DOCUMENT RESUME

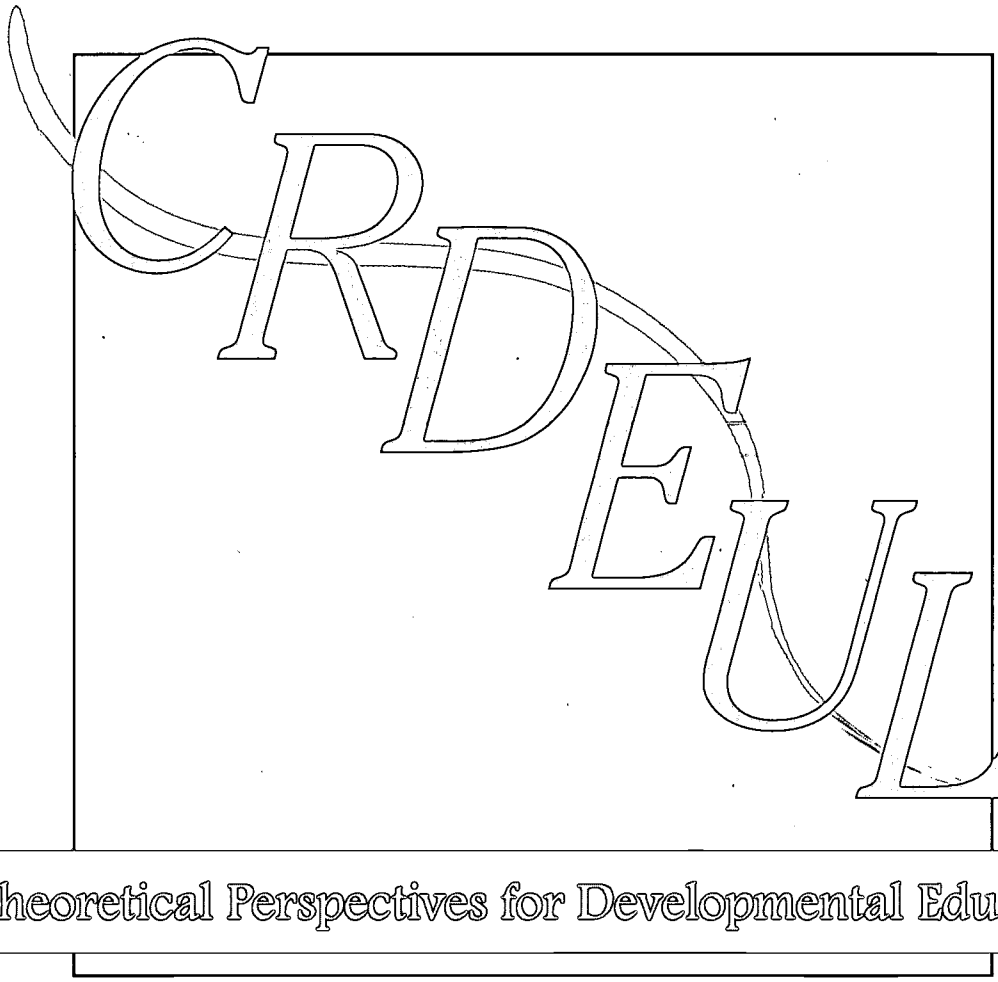
ED 459 871 JC 020 062

AUTHOR	Lundell, Dana Britt, Ed.; Higbee, Jeanne L., Ed.
TITLE	Theoretical Perspectives for Developmental Education.
INSTITUTION	Minnesota Univ., Minneapolis. Center for Research on Developmental Education and Urban Literacy.
PUB DATE	2001-00-00
NOTE	174p.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	Bachelors Degrees; Basic Skills; Basic Writing; *Community Colleges; *Compensatory Education; Culture; *Developmental Studies Programs; *Educational Theories; Educationally Disadvantaged; Learning Problems; Mathematics; Minority Groups; *Remedial Programs; Sciences; Transfer Students; Two Year Colleges
IDENTIFIERS	*Minnesota General College

ABSTRACT

This monograph from the University of Minnesota General College (GC) discusses theoretical perspectives on developmental education from both new and established standpoints. GC voluntarily eliminated its degree programs in order to focus on preparing under-prepared students for transfer to the university system. GC's curricular model includes a multi-disciplinary range of base curriculum courses integrating both skills and academic content. This model, which does not focus on traditional skills-based models for developmental education, provides students with a range of perspectives and academic training for continuing work directly in their majors. In this monograph, GC faculty and staff offer perspectives on the theoretical foundations of developmental education. Papers are divided into the following categories: (1) New and Revisited Theories for Developmental Education, with articles by Carl J. Chung, Jeanne L. Higbee, Patrick Bruch, and Dana Britt Lundell and Terence Collins; (2) Culture and Constructivism, with articles by Heidi Lesley Brajas, Mark H. Pedelty and Walter R. Jacobs, Rashne Jehangir, and David L. Ghere; (3) Literacy and Composition, with articles by Amy M. Lee, Thomas Reynolds, and Ditlev S. Larsen; and (4) Theories for Math and Science, with articles by Randy Moore, Allen B. Johnson, Thomas Brothen and Cathrine A. Wambach, and D. Patrick Kinney. Each paper contains references. (NB)

The Center for Research in Developmental Education and Urban Literacy



Theoretical Perspectives for Developmental Education

Dana Britt Lundell
Jeanne L. Higbee
Editors

UNIVERSITY OF MINNESOTA

Theoretical Perspectives for Developmental Education

The first annually published independent monograph sponsored by The Center for Research in Developmental Education and Urban Literacy, General College, University of Minnesota.

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CRDEUL

Printed in the United States of America.

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Foreword

David V. Taylor, Dean
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The mission of the General College (GC) is to provide access to the University of Minnesota for highly motivated students from the broadest range of socioeconomic, educational, and cultural backgrounds who evidence an ability to succeed in the University's rigorous baccalaureate programs. The mission is accomplished through a developmental general education program offered in a multidisciplinary and multicultural learning community by nationally recognized faculty and staff who are grounded in the theory and practice of developmental education. Through its teaching, advising, research, and outreach, the General College seeks to be the nation's preeminent developmental education institution.

In 1988, the mission of the General College at the University of Minnesota was changed. Although GC retained its primary role of providing access to the University for students who had not met the traditional preparation standards, the College voluntarily relinquished its degree programs. Its new mission, as a freshman admitting college, was to successfully transfer underprepared students into other degree granting academic units where they would complete their baccalaureate studies. The development of academic support programs and effective counseling and advising programs was crucial to the success of preparing students for transfer.

The faculty and staff embraced the theoretical construct of developmental education as descriptive of their work. Although the services that were provided to students in the General College went well beyond most developmental education programs, the existing theories and practices in the emerging field provided a core around which the meaningful research could be conducted. The energy that once sustained the vitality of the degree program was now liberated and redirected into research that explores the interrelationships between effective pedagogies, practices, and student outcomes. Our raison d'etre is to retain students and to assist them through the transfer process so as to enhance the likelihood of their eventual graduation and, secondarily, to disseminate to all interested parties what we have learned in the process.

Over the past decade GC has hired innovative faculty and creative student services personnel who understand and resonate to its new mission. They in turn have helped to define and sustain the work of the Center for Research in Developmental Education and Urban Literacy (CRDEUL). The First Intentional Meeting on Future Directions in Developmental Education held in Minneapolis in October of 1999, and the launching of the monograph series reflect their continuing interest in engaging professionals in the field about theories and practices that inform the discipline of developmental education. It is our hope that the monograph will be widely circulated and discussed. We encourage other scholars and practitioners to share with us research which will broaden an understanding of and improve services to college students.

Preface

Jeanne L. Higbee, Faculty Chair
Center for Research on Developmental Education and Urban Literacy (CRDEUL)

In 1995 the National Association for Developmental Education (NADE) published the following "Definition and Goals Statement" to guide theory, research, and practice in the profession:

> Developmental Education is a field of practice and research within higher education with a theoretical foundation in developmental psychology and learning theory. It promotes cognitive and affective growth of all postsecondary learners, at all levels of the learning continuum.
>
> Developmental Education is sensitive and responsive to the individual differences and special needs among learners.
>
> Developmental education programs and services commonly address preparedness, diagnostic assessment and placement, affective barriers to learning, and development of general and discipline-specific learning strategies.
>
> Goal: To preserve and make possible educational opportunity for each postsecondary learner.
>
> Goal: To develop in each learner the skills and attitudes necessary for the attainment of academic, career, and life goals.
>
> Goal: To ensure proper placement by assessing each learner's level of preparedness for college course work.
>
> Goal: To maintain academic standards by enabling learners to acquire competencies needed for success in mainstream college courses.
>
> Goal: To enhance the retention of students.
>
> Goal: To promote the continued development and application of cognitive and affective learning theory.

During the past year, leaders in the field (e.g., Malinowski, 2000) have revisited the NADE Definition and Goals Statement in a variety of forums and venues, including in a "think tank" of the NADE executive board, chapter officers, and committee chairs, held prior to the annual NADE conference in Biloxi, MS, and led by outgoing NADE President Martha Casazza, and at the First Intentional Meeting on Future Directions in Developmental Education (Lundell & Higbee, 2000), sponsored by the University of Minnesota General College's (GC) Center for Research on Developmental Education and Urban Literacy (CRDEUL). One of the foci of these discussions has been the formulation of a theoretical foundation for developmental education. Collins and Bruch (2000), reporting on a session at the intentional meeting, propose, "There are literally dozens of theoretical perspectives spanning multiple traditional disciplines that can contribute to the informed practice of developmental educators" (p. 19). A preliminary list brainstormed by session participants includes 23 disciplines and theoretical frameworks, ranging from adult education and student development theories to critical democracy theory and social constructivism, which might play a role in guiding our work. Obviously, this is a far broader approach than implied in the NADE Definition and Goals Statement. Collins and Bruch assert,

> We think it important to note that it is not from such disciplines or perspectives in isolation that we can construct powerful theories to guide practice in developmental education. Rather, it is from the purposeful interpenetration of the theories that inform disciplinary practices that

the richness of an interdisciplinary theoretical framework for developmental education might emerge. (p. 20)

Recent developmental education publications also reflect a renewed interest in identifying theoretical frameworks (e.g., Caverly & Peterson, 1996; Darby, 1996; Duranczyk & Caniglia, 1998; Friedman, 1997; Maxwell, 1998; Silverman & Casazza, 2000) or creating a central theory of developmental education (e.g., Wambach, Brothen, & Dikel, 2000; Lundell & Collins, 1999, reprinted here). In this monograph authors representing a wide spectrum of disciplines and theoretical perspectives reflect on theories that influence research, teaching, counseling, advising, and administrative decision making. As Collins and Bruch (2000) propose, "Formation of interdisciplinary theories must have in mind the pragmatic business of informing the project at hand, and so such theory building must be flexible and adaptable" (p. 20). The purpose of this monograph is to promote further discussion regarding the definition of developmental education and the theory or theories that underlie practice.

The mission of the University of Minnesota's Center for Research on Developmental Education and Urban Literacy is as follows:

> The Center for Research in Developmental Education and Urban Literacy, in partnership with the General College at the University of Minnesota-Twin Cities, promotes and develops multidisciplinary theory, research, and practice in postsecondary developmental education and urban literacy. The Center identifies future directions in the field locally, regionally, and nationally by bringing together a diverse range of faculty, students, and community organizations for research collaborations.

It is our belief that theory should provide the foundation for our research, and that research should guide practice. In launching this monograph series, it seemed appropriate that we begin with a volume devoted to theoretical perspectives. Calls for submissions and editorial guidelines for future monographs are provided at the back of this edition.

The authors of the chapters of this monograph represent the wide array of disciplines in which GC faculty and staff have earned their terminal degrees, and their writing reflects their endeavors to demonstrate that any introductory college course can be taught in a developmental education context. As individuals we may agree or disagree with some of the theories presented in this volume, or with their relevance to the field of developmental education. Some chapters provide a historical perspective; others challenge us to rethink even the most modern theories. Whether a century old or contemporary, the theories represented in this monograph have and will continue to influence how educators perceive their work. It is our hope that publications like this monograph will encourage developmental educators to further articulate the theoretical foundations for the profession and refocus on the link between theory, research and practice.

Dana Lundell and I would like to express our appreciation to David Taylor, Dean of the General College, and Terence Collins, GC's Director of Academic Affairs, for their continued support of CRDEUL and its programs, including this monograph series. We also want to recognize Devjani Banerjee-Stevens and Jennifer Kreml, our assistant editors, and Karen Bencke, who formatted this publication and created the cover design. Without their valuable assistance, this monograph series would not be possible.

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Introduction

Dana Britt Lundell, Director
Center for Research on Developmental Education and Urban Literacy

The theoretical perspectives discussed in this monograph represent both new and established foundations for developmental education. It has long been important to articulate the theories that shape our teaching, and it is equally pertinent that we continue to explore those theories that more broadly define the profession (Casazza, 1998; Lundell & Collins, 1999; Silverman & Casazza, 2000). However, this is not an easy task for several reasons. First, developmental education is only recently beginning to rename and reposition itself within the broader framework of higher education. We, as developmental educators, have challenged the use of the term "remedial" in our own work (Boylan, 1999; Higbee, 1993; Maxwell, 1997) because it has perpetuated popular misconceptions about what it is that teachers and students do in these programs, sometimes unfortunately upholding the status quo in shutting students out of many of our public institutions. By naming what it is we do *not* do (i.e., we do not "remediate" students using a deficit model), we have made a space for discovering and articulating what it is we actually *are* doing effectively. To do so, many developmental education leaders have stated this priority clearly: we need to examine and share the theories that shape our best practices (Boylan; Casazza, 1998; Higbee, 1996; Lundell & Collins; Silverman & Casazza; Wambach, Brothen, & Dikel, 2000).

Although this is a potentially liberating point in history for the field, it presents some noteworthy challenges. When we begin to explore our diverse vantage points as institutions, administrators, instructors, advisors, and students, we recognize that these standpoints alone defy easy categorization. Because we serve a variety of students, for example, we rely on utilizing and implementing our knowledge of best practices in developmental education, which includes using a flexible range of learning activities such as peer group work, Supplemental Instruction (SI), freshman seminars, and a range of other instructional delivery methods such as incorporating technology and learning communities into our curricula and program foundations (Boylan, 1999; STARLINK, 2000). As knowledgeable and responsive as we have become in our teaching methods, we also need to consider that our theories informing these methods need to be equally responsive in addressing a similar diversity in learning styles, prior knowledge and educational preparation, and student backgrounds (e.g., issues of language acquisition, race, class, gender, disability, and other social and cultural factors).

Traditionally, theories in developmental education, and related teaching methods, have primarily reflected individualistic models for learning (Collins & Bruch, 2000; Lundell & Collins, 1999). Because this positively serves large numbers of students in these programs, it is clear that research continues to indicate a need to reflect more systematically on why some students are still not adequately being supported by the same programs. This includes research reports that continue to document lower retention and achievement rates in college by greater numbers of students from lower income families and students of color in proportion to White students (i.e., Center for Postsecondary Research and Planning, 2000). To address these disparities in particular, it is crucial that we begin to reflect more deeply upon our theories and definitions to identify what we may be missing, and to strengthen and share what we already have implemented successfully.

As a field, we have started to do this with a definition statement outlining some areas of theory in developmental education (National Association for Developmental Education, 1995). Even in naming common ground, however, we still experience the reality that our programs and practices vary widely

(Malinowski, 2000). These varied interpretations and definitions may pose some viable tensions to consider as we continue to define the field and develop theories for developmental education. First, it positively suggests a kind of breadth and collective strength in our work, the "continuum of services" (Boylan as quoted in Lundell, 2000, p. 51) we provide in programs and across institutions. That is, "developmental education" may not even be coined by this term, depending on the form in which it is applied (i.e., learning centers and stand-alone courses in institutions that do not recognize a separate developmental education division or mission). Second, as developmental educators find it difficult to describe even rather generally what it is we all commonly do, given this variety in outreach and purpose, it may be in our best interest to consider the assets inherent in this conundrum. When our programs have been sidelined in the past, it has ultimately stemmed from an overly simplified version of the work of developmental educators and these students as remedial or marginal in some way. It is to our advantage to continue developing our frameworks and definitions in a way that includes a wide variety of approaches, definitions, and theories—for this reflects our real work.

