worldliness and sophistication, physical fitness, or the ability to fit in with peers, and so on. Although abstract, values and attitudes are reflected in the policies and practices of social institutions ranging from government and business offices to schools and families. Further, as the ecological model illustrates, macrosystem forces are not unidirectional, but are shaped by forces at every level of the social ecology, including the choices children make about their daily activities.

In sum, an ecological perspective illustrates the complexity of studying why youth become involved in particular media-oriented activities: Some influences are proximal, but others are indirect, influences at every level are bi-directional, and, as reflected in Bronfenbrenner's conceptualization of the *chronosystem*, influences change over time for reasons ranging from individual development to secular change. In the face of this complexity, however, this ecological model can serve as a road map for researchers interested in how youth's media use is influenced by their social environments.

Methodological Considerations and Directions for Future Research

An ecological perspective provides a framework for studying the contexts of youth development and directs attention to daily activities as a key developmental phenomenon. Conducting research within this tradition also highlights several methodological issues that have implications for the direction and design of research on youth development, issues that have relevance for research for media research in particular.

Bidirectional effects

As we have suggested, from an ecological perspective, youth play an important role in their own development. Indeed, as we have noted, Bronfenbrenner's (1979) analysis of the developmental significance of molar activities highlighted that youth's daily activities are both a reflection, or consequence of their prior development, as well as an influence on later development. Most research on youth's daily activities, however, has focused on the latter issue, whether involvement in particular activities explains individual differences in youth development and adjustment. In this literature, the fact that youth may select into particular activities because they are better or more poorly adjusted, however, has not always been taken into account (e.g., Marsh, 1992). Controlling for background characteristics such as parent education or family income provides some check against interpreting a "child effect" as an effect of activity involvement, but does not tell the whole story.

To address the issue of bidirectional effects, in our study of the daily activities of youth in central Pennsylvania, we used longitudinal data, controlling for parent education, to examine: (1) whether activities at age 10 predicted adjustment at age 12, controlling for adjustment at age 10; and/or (2) whether adjustment at age 10 predicted activities at age 12, controlling for activities at age 10 (McHale et al., 2001). Our findings revealed that child adjustment measures at age 10 were better predictors, in general, of youth's activities at age 12 than the reverse. In the case of television watching, for example, we found a significant positive association between youth's conduct problems at age 10 and television time at age 12, but the association between television time at age 10 and conduct problems at age 12 was not significant. In other words, the data were consistent with the idea that conduct problems caused children to watch more television (because they lack the self discipline needed for organized activities? because they are disliked by peers and have no other options? because they are attracted to the violence and aggression portrayed on television?), not that television time caused youth's conduct problems.

More generally, our analyses illustrate how longitudinal data and the use of appropriate controls can aid in the quest for causal inference. For investigators interested in whether activity involvement such as media use causes particular developmental outcomes, statistical approaches such as propensity analysis (e.g., Rubin, 1997) and multi-level modeling (e.g., Horney, Osgood & Marshall, 1995) can be used to rule out *some* third variable explanations for patterns of association, and longitudinal data can be used to explicitly test for alternative directions of effect. Further, as we discussed earlier, although several causal processes have been proposed to explain activity-development linkages, these processes have rarely been measured directly and tested in mediation models; testing hypothesized mediators is another means of improving confidence in conclusions about the causal role of activities in youth development. Ultimately, however, use of correlational designs precludes absolute inferences about causality, because unmeasured third variables may be operating. Use of experimental designs in which youth are randomly assigned to activity participation, for example, in intervention studies, is the strategy that solves the selection problem and continues to be an important area of media research.

Moving from "social addresses" to social processes

As we noted at the outset, contexts are not entities. Rather, they reflect social and other kinds of processes, and it is these processes that have their impact on youth development. Research on youth activities, for example, has highlighted that factors such as parental education and income or youth ethnicity and gender "explain" differences in the amounts of time youth spend on particular activities (e.g., Hofferth & Sandberg, 2001). These status variables, or as Bronfenbrenner (1979) terms them, "social address" variables, tell us where youth with particular media diets come from, but we are left speculating about the whys. For example, do youth from poorer families watch more television because their schools and neighborhoods lack opportunities for organized activities? Because parents see television watching as safer than playing out on the streets? Because television watching is an activity that family members can enjoy together? To the extent that television watching has negative developmental implications, interventions to change children's viewing habits should be informed by information about *the processes* underlying children's patterns of time use and the possibility that objectively similar activity patterns may have different implications in different settings.

