

## **Neighborhood Variation in Girls' and Boys' Time Use**

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Abstract: Does the rhythm of children's everyday lives vary in different community contexts and does this vary by gender and race-ethnicity? Neighborhood effects on children's time use are often proposed to be a key mechanism in producing observed variability in children's outcomes. We use data from the 2002 PSID-CDS to develop new, comprehensive measures of children's time use and demonstrate that activity patterns vary across neighborhoods. Drawing on Bourdieu's (1973) theorizing of habitus and field, we propose that time use is a "generative schema" through which individuals express individual "tastes" and signify hierarchical social identities, both of which are internalized and given meaning within the disparate conditions of life experienced in early childhood. Our research provides the foundation for future work that explores how children's time use is fundamental to [re]generative schemas of stratification.

Does the rhythm of children's everyday lives vary across different neighborhood contexts? The patterning of time is central to children's development of shared meanings within families and communities. Children's engagement in some activities and avoidance of others reflects preferences and rational decisions about what blend of activities will produce optimal maximization of well-being (Becker 1965). Time allocation thus expresses parents and children's values, satisfies needs, and helps children make sense of routine interactions with others (Bourdieu 1984; West and Zimmerman 1987). Research shows substantial variation in children's daily activities. Children in low socioeconomic status, minority, and single parent families spend less time in activities that promote positive cognitive, social and physical functioning (Bartolic, Lee, and Vandewater 2007; Brooks-Gunn, Duncan, and Maritato 1999; Hofferth, Kinney, and Dunn 2006; Larson and Verma 1999) Girls generally spend less time than boys in sports and electronic games and more time studying, doing housework, and in unstructured leisure with friends, activities that presage adult differences in time use (Bianchi and Robinson 1997; Larson 2001). Research is beginning to test causal links between time use and outcomes but little is known about why activity patterns differ. Studies have emphasized associations with family characteristics and typically do not consider how children's time use is affected by neighborhood processes, resources, and constraints, even though disparate activity patterns and outcomes parallel variations across neighborhood characteristics.

We propose that children's time use can be considered a behavioral manifestation of linkages among family and neighborhood contexts. Beliefs that children's time use is consequential for adult life chances are deeply embedded in U.S. culture. How these beliefs are translated into parental and child behaviors, however, vary according to the disparate conditions of life in which children are raised. Middle-class, college-educated parents' instrumental practices of "concerted cultivation," systematize children's time into adult-initiated and directed activities that foster cognitive, social, and physical development; in contrast, working-class, less-educated parents' more laissez-faire practices of "natural growth," mean their children's time is spent in more fluid, child-initiated activities (Hofferth et al. 2006; Lareau 2003). Findings from quantitative time-diary analyses mirror those from ethnographies: children of college educated parents devote more time to studying, reading, and doing sports and arts activities than children of less educated parents (Bianchi, Robinson, and Milkie 2006; Hofferth and Sandberg 2001). Theoretically, the end result of these class-based practices is differential endowments of cultural

knowledge, cognitive capacities, and social resources and networks. Children's habitus thus fashions time consciousness permeated by feelings of entitlement or constraint, control or powerlessness (Alwin 2001; Kohn & Schooler 1983; Kohn 1977; Lareau 2003). In other words how children spend time disciplines them to assume their "proper" station in adulthood.

In this paper, we use data from the 2002 wave of the Panel Study of Income Dynamics Child Development Supplement (PSID-CDS) to advance knowledge about children's time use in two ways. First, we show that activity patterns vary across neighborhoods. We use new measures of children's time use that point to children's (and parents') underlying dispositional orientations. Drawing on Bourdieu's (1973) theorizing of habitus and field, we propose that children's activities embody the interplay of socialization and social structure that are transmuted into lifelong individual dispositions and practices. In essence, time use is a "generative schema" through which individuals express individual "tastes" and signify hierarchical social identities, both of which are internalized and given meaning within the disparate conditions of life experienced in early childhood. This generative schema creates lifestyles that transform and naturalize structural constraints into individual proclivities. Children's local context may be one of the most salient factors that mold daily routines. Although neighborhood effects have been found across the life course, children and adolescents may be especially affected by their neighborhood setting because young people tend to be less mobile than adults, may spend more time in their residential neighborhood than adults, and effects occur during crucial developmental stages (Duncan, Connell, and Klebanov 1997; Sampson 2001). Our analysis focuses on three features of context that we expect are particularly influential for childhood time use: collective efficacy; social disorder; and socioeconomic disadvantage. Social disorder may lead both children and parents to prefer different activities in disadvantaged versus advantaged settings, and these preferences may be reinforced by the physical and social ecology of neighborhoods. Research indicates that parenting practices themselves are influenced by neighborhood contexts, with parents acting to mitigate harmful influences through strategies such as keeping children in the "haven" of homes and maximizing children's exposure to more positive contextual elements (Browning, Leventhal, and Brooks-Gunn 2005; Furstenberg et al. 1999; Kurz 2002; Turley 2002). Further, just as gender and race dynamics are reflected in parental socialization processes, they are also implicated in extra-familial contexts, such as gendered perceptions of neighborhood disorder and social control. Girls are more controlled /

constrained in less advantaged neighborhood environments, particularly activities done outside the home.