Sharing Theories for Developmental Education

"Few programs have articulated and presented their own models to a broader audience, specifically as they relate to relevant educational theories informing their conception and relationship to current definitions of developmental education" (Lundell & Collins, 1999, p. 7). There has been recent discussion about finding a theory, or theories, of developmental education (Collins & Bruch, 2000; Wambach, Brothen, & Dikel, 2000), but without first having the widespread articulation of key theories guiding individual teachers and program administrators themselves, a broader theory of sorts cannot yet practically be proposed. There is perhaps too much variety and range in perspectives to adopt a universal theoretical model at this point in time. We may need more theories *for* developmental education before we arrive at a theory *of* the field, if that is even a goal. In fact, it might be true and beneficial that the "one-size" model does not fit all in developmental education. This may be to our advantage as this appears to be one primary reason developmental education exists in the first place—to serve students for whom this type of one-size model has never fit, nor should ever entirely be made to fit. Perhaps our own theory or theories as a field might address this?

To explore the role of theory in developmental education and to articulate theories from one program, and specifically to demonstrate the range of both overlap and difference even within a program, we offer a set of theoretical perspectives from the General College (GC) at the University of Minnesota-Twin Cities—one of the nation's oldest developmental education programs. The university is the largest public, land-grant institution in the Midwest, offering four-year undergraduate and graduate degrees. It is also the only Big Ten public research institution situated in its state's major urban site. General College offers a pre-transfer, credit-bearing undergraduate curriculum for students entering other degree-granting colleges in the university. Each fall the college admits approximately 850 new first-year students, and overall the college typically serves between 1400 and 1800 students each semester in its programs. GC accepts about half of its students from those whose composite admission scores (i.e., a combination of the American College Testing [ACT] score, high school rank, and high school grade point average) fall below university program entry requirements. Another large percentage of students are admitted to GC based on individual and committee reviews of their cases, and an additional percentage of students qualify and enter the college through the support of the federally-funded TRIO program. GC's mission includes an emphasis on preparation toward students' educational and career goals through a multidisciplinary curriculum with the goal of transferring into the larger university. GC also maintains a strong position that students are being served within a multicultural program that addresses issues of diversity in teaching, learning, and research. Overall, GC's strong record of student transfer rates to degree-granting colleges of the university—rates of 79% compared to 84% for retention rates in the rest of the university—indicate that GC's programs are successful for most students who enter the program.

The college also offers a range of academic support services and courses to prepare students for a successful transition. GC hosts numerous unique programs such as the Student Parent Help Center, TRIO pro-

grams such as Upward Bound, an Academic Resource Center, and the Commanding English Program. The college also supports externally funded grant programs linking the college with the local urban community, such as the Commanding English program's English as a Second Language (ESL) bridge courses taught in the local high schools. GC also supports the Center for Research on Developmental Education and Urban Literacy (CRDEUL), which promotes and develops multidisciplinary theory, research, and practice in postsecondary developmental education and urban literacy.

GC's curricular model includes a multidisciplinary range of Base Curriculum (BC) courses integrating both skills and academic content. This multidisciplinary programmatic model, which does not focus on traditional "skills-based" models for developmental education—at least not apart from integrating that with academic content—provides students with a range of perspectives and academic training for continuing work directly in their majors. Students can take writing, math, art, biology, sociology, anthropology, literature, freshman seminars, multicultural communication, and law and society. In doing so successfully, they fulfill some of their university graduation requirements while receiving full academic credit for transfer to degree-granting colleges of the university, which typically takes place some time during their second year. Faculty, administrators, and staff in this program incorporate a wide range of theories and methods in developing their curricula. In addition, they fulfill GC's mission of conducting and disseminating research in both developmental education and their disciplinary content areas.

Given the breadth of courses and services GC offers, and given GC's long history as a self-contained developmental education program, the college offers a fundamental point of reference for the field. Similarly, it can inform current definitions and theories in developmental education given its unique format and location within a public research university. Like all developmental education programs and services, there is a sense of uniqueness in its definition and model as GC is viewed by the University of Minnesota as its main point of preparation and access for many students. It is not strictly an open admissions college, but it does serve a diverse range of students for whom immediate entry into the university would not have been possible. Because of this history, it is important to share this work more broadly to examine GC's theoretical, research, and pedagogical foundations.

GC Perspectives

This monograph specifically offers perspectives from GC faculty and staff who have responded to the recent call to articulate the field's theoretical foundations (Collins & Bruch, 2000). In particular, this group of authors has begun to explore not only the theories that inform their own classroom practice specifically, but they offer some theories that have relevance for developmental education more broadly. By collecting a set of theories from a group of teachers within one program, it is easy to see the wide range of overlapping, and sometimes conflicting, theories that are influential to developmental educators. These authors all teach within the same program, under the same general mission, but their approaches diverge in interesting and effective ways. They represent a broad range of academic content and advising areas: sociology, anthropology, English composition, psychology, mathematics, history, multicultural education, philosophy, logic, and student support services.

In this publication, many of these authors reflect on areas that have not yet been addressed explicitly in the field, and several expand or critique current theories that are outlined in the NADE definition. For example, theories of democratic education and civic engagement, race-critical and multicultural theories, and theories from cultural studies have not been lenses with wide application in developmental education, yet they are articulated and applied more widely in other fields and arenas of higher education. Some of these authors focus on theories about institutional and cultural issues affecting students, while some focus on issues of individual development or behavioral theory. The layers and tensions present here are important because they demonstrate why it is difficult to articulate a single theory of, or a full range of theories for, developmental education. Perhaps no one lens can provide a complete answer to the rich range of questions and situations that are produced in the wide variety of services, courses, teaching methods, and students that make up these programs.

General College also represents some unique subject areas that are not typically taught in developmen-

tal programs or thought of as developmental core courses. This can provide yet another unique perspective for the field as there is work being done in these areas that can and should be considered for developmental education. It is a hope and goal of this publication to consider that definitions of developmental education might continue to address some of the issues these authors have begun to explore in their own work. Because most developmental educators come to the field from a specific content area, it is important to continue to let the research in those areas inform and expand frameworks for developmental education. In the future, it will also be necessary to apply these new theories for the field more directly to classroom practice and within the rich variety of contexts within which developmental educators work.

Transforming Theory, Research, and Practice

As Martha Casazza (1998) wrote, it is evident in producing this publication, that

> These theories raise as many questions as they provide answers. The next step is to engage in a process of critical reflection regarding practices in developmental education to see if they lead to a reconstruction of the principles currently used as a framework. (p. 43)

It appears that in the field of developmental education, we are at the point of critical reflection, but we are also still in the position of needing to articulate theories. Silverman and Casazza (2000) have demonstrated an innovative way for education professionals to push the current theoretical trends in the field, to incorporate new research and theory into an examination of practice that transcends the traditional model for educating students. For example, they note that passive forms of education, such as the banking model (Freire, 1970), are outdated and do not assist students in developing important skills such as critical thinking and active learning stances. Although we have known this for awhile through research in education, it has taken awhile for these concepts to be instituted in definition, theory, and pedagogy that informs other disciplines. In developmental education, this translates into a push for continuing to transform our work at the levels of research and theory that more effectively responds to student needs as they make educational transitions with the support of a wide range of developmental programs and services.

Multi-disciplinary models for theory, research, and teaching seem to provide the best range of answers to our questions about student learning (Bruch & Collins, 1999; Casazza, 1998; Silverman & Casazza, 2000). The richer the range of definitions and approaches we provide in developmental education, the more responsive our classrooms and programs can be to the diverse range of students we serve. Additionally, as Silverman and Casazza (2000) clearly address throughout their work, theories and research that can be transformative to the profession provide fertile ground for defining more successful future directions for education. Specifically, they argue that educators must view themselves as ongoing agents of transformation, and that they are in the most important position for illuminating future goals.

> Change agents challenge the status quo. They are not satisfied with repeating past successes or accepting failures. Most important, they motivate themselves and others, including students, administrators, and colleagues, to explore new directions and take risks. We support this view as a foundation for making changes in practice and using theory and research to guide the way. (p. 260)

Their model for integrating a wider range of theories, applied directly to student experiences through case studies, provides a clear direction and instructive example for how developmental educators can continue to create change for students specifically, and the profession more broadly. Their vantage points include a wider range of theories than present definitions have outlined, including sociolinguistic theories, constructivist models, adult learning frameworks, cognitive development theories, and multicultural education and intercultural communication theories. Their rich range of applied theories demonstrates that current individualistic models alone, which presently dominate definitions and practice in developmental education (Lundell & Collins, 1999), do not offer a complete enough response to understanding students.

In this monograph, it is clear that we can adopt even more vantage points to add to our work in research and practice. In particular, some of the multicultural and sociolinguistic models for education

appear to provide a new standpoint, as well as constructivist models applied in history and science classrooms. No matter which discipline is examined, it is important to take a step toward doing this type of critical theoretical reflection. The authors and editors of this publication hope they have offered something to trigger new conversations about theories of, and theories for, developmental education.

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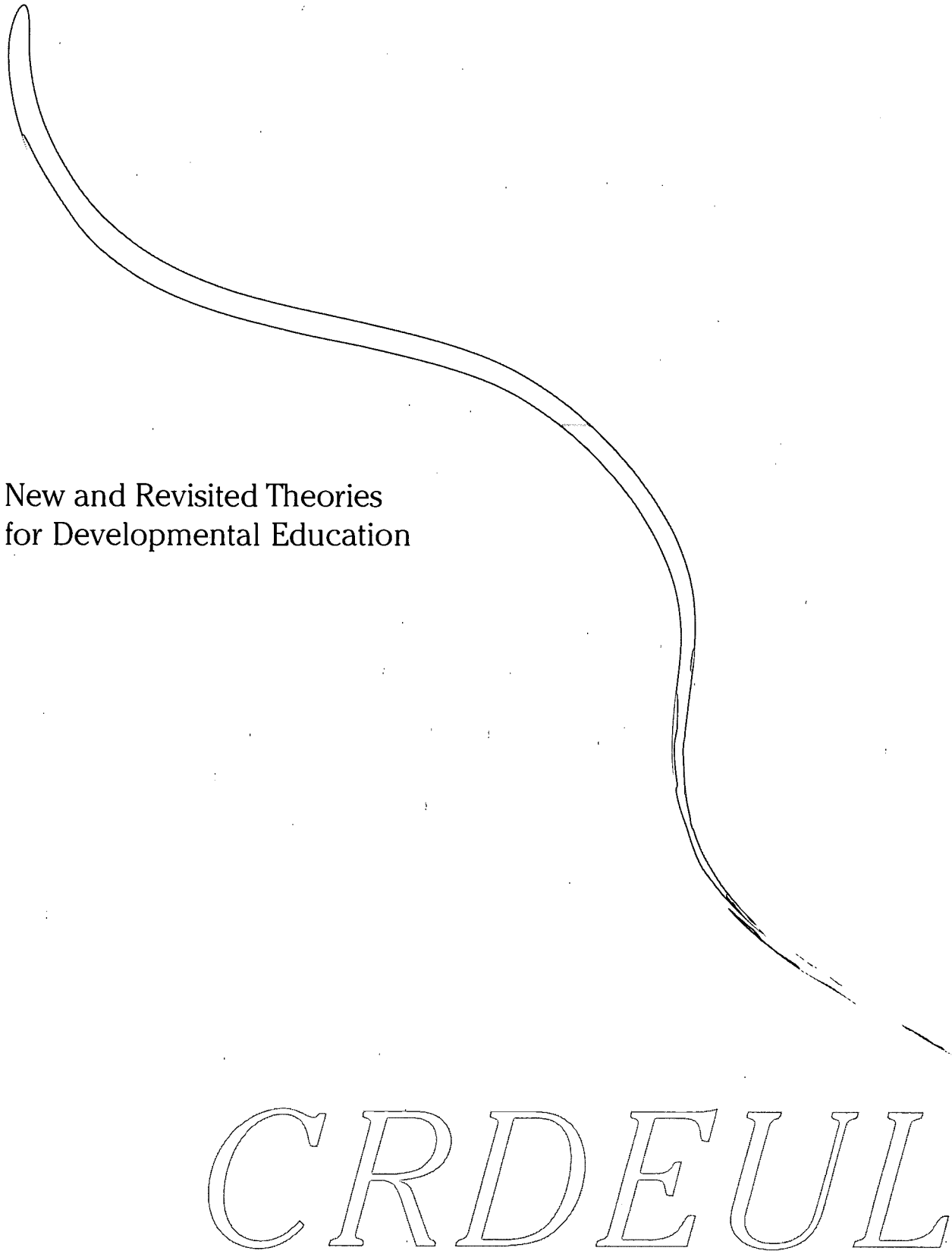
New and Revisited Theories
for Developmental Education



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Approaching Theory in Developmental Education

Carl J. Chung, Assistant Professor
Philosophy and Logic

The purpose of this chapter is to provide developmental educators with a useful initial framework within which to identify and reflect upon preconceptions concerning the nature and purpose of "theories." I accomplish this by presenting three general approaches to theory: the classical approach, the model-based approach, and the contextualist approach. Each approach has its own strengths and weaknesses, and each approach offers a different vision of the fundamental features of a theory of developmental education. I argue that no single approach is inherently superior to the others, and I suggest that learning to appreciate the strengths of each approach might lay the foundation for a robust theoretical framework unique to developmental education.

Recently developmental educators have been urged to embrace theory (Collins & Bruch, 2000; Lundell & Collins, 1999; Silverman & Casazza, 2000; Spann & McCrimmon, 1998; Wambach, Brothen, & Dikel, 2000). What is more, the reasons given to support this change implicate the very future of developmental education with this choice: we either embrace theory or face academic extinction. For example, in the *Proceedings of the First Intentional Meeting on Future Directions in Developmental Education*, Terence Collins and Patrick Bruch (2000) write that "Given the gains to be made through the process of vigorously theorizing our practice, 'developmental education' as simply a hodge-podge of contingent local practices guided by inexplicit and largely unintentional theoretical frameworks is no longer good enough" (p. 19). In an interview on the future of developmental education, Hunter Boylan asserts that

> An essential component of a successful program in the future will be research and development. The most successful programs are theory based. They don't just provide random intervention; they intervene according to the tenets of various theories of adult intellectual and personal development. (Stratton, 1998, p. 33)

Milton G. Spann and Suella McCrimmon (1998) characterize the importance of theory as follows:

> The field of developmental education currently faces an identity crisis. For the most part, it has little knowledge of its roots or a widely understood and articulated philosophy, a body of common knowledge, or a commonly accepted set of theoretical assumptions congruent with that philosophy. (p. 44)

Finally, Dana Lundell and Terence Collins (1999) echo similar concerns when they write: "Much of the published literature in developmental education lacks a theoretical base through which the motives and goals of seemingly disparate practices might be understood as constituting a unified core of disciplines" (p. 4). They motivate their call to theory by citing two main reasons:

> 1. Work in developmental education has matured intellectually to the point where we must be overt in theorizing our enterprise so that our research and curriculum studies can compete with each other for credibility in full view of the assumptions that are their intellectual foundation.
>
> 2. Attacks on developmental education are very easy to mount when the grounds for discussion are subject to redefinition at the whim of every legislator or academic vice-president who questions the value of our practice. That is, we need to know why we do what we do, and we need to say these things aloud. (p. 4)

As these quotations indicate, those advocating a larger role for theory do so for a variety of reasons, including overall program success, the identity and credibility of the field of developmental education, and the defense of the field against ongoing attacks from outside sources. In addition, this call to theory is, at least for some of those making it, overtly reformist. For example, the quotation by Collins and Bruch (2000) is critical of current theoretical frameworks that are "inexplicit" and "unintentional." That is, current theoretical frameworks have only managed to produce a ". . . hodge-podge of contingent local practices . . ." (p. 19). We, as developmental educators, are thus urged to be more systematic, explicit, and intentional in our theorizing.