In our work on Mexican American families we found that most of adolescents' time spent watching television included family members (see Figure 3). The 246 families in this sample were primarily first and second generation U.S. citizens, and further analyses revealed that, when parents and youth reported holding traditionally Mexican familism values (i.e., values that highlight individuals' responsibilities to their families), youth spent *more* time watching television. In contrast, when family members were more acculturated into Anglo culture (e.g., spoke English rather than Spanish, spent time with Anglos rather than Mexican Americans), youth watched *less* television. Unfortunately, in this study, we failed to assess whether the television shows being watched were in English or Spanish language; given the pattern of findings, however, one possible interpretation is that watching Spanish language television is a way for families to connect to their culture of origin. The important point here is that *what* media activities youth engage in (e.g., Spanish versus English language television), *with whom* they undertake media activities (with family; alone) and *why* they engage in particular activities (due to boredom; to connect to their culture of origin) should be directly measured, because these dimensions of activities may moderate the links between media activities and youth adjustment.

Limitations of main effect models

An ecological model highlights the multi-dimensional nature of contextual influences and the role of individuals in their own development: From this perspective, influences on development are complex and multifaceted and unlikely to be captured by analytic approaches that examine a litany of predictors, one-at-a-time. Indeed, according to Bronfenbrenner (1979): " in ecological research, the principal main effects are likely to be interactions" (p. 38). In a series of papers, Bronfenbrenner and his colleagues provided examples of ways in which person, process and contextual factors interact: For example, individuals with different characteristics and from different settings respond differently to similar experiences, and individuals with different characteristics evoke different reactions from others in their contexts which in turn have different developmental implications (e.g., Bronfenbrenner & Crouter, 1983; Bronfenbrenner & Morris, 1998). Our work on Mexican American youth suggests, for example, that the meanings of particular social processes or experiences may vary across settings, and thereby, the "same" activities may have different implications for youth development in different settings (McHale, Updegraff, Shanahan, Crouter & Killoren, 2005). For researchers interested in the role of the media in youth development, this suggests that investigating the *moderational role of socio-cultural factors* may be an important direction for study.

Collecting representative samples of persons, variables and occasions

The eminent methodologist, Raymond B. Cattell (1988) described the universe of data as a cube, whose three dimensions are persons, variables, and occasions, and argued that most studies are limited by failure to carefully sample one or more dimensions of this "data box." Disciplines have their biases about which dimensions of the data box serve as the focus of their efforts. At the extremes, demographers may use data collected from nationally representative samples, in which "persons" number in the tens of thousands, but tap a construct such as youth media use with one or two items, at a single point in time, using a self report survey. Developmental psychologists, in contrast, may assess youth media use in a variety of ways (observations, interviews, third party raters and self reports), along several dimensions (interest, actual involvement, friends' involvement, parental co-involvement) at six or twelve month intervals over several years, but study only 30 youth. In part, researchers' questions direct the designs of their studies, and no single study can provide the definitive answer to our questions about youth development. Understanding and appreciating the research strategies of other disciplines and working in multi-disciplinary teams, however, are likely to advance our scholarship more rapidly than working alone and from single disciplinary perspectives.

Summary and Conclusions

We have described an ecological perspective as a possible framework for studying youth's media involvement and its implications for youth development and well-being. An ecological perspective sets study of children's and adolescents' media use within a body of work that examines youth's time use and highlights the processes through which daily activities have implications for development. An ecological perspective also directs attention to contextual influences—conceptualized as processes that provide opportunities for and constraints on youth's activities—and the role youth play in their own development by virtue of their dispositions, the reactions they evoke from others, their choices, and their interpretations of their experiences. Finally, this perspective highlights several methodological issues relevant to designing research on youth activities and development. A recurring them is the complexities involved in study of the ecology of youth development. Capturing this complexity may be best achieved by bringing together researchers from

multiple disciplines who can provide alternative approaches to thinking about and investigating the role of the media in youth development.