Second, we use new, more comprehensive measures of time use. Research seeking to understand how and why gender and race-ethnicity influence children's time use has used limited measures of time in only one or two specific activities. For example, much current research investigates how television watching is associated with physical health, because of the conventional wisdom that watching television takes time away from active leisure. Because individuals have only 24 hours in a day, time use is theorized as a zero-sum game, with time in one activity crowding out time in other activities. What we don't yet know from this literature is if the same children who watch a lot of television also engage in less active play or sports or if instead they do less of other activities. Our approach, in contrast, is to assess the relational patterning of children's activities and thus provide a more nuanced lens into children's daily lives.

In sum, the innovation of our study is to theorize the influence of neighborhoods on the patterns of children's time use that scholars have argued shape access to privileged social positions. Neighborhood effects research has emphasized rather distal neighborhood contexts linked to increasingly specific individual outcomes. We propose to develop an understanding of the mechanisms that link the structural to the individual. By using time diary data in a nationally representative dataset, we bring cultural conditions and variables within the heavily quantitative field of neighborhood effects, supporting recent arguments that we must pay attention to both culture and structure in our understanding of unequal life chances (Wilson 2009; Small et al. 2010).

## **Data and Preliminary Results**

We use data from the 2002 wave of the Panel Study of Income Dynamics' Child Development Supplement (PSID-CDS-II) linked to Census tract data. The CDS-I was collected in 1997 on a sample of 3,563 children ages 12 and under in 2,395 eligible PSID families with a response rate of 88%. The CDS-II did follow-up interviews with 2,907 children ages 5 to 19 in 2,019 PSID families (91% response rate). Data collection went on between October 2002 and May 2003 (CDS-II User Guide 2006). The PSID-CDS collected a 24 hour weekday and weekend time diary of children's activities from children ages 2 to 12 (diaries were not collected on

children ages 0 to 2). The time diary component of the survey provides a unique opportunity to map the contours of neighborhood variability in children's time. In this analysis, we focus on the 2002 wave because the majority of children are school age. In future work, we plan to investigate associations between children's time use profiles in early childhood and adolescence, as well as explore links with developmental trajectories, but these longitudinal analyses are beyond the scope of the current analysis.

Data were gathered in the PSID-CDS and the core PSID on children's characteristics, family environments and parental and interviewer subjective perceptions of neighborhood context. We supplement the subjective neighborhood measures by linking the PSID-CDS to Census data using geo-coded data available by permission of the PSID. We use decennial Census summary tract data, which provides aggregate data for numerous compositional features of tract populations. As in much other research, we use Census tracts as proxies for neighborhoods. Census tracts are designed to be relatively homogenous populations of about 4,000. Although tracts may not always correspond to what respondents call their neighborhood, they do capture the social characteristics of the area surrounding respondents' residences, and are the best approximation of neighborhood available for national samples like the PSID. We believe the greater generalizability of results using national data outweighs the shortcomings of tracts as proxies for neighborhoods.

Our analytic sample consists of 1,684 children ages 6 to 18 whose primary caregiver is the PSID "head" or "wife," who completed both a weekend and a weekday time diary and who have no missing data on neighborhood characteristics, and child and family controls. From the initial sample of 2,907 eligible children, we omit 338 cases due to no weekend or weekday diaries, 133 cases not living with a PSID "head" or "wife," and 663 cases that either have missing tract information, missing data on interviewer reported neighborhood characteristics (the majority of the 663 cases) or missing data on key child and family controls. All results are weighted to adjust for clustering within families, sample design, and attrition between CDS-I and CDS-II.