One could respond to those advocating theory in a number of different ways. For example, one might agree (e.g., "Yes, this is obviously right; let's get on with it . . ."), one might ask for clarification (e.g., "What exactly do you mean by 'explicit' and 'intentional' theorizing?"), or one might disagree (e.g., "No, the 'theoretical state' of developmental education is just fine; I see no need to accept these recommendations . . ."). But no matter which response one adopts, we, as a community, are going to find ourselves having conversations about theories and about theorizing in the context of developmental education and its future as an academic discipline.

The main goal of this chapter is to try and ensure that those conversations about theory are constructive and not divisive or polarizing. This is a legitimate worry, for two reasons. First, the terms "theory" and "theorizing" are loaded in the sense that they encompass a range of possible meanings and associations, which in turn often reflect different underlying assumptions, values, and explanatory frameworks. Second, there is the incredible diversity to be found within the field of developmental education, including institutional diversity, practitioner diversity, disciplinary diversity, and theoretical diversity (e.g., Collins & Brùch, 2000, pp. 19-20). This diversity only multiplies the number of perspectives and assumptions we are likely to encounter, and it increases the opportunities for disagreement and miscommunication.

To accomplish this goal I present three general approaches to understanding what a theory is and what it means to theorize: the classical approach, the model-based approach, and the contextualist approach. For each, I set out some advantages of that approach, some disadvantages, and then I discuss how the approach would characterize the fundamental features of a theory of developmental education.

The point of doing this is not to offer a definitive typology of theoretical approaches, and it is not to defend one approach over others. Rather, I hope to provide readers with a useful initial framework within which to identify and reflect upon their own assumptions concerning theory and what a theory of developmental education ought, eventually, to look like.

The Classical Approach to Theory

One promising way to make sense of theory and theorizing is by clarifying what those terms mean in the context of our best examples of scientific inquiry. After all, physics and chemistry are well developed, robust, and time tested. If anything is going to count as a theory or theorizing, surely Newtonian mechanics and the mathematical modeling and experimental methodology of physics have got to be prime examples. Even if it is not possible for developmental educators to perform controlled experiments or to come up with mathematical equations, advocates of the classical approach nonetheless believe that the theories of the natural sciences embody an ideal standard worthy of emulation.

To identify some of the details of that standard, an example will help. Consider Newton's theory of motion, which is defined by three laws of motion and the law of universal gravitation (Beatty, 1980; Giere, 1991):

> First Law of Motion. If there is no force acting on a body, the momentum of that body will remain constant.
>
> Second Law of Motion. If there is a force acting on a body, that body will accelerate by an amount directly proportional to the strength of the force and inversely proportional to its mass.
>
> Third Law of Motion. If one body exerts a force on a second, then the second exerts on the first a force that is equal in strength, but in the opposite direction.

> Law of Universal Gravitation. Any two bodies exert attractive forces on each other that are directed along a line connecting them and are proportional to the product of their masses divided by the square of the distance between them. (Giere, pp. 69–70)

Several key points flow from this example. First, it is clear that the main ingredients of a theory are *laws* or universal generalizations. Second, taken together these laws *explain* why bodies move the way they do by identifying and interrelating certain causally relevant factors: force, momentum, acceleration, mass, and distance. Third, the laws allow us to *predict* movements of a body by extrapolating the effects of force, momentum, acceleration, mass, and distance from earlier to later times. For what I am calling the classical approach, then, a theory is essentially a collection of universal generalizations that allows us to explain and predict phenomena in a particular domain.

For many, this classical interpretation of theory is intuitive and obvious. Applied to the field of developmental education, the first step toward forging a theory of developmental education would be to isolate and clarify the causally relevant factors governing student development, learning, retention, and success. So just as Newton had to isolate and clarify what he meant by force, acceleration, and momentum, so must development educators isolate and clarify what they mean by such factors as, for example, motivation, learning style, identity formation, self-regulation, and demandingness (cf., Silverman & Casazza, 2000; Wambach, Brothen, & Dikel, 2000).

The second step would be to formulate the laws or principles governing the causally relevant factors. Examples of such laws or principles might be: "All students who possess learning style A will succeed when taught with teaching method B"; or "All students in affective state C in environment E will fail unless they achieve affective state D"; or "No student with cognitive disability F succeeds without intervention G and teaching method H." If it turns out that generalizations of such universal scope (i.e., All A are B) cannot be formulated, statistical generalizations would still work (e.g., Most A are B; P are probably Q; S follows in X percentage of cases studied).

Finally, the third step would be to verify and refine the laws or principles by further experiment or research. Ideally, this would result in a unique set of laws or principles that best explained student development, learning, retention, and overall success. This collection of laws or principles would constitute the core of a theory of developmental education.

Advocates of the classical approach to theory can point to a number of advantages of their approach. First, the classical approach allies itself with the prestigious tradition of the natural sciences, a tradition that boasts some of the best examples of theory. In addition, because of its emphasis on laws, it is clear that a classical theory will be verifiable, testable, and, in the long run, refinable. The classical approach also provides an intuitive conception of how a theory explains and predicts, again due to the emphasis on laws: basically, explanation or prediction of a given phenomenon occurs if we can identify specific causal factors and then cite a law governing those factors. Finally, applied to developmental education, the classical approach provides a clear "recipe" for forging a theory of developmental education, and such a theory would have the legitimacy and advantages noted above.

However, even with such compelling advantages, the classical approach to theory has not been immune to criticism. One criticism is that, historically, the classical approach has failed to provide a convincing general account of theory and theorizing in all areas of inquiry. For example, it has proven difficult to make sense of the theoretical structure of psychology and evolutionary biology in terms of general laws (Beatty, 1980). This has led some historians and philosophers of science to conclude that the classical approach fails precisely because of its emphasis on laws or universal generalizations (Beatty). For present purposes, this raises the possibility that there are legitimate domains of inquiry that are simply not governed by general laws. If this is so, then perhaps a theory of developmental education is possible that does not require the formulation of laws of human learning or development. One such alternative conception of theory not based on laws is the model-based approach, which I shall discuss in the next section.

The Model-Based Approach to Theory

Advocates of this approach hold that a theory is essentially a collection of "models." The models of a

theory are abstract entities that serve to characterize and define certain kinds of systems (Beatty, 1980, p. 410). As such, models are like maps of an unknown territory: they provide an abstract representation of "the lay of the land," how the parts of the unknown territory might be arranged or fit together, and how the parts might interact. In the context of theories and theorizing, such models represent some phenomenon or process we are trying to understand and explain. For example, Newtonian mechanics looks like this if we adopt the model-based approach: "A Newtonian mechanical system = [df] a system of objects which behave according to Newton's three laws of motion and the law of universal gravitation" (Beatty, 1980, p. 400).

Thus, instead of equating the theory of Newtonian mechanics with laws and specific causal factors, the model-based approach equates the theory with a simple definition of a model or system that satisfies Newton's laws. The difference may seem trivial, but it is not. For the classical approach, axioms or laws *constitute* a theory, whereas for the model-based approach axioms or laws simply serve as one way to *constrain* possible models. For the classical approach, the laws constituting a theory apply directly to some part of the real world—the laws are either true or false. For the model-based approach, the models constituting a theory are what apply to some part of the real world, and instead of a model's being true or false we focus on how well the model fits. In other words, the claim that a model fits some part of the real world may be true or false, but this does not make the model itself true or false. To evaluate a model's fit amounts to evaluating how well the model *represents*.

Applied to developmental education, the model-based approach offers a more inclusive view of theories compared to the classical approach. Instead of requiring that we find the causal factors and the laws governing a specific domain, the model-based approach would have us construct a family of theoretical models that accurately represent the phenomena of student learning, success, failure, teaching, learning styles, temperament, self-concept, and so on. The de-emphasis of laws allows this family of models to draw inspiration from a broader and more inclusive base that includes assumptions, hypotheses, postulates, and, if forthcoming, universal laws. In this way, the model-based approach emphasizes the construction of models of developmental education over the discovery of laws.

The model-based approach is also more inclusive in another sense. Because it does emphasize broad-based model building, it can more readily accommodate the diversity of institutions, practitioners, disciplines, and theoretical frameworks that seem to be a fact of life in developmental education. That is, while the classical approach appears to be committed to finding the single best theory of developmental education, the model-based approach allows for the construction of clusters of models from diverse sources. To formulate a comprehensive theory of developmental education the challenge would be to forge coherent connections among these clusters; this contrasts to the classical approach, in which a small and powerful core set of laws would be used to unify the disparate and heterogeneous subdomains of developmental education.

Advocates of the model-based approach have pointed to one main advantage of their view: that it more accurately and more faithfully captures the actual state of affairs in some areas of inquiry. In other words, while the core "natural sciences" may well be in the business of discovering universal laws and forging a single best theory for each domain, this is simply not the case for all areas of inquiry. In fact, some areas of inquiry do not appear to be governed by anything like universal laws, and some areas of inquiry appear to *require* a plurality of theories to adequately account for and explain their domains (Beatty, 1980; Longino, 1990, 2000). Given that there are such lawless and pluralistic domains, the model-based approach provides a useful means of understanding theory in these contexts.

With respect to a theory of developmental education, the foregoing discussion prompts us to consider two questions: Are there laws of developmental education? Can a single, unified theoretical framework explain our domain adequately? If we answer "yes" to these questions, then the classical approach offers distinct advantages; if, on the other hand, we answer "no" to these questions, then the model-based approach might be preferable.

The fact that the model-based approach is more inclusive, however, opens it up to criticisms from both

the classical and the contextualist approaches. From the perspective of the classical approach, the model-based approach seems too inclusive. That is, even though it's not the case that "anything goes" in the model-based approach, it certainly seems as if "everything goes." How, after all, are we to halt the unending proliferation of models and clusters of models? Or, put differently, how are we to forge a manageable and coherent theory given the inclusion of all perspectives and points of view allowed by the model-based approach?

From the perspective of the contextualist approach, on the other hand, the model-based approach is not inclusive enough. That is, from this point of view neither the classical nor the model-based approach adequately accommodates the human and social context in which theory and theorizing occur. According to the contextualist, then, not considering these contextual factors and their role in theory making renders both the classical and the model-based approach fundamentally incomplete.

The Contextualist Approach to Theory

In the previous two sections, I presented two general approaches to theory and theorizing. But the manner in which I presented those approaches itself becomes problematic once we try to make sense of theory and theorizing from the contextualist point of view. In particular, I presented both the classical and the model-based approaches as abstract and general philosophical positions without reference to the specific contexts in which they originated or in which they might be deployed. For the classical approach, we need to focus on systems of universal generalizations—because that is what a theory is. For the model-based approach, we need to focus on families of abstract models—because that is what a theory is. But one basic tenet of the contextualist approach is that knowledge, explanation, justification, and theorizing cannot adequately be understood unless we realize that all these things are intricately bound up with specific human and social contexts (Longino, 1990, 2000).

What I am calling the contextualist approach, then, is a broad umbrella term that includes postmodernism, poststructuralism, feminism, literary theory, social constructivism, and deconstruction. For purposes of illustrating a contextualist approach to theory, I will present just one thread of this complex skein by focusing on feminist philosopher of science Helen Longino.

Longino's overall goal is to demonstrate that "scientific knowledge" is best understood as a form of social knowledge (Longino, 1990, 2000). She accomplishes this by providing an analysis of evidential reasoning, arguing

> that evidential reasoning is always context-dependent, that data are evidence for a hypothesis only in light of background assumptions that assert a connection between the sorts of thing or event the data are and the processes or states of affairs described by the hypotheses. Background assumptions can also lead us to highlight certain aspects of a phenomenon over others, thus determining the way it is described and the kind of data it provides. (Longino, 2000, pp. 215-216)

Longino's emphasis upon the efficacy of background assumptions clearly has implications for how one is to view theories and theorizing. After all, to the extent that evidential reasoning plays a role in the development of theories and in testing them, Longino's argument would highlight the importance of background assumptions for theories as well. And if background assumptions come into play in specific contexts, then this is one sense in which theories might be seen as context dependent.

Longino (2000) continues by arguing that the ubiquity of background assumptions leads to a problem that can be solved by adopting a "social account of objectivity" (pp. 215-216). The problem is that background assumptions can include "subjective preferences" and "opinions" (pp. 215-216). Given that background assumptions are as important as Longino makes them out to be, how can scientific practice ever result in objective and intersubjective knowledge? Clearly, "there must be some way of minimizing the influence of subjective preferences and controlling the role of background assumptions" (pp. 215-216).

Longino's (2000) solution to this problem is the key to her account of science as social knowledge. Basically, she argues that individualistic subjective preferences can be overcome by the right kind of com-

munity and social interactions. As she puts it, "The background assumptions that determine evidential reasoning are those that emerge from the transformative interrogation by the scientific community..." (p. 216). "Transformative interrogation," which is also called transformative criticism elsewhere, amounts to "...subjecting hypotheses, data, reasoning, and background assumptions to criticism from a variety of perspectives" (p. 274).

The right kind of community is one in which such transformative criticism is nurtured. More specifically, such a community is distinguished by ". . . establishing or designating appropriate venues for criticism, uptake of criticism (i.e., response and change), public standards that regulate discursive interactions, and equality of intellectual authority..." (p. 275). Longino's arguments concerning science as social knowledge thus highlight the contextual role of a particular community's "methodological choices, commitments, or standards" (p. 278) as essential to understanding how that community can produce objective and well-justified knowledge.

With the above overview serving as background, we can now make sense of Longino's (1990) claim that

> [The] theory which is the product of the most inclusive scientific community is better, other things being equal, than [a theory] which is the product of the most exclusive. It is better not as measured against some independently accessible reality but better as measured against the cognitive needs of a genuinely democratic community. (p. 214)

I take it that a community becomes more "inclusive" by nurturing transformative criticism and by fostering social interactions that distribute power as equally as possible among members of that community. The startling conclusion that follows from Longino's account is that inclusive communities actually produce more objective and better justified knowledge than communities that are exclusive, homogeneous, hierarchical, and in which the interchange of ideas and criticism is limited.

The upshot for those interested in pursuing theory in developmental education is that the contextualist approach broadens the meaning of theory and to theorize to encompass communities and their epistemological standards. So, to construct a good theory requires that we do more than merely identify causal factors and laws or merely develop families of abstract models. Instead, we must be mindful of the community from which our theories arise, and we must nurture communication and criticism within that community. This is so because the contextualist account implies that better theories require a certain community structure and a certain ongoing social interaction within that community.

One advantage of the contextualist approach is that it values the diversity we find in developmental education. That is, it is implicit to Longino's position that a diverse community can do a better job of producing knowledge and theoretical frameworks exactly because such communities contain different points of view. Adopting a contextualist approach to theory would therefore allow developmental educators to present the field's incredible diversity as an asset instead of a liability.

In a similar vein, the contextualist approach provides a novel resolution to a tension some developmental educators may experience regarding the call to do theory. That is, many developmental educators are committed to the field because they view it as a means of reforming traditional higher education and especially the academy (e.g., Spann & McCrimmon, 1998, pp. 44-45). After all, the students we serve have been systematically rejected by the academy and thus denied access to higher education and its benefits. For many, this is a political as well as an intellectual issue. Insofar as the call to theory is interpreted as a call to become part and parcel of mainstream academe—to "do theory" and conform to the standards of the academy—then this amounts to becoming exactly that which developmental education has traditionally stood against. But the contextualist approach recasts the meaning of theory. Instead of considering theory as abstract, disconnected from practice, intellectual, and hegemonic, the contextualist links theory to social interaction in particular communities at particular historical moments. Theory thus becomes bound up with the local, the pragmatic, the social, and the political.

