

2011

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## Recommended Citation

Leonard, J. (2011). Using Bronfenbrenner's ecological theory to understand community partnerships: A historical case study of one urban high school. *Urban Education*, 0042085911400337.

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Using Bronfenbrenner's Ecological Theory to Understand Community Partnerships:  
An Historical Case Study of One Urban High School

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September 23, 2010

## ABSTRACT

While the value of school-community partnerships is unquestioned, we do not understand sufficiently the reasons for success and failure. This mixed-methods case study examines 60 years of partnering at one urban high school using Bronfenbrenner's ecological systems theory to better understand the effect on student development as measured by variables such as graduation, attendance and dropout rates. Successful partners achieved "cultural cohesion" by building collaborative relationships that encircled students, while failed partnerships ignored ecological theory. In contrast to conventional reform strategies that focus on curriculum and/or school structure, the author offers a cultural reform strategy that emphasizes relationships.

## INTRODUCTION AND PROBLEM

The challenge of sustainable, replicable reform in urban high schools continues to defy our best efforts, despite intense study and focused contributions from big-city mayors, the US Department of Education, several foundations, and many scholars. In recent years, community partners from the world of business, higher education, philanthropy, health and social services have increasingly assumed responsibility for the education of youth in their cities. The positive benefits to be gained from school-community partnerships have been well documented (Blank, Melaville, & Shah, 2003; Dryfoos, 2002; Gonsalves & Leonard, 2007). The qualities which make for successful school partnerships, such as communication, power-sharing, and transparency are well-known (Berg, Melaville, & Blank, 2007; Brabeck, Walsh, & Latta, 2003; Frey & Pumpian, 2006). Less has been written on the challenges of inter-agency collaboration in school-community partnerships, especially as these partnerships evolve over time, and how these challenges affect the improvement agenda of the local urban high school. Furthermore, while much of the theory on inter-agency collaboration follows a business model, there is a dearth of theory that is also student-centered. This paper employs a

well-known ecological systems theory to better understand the effect of various of partnering strategies on student outcomes.

### RESEARCH QUESTION

We conducted a historical case-study of one troubled urban high school in Boston to better understand the mixed results of so many urban school reform movements (Gonsalves & Leonard, 2007). The historical panorama allowed us to trace the shifting engagement of various community partnerships and better understand their role in school reform and student success. In this paper, I borrow the theory of Urie Bronfenbrenner (1979) to analyze the stories and to answer our question: *How can an ecological systems theory help us better understand school-community partnering that promotes student development?*

### DEFINITIONS AND CONCEPTUAL FRAMEWORK

The concept of the school-community partnership is broad and difficult to pin down. The term “community school” usually describes some collaboration between the local school, parents and community health and social service agencies, but can also include other agencies (Dryfoos, 2005). Partnerships that begin at the university may be called “university-assisted schools” (Benson & Harkavy, 2003), “professional development schools” (Teitel, 2003) and even “interprofessional development schools” (Lawson, 2003). There are partnerships with business and foundations and religious organizations. Even the levels of partner integration have been analyzed and classified (Slater & Ravid, 2010). Rather than naming and classifying, I focus instead on the effects of the partnerships on student development and, secondarily, high school reform. The significant partners in this case study included businesses, universities, foundations,

health agencies and, of course, parents (although this last group is not the focus of this paper<sup>1</sup>). Being a partner implies three things: a deliberate association (whether voluntary or not), which results in an exchange of knowledge, goods or services (which can be one-way or bidirectional), the effect of which is intended to be beneficial to students (but may also include teachers, parents, administrators, etc.). By this definition, the central district administration should also be considered a partner, as well as the state and federal departments of education.

The conceptual framework for this investigation focuses squarely on student development and not just whole school reform. I use a definition of development from the late child psychologist Urie Bronfenbrenner:

Human development is the process through which the growing person acquires a more extended, differentiated and valid conception of the ecological environment, and becomes motivated and able to engage in activities that reveal the properties of, sustain, or restructure that environment at levels of similar or greater complexity in form and content. (Bronfenbrenner, 1979, p. 27)

Thus, high school students who are developing properly will more accurately understand the world around them (reflected in grades and test scores, for example, or work records) and will be engaged, with others, in shaping their own futures (reflected in attendance, promotion and graduation rates, concrete post-graduation plans or participation in sports or clubs, for example).

An important predictor of student development and success, especially for students at risk in an urban environment, is a positive school culture of achievement, with strong measures of safety, cultural identification and personalization (Deal & Peterson,