Children's time use data were used to construct a theoretically motivated typology of six distinct clusters of activities. The typology is created from children's discretionary activities, e.g. those that reasonably reflect preferences and choices, and account for about 30% percent (47 hours) of

the total 168 hours in each week. We exclude remaining time in mandatory activities, such as school and day care, sleeping, and grooming, as well as time in paid work and housework because engagement in these reflects biological imperatives, statutory requirements, and household needs as much as children's and parent's preferences (Gager, Cooney, and Call 1999). The typology aggregates over 100 activities into the following 6 categories: cognitive (reading, using the internet for research); active leisure (organized sports and active recreation like playing basketball), television, games and hobbies, cultural (going to the museum, art and dance lessons), and social leisure (talking on the phone with friends, visiting). These categories reflect the extent children's activities develop physical, cognitive, and social competencies. Active leisure activities develop motor skills, strength, cardiovascular functioning, and general physical conditioning, and foster interpersonal skills, such as teamwork. Cognitive develop higher order reasoning and logic and develop larger vocabularies. Games and hobbies foster children's talents and interpersonal skills. Cultural activities develop social capital and exposure children to knowledge of class-coded leisure activities. Social leisure develops and maintains social ties and relational skills. In contrast, television and other screen-related passive activities are generally thought to produce few if any developmental benefits.

We then convert hours into z-scores to indicate higher or lower than average time in the activities and use Stata's kmeans clustering to group children by their dominant activity profile. The dominant activity profile thus reflects children's latent behavioral dispositions that are manifested in linked activities that collectively influence well-being. We tested multiple specifications of the number of cluster-solutions, ranging from three to six, and determined the optimal solution guided by theoretical expectations and extent of distinct clustering, as indicated by larger values of the Caliński and Harabasz index (Rabe-Hesketh and Everitt 2007). This approach yielded a 6 cluster solution with each cluster indicating dissimilar activity profiles.

We focus on variation across neighborhoods in girls and boys time use in preliminary results presented here, but plan to incorporate variation by race-ethnicity by the time of the PAA. Child gender is a dummy variable, with girls coded 1 and boys coded 0.

We use three different measures of neighborhood context: neighborhood concentrated disadvantage; neighborhood social control; and neighborhood disorder. Children in

disadvantaged environments typically have less access to recreational facilities, well-maintained pedestrian pathways, and public institutions, such as free libraries. Consequently, children in these types of settings may have lower access to recreational and developmentally oriented activities. We assess neighborhood concentrated disadvantage with an index of four indicators of social exclusion (percent poor, percent Black, percent on public assistance, and percent female-headed households), measured with Census tract data. The concentrated disadvantage scale has been shown to be a good measure of socioeconomic deprivation in neighborhood effects research (Sampson et al 1999). The scale was created by summing the z-scores of each item (weighted equally), and dividing by the number of items. Higher values indicate greater levels of concentrated disadvantage. Average concentrated disadvantage is -0.26; the range of the scale is from -1.05 to 3.40.

Neighborhood social organization encompasses the social relational structure of neighborhoods that determine the adult supervision and guidance that children experience. Sampson et al (1999) argue that this is linked to social capital, but emphasize the neighborhood social ties and shared expectations that produce orientations to action, or “collective efficacy”. One aspect of social organization is neighborhood social control, or the level of commitment to monitoring and enforcement of community norms. We expect that children’s activities will be more structured and focused on acquisition of future-oriented capabilities in neighborhoods with stronger regulatory normative structures. We assess neighborhood social control with a scale summarizing children’s primary caregiver responses to a series of PSID-CDS questions focused on child-centered social control: How likely is it a neighbor would do something if: a) someone was trying to sell drugs to your children in plain sight?; b) your kids were getting into trouble?; c) a child was showing disrespect to an adult?; and d) a child was taking something out of a neighbor's apartment, house, garage, car or yard? The scale was created by summing the z-scores of each item (weighted equally), and dividing by the number of items. Higher values indicate stronger social control. Average social control is -0.03 with values ranging from -2.6 to 0.75.

The other aspect of social organization we assess is the extent of neighborhood disorder. Social disorder may lead both children and parents to prefer different activities and these preferences may be reinforced by the physical and social ecology of neighborhoods. We

construct a scale that summarizes PSID-CDS interviewer rating of four aspects of the neighborhood: the condition of face-block housing; street conditions; the presence of garbage; and the visible presence of drug activity. The scale consists of summed z-scores of each item (weighted equally) divided by the number of items. Higher values indicate more disorder. Average social disorder is -0.13 and the scale ranges from -0.64 to 4.89.