On the downside, other developmental educators may recoil from the contextualist's broader conception of theory. The problem is that such a conception stretches the meaning of theory significantly beyond

what has traditionally been meant by that term. For example, those who are sympathetic to the classical approach to theories may well find Longino's contextualism interesting but nonetheless irrelevant to the real business of making, testing, and refining a theory.

Conclusion

As developmental educators increasingly encounter and reflect upon theory, they will find themselves forced not only to think within a particular theoretical framework but also to think more about theoretical frameworks and approaches in general. Just as we have become mindful of different student learning styles, so must we become mindful of our colleagues' different theory styles.

The classical, model-based, and contextualist approaches to theory discussed in this chapter each enshrine a different set of intuitions regarding theory and research. It is worth stressing that none of these approaches is "inherently" or "naturally" superior to the others. As I have tried to show, each approach has its own advantages and disadvantages. Rather than fall into the trap of arguing that one approach is the right approach, it would be very instructive for each of us to take a current research project and to consider it through the lens of classical theory, model-based theory, and contextualist theory. Doing so would allow us to make more informed criticisms of alternative approaches to theory, and it would lay the foundation for creating a robust theoretical framework unique to developmental education.

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The Student Personnel Point of View

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This chapter provides a history of The Student Personnel Point of View and explores how this theoretical perspective provides a foundation for developmental education theory, research, and practice.

In 1926 the American Council on Education (ACE) established the Committee on Personnel Methods to explore student personnel programs and services in higher education (National Association of Student Personnel Administrators [NASPA], 1989). This committee, led by H.E. Hawkes, conducted a survey authored by L.B. Hopkins to determine specific institutional practices designed to promote students' individual development. The results of this research, published in 1926 in *The Educational Record* (NASPA), prompted further investigation and innovation in the area of testing and measurements. In 1936 ACE replaced the Committee on Personnel Methods with the Committee on Measurement and Guidance. In April, 1937, the Executive Committee of ACE sponsored an invited meeting to examine ACE's role in further study and clarification of student personnel work.

The Original *Student Personnel Point of View*

The following individuals participated in the 1937 conference that developed *The Student Personnel Point of View*: Thyrsa Amos, F. F. Bradshaw, D.S. Bridgman, A.J. Brumbaugh, W.H. Cowley, A.B. Crawford, Edward C. Elliott, Burton P. Fowler, D.H. Gardner, H.E. Hawkes, L.B. Hopkins, F.J. Kelly, Edwin A. Lee, Esther Lloyd-Jones, D.G. Paterson, C. Gilbert Wrenn, C.S. Marsh, D.J. Shank, and G.F. Zook, then president of ACE (NASPA, 1989, p. 38). This list represents a virtual "who's who" in the history of the profession of college student development. Their report resulted in the formation of the ACE Committee on Student Personnel Work.

The Student Personnel Point of View (ACE, 1937; reprinted by NASPA, 1989) is divided into four sections: (a) Philosophy, (b) Student Personnel Services, (c) Coordination, and (d) Future Development. However, it is in the first two paragraphs that the authors established the theoretical framework that is the essence of *The Student Personnel Point of View*:

> One of the basic purposes of higher education is the preservation, transmission, and enrichment of the important elements of culture: the product of scholarship, research, creative imagination, and human experience. It is the task of colleges and universities to vitalize this and other educational purposes as to assist the student in developing to the limits of his potentialities and in making his [sic] contribution to the betterment of society.
>
> This philosophy imposes upon educational institutions the obligation to consider the student as a whole—his intellectual capacity and achievement, his emotional make up, his physical condition, his social relationships, his vocational aptitudes and skills, his moral and religious values, his economic resources, his aesthetic appreciations. It puts emphasis, in brief, upon the development of the student as a person rather than upon his intellectual training alone. (NASPA, 1989, p. 39)

The authors noted that prior to the Civil War "interest in the whole student dominated the thinking of the great majority of the leaders and faculty members of American colleges" (NASPA, 1989, p. 39). However, in the latter decades of the 19th century the emphasis of American higher education, reflecting the influence of the German model, shifted

> through scientific research, upon the extension of the boundaries of knowledge. The pressures upon faculty members to contribute to

this growth of knowledge shifted the direction of their thinking to a preoccupation with subject matter and to neglect of the student as an individual. (NASPA, p. 39)

It is fascinating that this comment, made in 1937, mirrors the viewpoint of many educators regarding the mission of the research university during the last decades of the 20th century as well.

> As a result of this change of emphasis, administrators recognized the need of appointing a new type of educational officer to take over the more intimate responsibilities which faculty members had originally included in their duties. At the same time, a number of new educational functions arose as the result of the growing complexity of modern life.... (NASPA, p. 39)

Thus, student services such as admissions, orientation, financial aid, counseling and testing, career planning and placement, student activities, residence life, and health centers emerged on campuses across the country, often under the auspices of the Dean of Men and Dean of Women, positions that later merged under the title of Dean of Students, and later Vice President for Student Affairs or comparable position. "These officers were appointed first to relieve administrators and faculty of problems of discipline; but their responsibilities grew with considerable rapidity..." (NASPA, p. 39).

The authors of *The Student Personnel Point of View* remarked on their preference for the term "student personnel," rather than terms like "guidance" or "counseling" to refer to their philosophical point of view, which the authors considered "as old as education itself" (NASPA, 1989, p. 40). They went on to specify the types of services that should be included in student personnel work, and provided guidelines for the coordination of these services. They stated,

> The effective organization and functioning of student personnel work requires that the educational administrators at all times (1) regard student personnel work as a major concern, involving the cooperative effort of all members of the teaching and administrative staff and the student body; and (2) interpret student personnel work as dealing with the individual student's total characteristics and experiences rather than with separate and distinct aspects of his personality or performance. (NASPA, 1989, p. 42)

The 1937 original version of *The Student Personnel Point of View* is most closely identified with this focus on the whole student.

The Revised *Student Personnel Point of View*

In 1949 ACE published a revised edition of *The Student Personnel Point of View* (reprinted by NASPA, 1989) that reflected the changing face of American higher education, as well as noticeable anti-German sentiment. The sections of the new report were "Philosophy and Objectives," "Student Needs and Personnel Services," "Elements of a Student Personnel Program," "The Administration of Student Personnel Work," and "The Importance of the Research Emphasis" (ACE, 1949). In its philosophical statement the revised version built on the purpose of higher education as articulated in 1937, but focused on three additional goals: (a) "Education for a fuller realization of democracy in every phase of living," (b) "Education directly and explicitly for international understanding and cooperation," and (c) "Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs" (NASPA, 1989, p. 17). The authors of the 1949 revision continued to emphasize the importance of educating the whole student as follows:

> Although these added goals aim essentially at societal growth, they affect positively the education and development of each individual student. The development of students as whole persons interacting in social situations is the central concern of student personnel work and of other agencies of education. This emphasis in contemporary education is the essential part of the student personnel point of view.
>
> The student personnel point of view encompasses the student as a whole. The concept of education is broadened to include attention to the student's well-rounded development—physically, socially, emotionally, and spiritu-

ally—as well as intellectually. The student is thought of as a responsible participant in his [sic] own development and not as a passive recipient of an imprinted economic, political, or religious doctrine, or vocational skill. As a responsible participant in the societal processes of our American democracy, his full and balanced maturity is viewed as a major end-goal of education and, as well, a necessary means to the fullest development of his fellow citizens. From the personnel point of view any lesser goals fall short of the desired objectives of democratic educational processes and is a real drain and strain upon the self-realization of other developing individuals in our society. (NASPA, 1989, p. 18)

These paragraphs have served as the theoretical framework for countless research studies in student personnel work through its evolution into student affairs and student development, as well as providing the foundation for other student development theorists, such as Arthur Chickering (1969; Chickering & Reisser, 1993) and Alexander Astin (1977, 1985, 1993). In fact, in his preface to *Education and Identity*, Chickering (1969) wrote:

> Higher education once aimed to produce men prepared to engage with the society of man. But as the changes of the last fifty years have occurred, higher education has altered its image of man. The focus has shifted from men to subjects, from persons to professionals. Consequently, men themselves have become subjects—subjects to majors, to disciplines, to professions, to industries. Higher education and society are mired in frustration and conflict. These conditions will persist until men—not materials, nor systems, nor institutions—again become the focus of human concern. (p. ix)

In *Achieving Educational Excellence*, Astin (1985) wrote,

> During my twenty-five years of research on American higher education, I have been increasingly attracted to what I shall term the talent development model of higher education. Under this model, the major purpose of any institution of higher education is to develop the talents of its faculty and students to their maximum potential. (p. 16)

Under the section on "Student Needs and Personnel Services," the revised report included a paragraph titled "The Student Succeeds in His Studies," as follows:

> The college or university has primary responsibility in selecting for admission students who have basic qualities of intelligence and aptitudes necessary for success in a given institution. However, many otherwise able students fail, or do not achieve up to the maximum capacity because they lack proficiency or personal motivation for the tasks set by the college, because of deficiency in reading or study skills, because they do not budget their time properly, have emotional conflicts resulting from family or other pressures, have generally immature attitudes, are not wisely counseled in relation to curricular choices, or because of a number of other factors. In order that each student may develop effective work habits and thereby achieve his optimum potential, the college or university should provide services through which the student may acquire the skills and techniques for efficient utilization of his [sic] ability. In addition to the contribution of counseling and removing blockages from his path toward good achievement, the student may also need remedial reading and speech services, training in effective study habits, remediation of physical conditions, counseling concerning his personal motivations, and similar related services. (NASPA, 1989, p. 22)

Thus, just as *The Student Personnel Point of View* is the cornerstone of the student development profession, it also provides a foundation for the broad definition of developmental education, as articulated by the National Association for Developmental Education (NADE; 1995).

Implications for Developmental Education

One of the goals of developmental education is "to develop in each learner the skills and attitudes necessary for the attainment of academic, career, and life

goals" (NADE, 1995). Although many developmental educators are unfamiliar with *The Student Personnel Point of View*, its impact can be felt throughout the profession.

The original group of higher education professionals who promulgated this theoretical perspective in 1937 made the following statement regarding "Coordination between Instruction and Student Personnel Work":

> Instruction is most effective when the instructor regards his [sic] classes both as separate individuals and as members of a group. Such instruction aims to achieve in every student a maximum performance in terms of that student's potentialities and the conditions under which he works. Ideally each instructor should possess all the information necessary for such individualization. Actually such ideal conditions do not exist. Therefore, a program of coordination becomes necessary which provides for the instructor appropriate information whenever such information relates to effective instruction.
>
> An instructor may perform functions in the realms both of instruction and student personnel work. Furthermore, instruction itself involves far more than the giving of information on the part of the teacher and its acceptance by the student. Instructors should be encouraged to contribute regularly to student personnel records such anecdotal information concerning students as is significant from the personnel point of view. Instructors should be encouraged to call to the attention of personnel workers any students in their courses who could profit by personnel services. (NASPA, 1989, p. 43)

Developmental education programs have a long history of encouraging communication among faculty, counselors, advisors, and students. The small class size inherent to most developmental education settings enables individualization and enhanced contact between students and faculty. Starks (1994) notes that these practices encourage the retention of developmental students "because they support academic and affective needs" (p. 25). Similarly, Neuberger (1999) states, "Programs which are comprehensive in nature—those that combine services and do not offer developmental courses in isolation—tend to be more effective" (p. 5). Boylan and Saxon (1998) provide a historical context for the link between developmental education and the focus on the whole student:

> There are those who believe that the term "developmental education" originated during the 1970s as a politically correct label coined to avoid offending minorities by referring to them as "remedial," "nontraditional," or "disadvantaged." This is a gross misconception. The term "developmental education" reflects a dramatic expansion in our knowledge of human growth and development in the 1960s and 1970s. As a result we began to understand that poor academic performance involved far more complex factors than a student's being unable to solve for *x* in an algebraic equation or write a complete sentence using proper grammar. If such deficiencies were the only problems for students having difficulty in college, simple remediation would be an appropriate solution for everyone. A variety of noncognitive or "developmental" factors, however, were also discovered to be of critical importance to student success. These additional factors include such things as locus of control, attitudes toward learning, self-concept, autonomy, ability to seek help, and a host of other influences having nothing to do with students' intellect or academic skill.

By the late 1970s, educators who worked with underprepared students developed an entirely new paradigm to guide their efforts. Instead of assuming that students were simply deficient in academic skills and needed to have these deficiencies remediated, they began to assume that personal and academic growth were linked—that the improvement of academic performance was tied to improvement in students' attitudes, values, and beliefs about themselves, others, and the educational environment. This created a new model for working with those who had previously been unsuccessful in academic tasks.

> The new model involved the teaching of basic skills combined with assessment, advising, counseling, tutoring, and individualized learning experiences designed not just to reteach basic content, but also to promote student development. The resulting model became known as "developmental education," and those who participated in it were described as "developmental students." (pp. 7-8)

Boylan and Saxon, like others writing in the field (e.g., Neuberger, 1999; Stahl, Simpson, & Hayes, 1992), further assert:

> Successful developmental education...involves more than just the teaching of basic skills. Understanding that there is a link between personal and academic growth is the key difference between "developmental" and "remedial" education. For developmental intervention to be successful, student development must be promoted through services such as advising, counseling, and tutoring. For these treatments to be effective, developmental educators must attend to noncognitive variables. (1998, p. 12)

A review of the developmental education literature reveals numerous models for addressing the noncognitive needs of students (e.g., Farmer & Barham, 1996; Gallagher, Golin, & Kelleher, 1992; Hammond, 1990; Higbee & Dwinell, 1998; Nelson, 1998; Roberts, 1990; Roueche & Baker, 1994; Upcraft & Gardner, 1989) and research studies that support the effectiveness of these models (e.g., Boylan, Bliss, & Bonham, 1997; Clark, 1987; Higbee & Dwinell, 1990, 1992; Kulik, Kulik, & Schwalb, 1983; Starke, 1994; Weinstein, Dierking, Husman, Roska, & Powdrill, 1998). Both research and practice in developmental education reflect the importance of addressing the needs of the whole student. Some programs, like the University of Minnesota's General College (Wambach & delMas, 1998) provide a full range of student support services, from orientation to scholarships, advising, an early warning system, freshman seminars, an academic resource center, career planning, a program for non-native speakers of English (Murie & Thomson, in press), and special services for students who are parents.

However, perhaps even more important than this emphasis on the whole student are the goals set forth in the 1949 revision that focus on "a fuller realization of democracy," "international understanding," and " the solution of social problems" (NASPA, 1989, p. 17). Developmental education is committed to the democratic ideal of access to higher education. Hardin (1998) explains,

> Some argue the philosophical issue of developmental education, suggesting that higher education should be "higher" and, therefore, limited to the financially able and academically gifted. Others argue that the American education system is based on the Jeffersonian concept that all American citizens are entitled to achieve their fullest academic potential. (p. 15)

Hardin further notes,

> Perhaps higher education has been "higher" because colleges and universities were able to stay above the problems of society; however, this is no longer possible. The problems of poverty, violence, drugs, mental illness, and homelessness are being brought to institutions of higher education.... (p. 22)

Developmental educators can take the lead in providing access to all levels of higher education, including the research university, through both content-based core curriculum courses (Brothen & Wambach, 1999, 2000; Ghere, 2000; James & Haselbeck, 1998; Jensen & Rush, 2000) and skill development elective courses (Higbee, Dwinell, & Thomas, in press) for graduation credit that enhance retention as well. They can also play a prominent role in promoting the celebration of diversity both within and outside the classroom, and facilitating understanding of and creating solutions for social problems. Recent trends in developmental education that support the accomplishment of these goals, in addition to content-based developmental courses in such areas as history and the social sciences (Ghere, 2000, in press; Pedelty & Jacobs, in press), include community-linked programs such as workplace literacy projects (Griffith, 1999; Longman, Atkinson, Miholic, & Simpson, 1999), service learning (SL; Borland, Orazem, & Donelly, 1999; Gordon, 1999;

McKenna, 1999; Robinson, 1999; Rockwell, 1999; Schnaubelt & Watson, 1999; Slimmer, 1999; Troppe, 1999), community partnerships (Tompkins, 1999; Wiseman, 1999), and other innovations that link higher education in general and college students in particular to the world outside the doors of the institution. In an interview (Mack & Nguyen, 2000) for a recent edition of *Community Connection: A Newsletter for Service Learning and Community Involvement*, Barajas-Howarth states, "Historically, the University has drawn on the community for research purposes. But we need to also be mindful that our teaching and research, in turn, benefit those communities" (p. 8). She further explains,

> SL is about much more than humanitarianism. This work is about learning, about making education come alive through application. As people privileged to enjoy the benefits of higher education, we have the obligation to learn from as well as to give to our community (p. 8).