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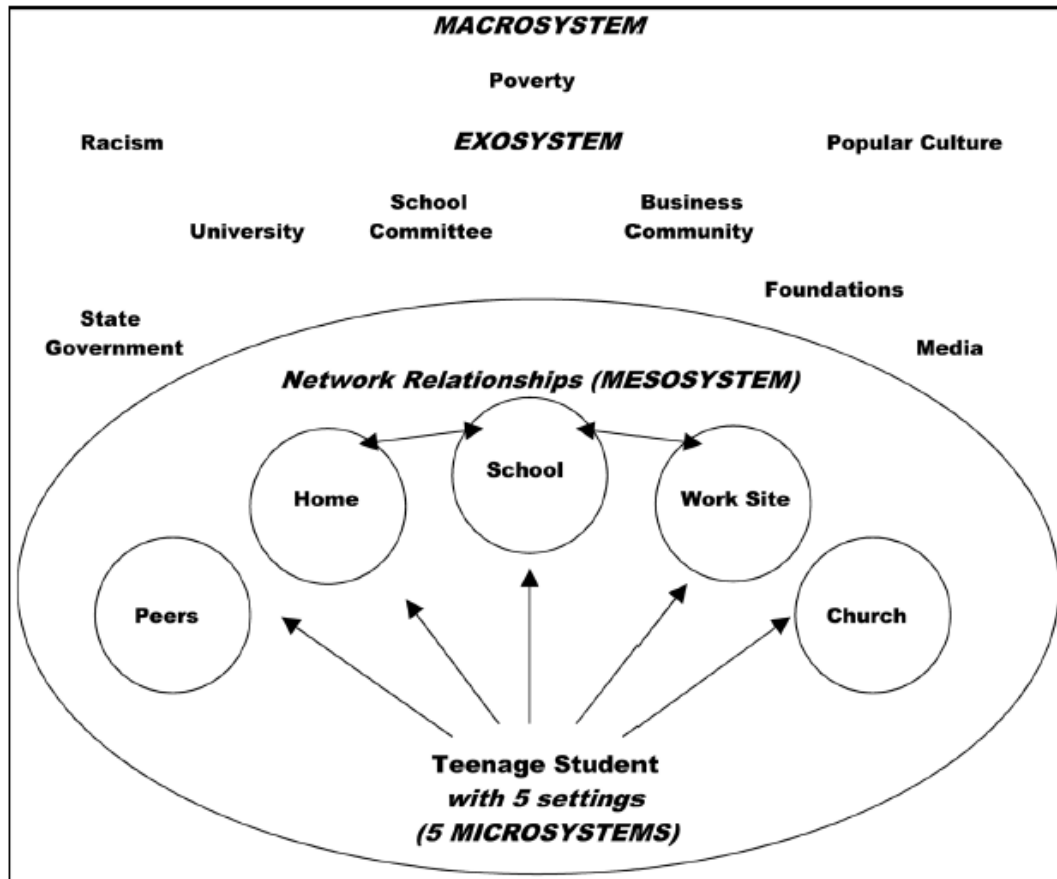
<sup>1</sup> The role of parents in student success is unquestioned. The stories described here will include efforts at parental engagement, which was always challenging. Overall, however, the focus of this paper is not to promote a particular kind of engagement, but simply to report on the historical efforts of community partners to build relationships with all the important adults in a student's life.

1999; Delpit, 1995; Northeast and Islands Regional Educational Laboratory at Brown University, 2001). This fact encourages an examination of relationships, both within the school and between the school and outside partners, and their effect on school culture. Culture has been defined as “shared beliefs and values,” the “rules and traditions, norms, and expectations that seem to permeate everything,” and even a “a pattern of basic assumptions” (Deal & Peterson, 1999, p. 3); this culture is reflected in the language (both oral and written) and choices of the group. Clearly, multiple cultures can exist and compete, side-by-side, among student groups, in the teachers’ lounge, or in the administrators’ offices in a school. While others have focused on the relationships between the internal members of the school community (eg. Bryk & Schneider, 2002), this paper focuses on the relationships with community partners. For this reason, I have chosen an ecological approach, which allows me to investigate school-community relationships and to estimate the degree of synergy within those relationships. Epstein offers a model of three overlapping circles to explain the interactions of family, school and community on the healthy development of children (Epstein, et al., 2002). Waddock suggests a six-sided ecological model, with the school networked between government agencies, educational policy makers, teacher organizations and universities, human service institutions, media and “value-shapers,” and the business community (1995, p. 59). Most ecological models, however, focus on school improvement, so they run the risk of reporting overall positive gains while overlooking the needs of vulnerable students. For that reason, I have adhered to Bronfenbrenner’s theory (1979), one of the original ecological models, which focuses squarely on the individual child.

Bronfenbrenner proposed that the developing child is surrounded by layers of relationships like a set of nested Russian dolls (1979, p. 3). The inner circle, which he calls the *microsystem*, describes each setting in which the child has direct, face-to-face relationships with significant people such as parents, friends, and teachers. This is where students live their daily lives and this is where they develop. Ordinarily, there are cross-relationships between these small settings – parents talk to teachers, for example – and these lateral connections are called the *mesosystem* (1979, p. 25). Beyond this is an outer circle of people who are indirectly involved in the child’s development, such as the parents’ employers, family health care workers, or central school administrators; this is called the *exosystem* (1979, p. 25). Bronfenbrenner also described a *macrosystem* (the prevailing cultural and economic conditions of the society) and a *chronosystem* (reminding the reader that this system of nested relationships is situated in time and shifts accordingly); see Figure 1 below.

Bronfenbrenner’s theory is an attractive one for our work around high school reform because it is expansive, yet focused; one eye is trained on the complex layers of school, family and community relationships, while the other eye is sharply focused on individual student development. Figure 1 places the school setting in the center, with various microsystem-level settings and more distant exosystem-level settings arranged concentrically. The historical nature of this study allows us to address the chronosystem as well.