We control for child age and primary caregiver race-ethnicity, marital status, educational attainment, employment status, age, and family income. Their inclusion allows us to avoid confounding associations among neighborhoods, family and child characteristics and time use. At the same time, we include a parsimonious set of controls to avoid equally problematic bias resulting from the fact that endogenous family processes and characteristics are themselves influenced by neighborhood contextual factors (Sampson, Sampson and Sharkey). Child age is grouped into 4 categories that reflect key developmental transitions: ages 6 to 8, 9 to 12, 13 to 15, and 16 to 19. Primary caregiver race-ethnicity is coded into three dummy variables: White, non-Hispanic; Black non-Hispanic; and Hispanic. Marital status is a dummy variable coded 1 when the primary caregiver is single and 0 otherwise. Primary caregiver educational attainment is coded 1 for those with a college degree or more and 0 otherwise. Employment status is a dummy variable coded 1 when employed and 0 otherwise. Primary caregiver age is coded into three categories: less than age 30; age 30 to 45; and age 45 and older. Last, family income is 2003 annual income logged to normalize the distribution. In preliminary results we explored using multiple specifications of controls (i.e. for dummy variables using three or 4 categories) but because results were similar, we opted for the more parsimonious measures.

## **Preliminary results**

Figure 1 shows differences in the proportion of girls and boys with each type of time use profile. The figure shows girls spend their time in more beneficial activities than boys: higher proportions of girls have cognitive, cultural, and games and hobbies profiles and fewer girls are identified as having the television profile, as well as the active profile. Results not shown indicate only modest gender differences in time spent in active leisure and larger differences in other activities. What the profiles do that goes beyond a focus on aggregate time in activities is indicate relatively more of girls' time is spent in cognitive, cultural, and games activities and

relatively less in television and active leisure. In contrast, boys spend relatively more of their time watching television and playing sports. Figure 2 shows gender differences in active, television, and cognitive profiles by neighborhood disorder. Results are similar for the other two neighborhood measures, and indicate that even in bad neighborhoods more girls are grouped in clusters of activities that are more beneficial. For example, in neighborhoods with low social disorder, a larger proportion of girls are identified as having the cognitive profile than television profile, whereas for boys, a larger proportion have the television profile. Additionally, in neighborhoods of high social disorder, more girls than boys are identified as having the cognitive profile, despite the large decline in girls' likelihood as neighborhood disorder climbs.

Our early results suggest intriguing differences in time use associated with neighborhood variation that appear to correspond to theoretical expectations. By the time of the PAA, we plan to investigate interactions of gender and race-ethnicity. Our project promises to substantially advance understanding of the dynamic effects of spatial inequality on children's development.

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Figure 1.

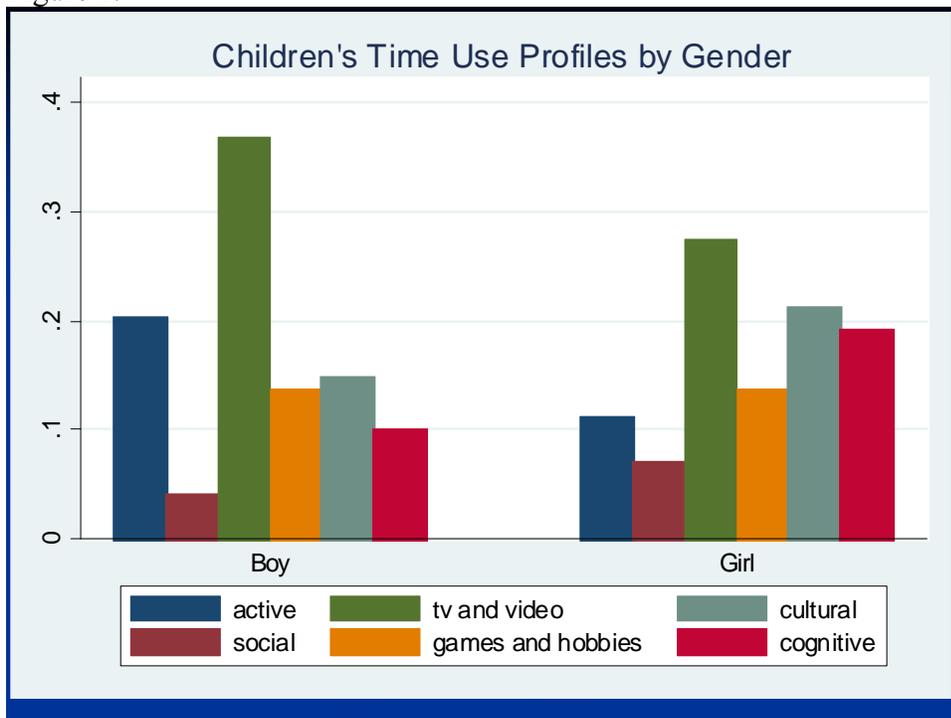


Figure 2.

