CHAPTER ONE
INTRODUCTION

The process that links high school students and educational outcomes is a complex combination of many factors, including family background, self-processes, and interactions with opportunity structures in school environments. Both schools and families are primary social contexts for the development of youth, and the relative importance of schools and families in educational processes has been a central concern of researchers who seek to account for differential outcomes and inequalities among groups. Sorensen (1998, in Hill, 2001) likens the question about relative importance of schools and families to asking whether oxygen or hydrogen is more important for water. He asserts that it may be much more meaningful to conceive of mechanisms that produce differential outcomes.

This study examines the self and social processes that mediate family and social background and educational outcomes. Herein, educational outcomes are conceptualized as products of individual student actions and the focus is specifically on social mechanisms that generate opportunities for high school students to learn and to strategically pursue educational goals. A social mechanism is a plausible hypothesis or set of hypotheses that could explain some social phenomenon (Hill, 2001). Explanations of social phenomena are generally discussed in terms of interactions between individuals, or between individuals and some aggregates. The social phenomenon of interest in this study is inequality of educational opportunity, or differential educational achievement according to social background. In the framework to be elaborated here, the primary mechanism for the pursuit of educational goals is the set of social ties that link students to knowledge-based resources; social capital.

In most empirical work employing the social capital concept, social capital has been modeled as present or absent; as a qualitative characteristic of a system (Sandefur & Laumann, 1998). This study seeks to offer a meaningful statement about the relative importance of self-processes and relationships with school agents in the process that links high school students and educational outcomes. More specifically, the study focuses on

social mechanisms in schools that enhance youth opportunities for higher levels of achievement and aspirations.

This study focuses on the school as a socialization context; one that provides potential social capital (networks and relationships) and also offers opportunities for activation of social capital (informational and instrumental support from school agents). In other words, the school is both a site of exchange of social resources as well as a source of social resources. While offering these opportunities, the school as social institution also exerts constraints on individual agency or choice. Further, social capital is conceptualized as both cause and effect of individual's social milieu; that is, social capital is not only determined by an individual's choices but by the choices, actions, and dynamics in the social network (Averett, 2000).

Conceptual Framework

Situating the Research: Persons in Context

This study draws on the large and diverse body of research that aims to understand the process and effects of the interaction of the person and his or her environment. Further, the study consults such theories that offer an understanding of inequality based on the study of the person in context. The study does not rely on one theory about this interaction, rather incorporates an eclectic, synthetic, and exploratory approach to the study of high school students in the school environment. Theoretical developments in sociology and psychology have elaborated the idea of person-environment interaction. In the sociological tradition, this notion has been studied as structure and agency; and as symbolic interaction. In the psychological tradition, ecological models of learning and human development have emphasized the importance of meso- and macro-systems surrounding the individual.

Structure and agency. A significant theme in sociological literature has been the relationship between agency and structure. The study of social structures is foundational to much of sociological work. "Structure and agency" are often contrasted and dichotomized; that is, structure is systematic, constraint, static, and collective whereas agency is contingent, freedom, active, and individual. Hays (1994, p. 58) notes that this conceptualization casts structure as "the concept with muscle, while agency and culture

become its weak-kneed younger cousins." She suggests that agency and social structure have a simultaneously antagonistic and mutually dependent relationship.

Hays (1994) proposes that agency occurs on a continuum from structural reproduction to structural transformation. Thus, agency can be understood as "human social action involving choices among the alternatives made available by the enabling features of social structure, and made possible by a solid grounding in structural constraints." (p. 64) She specifies that choices can be conscious or unconscious; may have intended and unintended consequences; are necessarily socially shaped; and are made within the realm of structurally provided possibilities. Rather than being understood merely as instruments of social reproduction, Hays (1994) suggests that structures be understood in three senses: (a) as both the creation of human beings and the mold they fit; (b) as enabling as well as constraining; and (c) as more or less deep in terms of level of structure. Further, Hays (1994) proposes that culture should be understood as part of structure rather than in opposition to it. She notes that "(s)ystems of meaning are neither more nor less malleable than systems of social positions, social exchange, and social power" (p. 68).

Symbolic interactionism. While the study of inequality in mainstream sociology has generally been approached from a macro-level or structural vantage point, symbolic interactionism emphasizes the ways in which systems of stratification manifest themselves at the micro, interactional level. Symbolic interactionism focuses on how people make sense of their world and how meaning is constructed in the process of interaction. Anderson and Snow (2001) highlight the potential of the symbolic interaction perspective to contribute to a more complex understanding of social stratification. In a review of interactionist research on inequality, these authors explore questions related to everyday manifestations of inequality, their consequences, and how people manage and negotiate the reminders of inequality as they go about their everyday routines.