Figure 1: Bronfenbrenner's nested relationships in a public school setting



Our study of Dunbar High School (DHS, not the real name) led to the formulation of a *cultural reform strategy* that is contrasted with the more common curricular and structural reform methodologies. Structural reforms, such as the movement to block scheduling or small learning communities, can offer economies for staffing or scheduling but may or may not offer a more personalized culture for students. Similarly, curricular reforms, such as the recent STEM initiative, can improve student learning but have negligible effects on the culture. Cultural reform, however, looks directly at relationships in the microsystem and mesosystem, with students and among the adults who work with



children, in an attempt to increase *cultural cohesion*<sup>2</sup> (Gonsalves & Leonard, 2007) and thereby improve student learning. The degree of synergy or agreement among relationships is important for student development; conflicting messages and demands are detrimental to healthy growth. The other factors (curriculum and structure) become enhancements or hindrances to this synergy. Cultural reform strategy recognizes that relationships matter, especially with at-risk urban students who, faced with low expectations or impersonal pedagogies, may simply decide that “I won’t learn from you” (Kohl, 1994). On the other hand, the power of respectful relationships to unleash student learning was shared by one award-winning teacher in this school who was enormously popular with the students. He explained, “I can do what I do in a corn field,” implying that everything else (curriculum, technology, length of period, desk arrangements, etc.) were but bells and whistles when students felt safe to learn. Furthermore, while the more popular curricular and structural reform methodologies call upon the school to improve, cultural reform strategy calls upon a larger circle of community participants (Bronfenbrenner’s exosystem) to grow with the school.

## METHODOLOGY

From 2002 to 2005, my colleague and I conducted an historical mixed-methods case study of one urban high school, hoping to learn from the up-and-down pattern of school improvement and deterioration over the previous 60 years (Gonsalves & Leonard, 2007). The high school was a grade 10-12 school in the 1950s, converted to a 9-12 in 1968, and served anywhere from 850 to 2000 students depending on district growth and

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<sup>2</sup> Culture is a local microsystem phenomenon, as noted above. Cultural contradictions between student microsystems can cause confusion and delay development. Bronfenbrenner’s theory suggests that when microsystems adopt the same beliefs, values, norms, expectations and assumptions, then child development is enhanced. We coined a term for this kind of mesosystem synergy – “cultural cohesion” – signifying not just consistency, but a deliberate choice to de-emphasize local constructs and cling to common goals.

needs. In our study, we looked back far enough to predate the civil rights movement, authorization of special education and bilingual education, standards-based reform and high-stakes assessments. At the time of the study, I was an administrator in the high school and my colleague taught at a partnering university.

The school is a community that extends beyond the four walls of the building. Dunbar High lies in one of the most-studied districts in the country.<sup>3</sup> Dunbar High has also partnered with various businesses, such as New England Telephone Company and the larger Boston consortium of businesses called the Private Industry Council, which was assembled in the 1980s to support youth development and employment in the city. Other partners have included the University of Massachusetts Boston (UMass Boston), the Trefler Foundation, youth advocacy groups, the neighborhood health center and the Northeast and Islands Regional Educational Laboratory at Brown University (LAB).<sup>4</sup>

The case study was imbedded and contextualized; in other words, the school story was re-created alongside the history of the Boston School Committee, the struggle over desegregation in Boston, and the growing engagement of the business/university community. This method allowed for triangulation of data as well as an enhanced understanding of the events as they took place within the school. In Bronfenbrenner's terms, the *macrosystem* and the *chronosystem* were also included in the study of this high school.

School improvement studies sometimes focus on leadership development or teacher development. This paper focuses on student development, as defined above.

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<sup>3</sup> The school as well as the district have been well-studied (Gonsalves & Leonard, 2007; Leonard, 2002; Louis & Miles, 1990).

<sup>4</sup> Dunbar was the target of many community investments because the uniquely troubled record (low test scores, high dropout rate, notorious violence) drew widespread public concern and sympathy; UMass Boston helped mediate many of these additional partnerships.

Broad measures of student attendance, achievement, promotion and graduation rates were found in school and district records. We disaggregated the data whenever possible because some of the best work with community partners did not involve the entire school, but only a group of students (such as ninth graders or senior girls, for example). Our goal was to identify selective student development, wherever it occurred.

Measures of emotional, social, or physical development were also estimated indirectly from artifacts such as yearbooks, student publications, or interviews. The most casual yearbook reader, for example, can tell when the school as a whole was suffering (thin books with memorials to victims of violence or sarcastic tributes to classmates) and when students were prospering (thick books with lots of warm memories, written tributes, sports trophy pictures, and dedications). Interviews provided a second window on student social, emotional and physical health. Disaggregation was limited because of the spotty nature of the data, however.

The information on school-community partnerships and school culture was gleaned from anecdotal accounts in yearbooks, information in the five-year accreditation reports to the New England Association of Schools and Colleges, and then substantiated and elaborated through interviews with former students and staff members as well as the partners themselves. A study of high school reform in the mid-1980s (Louis & Miles, 1990; Sege, 1985) provided details of partnering for school improvements. Partnerships proliferated in the late 1990s as the importance of this school support system became clear to the general public. The partners are listed chronologically in Table 1 below along with the general purpose of each partnership. Some partnerships have lasted for 50 years,

such as those with central administration and the courts; others were short-lived, such as MIT. Five partnerships developed in the years 1995-2000.

Table 1: DHS School Partnerships Over Time

											Partnership Goal	
Institute for Student Achievement											Graduation and college acceptance for 60	
Northeast Regional Educational LAB											Improved alignment of all curricula and reform	
US-DOE grants (Magnet, Small School, CSRD)											Restructuring into theme-based SLCs	
Trefler Foundation											Scholarships, support for UMB partnership,	
Annenberg Foundation											Grant for school reform	
Neighborhood Health Center											Health, dental, vision, reproductive services	
Private Industry Council											Jobs; employment advice; advocacy	
New England Telephone											Advocacy; small grants	
UMass Boston											Multiple; see paper	
MA Office of Equity											Grants to support desegregation	
MIT Sloan School											Team-building workshops	
Dept. Soc. Services											Foster care services	
Dorchester Courts											Justice, advocacy, safety	
NEASC											Accreditation	
BPS Central Admin											Standard central admin. services	
<i>5-year increments ending at....</i>	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2003	