It is imperative that the developmental education profession continues to provide leadership in the areas of pluralism (Higbee, 1991; Kezar, 2000; Walters, 2000) and public service (Coles, 1993). Smith (2000) reports that senior recipients of leadership awards at Longwood College had significantly higher cumulative grade point averages (GPAs), and that students with high GPAs but no leadership awards "showed far fewer social and personal gains" (p. 27), as measured by the College Student Experiences Questionnaire. Promoting intellectual competence (Chickering, 1969; Chickering & Reisser, 1993) is only a small part of the mission of higher education. Developmental education programs can continue to lead the way in enhancing the growth of the student as a whole person.

The Student Personnel Point of View may be more than 50 years old, but it still has much to teach the developmental educator. By familiarizing themselves with the basic tenets of this theoretical perspective, developmental educators can guide students to achieve to their fullest potential, while also setting an example for other higher educators who have lost sight of the fundamental purpose of higher education.

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Democratic Theory and Developmental Education

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Writing

In our present circumstances, it is incumbent upon developmental educators to construct alternatives to the privatized democratic theories of knowledge and power that, though once progressive, today propel rollbacks of support for underprepared students and widespread misunderstandings of educational success and failure. This chapter represents a contribution to this project of reimagining the definitions of democratic social relations that provide foundations for any talk of the social purposes of education. I analyze the contemporary impasse of privatized democracy as a theoretical framework for defining and defending developmental education. I discuss how two significant strands of contemporary democratic social theory can expand the current focus on discrimination and inattention to oppression. I conclude with a discussion of how developmental educators might build on the strengths of currently available alternatives to privatized democratic theory.

In 1903, W. E. B. Du Bois predicted that the problem of the twentieth century would be the problem of the color line (Du Bois, 1982, p. xi). For higher education, and most acutely for developmental education programs, the challenge of the twenty-first century will be the challenge of multicultural democracy. The challenge of multicultural democracy is not the same as the problem of the color line. The color line of Du Bois' time was institutionalized through official discrimination—through practices or policies that intended to either favor or penalize individuals on the basis of social group identification. Discrimination has, since the time of Du Bois's prediction, become illegal and socially unacceptable. Yet despite the best efforts of reforms, many of the social group hierarchies of Du Bois' era continue to structure higher education in particular and public life in general.

The new challenge, the challenge of multicultural democracy, demands that those of us within developmental education understand and respond to the obstacles to equality that remain after the implementation of formal nondiscrimination. One difficulty at this point in meeting the challenge of multiculturalism within developmental education is that researchers have not yet deeply examined the implicit conceptions of democratic social relations—the theories of how knowledge and power relate to democracy—that structure research in the field. As a result, developmental education research has largely operated within the broad popular assumption that we can best serve our students by supporting their individualized participation in existing institutions, where participation means fitting in and playing according to the rules of the institutions as they are currently defined. Given this focus, much of our research pursues strategies for helping students to adapt themselves to what Paul Fidler and Margi Godwin (1994) identify as "curricula, student services, and campus environment based on a white [*sic*] middle class norm" (p. 35). Hunter Boylan (1991) has drawn attention to the complex and contradictory roles that such research plays, commenting that

> all programs that work with nontraditional students have one, and only one, bottom line. And that's to make opportunity a reality rather than an abstraction, a fact rather than a noble fiction, an outcome rather than a piece of legislation. (as quoted in Craig, 1997, p. 23)

Boylan here pinpoints the social motivation of research and teaching in developmental education—making equal opportunity real one person at a time.

In addition to identifying our bottom line, Boylan's comment points to the frustrating experience of ongoing group inequality despite the erasure of the color

line and the implementation of formal nondiscrimination and individualized access. Boylan's references to equality as an "abstraction," a "noble fiction," or an unrealized "piece of legislation," hints at the need for a new vision of democratic equality. Boylan locates our efforts as struggling against the present condition of having extensive rules about equality but a reality of profound inequality. His comments suggest the need for theoretical discourses that can redefine the rhetoric and reality of equality. We need theories of knowledge and power that can help us to ameliorate the gap that currently exists between individualized strategies on one hand and historically, culturally, and institutionally entrenched relations of group privilege and oppression on the other. But despite the nagging sense that, on its own, "not only is an agenda of socialization insufficient for enfranchisement but...it might be detrimental to enfranchisement" (Prendergast, 1998, p. 50), developmental educators have not pursued a research agenda for redefining educational enfranchisement. Although important as a partial strategy, if pursued exclusively, the currently dominant research agenda ignores how facially neutral knowledge can, in practice, reinforce the power of dominant groups.

In what follows, I examine the relationships between democratic theory and developmental education, highlighting theories of democratic equality that offer more robust foundations for responding to the challenge of multiculturalism. I begin with a discussion of the democratic theory implicit to most contemporary research in developmental education. Here, I draw from the educational theory of David Sehr (1997) to argue that developmental education operates within a theoretical paradigm of privatized democracy. Next, I draw from research within developmental writing to outline the value of privatized democracy as a conceptual tool with which to erase the color line, and the inadequacies of privatized democracy as a conceptual foundation for grappling with the challenges of multicultural democracy. I follow this critical engagement with a discussion of resources available within two significant theories of democratic public life that seek to address the weaknesses of privatized democracy. I conclude with a discussion of how these theories might transform research and practice in developmental education in particular and higher education in general.

The Foundations of Developmental Education in Democratic Theory

In their discussion of the evolving definition of developmental education, Emily Payne and Barbara Lyman (1996) have recently pointed out that "developmental education, perhaps more than most disciplines, has been influenced by trends and issues outside the field" (p. 13). The most recent of these trends and issues have grown out of demands from and responses to social movements for group justice. Primary among the demands have been calls for institutional transformation to enact group equity. A primary response has been a focus on overcoming the legacies of the color line by more vigorously pursuing neutral standards for individual participation and success in powerful institutions like education. Responding to the way that the color line established inequality by defining and treating people as members of groups, the trend has been to define and strive to treat all people as separate individuals, and to support each individual's efforts to succeed.

Sehr (1997) has called this trend toward nondiscrimination and individualized competition "privatized democracy" (p. 1). For Sehr, privatized democracy refers to visions of democratic public life that emphasize individual self-determination and freedom. This strand of democratic theory has dominated United States social thought and policy to such a degree that it has become an invisible assumption within educational discourse. Thus, as Sehr points out, "behind the current clamor for educational reform, restructuring, privatization, and vouchers, is the assumption that the purpose of public education is to prepare Americans to compete, both as individuals and as a society" (p. 1). Importantly, privatized democracy defines equality as a relationship between individuals, detracting attention from the effects of the social and cultural contexts, the contexts of group relations, within which individuals interact.

This trend toward privatized democracy outside the field has influenced research and practice within developmental education. As suggested by Boylan's comment about making equality more than a promise, developmental educators have worked within a sort of double consciousness. On one hand, our close contact with marginalized, at-risk, first generation, and minority students has demonstrated to us the struc-

tural, social group, roots of our students' difficulties. These include, as Payne and Lyman (1996) point out, "unequal academic opportunity across socioeconomic levels, unequal funding of K-12 programs, unequal and unfounded academic expectations of students from different racial, linguistic, and ethnic backgrounds, and erroneous and inappropriate student placement and tracking" (p. 15). On the other hand, faced with the reality of classrooms full of individuals who are being held out of educational and other opportunities by their location on the wrong side of facially neutral talk of standards and criteria of excellence, we have dedicated our research efforts to figuring out how best to enable these students to meet these standards of unfairness. Thus, within a context of privatized democracy emphasizing neutrality as a strategy for overcoming past favoritism toward dominant groups, developmental educators have spent less time questioning the possibility of neutrality and more time trying to help students succeed according to existing standards.

The broad and deep commitment to privatized democracy that has emerged as a cultural dominant in the post-civil rights era is a double-edged sword. Through the vigorous pursuit of institutional policies and practices that propose to treat all persons as equal individuals and ignore group dynamics, the categorical mistreatment of some has been fundamentally challenged and, in places, eradicated. This progress is real and has supported economic and social prosperity for some individuals from historically marginalized groups. Although highly successful as a response to institutionalized discrimination, though, privatized democracy has been unable to transform some group level injustices. For example, within developmental writing, Tom Fox (1993) has challenged the "access through language pedagogy" that continues to dominate developmental writing, calling this strategy "an unqualifiable failure" (p. 42) in dealing with the educational disenfranchisement of African American students. Fox documents how, despite official nondiscrimination, skill remediation does little to transform the group level results of past discrimination. As he points out, "If you trace participation in higher education by African Americans in the last two decades, you see an ugly picture of slow, actual decline until 1988, a small increase in the last few years, and an overall picture that *no* significant change is occurring" (p. 42). Although access through language appears to work for some individuals, it best serves those least in need. Also, by reaffirming the valued position of currently dominant forms of knowledge, narrow access approaches justify the disconfirmation and exclusion of many.

The decades-old dilemma of no significant change for African American and other students at the bottom of academic and socioeconomic ladders translates into data like those collected by Eleanor Agnew and Margaret McLaughlin (1999) who found that "[White] students who were *not* successfully remediated in one quarter" of basic writing still "have more than twice the success rate in subsequent college courses as black [*sic*] students who *did* pass the course" (p. 45). Building on this kind of empirical evidence documenting the weakness of trying to grapple with group level injustice at the individual level, it is incumbent upon educational researchers to reflect upon models of democratic equality that can support meaningful enfranchisement of historically marginalized groups. Within a paradigm of privatized democracy that ignores group relations, the best that can be hoped for is equal access to a fundamentally unjust work and social world. At the present time, the disproportionate lack of success among students from socially oppressed groups pulls practice towards individualized skill remediation that perpetuates the cultural and social exclusion of students from those groups.

Thus far, I have demonstrated that much of the research within developmental education can be understood as implementing privatized democratic theory. I have drawn attention to the limits of this theoretical paradigm for dealing with the group challenges of multicultural democracy. In short, privatized democracy represents a way of responding to the challenges that define developmental education that, in the long run, chronically underserves some of our students. Although it is valuable as a partial response to the challenges we face, it is anemic as a total response.

Though historically dominant, privatized democracy has always been challenged by alternative views of democracy that have emphasized participation and redefinition of social institutions as essential democratic activities. Sehr (1997) calls these theories of public democracy. Extending the intellectual traditions of Thomas Jefferson and John Dewey, these theories emphasize the importance of relationships, participation, and common good over private gain. Where priva-

tized democracy offers a universal vision of individuals as possessed of rights that should not be violated, public democracy expands the notion of citizenship beyond individualized access to existing institutions to include equitable participation in institutions and active, continuous redefinition of those institutions.

Dana Lundell and Terence Collins (1999) have recently begun pushing developmental education research towards a critical examination of the theoretical assumptions about knowledge, power, and democracy that underlie currently dominant practices. Specifically Lundell and Collins investigate "assumptions which, though unarticulated, seem to shape the research in developmental education" highlighting a strong need for "integrated models that are thoughtful in naming [the] prior assumptions" (p. 7) that motivate practice in the field. They conclude that, because it is primarily dedicated to enabling student assimilation to what are assumed to be inherently valuable (i.e., because institutionally valued) forms of knowledge, "research in developmental education primarily focuses on individual deficit and its remediation, even though the rhetorical emphasis is on serving diverse or non-traditional populations of students" (p. 7).

As an alternative that is practically as well as rhetorically committed to serving diverse or nontraditional students, Lundell and Collins propose a broad reconceptualization of developmental education that would focus on expanding discourse participation rather than discrete skill remediation. For Lundell and Collins, success in higher education involves learning to participate in communicative, affective, intellectual, cultural, and social norms and patterns that are distant from and potentially at odds with the norms and patterns that many students bring with them to schooling. In order to really serve these students, developmental education programs must create contexts in which the discourses of higher education can be selectively adopted while not being uncritically overvalued.

As Lundell and Collins suggest, the challenge of responding to group oppression is to come up with new ways of formulating the relationships between knowledge and equality that resist the trap of seeing knowledge as neutral and equality as dependent on individualized assimilation to an inherently valuable norm. Their theory of discourse is important because it invites reconsideration of the role of developmental education and the democratic purposes of schooling.

Lundell and Collins have initiated a necessary reexamination of the foundational assumptions shaping work in developmental education. In what follows, I undertake further work needed for discourse theory to constructively challenge the dominant framework of developmental education research. Recognizing that higher education is a discourse—a social construction that defines and distributes power—does not necessarily challenge developmental educators to rethink the assumption that exclusively redistributing currently valued academic discourses to more individuals can provide a ground for equal participation and opportunity. Nor does discourse theory necessarily invite critical reflection on how expanding access to privileged ways of being and knowing might unintentionally extend and reinforce the institutional privileges of currently dominant groups via those groups' preferred discourses even as it enables some individuals limited access to some of the privileges enjoyed by those groups. In other words, Lundell and Collins' presentation of discourse theory assumes the foundational insights of a critical theory of democracy and difference currently absent from developmental education. Without making these foundations explicit, discourse theory might not, in practice, engage the relational hierarchies that pit some discourses against others so that adopting one is to disconfirm and silence the other.

In order to make opportunity a fact and a reality, the reconceptualization of academic participation that Lundell and Collins propose will need to be rooted in a vision of knowledge and power that interprets and addresses the shortcomings of the currently dominant emphasis on nondiscrimination. Such theories provide a framework for redefining the inequalities we need to address in schools and other institutions, emphasizing the importance of transforming as well as distributing privileged discourses and providing a picture of what necessary transformations might look like. In the following sections, I outline the major tenets of two significant theories of public democracy and discuss the ramifications that each might have for developmental education. These theories provide rationale and criteria for critically challenging currently dominant discourses or forms of knowledge in the academy. In order to make my discussion of these theories man-

ageable, I concentrate on the implications that these theories have for rethinking our definitions of literacy.

Communitarian Democracy: Literacy and Mutuality

I begin my discussion of theories of public democracy with the communitarian model. Many political theorists look to a more robust community as the theoretical alternative to the individualism that they understand as the rip tide undermining social solidarity and group equality within privatized democracy. The most influential discussion of communitarian democracy as an antidote to the negative effect of privatized democracy is Benjamin Barber's *Strong Democracy: Participatory Politics for the Modern Age* (1984). In what follows I discuss specific contributions that the communitarian perspective makes towards reformulating the democratic prospects of literacy. These contributions include the foundational principle that literacy and other forms of knowledge are social constructions that should enable persons to participate in making and being made by history, and the connected notion that rather than a stable set of skills, literacy is a flexible practice of continuously redefining and enacting just relations among persons—communicative relations that enable all to participate meaningfully in creating a shared truth.