From the interactionist perspective, it can be understood that symbolic expressions of social power contribute to the reproduction of stratification, and "diminish individuals' participation in actions that bear directly on their material well-being" (p. 397). The consequences of inequality for the self can also be studied from this perspective. Self-processes are situated in the immediate and embedded contexts of

individuals where they spend most of their time. Research suggests that the relationships among self-concept, identity, and other self-processes are complicated and conditional (Anderson & Snow, 2001). Finally, resilience and stigma management can also be understood through the study of interaction. While symbolic interactionism emphasizes human agency, it also acknowledges the effects of structural constraints and capacities at the micro-level.

Psychological models. While this study draws much more explicitly from sociological theory, the influence of psychological models that emphasize the interaction of person and environment must be acknowledged. Vygotsky (1978; 1986) proposes that engagement in social activity is the foundation for high-level cognitive functions, and elaborates the idea of the "zone of proximal development" to acknowledge that children's learning occurs through interactions with the more mature members of their community. Bronfenbrenner's (1979) ecological model of human development acknowledges the separable but interacting systems that affect human development. He describes process-person-context models as models that identify the context in which development is taking place; the personal characteristics of the individual (biological or psychological); and the process through which the development occurs (Bronfenbrenner, 1986). These theories share the idea of development in the social context, and acknowledge the influence of the environment and interactions with others on learning and development.

Summary. Fine (1992, p. 104) suggests that sociological theory should be "synthetic - not unnatural, but blended." The understanding of students' experiences and outcomes in schools depends both on the social psychology of the person and on the reality of social structures. The conceptual model for this study is framed by the notion of the person in context to understand the interaction of self and social processes in mediating the effects of background on desirable educational outcomes.

Conceptual Model

DuBois (2001) presents a three-part model that suggests the importance of self-processes in mediating the effects of family disadvantage on educational achievement. He conceptualizes social capital as a component of family disadvantage. However, this definition of social capital ignores the influence of significant others, including non-kin and school agents, as social resources in adolescents' lives. While the presence of adults

in the home indicates potential social capital, the social networks of adolescents, including the qualities and processes within these networks, is used in this study to provide more valid and reliable indicators of actual social resources possessed and mobilized by youth in school settings. It may be more appropriate to view family background as one indicator of potential social capital. The conceptual framework used in this study, shown in Figure 1, places self-processes and activated social capital as mediating factors between potential social capital (family and social background and network characteristics) and educational outcomes.
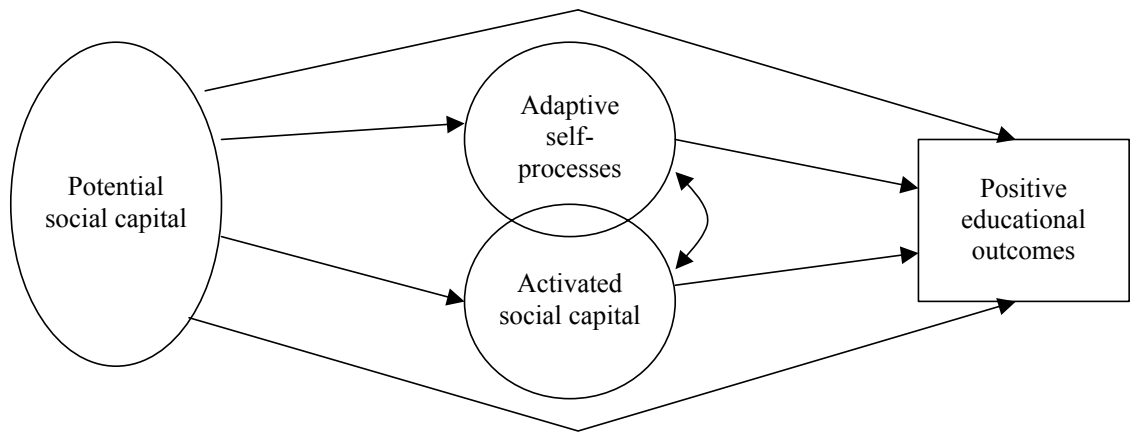

Figure 1. Model of mediating effects of self-processes and social capital on educational outcomes.

The social capital component of the framework is of primary interest in this study. In contrast to extant educational research, this study proposes a comprehensive view of social capital that separates and includes both social network characteristics (potential) and processes (activation) as important measures of an individual's social capital. Most scholars agree that social capital can be defined as the resources embedded in a social structure, which points to the salience of the study of person-centered social networks. Social capital in this view is seen as resources that accrue to an individual through social networks, including kin and non-kin resources. Typical social network measures; such as size, density, heterogeneity, and compositional quality; are proposed as measures of social capital available to an individual (Borgatti, Jones, & Everett, 1998). Size, heterogeneity, and compositional quality are positively related to social capital; i.e., greater numbers and diversity in the network provide more social resources, while

density may be negatively related to social capital; if network members are tied to one another, they become redundant.