## RESULTS

The historical survey of Dunbar High revealed three obvious peaks of relative prosperity with intervening valleys (Leonard, 2002). The first was in the early 1960s, when the school was slowly and happily integrating Black students into the traditional White, lower-middle-class population. The graduation rate was higher at this point than

any other time from 1945 to 2003.<sup>5</sup> Beginning in 1968, student assignment patterns changed and the school was quickly filled to overflowing with low-income minority families, students with disabilities and English language learners, and the school record and reputation declined rapidly. Then, from 1983 to 1988, the school recovered and made some notable gains in attendance and promotion rates. So successful was the school, in fact, that Louis and Miles featured it as a positive exemplar on urban school reform (1990). The collapse of the U.S. economy from 1988 to 1992 brought program cuts and ensuing violence to the school so that by 1996, Dunbar had the highest dropout rate of any comprehensive high school in the Commonwealth (Leonard, 2002). And then, finally, from 1996 - 2003, we began seven years of school-wide improvements in facilities, staffing, school safety, standardized test scores, and graduation rates. Soft measures of school culture, seen in the yearbooks, helped verify this up and down cycle. For example, the yearbooks of the mid-1980s were thick and colorful, filled with stories of student accomplishments; the trophy cases were filled with sports awards from the same time period. The evidence from the period 1988 – 1994 was strikingly different: thin, morose, mocking yearbooks and missing trophies. After 1996, things began to improve again. Interviews with former students and staff members, plus school and district data on attendance, achievement, promotion and graduation rates substantiated the three positive periods in the school history. While school-community partnerships were rare in the 1950s and 1960s, they played a vital role in the mid-1980s, and were an overwhelming presence in the late 1990s. They provided the lessons for this paper.

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<sup>5</sup> In the 1960s, 57% of students who matriculated at DHS graduated within five years; this figure dropped to 17% in the 1970s and slowly increased to 41% in the late 1990s.

We can use Bronfenbrenner's theory of the concentric circles to explain why some DHS partnerships were so effective for student development and others, despite good intentions and ample budgets, were not fruitful. Rather than relating the story of each partnership through the Bronfenbrenner lens, a more fruitful approach would be to gather the stories into categories that demonstrate the power of this theoretical lens. This is the approach used below.

#### Student-centered Work at the Microsystem Level.

By definition, school partners lie in the exosystem outside the daily school environment. They tend to be only indirectly connected to student development and their actions can have unintended consequences. Students, however, live in microsystem settings and this is where development occurs. Logically, partners will have more positive impact on student development when they operate at the microsystem level in direct relationships. There were many such examples in the history of DHS, but I offer three to show the power of microsystem engagement plus one example of a failure in the microsystem.

In the 1980s, the Private Industry Council (PIC) was a citywide business consortium that pushed the mayor and superintendent to raise student achievement and graduation rates; in return, the PIC promised jobs for high school students (Farrar & Connolly, 1990). Operating from the exosystem, the PIC was only indirectly connected to students and the jobs were out of reach for many students who lacked fundamental knowledge about resumes, job applications, and interview techniques. As a result, in the 1990s, the PIC began to place full-time "career specialists" in high schools, including Dunbar, who taught students the fundamentals and helped them secure a job. In this way,

the PIC invaded an established student microsystem (the school) to better address student development.

In a second example, the neighborhood health center opened a branch clinic inside the school, adjacent to the nurse's office, in the 1980s. From this vantage point, they could better provide medical, dental, reproductive, vision and counseling services to students and thus promote healthy, balanced student development. In this example, the health center did more than just send a representative; they actually opened their own microsystem setting inside the high school where students could visit and receive face-to-face services.

UMass Boston provided the third example. This institution was originally known to students as a destination after high school and had no contact with students until application time. However, in 1968 the university began inviting promising students to the college campus for after school academic support. Upward Bound (both at UMass Boston and elsewhere across the nation) proved to be effective in steering students toward college. In this case, the partner created a new microsystem setting for students that was separate from the high school, but one that still provided face-to-face contact.

In these examples, the community partners who were located in the exosystem and only indirectly (and weakly) connected to student development found various ways to attain direct, face-to-face microsystem-level relationships with students to better promote student development. The three approaches – sending a single representative to join an established microsystem, opening a new adjacent microsystem with multiple representatives, and creating a new off-campus microsystem – all proved effective for positive student growth.

One more example shows how a partner, isolated in the exosystem, may be ineffective in student development, despite large budgets and elaborate plans. In the late 1990s, the Northeast Regional LAB was one of a bevy of partners who were determined to turn around the high school. Working with five New England high schools, including Dunbar, the LAB brought an impressive rubric for whole school improvement as well as a data-analysis team from New Hampshire that combed through student achievement data to better align the curriculum. Unfortunately, the LAB team made infrequent visits to the school and only interacted with a few administrators. Most teachers and students did not know them at all. The LAB leaders were not able to oversee implementation of the plan and to follow the implications of the data analysis down to the classroom/student level; as a result, the plan was easily lost among many other simultaneous reform initiatives. In terms of Bronfenbrenner's theory, the LAB remained isolated in the exosystem and so the message was lost to students. I emphasize that the message itself was not bad – data analysis and curriculum alignment are important tools in school reform work – but without the relationships, which provide channels for operationalization, implementation and institutionalization, the message never reached the students. Despite dozens of meetings, many reams of reports, and thousands of dollars spent, there were no measurable effects (Gonsalves & Leonard, 2007).