First, I will address how Barber's (1984) communitarian perspective formulates language as a practice for participating in, rather than escaping from, history. The communitarian view of language differs from the traditional privatized view with respect to the relation within each model between language and the historical contingency of truth. In each model, language plays an essential and definitive role in facilitating "democratic" relations among persons. Within privatized theory, language is understood as an ahistorical bridge between the autonomous self and the rational world. Standing apart from individuals and enabling individuals to stand outside of history, literacy enables the democratic community to argue about truth through appeals to reason. Barber contends that in order for the privatized model of individualist meritocracy to make sense, "the individual must know . . . truth in and of himself but also universally" (p. 59). As the connective tissue among individuals, language must itself be impartial. Thus, within the privatized democratic community, language provides a sphere for contestation over which perspectives or interpretations accurately reflect a universal truth outside of language. Through language, in privatized democracy, "reason is the vital link [among persons]—the common process that gives to individual discovery the legitimacy of mutuality" (p. 59). It is this view of language that has led developmental educators to the access through language model that Fox (1993), Prendergast (1998), and Agnew and McLaughlin (1999) challenge.

Drawing on the idea promoted by the group movements of the 1960s that "objectivity," "universality," and "impartiality" are socially determined terms that justify overvaluing some perspectives at the expense of others, communitarianism challenges the privatized view of language and truth. For communitarian theory, rather than existing outside of language, truths about who we are and what the world is like are products of the ways that we use language. Given this, multicultural democracy demands a definition of literacy—the language practices we value—as a public mode of participation that gives democratic legitimacy to truths that structure social life. In opposition to the privatized model in which language embodies the autonomy, rationality, and universality of truths, in communitarian theory, language expresses the mutuality and commonality that citizens construct through the process of making truths. In the communitarian model, then, the social function of language is not to provide a sphere for argumentation concerning autonomous truth, but to provide a sphere of participation in creating shared meanings that serve the common good within particular circumstances. For communitarian democracy, in distinction from privatized democracy, truths are "produced by an ongoing process of democratic deliberation, judgment, and action, and they are legitimized solely by that process" (Barber, 1984, p. 170).

The major democratic prospect of literacy in communitarian theory is "challenging the paradigmatic present" (Barber, 1984, p. 194). As a way of measuring literacy, challenging the paradigmatic present puts school knowledge in support of the civic practice of creating greater mutuality by contesting conventionalized uses and valuations of terms for describing contemporary realities. This discursive activity expresses the communitarian commitment to meaningfully involving citizens in creating shared interpretations of

public life. Rather than simply acquiescing to what exists, allowing others to define reality, or excluding persons from participating, citizens are understood through their obligation to deliberate over meanings for the terms they use to define themselves and others in ways that expand relations of mutuality. Strong democratic civic literacy emphasizes that language should be a sphere through which citizens continually question the present realities they face as a way of enacting the recognition that present realities are products of talk. In other words, for democracy, we measure our ways of talking not to question their truth but their consequences. Thus, Barber argues that "to participate in a meaningful process of decision making...self-governing citizens must participate in the talk through which the questions are formulated and given decisive political conception" (p. 196). Strong democratic literacy emphasizes that the formulation of problems and issues by citizens must be open and critical. Literacy must be defined by the ability to challenge the consequences of the language used to define a given issue.

Within communitarian theory, knowledge is seen as social and is measured in part by the relations among people that it operationalizes. The stark difference with respect to literacy within communitarian theory reflects its distinctive understanding of difference as an ingredient of, rather than an obstacle to, democracy. Within privatized democracy, difference is understood as personal and private, properly exterior to public life structured by universal and thus impartial truths. Within communitarian theory, difference is understood as a beginning perspective, a starting point, that democratic participation provides an arena for transforming. Within communitarian theory, then, the community is defined by its perennial transformation of differences into mutualities. The construction of community is idealized as mutually transformative and thus difference is not understood as defection from a neutral or universally valuable norm. Such a reading of literacy and difference holds great promise for equipping developmental educators to meet the challenge of multiculturalism. Specifically, the principle of mutuality potentially lifts the burden of assimilation from marginalized groups and creates conditions for challenging dominant forms of knowledge. At the same time, formulating all differences as formally equal starting places, Barber (1984) does not question the relations among them and thus abstracts difference from the realities of group relations. In this sense, the historical focus of education on the contingency of currently conventional truths and relations fails to question the invisibility to dominant groups of the ways that group privileges inflect their views.

As such, the way that communitarianism winds up constructing democratic equality, as a process of overcoming individual difference, exhibits certain conspicuous inadequacies for addressing the current challenge of multicultural democracy. The inadequacies of communitarianism revolve around the character of the mutuality that Barber (1984) advocates and the individualist understanding of difference that, within his vision of democratic community, mutuality works to overcome. It is important to point out that only by situating the project of mutuality historically as a response to specific problems that privatized democracy cannot adequately ameliorate, can communitarianism distinguish its own calls for mutuality from models of social life that use appeals to community and commonality to justify the suffering of members of social groups defined as different. Barber recognizes this need to historicize in his conception of language, but does not understand difference in terms of historically specific relations of power among groups.

The difficulty with the definition of community that Barber (1984) advocates is that it obscures the need for consideration of the historically situated relations of power between and among perspectives as these perspectives are grounded in the society that currently exists. Many of the conflicts that the communitarian perspective would see as opportunities for mutuality, conflicts over curriculum content for instance, are interactions among socially differentiated groups defined by unequal relations of power and privilege. As such, the mutuality created must specifically account for the practical inequality that currently defines the positions to be transcended. Barber's view of mutuality relies on assuming that the perspectives brought to a situation are equally legitimate. But if the positions are representative of historic and contemporary group inequities, then a democratic encounter should not consider all positions equal because they are defined, in part, by their relations to other positions. Instead of ignoring the social inequity that informs positions, the democratic encounter should emphasize challenging inequity and the impasse in deliberations that inequity creates. The democratic en-

counter should emphasize the public authority of those social groups that suffer from the formal but not actual equality of all perspectives.

Communitarian principles that knowledge is a social construction and that the purpose of schooling is to enable equitable participation rather than to justify existing hierarchies are important. Still, Barber (1984) can ignore the need to define mutuality historically because he distances communitarian theory from real world group struggles that have tried to implement participatory practices. By defining equality as a communicatively enacted relation among persons, communitarianism makes the important gesture of reformulating the privatized conception of individuals as static entities towards the view that individuals are created by their communicative relations with others. But in advocating a shift in emphasis from togetherness grounded in neutrality to mutuality constructed by deliberation as in and of itself sufficient to democratize society, Barber fails to account for the ways that social group hierarchies inflect the ways individuals are able under current conditions to relate and deliberate. Here, different positions must be understood in part through attention to the historical and current group relations of power that give differences social significance. In this perspective mutuality must be defined as a relationship that transforms the unequal relations of power that structures the meanings of difference between and among groups. Without explicitly recognizing that difference is not personal, but a function of norms and conventions that institutionalize power, the ideal of mutuality risks reiterating historical assaults on members of groups whose difference has been negatively charged. The ideal of all-encompassing mutuality risks targeting difference rather than inequality as the obstacle to democracy. It distances talk of democracy from the hopes and dreams of the civil rights movement, feminism, and other social group movements by distancing theory from the central lesson learned in these group struggles—that group injustices cannot be transformed by knowledge that proposes to transcend rather than engage group relations.

Critical Cultural Pluralism: Iris Marion Young

To recall the discussion thus far, within communitarian theory the purpose of valued knowledges like literacy is to affirm social equality among persons. In contrast to the opposition constructed by privatized democracy and communitarian democracy between truth and consequences as the goal of valued knowledge, Iris Marion Young (1990) has theorized a model of democracy that concentrates attention on the weak point of each of these theories, the unexamined assumptions within each about rising above group inequalities. She articulates the critical cultural pluralist view of knowledge, power, and democracy through her argument that equality is something that people do in relation to others, an exercise dependent upon conditions of enablement, rather than a possession. Further, conditions of enablement are contexts deeply informed by the overall social group hierarchies that structure the society. In this view, knowledge itself is a way of being a member of social groups, a way of exercising affiliation with some and differentiation from others. For Young, given the role that knowledge forms play in the construction, affiliation, and differentiation of social groups, and given the reality that social groups exist in relations of power and authority, competing knowledges cannot not be charged with intense political force. This concern for how structural group dynamics shape the conditions of doing in schools makes critical pluralism particularly valuable to educators. It provides foundations for revising the knowledges we value in the interest of addressing injustices.

In *Justice and the Politics of Difference*, Young (1990) fully articulates her vision of the justification for and social realization of a democratic cultural pluralism. She begins with a critical reading of the distributive paradigm of equality that operates in privatized democracy. Distributivism assumes that social goods and burdens exist separately from persons and separately from language that names and measures them. Significantly, then, within this view, social goods and burdens are conceived as distributable things, and thus "What marks the distributive paradigm is a tendency to conceive social justice and distribution as coextensive concepts" (p. 16). In the case of education, for instance, distributivism limits conceptions of education to distributing currently valued knowledge.

For Young (1990), the distributive definition of equality is valuable in defining the ways that quantifiable resources such as wealth, food, health care, and other such discrete goods should be distributed in or-

der to make material relations more fair. She argues, however, that the distributive vocabulary suffers significant inadequacies for dealing with nonquantifiable goods, goods like the feeling of belonging, cultural legitimacy, or power that are significant to the challenges of multicultural democracy. First, distributivism "tends to ignore, at the same time that it often presupposes, the institutional context that determines material distributions" (p. 18). Second, "when extended to nonmaterial goods and resources, the logic of distribution misrepresents them" (p. 18). Taken together, these characteristics conceptually separate goods, persons, and institutionalized language, rules, processes, and assumptions. The effect of this separation is to ignore the significance of social groups as institutionalized identity relationships and thus to ignore the primary forms of injustice in contemporary democracies—group domination and oppression. In other words, distributivism understands persons and social goods as atoms that can be attached to each other but that exist independently. Distributivism is unable to appreciate how persons are in some senses created by the relations of burdens and goods they inhabit with respect to each other through institutional processes and practices. Thus, distributivism focuses on quantitative redistribution rather than the deeper needs for cultural and institutional transformation.

Rather than focusing exclusively on distribution, critical pluralism also addresses group oppression. In contrast to distribution, Young (1990) defines oppression as "the disadvantage and injustice some people suffer not because a tyrannical power coerces them, but because of the everyday practices of a well-intentioned liberal society" (p. 41). For Young,

> oppression consists in systematic institutional processes which prevent some people from learning and using satisfying and expansive skills in socially recognized settings, or institutionalized social processes which inhibit people's ability to play and communicate with others or to express their feelings and perspective on social life in contexts where others can listen. (p. 38)

An unintended consequence of privatized democracy, rather than a contradiction of its basic tenets, social group oppression expands understandings of democratic foundations for education.

Critical cultural pluralism is a particularly potent resource for responding to the challenge of multiculturalism because it addresses the significance of groups and the need for group equity beyond nondiscrimination. For critical cultural pluralism, social groups constitute persons by giving structure to the social perceptions that create how one is seen and understood by others and how one sees and understands others. Group conventions of knowledge and interpretation give group members shared experiences and perceptions so that "a person's sense of history, affinity, and separateness, even the person's mode of reasoning, evaluating, and expressing feeling, are constituted partly by her or his group affinities" (Young, 1990, p. 45). Further, other persons' ways of relating to one are structured by group relations of power and authority. As a White, able bodied, middle class, male, then, one exercises privileges and is treated with forms of regard that enact the social dominance of the group. Thus, although dominant political discourses often explain group difference as the *cause* of injustice and idealize transcending groups and seeing all persons as individuals, differences of language, social experience, modes of affiliation, are not themselves obstacles to democratic social life and are probably impossible to eliminate. The point, from a culturally pluralist perspective, is to recognize that social groups only have meaning in their relations with and to other social groups and that these meanings become ways of constituting individuals in relations of enablement or constraint. Individual oppression or privilege is the effect of what social groups are enabled to do in relation to other groups, not existence of group differences themselves.

For critical cultural pluralism, then, individual difference is, in part, a function of group relations. The individual identity of any person is not exhausted by an explanation of the social groups with whom one identifies because group identification is contextual and contingent, dependent upon circumstances and conditions, and thus always shifting and multiple. Still, groups can be said to "constitute individuals" (Young, 1990, p. 45) because they are the primary ways that people give meaning to their own sense of self and interpret others in social contexts. As social collectivities of identity affiliations and differentiations become institutionalized cultural practices within societies, one cannot not identify oneself through social groups. One "finds oneself a member of a group, which one expe-

riences as always already having been . . .For our identities are defined in relation to how others identify us, and they do so in terms of groups which are always already associated with specific attributes, stereotypes, and norms" (Young, p. 46). Thus the meanings that persons have are expressions of social relations between groups. Groups carry and enact—by their existence in and through their relations with other groups—the cultural meanings, knowledges, assumptions and practices that enable or constrain individual actions.

Young's (1990) central claim deriving from her attention to institutionalized relations among social groups is that although injustice is experienced by individuals, it is institutionalized as relations among the social groups that give definition to individuals' social locations, perceptions, and identities. Given this, Young defines a democratic view of difference in terms of institutional conditions and practices that enable individuals as members of different groups to enrich and enhance the social life that informs their own and others' identity and action. This involves but exceeds enjoying fair material circumstances to include,

> learning and using satisfying and expansive skills in socially recognized settings; participating in forming and running institutions, and receiving recognition for such participation; playing and communicating with others, and expressing our experience, feelings, and perspective on social life in contexts where others can listen. (p. 37)

These are relational goals concerning communicative actions. They suggest that social justice demands institutional practices that go beyond not devaluing any person or social group. The democratic community should instead of formally disabling no one, actively enable all. For Young, the communicative imperative of creating institutional conditions of enablement suggests that part of the goal of democratic institutions must be to uplift members of social groups who experience social relationships that constrain the meaningfulness and authority of their action and participation. Rather than overcoming difference, such goals prioritize reproducing and enabling group differences while working to challenge the meanings that disable ascription of positive value to differences.

Building on her challenges to privatized democratic conceptions of knowledge and difference and her advocacy of a relational model of society that attends explicitly to group consciousness and the politics of difference, Young (1990) explains how public life would be structured under cultural pluralism, arguing, "the good society does not eliminate or transcend group difference. Rather there is equality among socially and culturally defined groups, who mutually respect one another and affirm one another in their differences" (p. 163). This ideal of cultural group difference and equality demands, in Young's view, dispensing with the ideals of community and individuality that have underwritten the continuation and entrenchment of social group injustices since the era of civil rights reform. Since that time, the logic of the community versus individuality opposition has become a commonsense feature of debates over democracy so that "for many writers, the rejection of individualism logically entails the assertion of community, and conversely any rejection of community entails that one necessarily supports individualism" (p. 229). But for Young the privatized and communitarian views of community are bound together by the fact that "each entails a denial of difference and desire to bring multiplicity and heterogeneity into unity" (p. 229). In this similarity, they each deny the politics of difference that inspired and were developed by the group movements born in the 1960s. Young thus constructs "a normative ideal of city life as an alternative to both the ideal of community and the liberal individualism it criticizes" (p. 237) as a way of trying to articulate a model of democratic social life that exercises and institutionalizes social transformation through attention to difference.

Through her definition of city life as a model of the good society, Young (1990) works to locate opportunities for more just social norms within the existing material and historical realities we face. Despite the realities of contemporary cities where the depth of social injustice is blatant, Young outlines the features of a democratic cultural pluralist public by outlining the virtues hinted at within the reality of present day cities. For her, the ideal of city life involves a shared life in which "differences remain unassimilated" (p. 241) and where "the public is heterogeneous, plural, and playful, a place where people witness and appreciate diverse cultural expressions that they do not share and do not fully understand" (p. 241). Bringing to-

gether persons of diverse backgrounds, interests, cultures, and beliefs, cities also bring together diverse activities of life and become spheres of exposure to multiplicity and dynamic possibility. For Young, the inassimilable diversity of city life presents a model of the good society to the degree that difference is associated not with notions of exclusion and inclusion, but with overlapping variety, attraction to difference, and publicity. Further, by enabling differentiation without exclusion through the simultaneous existence of social group differences and overlaps, the city demonstrates that social justice requires a politics of difference that "lays down institutional and ideological means for recognizing and affirming diverse social groups by giving political representation to these groups, and celebrating their distinctive characteristics and cultures" (p. 240). In the ideal city, for Young, the purpose of public life is to institutionalize social group equality.