Although differential access to resources is a persistent theme in education, the notion of access to social resources and networks has not been studied in the context of educational outcomes. Lin (1999a, 1999b) asserts that greater research attention should be paid to differential access to social capital based on social group (e.g., gender, race). McNeal (1999) echoes the idea that forms of social capital need to be studied across race, socioeconomic status, class, gender, and geographic location. The analysis of social capital through individual social networks has the potential to reveal inequalities in network size, density, heterogeneity, and composition for disadvantaged groups, such as females and minorities. The issue of differential access to social capital is very relevant to education in general and to educational outcomes in particular.

The conceptual framework for this study was developed through a review of the research literature and through a pilot study in Spring 2001. Social network, social support, and academic engagement measures were developed and tested with a sample of 600 Virginia high school students. Following the work of Lin (1999a), five network characteristics were measured as indicators of potential social capital: network size, percent females, percent non-kin, maximum occupational status, and frequency of interaction. Three network qualities; emotional support, academic support, and interpersonal support; were measured as indicators of activated social capital. Additionally, self-concept and trust were measured as adaptive self-processes, while aspirations, academic orientation, and academic effort were measured as educational outcomes.

The results of the pilot study indicated acceptable reliability and validity of the measures. Correlational and regression analyses suggested certain relationships among the variables. Network qualities, indicators of potential social capital, had low but significant positive correlations with positive educational outcomes (.12 to .17). Correlations of network processes - activated social capital – and positive educational outcomes were also significantly correlated, but the correlations were slightly higher, ranging between .17 and .34. Correlations involving self-concept and trust - adaptive self-processes – were positive and significant with network processes (.21-.35), but not with

any of the network qualities except network size (.15). Regression analyses revealed that network qualities and network processes both explained significant proportions of variance in educational outcomes. The explained variance for models using the network processes as regressors was higher for all three educational outcomes – over 13% for both academic effort and academic orientation. The results of the pilot study are included in the literature review in Chapter Two. The pilot study is described more fully in Chapter Three in the discussion of the study methodology.

<div align="center">Community Profiles</div>

This conceptual framework for this study emphasizes an ecological and relational view of adolescents' experiences in the school and the larger community. Community characteristics provide a context for understanding the experiences of the young people living in those communities. Students participating in this study are from schools in three western Virginia communities: Alleghany County, Henry County, and Pulaski County. A map of Virginia, showing the location of the counties, is displayed in Figure 2.

Figure 2. Map of Virginia showing Alleghany, Henry, and Pulaski counties.

Census statistics from Census 2000 electronic summary files (US Census Bureau, 2002) were compared on selected socio-demographic and economic characteristics in each of the three counties, the state of Virginia, and the United States. In general, these statistics provide a context for interpreting the results of the analyses and their implications. The

figures also serve as statistics to determine whether the networks described by adolescents in the study sample are representative of their respective communities, the state, and the nation.

First, community profiles highlight the major socio-demographic and economic characteristics of the community. Next, the communities are compared with state and national profiles, emphasizing the main similarities and differences. A full presentation of the statistics used to create the summary profiles, including a more detailed comparison, is provided in Appendix A.

Alleghany County

Alleghany County is the smallest community in the study, with just under 13,000 residents. The median age is 41.1 years, and just over 19% of the population is school-aged (between 5-19 years). The community is the least racially diverse of the three (96.3% White). The population of the county is quite stable, as 85% of adults are homeowners, and less than 30% of adults lived in a different house in 1995 (5 years prior to the census). Over three-quarters (77.5%) of adults have attained at least high school, while only 13.6% have attained at least a bachelor's degree. The median household income is the highest of the three communities, at $38,545. The three largest occupational groups are production, transportation, and material moving (28.4%); management and professional (23.4%); and sales and office (20.4%). The unemployment, family poverty, and child poverty rates are the lowest of the three counties, at 3.0%, 4.9%, and 8.6% respectively. These figures do not fully reflect the economic experience of women in the county - 30.3% of female-headed families are living in poverty, and the income disparity between full-time male and female workers is the highest of the three communities ($14,265).

Henry County

Henry County is the largest community in the study, with nearly 58,000 residents. The median age is 39.9, while 19.1% of the population is school-aged (5-19 years). The community is the most racially diverse of the three, with 74.4% White, 22.7% Black, and 3.5% Hispanic. The population of this community also appears relatively stable, in terms of home ownership (76.9%) and mobility (32.3% living in a different house in 1995). Educational attainment in this community is the lowest of the three – 64.9% have attained

high school, while only 9.4% have attained a bachelor's degree. The median household income is the lowest of the three communities, at $31,816. The three largest occupational groups are production, transportation, and material moving (34.5%); sales and office (23.7%); and management and professional (18.9%). The unemployment, family poverty, and child poverty rates are reflective of national rates, at 3.3%, 8.8%, and 15.2% respectively. Females may fare slightly better in this community - percentage of female-headed families living in poverty (24.1%) and the income disparity between full-time male and female workers ($5,894) are the lowest of the three communities.