In the positive examples above, being established in the microsystem provided a footing not only for direct relationships with students but also for lateral adult-to-adult relationships with teachers, administrators and parents. These mesosystem relationships are the focus of the next section.



### Collaborative Work at the Mesosystem Level.

Bronfenbrenner defined the mesosystem as “a set of interrelations between two or more settings” in which the student participates (Bronfenbrenner, 1979, p. 209). He speculated that student development would be enhanced through participation in multiple “structurally different settings,” particularly when there are relationships with others who are “more mature or experienced” (Bronfenbrenner, 1979, p. 212, Hypothesis 29). Furthermore, the “developmental potential” of a setting in the mesosystem would be increased by two things that are relevant to this paper. First, student development would increase “as a function of the number of supportive links existing between that setting and other settings (such as home and family)” (Bronfenbrenner, 1979, p. 215, Hypothesis 35). Secondly, student development would be enhanced if the roles, activities, and relationships in which the student engages in both settings “encourage the growth of mutual trust, positive orientation, goal consensus between settings and an evolving balance of power” (Bronfenbrenner, 1979, p. 214, Hypothesis 34). These hypotheses allow us to explore how some of the community partners used the mesosystem to promote student development.

First, when community partners begin to get directly involved in students’ lives, then new settings open up and this promotes student development, particularly if the student is inter-acting with “mature or experienced” people (Hypothesis 29). This is the case, for example, when high school students began travelling to UMass Boston to work in the Upward Bound classes or they secured after-school jobs through the PIC with help of the career specialist. Furthermore, if there is supportive communication between the settings, this also promotes student development. So, for example, the PIC career

specialist began talking to parents to learn more about students' schedules and availability for after-school work, to teachers to explore conflicts with academic priorities, and to employers to best match students' talents and interests with worksite requirements. This kind of supportive communication is an example of Hypothesis 35 and it's easy to see why this would positively affect student development, for the coordination of resources around a student and consistent communication from all parties makes for less confusion and more success. However, this kind of communication is also labor-intensive. The PIC career specialist could not sustain mesosystem-level conversations with the parents and teachers of 1000 students at DHS. Furthermore, the last hypothesis (34) calls for mutual trust, positive orientation, goal consensus and an evolving balance of power between students and others in the settings – an even more exacting standard that would be hard for a community partner to achieve with all students. This leads to a discussion of an unexpected phenomenon, which we discovered in the history of DHS.

The microsystem-level investments described above were a positive step in promoting student development, but they do not answer the question of how best to engage so many students. We were surprised to find a repeating pattern of partnership, from the 1970s onward, whereby a partnering institution would collaborate with a small team of teachers and target a select group of students in the school. This created a “pocket of excellence” in the school, which sometimes became a model for whole school reform. Some of the pockets evolved into official small learning communities and two of them later emerged as fully independent small schools. One of the best examples of these pockets was an initiative that targeted students who wanted to get into college during the

bleak years of 1988-1992 when the recession stripped the school of many programs and violence erupted. The initiative began with an idea of an academic track in the high school focused on public service. The idea was floated by the PIC, picked up by three DHS teachers, supported by the Trefler Foundation and turned into a program for 90 students in grades ten through twelve. Within four years, this small learning community (SLC) was sending 95% of its graduates off to college and, until 2003, remained the most sought-after program at Dunbar with over 500 students sent on to college and \$1,000,000 raised for scholarships. While the annual high school dropout rate soared as high as 25%, students rarely left this SLC.

The public service SLC was a good example of the mesosystem hypotheses listed above. Throughout the 15-year history, the three teachers met daily to discuss the needs and progress of their students. Often, the meetings included a PIC career specialist, the president of the Trefler Foundation, a school administrator, an additional teacher or a parent. Together, they planned field trips for the students to public events, recruited adult mentors for each student, arranged internship placements at City Hall and other government offices, built relationships with college admissions officers and found jobs to help raise money for college. In this way, the students were exposed to multiple new settings with mature or experienced members (Hypothesis 29). The daily common planning time ensured that supportive links were being built between the various settings (Hypothesis 35), including homes which were frequently called. Finally, the collaboration of so many professionals led to a positive culture of achievement, with a high level of trust among participants, goal consensus around college attendance, and an increasing willingness to treat the students as emerging adults (Hypothesis 34). We don't

have sufficient data to explain fully *how* this was accomplished, but it appears that the presence of committed partners (such as PIC and Trefler) emboldened the teachers to “take off the wraps” and begin teaching, counseling, advising, meeting and planning as they would in an ideal world instead of succumbing to the innervating conditions of the school and surrendering to discouragement. At times, Trefler (in particular) was a muscular advocate to protect the integrity of the SLC when, for example, school administrators failed to schedule common planning time or assigned students to the wrong classes.

This pattern of collaboration between a small group of committed teachers and supportive partners was repeated at least ten times from the 1970s through the 1990s, with surges of activity in the mid-1980s and the late 1990s. Sometimes, the targeted investments emerged as magnet programs, career academies, vocational programs, or even special education programs. One well-documented effort, in the 1980s, was the creation of a very successful ninth grade cluster for at-risk students with help from New England Telephone, UMass Boston, and the PIC (Compact Ventures, more on this later). The efficiency of the approach was intriguing; school leaders gave tacit consent and then were largely ignored in the development and implementation. These collaborations “flew under the radar” in order to achieve results.