As a resource for defining and defending developmental education, Young's (1990) vision of the city exhibits prominent strengths. Her view of the latent potential within urban social relations envisions an alternative to the institutionalized social group oppression that is not addressed by privatized or communitarian appeals to nondiscrimination, individual freedom, or community togetherness. Young's view attends to the suffering experienced by groups whose experiences, practices, cultures, histories, perceptions, and members are "feared, despised, or at best devalued" (p. 235) by practices and norms that propose themselves to be impartial.

By constructing her model of the good society through the norms of city life, Young places herself and the definition of democratic society in solidarity with downtrodden social groups who make up the majority of urban residents in many areas. At the current historical juncture, cities signify in the public consciousness non-White cultural spaces. As well, in material fact, from Detroit to Newark, Los Angeles to Miami, non-White cultures, practices, and perspectives exercise more public authority in cities than in any other space. Thus, holding up the city as representative of the social relations that our society should seek inherently denotes the significance of difference to a democratic vision of the future. As a model of a critically compassionate democratic society that not only accommodates difference but that institutionalizes equality across differences, Young's ideal of city life as a terrain of social group justice is compelling and promising.

Conclusion

The civil rights movement and the cultural upheavals of the 1960s have provided a new vocabulary—the vocabulary of nondiscrimination—for defining and defending developmental education programs. Drawing on this vocabulary, developmental education has extended a legacy of human hope that has historically sustained an interventionist attitude toward the suffering that society produces. In the aftermath of these efforts, new theories of democracy have emerged to make sense of unprecedented social realities and social hopes. The prospect raised by the civil rights struggles was that full participation in all aspects of shared life should not require assimilation to norms and practices that devalue any group's cultural heritage, perspectives, or practices. The social group movements, in contrast to individualist liberalism, subscribed to positive views of group difference and group solidarity, and thus audaciously hoped for and sought to realize, through thought and action, a public that would do justice to difference. In the aftermath of the privatized democratic civil rights era, theory and practice must continue to challenge cultural genocide as a prerequisite for social equality.

In this chapter, I have discussed theoretical responses to privatized democracy. These theories exhibit strengths and weaknesses for redefining and defending developmental education. In the aftermath of the civil rights era, human suffering has expanded despite the dominant language of equal treatment for all. As Henry Giroux (1997) has argued, in such a context, theory must be understood as an ethical and political undertaking: "Theory should be seen as abstract and anticipatory: abstract in that it makes the self-evident problematic; anticipatory in that it points to a language and project of possibility" (p. 206). Using this definition of theory, we can measure the value of theories of democracy by examining the kinds of hope and insight that the theories can inspire for educators. What aspects of the relations we have do these theories make problematic and what "projects of possibility" do these theories sustain?

Communitarianism hopes for a total transformation of privatized individualist social relations. The par-

ticipatory democratic community uses appreciation of the rhetorical nature of our relations to place mutuality rather than universality as the measure of the legitimacy of the truths that a community shares. Through commitment to enhancing bonds with others as a way of communicatively enacting democratic citizenship and as a way of maintaining the conditions for democratic decision making, civic literacy uses contingency to define the community. Engagements with others through literacy or other forms of valued knowledge is a process of self transformation in light of the partiality of any singular perspective and in an effort at "understanding individuals not as abstract persons but as citizens, so that commonality and equality rather than separateness are the defining traits of human society" (Barber, 1984, p. 119). As a model of communicatively created mutuality, communitarian theory inspires hope that the human capacities for collaboration can prevail over the logic of privatized competition.

As a foundation for education, the communitarian model argues that "Democracy means above all equal access to language, and strong democracy means widespread and ongoing participation in talk by the entire citizenry" (Barber, 1984, p. 197). In this sense, communitarianism as a theoretical model allies itself with the hope of making good—through participation—on the promise of social equality at the center of education. There is much to value in Barber's theoretical recognition that democratic principles are only given meaning as they are lived out and transformed by persons. As I have discussed, however, despite the appealing notion of personal change for the public good in communitarianism, the ideal of individual equality through participation and the hope for a social equality that transcends differences of social group perception, history, and practice, ultimately refuses to invest in social group affirmation. Barber ignores the complex obstacles to individualized equality that social group movements have encountered in recent decades. Whether equality among individuals is understood as a truth that precedes participation or as an outcome of participation, equality must be defined in terms of how it will transform the relations of social group injustice that currently exist. By refusing to talk of groups, communitarianism refuses hope for definitions of equality that respond to the claims from unprivileged social groups that inequality is not personal and individual, but a relation of groups.

In contrast to communitarian theory, critical cultural pluralism offers a powerful critique of existing theories and a utopian vision of an alternative society. Critical pluralism sees the hope of democracy in terms of social groups and emphasizes the transformation of institutionalized social group hierarchies as a central feature of an adequate definition of democratic community. It is this ideal of institutionalizing social group equality that most poignantly distinguishes Young's (1990) cultural pluralism from privatized or communitarian democratic theory. As a resource upon which to ground practice in developmental education, critical pluralism would enable professionals to redefine curriculum around the goal of just relations among competing knowledges and the groups those knowledges represent, and to define and defend developmental programs in terms of the educational mission of group justice.

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Toward a Theory of Developmental Education: The Centrality of "Discourse"

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Postsecondary developmental education encompasses a wide range of practices in a number of disciplines. The purposes and practices of developmental education have undergone a variety of historical transformations. Indeed, the term "developmental education" itself has emerged only recently to identify educational approaches or a set of practices which deliberately and holistically address students' educational needs and diverse backgrounds. Shifting demographics and social imperatives have influenced these developments. Educators have identified the need and demanded recognition for programmatic models that assist students in their educational transitions, specifically those students whose backgrounds may not include experiences and discourses valued in higher education. Terms such as "remedial," "special," and "developmental" have consequently evolved to define both the population served and the educational paradigm through which such students enter higher education, with "developmental education" being the current term of choice.

Much of the published literature in developmental education lacks a theoretical base through which the motives and goals of seemingly disparate practices might be understood as constituting a unified core of disciplines. This is perhaps a symptom of the energetically pragmatic purposes which drive this body of research and practice. Much of the research we produce remains at an applied or assessment level, lacking a connection across the wide variety of subject areas and socio-cultural contexts that our practices seem to assume and which our disciplinary approaches seem to have in common. We propose a closer examination of the assumptions which, though unarticulated, seem to shape the research in developmental education, and we seek the creation of integrated models that are thoughtful in naming such prior assumptions. The purpose of this discussion is to identify common assumptions made by developmental educators in current published research and to challenge these assumptions constructively with the goal of expanding our definitions and theories. We propose to do so, though not out of any disdain for the committed practice of our colleagues who, like us, struggle with very pragmatic concerns at the level of practice day in and day out. Rather, we assert the need for such an enterprise for two closely related reasons:

First, work in developmental education has matured intellectually to the point where we must be overt in theorizing our enterprise so that our research and curriculum studies can compete with each other for credibility in full view of the assumptions that are their intellectual foundation;

Second, attacks on developmental education are very easy to mount when the grounds for discussion are subject to redefinition at the whim of every legislator or academic vice-president who questions the value of our practice. That is, we need to know why we do what we do, and we need to say these things aloud.

Method

To get at an understanding of what the profession's common assumptions and what the extant of unarticulated theories might be, we surveyed representative articles in developmental education. These

articles varied in topic and purpose, including broad historical overviews, emerging definitions, and emphases on specific disciplinary areas such as math and writing. The primary source for the publications surveyed was the National Center for Developmental Education's recent *Annotated Research Bibliographies in Developmental Education, Volumes 1 and 2* (1997, 1998), which identifies articles in seven content domains, including articles from major field journals and research reports. That is, we took inclusion in the annotated bibliographies to be an indication that the piece under consideration had achieved credible status in the developmental education canon. In selecting articles and research reports for our overview, we focused on items that reported significant findings or that proposed curricular practices based on research. In each disciplinary domain, this included identifying popular debates and targeting articles that addressed these issues. The study also focused on key historical overviews, articles, and research reports exploring developmental education's definitions or foundations.

Our methodology in this literature survey included the identification, selective review, and meta-analysis of these works. We focused on the selection of approximately 20 articles from each of the seven major research and practice categories from Volume 1 (assessment and placement, critical thinking, developmental reading, developmental writing, developmental math, minority student retention, and tutoring). To identify "representative" articles from each category, we reviewed both abstracts and articles by prominent authors in each discipline (who had more than one article included in the volume), and we marked recurring themes or issues being discussed in the literature drawn from a thematic reading of the abstracts. Additionally, we surveyed approximately 25 more articles reflecting new categories in Volume 2 which reorganized the previous seven categories into 48 subheadings, including new areas of emphasis such as program evaluation, legislation, program management, and instructional design. Focusing on this representative sample, we then examined these to identify major themes, research topics, primary assumptions, and articulations of theory related to developmental education and/or disciplinary-based or broader educational foundations.

Our purpose in this overview was to identify and examine the underlying assumptions of published research in developmental education. It was our hypothesis that this body of research and practice lacks thoughtfully articulated theories or definitions of practices that adequately describe the range of student backgrounds and socio-cultural activities reflected in developmental educational programs. Furthermore, we speculated that a survey of representative articles and reports would reveal these gaps in our collective articulation of our theory. Research and practice in developmental education continues to evolve at an important time at the national level, and an ongoing exploration of these assumptions and definitions within and across the disciplines is key to strengthening programmatic foundations and addressing student needs.

Definitions of Developmental Education

A first finding grew from a cluster of articles with a focus on definition. The term "developmental education" is a fairly recent evolution from past terms and politics, suggesting an increasing awareness of the diversity of student educational needs and personal backgrounds served in the range of sites which form our field. Terminology is important, for in our successive attempts to name ourselves are found traces of unarticulated theory which have given rise to our practice. Primarily, this work has emphasized issues relevant to students' transitions between high school and college at sites such as community colleges and preparatory programs within four-year institutions.

Payne and Lyman (1996) outline the history and shifts in political climate that mark the progressive changes in terminology used to describe students thought to be underprepared for higher education. These changes are intricately linked to national economic trends and an ongoing examination of the larger role of education in American society. Developmental educators debate among themselves over the vocabulary used to describe their programs, students, and pedagogies, and recently have pointed to "an identity problem, if not an identity crisis" within these disciplines, suggesting that "developmental educators consider renaming themselves" in response to outside criticisms (Payne & Lyman, 1996, p. 13). This call for a re-examination of the foundations of developmental education marks an important moment in the history of this expanding body of research and practice. Although it may appear to be a time of crisis, it also

creates an opportunity for self-reflection, constructive critique, and a further articulation of basic definitions and guiding principles.

In recent monographs, The National Association for Developmental Education (NADE) has established a working definition for "developmental education" which includes a holistic focus on cognitive and affective development of students, acknowledges a spectrum of learning styles and needs, and promotes an interdisciplinary range of approaches and student services. Higbee (1991) further examines this definition within the context of cultural pluralism, emphasizing a more positive framework for viewing students in their full complexities, not as "deficient" as past terms such as "remedial" have traditionally implied. These terms have created definitional and programmatic "myths" (p. 74) which Higbee challenges, acknowledging the barriers and stereotypes that arise amidst this confusion over terminology. These challenges and current definitions represent the most recent efforts to examine foundations and create a critical agenda for the future of developmental theory and practice. But at the same time, the recurring nature of the definitional argument actually discloses the first tacit theory: it appears that as a profession, we operate from an assumption that students or their home environments must be "fixed," that the students served in our programs or their families or their neighborhood are in some way pathological when seen against an imagined "healthy" norm.

Tomlinson's (1989) report also identified the complex, shifting definitions during the past century, noting definition ambiguities and challenges facing developmental educators. She traces the history of terms used to label underprepared students which primarily have emphasized models of deficiency. Again, the evolution toward the currently preferred term "developmental" shifts away from these notions of students as "lacking" as individuals or in their backgrounds, to a model which focuses on how "to bring something into being as if for the first time" (p. 7). This term has called for the shifting of discussions about these students and their programs away from deficit theory to more ability-based definitions and assumptions. Even this more broad-based definitional shift exposes a theory some might find problematic: if the goal of developmental education is "to bring something into being as if for the first time," the tacit theory must include the notion that what is already "in being" about the student is to be devalued as unfit for the new environment.

Despite recent critical assessment of foundational terminology, however, developmental educational research and practice, and its definitions, remain in a state of flux and are subject to both external and internal challenges as many items in the literature indicate. This may simply be the result of the wide range of local conditions and shifting demographics that influence definitions, student populations, and programmatic structures (Tomlinson, 1989), or it may indeed disclose a lack of professional consensus on key issues of theory, on key issues of how we construct intellectual frameworks for practice.

Primary Assumptions

Beyond the basic definitions offered in recent literature, there are many unstated assumptions informing most research studies and program models. Even as programs fall within the general scope of "developmental education," they vary widely, and within this variation is the measure of our lack of a coherent theory, or rationalization, for what we do. Our unexamined practice and unarticulated theory—in a domain which is already marginalized in higher education research—places our enterprise further into a subordinate position. Despite a pattern of recurring calls for thoughtful self-definition, noted above, the primary body of literature in developmental education remains focused on under-theorized curricular practice and traditional disciplinary-based models for students and programs. The literature discloses several patterns:

1. Disciplinary-specific models and definitions of developmental educational practice which emphasize practical, pedagogical issues are the norm in the research.

2. Articulated assumptions about developmental education focus on attitudinal, psychological, and affective dimensions, primarily at the level of the individual and related mostly to behavioral and skills-based issues and needs.

3. Research in developmental education primarily focuses on individual deficit and its remediation, even though the rhetorical emphasis is on serving diverse or non-traditional populations of students.

4. The bulk of articles reflecting more broadly on national and historical issues relevant to developmental education tend to focus primarily on assessment tools and paradigms, reinforcing dichotomized "insider/outsider" categories for students in terms of barriers and educational hierarchies.

5. Few programs have articulated and presented their own models to a broader audience, specifically as they relate to relevant educational theories informing their conception and relationship to current definitions of developmental education.

Despite recent efforts to expand the definitions of developmental education, it is apparent that popular conversations which place students into simplistic, assessment-based categories prevail. The predominant orientation of these five patterns indicates a primary emphasis in the field on issues of pedagogy, and a tendency to reflect or borrow existing theoretical models, primarily in the field of psychology and from assessment measures. The majority of these models prioritize definitions and theories of students pitted against an imagined societal norm, discounting their prior knowledge, strengths, and home cultures. In our assessment of the literature, this theoretical stance appears to be adopted mostly by accident, through our cumulative lack of attention to the primary theoretical foundations and philosophies of our local practices in developmental education. We propose that these conversations will need to shift in the future toward an examination of these five assumptions as they will challenge current perceptions of our field, and as they will more thoughtfully contribute to our position as a theory-making entity within higher education. Our conversation begins with an exploration of how these patterns are mapped out specifically within the primary research canons in developmental education.