Pulaski County

The population of Pulaski County, at slightly over 35,000 residents, puts it halfway between the populations of the other two communities. The median age is 40.3, while 17.2% of the population is school-aged (5-19 years). The community is slightly more diverse than Alleghany County, but still primarily White (92.6%). Similar to the other two communities, home ownership (73.7%) and mobility (37.3% living in a different house in 1995) are lower than both state and national figures. In terms of educational attainment, 74.2% have attained high school, while 12.5% have attained a bachelor's degree. The median household income is $33,873, slightly higher than in Henry County but still nearly $5,000 lower than Alleghany. The occupational profile is similar to Alleghany County - the three largest occupational groups are production, transportation, and material moving (27.4%); management and professional (24.0%); and sales and office (22.7%). The unemployment rate is similar to the national rate (3.3%), however, family poverty (10.6%) and child poverty (18.9%) rates are higher. The percentage of female-headed families living in poverty (30.8%) is the highest of all three communities, while the income disparity between full-time male and female workers ($9,116) falls between the disparity amounts in the other two communities.

Summary

From socio-demographic and economic data presented here and in Appendix A, it is possible to make some tentative inferences about the communities of the students participating in this study. These regions of Virginia are less densely populated than the "Golden Triangle" of the capitol, Northern Virginia, and Tidewater regions. The production and transportation sector employs the largest proportion of workers, and the

population is older than state and national medians. Educational attainment levels and income levels are lower than state levels, and poverty and unemployment rates are higher. However, these communities may be more stable than others in the state, as represented in higher homeowner rates and lower mobility rates.

There are differences among the communities, however. Henry County is much more racially and ethnically diverse than Alleghany and Pulaski counties, primarily in terms of percentage of African Americans. The statistics also imply that there is less income disparity by gender in Henry County, reflected in median income and female-headed family poverty rates.

Study Synopsis

The data for this study is obtained from a sample of over 1,000 students in grades 9-12 from six high schools in western Virginia. Students completed the School Relationships and Experiences Survey (SRES), an instrument designed for this study. The study uses regression methods and structural equation modeling (SEM) to model the relationships between the variables of interest. SEM, a multivariate technique to assess relationships among latent or observed variables (Hoyle, 1995), is appropriate for this study for several reasons. The proposed model involves both latent and observed variables. The SEM approach allows testing of directional relations among objects or concepts, as well as the testing of nonrecursive (bi-directional) paths. This approach also permits a consideration of the direct versus the indirect effects of independent (exogenous) variables on dependent (endogenous) variables. While SEM cannot infer causality, it provides a rigorous analysis of relations among variables to allow the testing and refinement of complex theories.

In this study, it is hypothesized that adaptive self-processes and social capital are positively related to school engagement, educational aspirations, and actual performance in school. Furthermore, self-processes are hypothesized to affect activated social capital. The primary variables of interest are potential and activated social capital, but if adaptive self-processes are left out of the model, variance in outcomes which actually belongs to self-processes may be assigned to social capital. Thus, a comprehensive model of educational outcomes was hypothesized with potential social capital indicators as the

exogenous variables and self-processes, activated social capital, and educational outcomes; including academic effort and engagement, aspirations, and expected grades; as the endogenous variables. Self-processes include self-esteem, trust, ethnic identity, and help-seeking orientation. Potential social capital variables include family resources and five network qualities; size, density, heterogeneity, compositional quality, and frequency of interaction. Actualized social capital variables include support from teachers and counselors, sense of school membership, perceptions of school and teaching, and three network processes; emotional support, interpersonal support, and academic support. Although the influence of peer networks on adolescents is very important, this study focuses specifically on the network of important adults as a source of social capital.

Organization of the Study

This document proceeds with reviews of several bodies of relevant literature in Chapter Two. By way of introduction, an intellectual history of social capital is provided as a context for the remainder of the review. The sections of the review are intended to complement the conceptual model outlined earlier in this section, thus research that addresses relationships among the major components of the model is reviewed. The final section in Chapter Two discusses shortcomings in the current research on the role of social capital in educational achievement and attainment. In Chapter Three, the methodology for the study is presented, including sample, measurement, and data collection procedures. The results of the data analyses are presented in Chapter Four, including descriptive statistics for all variables of interest, preliminary regression analyses, and model development. The final chapter presents a summary and discussion of the results, including directions for future research in this area.