The work of one community partner illustrates what happens when an institution makes a strong showing in the microsystem, but fails to make mesosystem connections. In 1999, the Institute for Student Achievement (ISA) brought nearly one million dollars to the school to fund an intensive four-year commitment to 60 students in the ninth

grade.<sup>6</sup> Placing two full-time tutors inside the school, the ISA intended to track and tutor this cohort of students through four years of high school right into college. In this case, the outside agency succeeded where the LAB failed in forging ground-level (microsystem) relationships with the students. Students enjoyed the ISA classrooms and frequently spent free periods and lunches there and came after school as well for tutoring and support. By providing a new setting (Hypothesis 29 above), the ISA enriched the lives of the students. However, the two young ISA instructors failed to interact with teachers, counselors or administrators who also knew the students, so the ISA operated independently and, at times, at cross-purposes with the school. Teachers did not know what they were doing and resented the distraction. Students, who had to navigate the two worlds of DHS and ISA, received mixed messages. As a result, the ISA program was unable to duplicate the work of the public service academy in creating a unique, focused culture of achievement. There was high student mobility, the dropout rate resembled that of the larger high school, and many students did not transition to college. After four years, the school did not even receive a final accounting; the project just petered out.

Bronfenbrenner's theory of the mesosystem is particularly relevant when we consider the most at-risk students at DHS. As we began to "draw the circle" around each student in school – mapping out the microsystem and mesosystem from the student's viewpoint – we ran into unexpected difficulties. First, their microsystem settings were unusual; we often found students living with foster parents, non-parental relatives, siblings or friends, sometimes only spending a few days at one location before moving on. Other settings were equally unusual, such as appointments with probation officers,

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<sup>6</sup> Both ISA and the Northeast LAB were introduced to the school through the advocacy of the Associate Chancellor for School/Community Collaboration at UMass Boston. Unfortunately, introductions do not guarantee effectiveness.

visits to the Daily Reporting Center (where court-involved youths were required to provide accountability), or meetings with case workers from the Department of Social Services (DSS). The mesosystem was full of gaps, for the involved agencies were not talking to one another. For example, a student might miss many days of school for lack of money for a bus pass, which stemmed from poor communication between the school, the foster family and the case worker. Slowly, we tried to build the mesosystem network around each student, facilitating communication between case workers, probation officers, foster parents, relatives, and other adults who played a powerful role in these students' lives. Students with gang affiliations had yet another setting, which was untouchable.

The mesosystem for these vulnerable students was often confounded. Due to laws of confidentiality, the DSS was not allowed to give the school a list of their assigned cases; we did not find out who was living in a shelter or foster home until there was a crisis and the student began to unravel emotionally at school. In too many cases, we only discovered the various microsystem settings through student self-reporting, a precarious and potentially dangerous arrangement. For example, sometimes students would move into the district at mid-year, without school records, and fail to report that they had been enrolled in special education in their prior school or that they required medication for a psychiatric condition. In these cases, fragile students were set up for additional conflicts and failure.

Now, when No Child Left Behind legislation requires accountability for the dropout rate and graduation rate of all students, one worries that the resources required by our most vulnerable students lie largely outside the school and the agencies with these

resources are not talking to each other. The lessons of cultural cohesion are too often ignored by agencies for housing, health, safety, the courts, and the Department of Social Services.

### Exercising the Exosystem.

Bronfenbrenner defined the exosystem as “one or more settings that do not involve the developing person as an active participant but in which events occur that affect, or are affected by, what happens in that setting” (Bronfenbrenner, 1979, p. 237). Many of the mesosystem hypotheses (#29, 34 and 35) also apply here. In addition, Bronfenbrenner postulated that,

The developmental potential of a setting is enhanced to the extent that there exist direct and indirect links to power settings through which participants in the original setting can influence allocation of resources and the making of decisions that are responsive to the needs of the developing person and the efforts of those who act in his behalf.

(Bronfenbrenner, 1979, p. 256)

Bronfenbrenner’s interest in “power settings” is similar to the more recent attention paid to social capital; the exosystem partnerships sometimes gave students and their teachers/advocates access to resources and influence that would otherwise have been unattainable. Earlier, I described a few ways in which exosystem partners maneuvered to have more influence at the school level with students. In this section, I want to examine how community partners built lateral relationships across the exosystem in response to intractable student problems. Briefly, the history reveals that some exosystem relationships could positively affect student development at three levels, by strengthening

the small “pockets of excellence,” by promoting whole-school change, and by challenging macrosystem-level politics and pushing the district in the right direction.

For greater effectiveness in the pockets of excellence.

New England Telephone (NET) was a partner with DHS for over 40 years and gradually evolved from a company that hired the graduates to a company that invested in the school to make things better for students. As a prominent Boston business, the company was well positioned to partner with other institutions that were also in the exosystem relative to the Dunbar students. For example, in the 1970s, NET teamed up with another exosystem member, the MIT Sloan School of Management, to offer T-group training to select teachers and administrators. The trainees became known as the “Class of ‘69,” since many were first hired in 1969 (Leonard, 2002, p. 101). The teacher members stayed together for many years, even as principals came and went. “This group seemed to share a personal affinity and a common view of how education should work.... They favored a humanistic approach that stressed individualization of learning experiences” (Louis & Miles, 1990, p. 60). This was a positive investment in the school, but one without measurable impact on student development in the beginning.

In the mid-1980s, NET teamed up with UMass Boston to address the high dropout rate among ninth graders at Dunbar. Through the PIC, they secured some state funding and then approached the Class of ‘69 to create a small academy called Compact Ventures for the most at-risk ninth graders.<sup>7</sup> This coordination at the exosystem level is what makes this example unique; leaders at NET, UMass Boston, PIC, and the

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<sup>7</sup> During this same time period, the Private Industry Council signed the “Boston Compact” with the superintendent, which was an agreement to provide jobs to BPS graduates if the district would address student achievement and graduation issues. Hence, the name Compact Ventures. The Boston Compact was an exosystem agreement that affected the entire district; see section on Macrosystem below.