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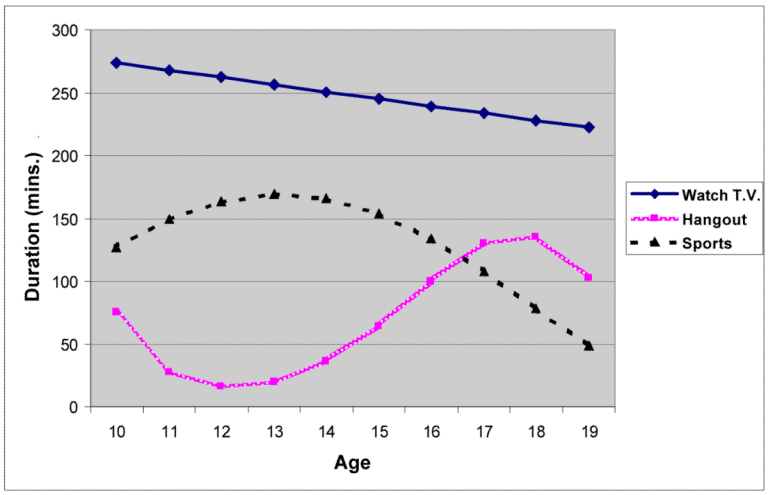

Figure 1.
Longitudinal changes in youth's free time activities from age 10 (1995/1996) to age 19 (2004/2005).

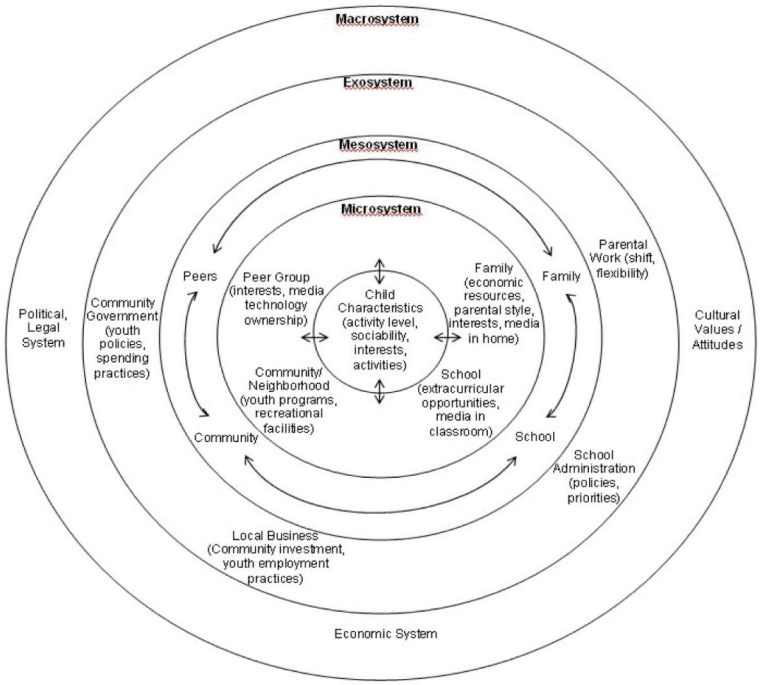

Figure 2.
An Ecological Model of Youth Media Use

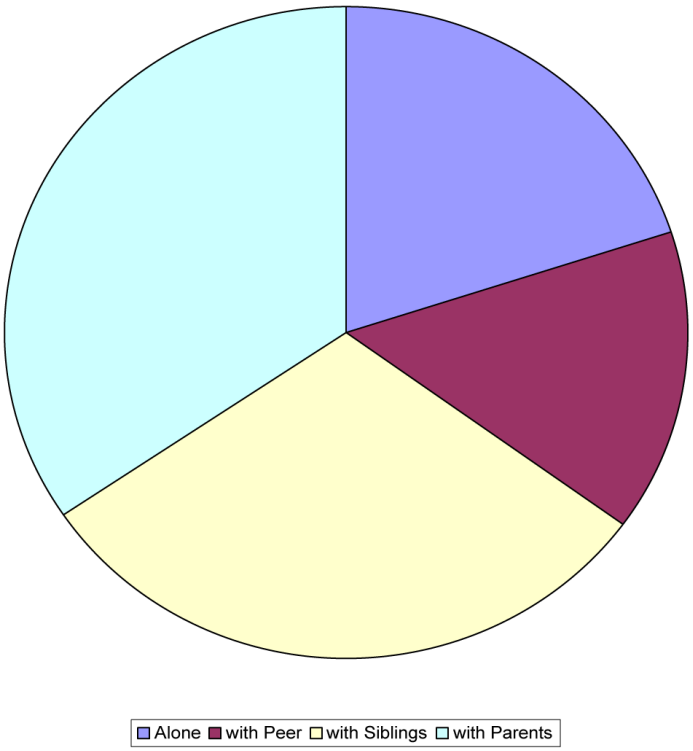

Figure 3.
The social contexts of Mexican American youth's time spent watching television.