Commonwealth, who might never step inside the high school, were meeting outside the school and making decisions that would profoundly influence freshmen students; the decisions in turn were communicated by community representatives from NET and UMass Boston. Compact Ventures had its own director, a youth worker, teaching assistants and tutors. The teachers met daily to discuss student needs and programmatic decisions and the youth worker stayed in touch with homes, both examples of mesosystem-level communication similar to those discussed above. In other words, distant partnering at the level of the exosystem, in power settings never visualized or experienced by students, were facilitating mesosystem-level communication that had a positive effect on student development.

The effort was recorded by researchers (Louis & Miles, 1990) and a Boston Globe reporter (Sege, 1985). The NET representative visited classrooms to discuss industry expectations, but otherwise the partners were not directly involved in the students' microsystems. Instead, they acted indirectly through the teachers, counselors and administrators. By the end of the first year, the dropout rate for these most at-risk students was only 11%, compared to 22% for the entire ninth grade the previous year. Furthermore, "when 50 of the poorest readers were tested in September they were reading like early fifth graders. By June, their average score was mid-year seventh grade, a jump of more than 2 years" (Sege, 1985). In this way, measurable gains were recorded through several years of the program.

#### For whole school change.

In 1997, UMass Boston began to wrestle with how a university could support the turn-around of an entire school. With a one million dollar gift from the Trefler

Foundation and support from the superintendent, this partner placed college faculty members inside the school to work with students, teachers and administrators on whole-school reform. Within three years, the entire school was restructured into small learning communities and the “pockets of excellence” had expanded to include the entire school. One pocket was an alternative program for non-traditional students; others included a freshmen academy, a business academy and one focused on technology. Furthermore, UMass Boston launched “Teach Next Year,” an innovative teacher-preparation program that placed interns in Dunbar classrooms for the entire year. In this way, the university introduced fresh thinking around teaching, lowered the student/teacher ratio, and created a stream of enthusiastic recruits for future openings.

While the Trefler-UMass Boston collaboration was unique to Dunbar, the district as a whole was also undergoing major change as a set of forces came together for reform. The Annenberg Foundation made a major commitment to BPS schools and large federal grants (Magnet School, Small Learning Community, and Comprehensive School Reform Demonstration) drove high school restructuring across the city. A strong economy enabled the PIC to line up unprecedented internships and jobs for students. There was a tangible excitement among corporate leaders that real change was possible. As one participant noted, “The time was ripe – the stars were in alignment – or, if school improvement doesn’t happen now, it never will” (Minihan, 1999).

In this work, the school principal was a willing participant but the driving energy for reform was clearly coming from outside the school – and not even from central administration! In fact, most teachers would have been unable to name all the partners or describe the collaborations. Nevertheless, members of the exosystem were squarely

aligned and, importantly, some were intimately connected to the student classroom microsystem.<sup>8</sup> The school was reaccredited in 2001, won a \$100,000 award as a professional development school, and was nationally recognized as a leader in restructuring.

Dunbar's graduation rate, which was 17% in the 1970s, reached 27% in the 1980s and 41% in the late 1990s. This improvement correlates with the growing engagement of community partners, which was summarized in Table 1. Furthermore, the number of Carnegie points earned by those graduates for each year in school also increased, from 26 in the 1970s to 31 in the 1990s. The degree of difficulty of those points increased as well. In 1985, students could graduate from DHS with only one general math course (and in reality, students could graduate without really knowing how to read). By 1998, they were required to take four math courses and pass Advanced Algebra. Furthermore, with the inception of the state's graduation exam (MCAS), they had to prove they could read and write as well.<sup>9</sup> Other indicators also improved. The average daily student attendance (ADA) reflected the ups and downs of the school; ADA bottomed at 72% in the 1970s, climbed to 84% in the mid-1980s, dropped back to 76% in the early 1990s and then reached 80% by the year 2000. All this is remarkable when one considers that the percentage of English Language Learners was also growing from 6% to 28% of total enrollments and special education assignments grew from 5% to over 20% during the same 35 year period (1968 – 2003), pushing regular education enrollments downward

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<sup>8</sup> See the notes above on the presence of university faculty and interns in the high school classrooms, as well as the president of the Trefler Foundation co-teaching English and mentoring girls as well as working with SLC teachers.

<sup>9</sup> From 1999 onward, MCAS scores at DHS improved yearly, from a 90% failure rate to a 90% passing rate on the first attempt.

toward 50% (one of the lowest in the district). Certainly, the evolving school partnerships offer some explanation of these gains.

### The Macrosystem

Bronfenbrenner's analogy of nested Russian dolls to describe the layers of relationships surrounding the developing child reminds us of the hierarchical nature of the world. Furthermore, the educational establishment is often immersed in an entrenched culture with strong historical roots. Boston's history was one of ethnic neighborhoods, segregated schools, and an elected school committee that was more concerned about promoting political careers than addressing issues of equity and academic excellence, a story that has been told repeatedly (Formisano, 1991; Hillson, 1977; Ross & Berg, 1981; Taylor, 1998). Students suffer in this kind of macrosystem and DHS was no exception, where the warehousing of 2000 Black students in the early 1970s was a clumsy attempt to steer them away from favored White schools across town (Leonard, 2002). Racism of this degree is difficult to dismantle. I offer one example where exosystem-level collaboration succeeded in shifting the citywide culture with long-range positive effects in student outcomes.

In the 1980s, the business consortium, known as the PIC, was frustrated with the overall shortage of employable BPS graduates and began to apply pressure on the superintendent for high school improvement measures. Their demands for accountability, however, were confounded by an elected school committee that was dominated by partisan politics. So, business leaders approached the state legislature about replacing the elected school committee with a mayorally appointed body and finally succeeded in the early 1990s. The newly appointed school committee hired a superintendent who for 11

years raised graduation standards, prepared the district for the MCAS, tightened school discipline policies and resecured accreditation for many high schools, including DHS. In this way, the business community reached vertically up through the Bronfenbrenner circles – far beyond the power and reach of the local school leaders – to help promote city-wide reforms for school improvement and gains in student development such as those cited above.

## DISCUSSION

Bronfenbrenner added the chronosystem to his theory to describe how settings and their developmental importance change over time. The historical case study of DHS allowed us to consider this evolution. Looking back over 50 years, we found that long-standing individual partners evolved in their engagement with the school; we also found that the pattern of partnering evolved as temporary partners came and went. In general, the partnering in the 1950s and 1960s was directed toward individuals. For example, New England Telephone provided internships to students and jobs after graduation, but had little interaction with teachers or parents. In the 1970s, NET helped train a team of teachers (the Class of '69) and by the 1980s was supporting all the elements of a small learning community (Compact Ventures). By the 1990s, the partners were working together to turn around the entire school. In this way, we see that community partners evolved and gradually assumed greater and greater responsibility for student outcomes. Rather than waiting for students to emerge from the school as candidates for employment or higher education, the partners began to work with students while they were still in school (Upward Bound), then work with teachers and administrators (the pockets of excellence), and finally with the entire school, with joint partners, with the district

administration and even with the state legislature. The evolution of this engagement took over 50 years and reflected a growing understanding of the challenges of urban education as well as the development of civic capacity (Stone, 2001, 1998). Bronfenbrenner reminds us that while students may be the developmental target, mutual change is the story of relationships; in this case, the partnering institutions evolved to more effectively address student needs.

The history reminds us that partnering is a relationship with growth on both ends and not simply the transfer of goods, services and knowledge from one institution to another. In recent years, many of the grant-funded projects in the school called for “building capacity” and “sustainability” in the hope that a short-term investment could produce permanent improvements. No doubt, outside investments can increase capacity, as demonstrated, for example, by the T-group training of the Class of ‘69. At the same time, the notion of capacity-building as a sustainable result of partnering school improvement efforts could be elusive and even insulting. In reality, the new capacity often lay in the relationships and not in the participants themselves. When one member withdrew, the capacity dwindled again. This helps explain the ups-and-downs of the Dunbar record. What hope is there that a freshmen academy will continue unabated when the funding for counselors and leaders is withdrawn or how likely will a dual enrollment program continue when state funds dwindle? Moreover, the history seems to indicate that the relationships that developed through partnering were themselves empowering; teachers, administrators, students and partners were more likely to think confidently, boldly, creatively and “outside the box,” when others were around who were committed and believed. Understandably, when a partner withdrew because a grant ran out, the

excitement, encouragement, and moral support also disappeared. In short, effective partnering was more like a marriage than a date.

The relationships of mutual support often seemed to be more important than the money involved. This history demonstrated at least four times when an approximate investment of one million dollars was made in the school. In the 1980s, the Massachusetts Office of Equity invested “a million dollars” in DHS to address racial inequities, with no memorable effects according to the Director (Leonard, 2002, p. 129). In the late 1990s, another one million was invested in Dunbar between the federal Magnet, SLC and CSRD grants. The money arrived in lump sums, well into the school year with a June spend-out deadline, which militated against thoughtful, long-range planning or enhanced staffing, and encouraged instead questionable stipends and material purchases such as furniture or computers, all of which are poor school reform strategies. I have already examined the poor outcome of the million dollar investment of Institute for Student Achievement. The Trefler gift, however, which extended from 1997 to 2002, built relationships with the foundation, the university, the PIC and the public that extended far beyond the five-year time limit. Furthermore, the combined voices of the foundation, university and PIC forced the district central administration to look at the school in a new light and gradually led to the reduction in number of students requiring special services (special education, second-language learners, and court-involved youth) to the school. If any grant was effective in restoring accreditation to the high school, reducing the dropout rate, raising test scores, and pointing students toward college, this was it.

## CONCLUSION

There is an increasing recognition of “civic capacity” (Anyon, 1997; Portz, Stein, & Jones, 1999; Stone, 2001) and, specifically, calls for “smart education systems” (Rothman, 2007) that emphasize community responsibility and a city-wide approach to addressing the needs of young people. In this new approach, schools are supported in the ways I have outlined above. Systems-level thinking is exciting, but there is a need to drill down to the individual student, the focus of the Bronfenbrenner circles, and to examine the encircling relationships.

Forty years ago, the urgent need for school improvements in Boston brought business and university partners into the mix. In this paper, I traced some of the partnerships at one problematic high school and used Bronfenbrenner’s ecological systems theory to understand the elements of successful school partnering as well as some of the reasons for failure. The developmental needs of all students are larger than what a school can address alone. With successful students, these needs are met through relationships we hardly notice between teachers, parents, peer groups and other members in microsystem settings. For at-risk students, these relationships are sketchy. Other relationships at the level of the exosystem can also improve outcomes for students and, sometimes, turn around an entire school or steer a district in a new direction. Cultural cohesion describes the deliberate attempt to convey the same standards and expectations to students. Bronfenbrenner’s theory suggests a cultural reform strategy with advantages for student development over curricular and structural reform models.



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