Evidence in the Literature

To uncover these assumptions, we reviewed our representative literature sample carefully to identify basic definitions, foundations, and stances toward research and practice in developmental education. Each domain we examined in the annotated bibliographies reveals a productive contribution to the field in terms of research publications that address practical and theoretical issues within specific disciplines. Yet as developmental education encompasses many disciplines, interdisciplinary links in information about theory and practice which cut across these areas have not been as widely produced. Individual, discipline-specific articles emphasizing pedagogical issues prevail over broad-based examinations of educational and developmental theories. It was our primary assumption that this reflects a historically constructed stance and ethos in developmental education which future conversations need to interrogate. While this position certainly reflects a richness in our commitments to classroom practice and to our students, it is an approach that has not led to expanded theoretical conceptions that can effectively articulate our primary contributions and foundations within higher education.

To test this first assumption, we sampled the content areas and categories in the literature for evidence of how the canon currently reflects this primary pedagogical orientation. The areas of reading and writing, for example, provide a thoughtful representation of this history in developmental education research. Articles in these content areas address issues in metacognitive development (Applegate & Quinn, 1994; Flower, 1989; Hodge, 1993), learning theory and classroom methods (Davis, 1992; Easley, 1989), process-based instructional paradigms (Commander & Gibson, 1994; Williamson, 1988), motivation (Mealey, 1990), support services like tutoring (Hartman, 1990), and assessment-related issues such as grammar and English as a Second Language (ESL) instruction (Diaz, 1995; Doyle & Fueger, 1995; Sedgwick, 1989). Dominant theories in the fields of education and composition also inform developmental reading and writing research, including areas such as socio-cultural issues related to theories of remediation in basic reading and writing (Hull & Rose, 1989) and histories of theoretical changes in these fields (Goodman, 1984; Quinn, 1995; Williamson, 1987). Although discipline-specific theories offer the possibility of connecting more broadly toward definitions of developmental education practice across the disciplines, the information typically remains rather pedagogically focused and disciplinary-bound within these primary content areas.

Our criticism of this research is not in its lack of ability to evolve our pedagogies and shape curricula in our local programs; rather, we see this as developmental education's inherent strength. In fact, it is this primary attention to the diverse instructional needs of

our students which marks our work as progressive in higher education. However, as we have given priority to this standpoint in the past, we have often remained myopic in these examinations as they are positioned more broadly across the disciplines. It is our challenge to the evidence of this first assumption that we need to begin the next step in a process of increasing developmental education's visibility. We also believe this can be done through an extension of existing research, for its implications are rich, but as yet unarticulated in their connections to a theory of developmental education. For example, theories and strategies in the development of critical thinking (Chaffee, 1992; Elder & Paul, 1996) that appear in developmental education research have the potential for further application across the disciplines. Similarly, studies of minority students and multi-cultural issues (Boylan, Saxon, White & Erwin, 1994; Knott, 1991; Miller, 1990) provide evidence of rich and untapped resources for theoretical development across the disciplines. An examination of these philosophical foundations and an application of these tenets to definitions of developmental education can create a more unified perspective of how our students learn with a focus on their multiple contexts, not just what we are teaching them in the content areas.

Even in this bibliographic categorization of these as separate content areas in the 1997 bibliographies—critical thinking, and minority student retention—a particular pedagogical and epistemological stance is reflected. These categories seem to reflect a possible point of transcendence over the traditional disciplinary divisions as they prioritize theoretical orientations and culturally relevant issues over pedagogical tactics. Yet while it is necessary to address content-based approaches within our current structures for developmental programs, it appears that our most widely useful theoretical models often remain bound within these preconceived categories. This results in a strong, ongoing assessment and sharing of practice-based issues, but it does not ultimately lead to a strengthening and building of relevant theories that can be applied across the disciplines and contribute to a better understanding of our culturally diverse student populations. The most recent bibliographic volume (Volume 2, 1998), however, reflect a more integrated approach to its organization as it shifts from the content-based labels to a richer blend of foundational, pedagogical, and theoretical areas reflected in the research. This shift positively challenges the first assumption simply through its suggestion that a range of issues, rather than a fixed set of disciplines, is what unifies us as a body of research and practice. However, our theory and research designs need to follow similarly in this approach to work more explicitly as a theory-building entity in higher education, a move which ultimately best serves our students through our strong tradition of pedagogical critique.

The second assumption we uncovered is reflected in a recurring focus on attitudinal, psychological, and affective dimensions in the field which emphasize individual, behavioral, and skills-based issues and needs. These have certainly provided one of the most informative and active frameworks through which we have challenged reductionist education models and expanded definitions. In surveying the most recent (1998) bibliographic collection, we noticed that learning assistance, advising, tutoring, and skills-based models for learning reflect our primary developmental models. These are informed by a rich history of learning development theories based on cognitive and affective processes (Boyle & Peregoy, 1990; Hylton & Hartman, 1997; Smith & Price, 1996; Spann, 1990). These models have contributed to the development of one of the unique features of developmental education programs—the use of additional educational support services such as learning centers which offer individualized assistance. However, as far as these skills-centered instructional modes go to address these cognitive factors, they do not expand much beyond this mode of learning enhancement to challenge this deficit-based programmatic model.

The third assumption in the literature describes how these individualistic models tend to reinforce notions of remediation even as they may purport to reject them, especially as they apply to diverse student populations. When our definitions remain focused on linear, stage-oriented developmental schemes, we develop only one aspect of a more complicated picture of students' backgrounds and of the role institutional contexts play in these interactions. This includes a broad range of social, economic, political, and cultural backgrounds which intersect in ways that affect students' experiences in the classroom. While our rhetoric embraces notions of diversity and recognizes that we serve non-traditional populations of students in greater numbers than most programs in higher education, our

research does not similarly reflect this reality. Linear models of cognitive and affective development are often used to justify and validate assessment tools and behavioral labels, and they typically categorize students within a limited range of specific "skills sets" or linear developmental tasks. What is missing from existing frameworks is a culturally-based examination of student needs and pedagogical implications.

A broader recognition of the diverse contexts within which developmental education takes place is essential. For example, the notion of multiple contexts and communities (Phelan, Davidson & Yu, 1998) within which students, their programs, and their teachers live and work is key in this evolving understanding of developmental education. Work, family, peers, school, languages and other communities are interconnected in this broader picture. Such culturally-specific models for development address students holistically as they make transitions into higher educational settings. These issues are especially important as we continue to discuss educational opportunities and experiences relevant to the needs of students of color and other traditionally bypassed populations such as students for whom English is a second language, low-income and first-generation college students, and students with disabilities.

Current individualistic definitions simply do not extend far enough in recognizing multiple cultural issues which are important factors in student success in higher educational settings. We propose that interdisciplinary theoretical models be incorporated into definitions of developmental education. More research must be done in this area to challenge individualistic models which often separate students and their academic skills from their communities. Such research might help developmental educators challenge deficit models of students by constructing models that can view students as fully formed individuals—and not merely as "underprepared." Students can be seen instead as individuals who are traversing the territory of new communities while retaining and bringing their previous strengths and identities into higher education. This might also lead us to expand beyond the linear views in developmental psychological theories which unrealistically tend to scaffold and compartmentalize students' development. This would answer Higbee's (1996) call for an ongoing focus on the more positive, domain-oriented educational models which address intellectual development.

A fourth assumption uncovered by the survey focuses on conversations about assessment, which form the bulk of research studies in the developmental education. The reality is that most educational programs are frequently defined by local contexts such as legislation, politics, test scores, and other external factors of placement. This is perhaps the reason for the richness in programmatic models and emerging definitions in the field, yet these conversations also tend to reinforce the language of barriers and "insider/outsider" notions even as much of the recent research in this area has attempted to challenge this trend (Darling-Hammond, 1994; Gabriel, 1989; Fuentes, 1993; Kerlin & Britz, 1994; Jitendra & Kameenui, 1993; Seybert, 1994). Whereas this assessment bind may be inescapable in many locales, it also marks an important place in our practice where the challenge to externally-limiting definitions can continue. As definitions in developmental education become less focused on a language of remediation and more on inclusive, holistic models, it is important that research in assessment also begin to challenge its traditional stance of divisiveness and barrier-making language—even when these realities continue to be binding. While assessment tools certainly create initial placement lines and define who does or does not enter programs, developmental education does not begin or end with these preconceived boundaries.

The final assumption we uncovered in this survey focuses on the articulation of programmatic models to broader audiences—beyond the boundaries of individual disciplines, specifically as they relate to relevant educational theories informing their conception. There is a strong history of sharing classroom models and strategies within field-specific domains, but few of these are linked directly to definitions of developmental education and an explanation of relevant educational theories which inform their foundations. Programs need to be more self-reflective about current goals and theories, like La Guardia Community College (Chaffee, 1992; Simpson, 1993) has done in the past. Discussions such as these, which are oriented toward the unveiling of tacit theories underscoring local practice, provide directive starting points and useful models for other programs to investigate and share their work with a national audience. Such ongoing articulation and sharing of programmatic philosophies and educational foundations is important, especially in a field which is interdisciplinary by nature. Research centers like the National Center for Developmental

Education (Spann, 1996) and national organizations like NADE also continue to provide forums for this shared information. However, this strand of our conversation needs to move beyond the sharing of pedagogical and classroom models and toward an inclusion of broad-based representations of programs, their locales, their educational philosophies, and the communities they serve. This will contribute to a richer definition of developmental education, and it can provide ongoing, interdisciplinary frameworks linked to useful theories in education which, in turn, can lead us to expanded research in the field.

Toward Theory: James Paul Gee and the Centrality of "Discourse"

We argue that a healthy next step for this discussion would be consideration of a variety of theoretical directions for developmental education. As a profession, we have operated on the basis of tacit theories of deficit models and normative socialization. Such tacit theories are disclosed by examination of our practices. But the examination of practices to discern what our tacit theories might have been seems backwards, at best. A more deliberate engagement with theory as a precondition for adoption of practice is consistent with developments such as the recent public articulation of definitions of developmental education among NADE members (Higbee & Dwinell, 1996). In recommending a greater engagement with theory, we risk appearing to be judgmental about or dismissive towards the literature reviewed above. Nothing could be further from our intention. In calling on colleagues—and ourselves—to articulate and apply theories which might guide our practice and form a framework for further testing of our assumptions, we hope to add value to the everyday efforts which are at the heart of developmental education and access programs in higher education. We recognize, too, that examination of theory is inherently frustrating. As each theory is examined and tested, its limits become apparent and competing theories enter our field of vision. Moreover, as we embrace any one theory for the space of time it takes us to learn from it, we are inevitably in a reductionist posture toward the complex domain of developmental education. Theory is humbling, as well, in that fiscal and human resources rather than theory typically provide and define the tangible limits of our efforts. Recognizing that, however, we also remain convinced that in the absence of evolving theories of what we do, we are left without the complex bases on which compelling cases can be made for both what we do and how we propose to do it.

As a starting point in engaging theory which might better inform our practice as developmental educators, we point to James Paul Gee's notion of "Discourse" (Gee, 1996). Building from the intersection of culture studies and sociolinguistics, Gee defines a Discourse as follows:

> A *Discourse* is a socially accepted association among ways of using language, other symbolic expressions, and "artifacts", of thinking, feeling, believing, valuing, and acting that can be used to identify oneself as a member of a socially meaningful group or "social network", or to signal (that one is playing) a socially meaningful "role." (p. 131)

That is, Discourses are ways of being in the world. (Gee [1996] uses the upper case "D" to distinguish this complex meaning from "discourse" in its everyday uses tied to spoken language). A Discourse "is a way of speaking/listening and often, too, writing/reading in specific social languages, as well as acting, interacting, valuing, feeling, dressing, thinking, believing, with other people and with various objects, tools, and technologies" (Gee, 1998, p. 9). Our "primary Discourse," most typically the one we acquire at home as children, forms our language uses and defines for us the basic terms of human interactions. This primary Discourse makes available to us a sense of values, a set of cues from which we learn our roles and response patterns. The primary Discourse and its ways with words, ways with people, ways of carrying ourselves, ways of understanding the complex varieties of human behaviors that make up home life and neighborhood life, is powerfully formative. This primary Discourse gives us, according to Gee (1998), "our initial and often enduring sense of self" (p. 9) Moreover, the primary Discourse gives form to our culturally specific vernacular language, the language we take out into the world with us when we go off to school.

For Gee, Discourses are embricated with ideology. Without our giving it much critical reflection, we acquire values, world views, perceptions of others, and a definition of ourselves within the deeply complex affective and cognitive domains of the family or other

unit of early socialization. These include our situated language (our family or community's version of English, for instance) and our initial perceptions of what "counts" as knowledge and its meaningful expression (like storytelling from individual experience as the unit of knowledge and its expression, as an example). These languages and perceptions are acquired within the same deep contexts as are our sense of what is right, what is wrong, how the social world is modeled or imagined, and a host of other "truths" (i.e., perceptions) through which we construct our social selves within the everyday realities we inhabit. As a result, Discourses are comprised of interpenetrating patterns of values, "knowledge," language, beliefs, roles, and relationships.

From this vantage point, one's life can be said to be marked by the interplay of different Discourses. Our primary, or initial, Discourse is added to or modified by the series of secondary Discourses with which we come into contact and to which we attach value as we live our lives. Gee (1998) notes emphatically that as we acquire or learn secondary Discourses, we "filter" (p. 10) them through our primary or initial Discourse. New Discourses (such as the Discourse of being a student in a school) are acquired or resisted in proportion to their perceived compatibility with the primary Discourse. Furthermore, acquiring any secondary Discourse (where "acquiring" means that its features become part of one's enduring sense of self) requires both learning the terms of the new Discourse and recurring meaningful practice of its key features.

School is comprised of sets of Discourses—"ways of using language, other symbolic expressions... thinking, feeling, believing, valuing, and acting" (Gee, 1996, p. 131). In the U.S., the Discourses of schools are marked by white middle class ways (how adults are addressed; how a child is groomed; how authority is asserted or acknowledged; how limited forms of English are used; how literate knowledge is primary; and how knowledge is expressed, and so forth, for example). In addition, school Discourses reflect and value the practices and world-views of specialized communities, such as science or law. Children in many families, of course, learn within their primary Discourse many of the features of the secondary Discourses they will encounter when they enroll in school. That is, they will have a primary Discourse which includes values, ways of expressing themselves, dispositions toward what counts as knowledge, ways of dressing and behaving, which are consistent with the specialized Discourses of school. An individual's "enduring sense of self" (Gee, 1996, p. 9) can be said to have been constructed in ways which dispose him or her towards the Discourse of school. For "successful" students, school becomes the place in which they acquire through both learning and meaningful practice the peculiar set of secondary Discourses that comprise school knowledge and behavior.

How successful one will be in acquiring a new Discourse depends in large part on the degree to which the new Discourse conflicts with or threatens the primary Discourse and the enduring sense of self it sponsors. From this perspective, some students who do not do well in school might be seen to have not acquired school Discourses (school values, preferred language forms, authority structures, constructions of knowledge, ways of expressing knowledge, social practices) because the new Discourse threatened or conflicted with the primary Discourse and its ways in those domains. And it is often such students who enter the programs where developmental educators work.

Gee (1998) calls such students who come to higher education without having successfully acquired school Discourses "latecomers" (p.11). However, as he has evolved the term recently to reflect a more positive connotation, he now calls them "authentic beginners" to describe "people, whether children or adults, who have come to learning sites of any sort without the sorts of early preparation, pre-alignment in terms of cultural values, and sociocultural resources that more advantaged learners at those sites have" (Gee, 1999, p. 1). For authentic beginners, who lack experiences in and familiarity with the domain of education and, in particular, higher education, the task of acquiring the new Discourses in ways which might lead to full mastery of knowledge sets and fluency in skills is complex. In fact, he notes, "People who teach latecomers [authentic beginners] require the most knowledge, sophistication, heart, and talent of any teachers I can think of" (1998, p. 20). Gee assigns to higher education an assembly of specialized Discourses, all of which would be situated as secondary Discourses against the primary Discourses of students whose families or early socializing environment has not led them to smooth acquisition of school Discourses. (In this he is consistent with developmental education legislation under the U.S. Department of Education TRIO Programs, in which special supports are targeted at "first-genera-

tion college students" on the assumption that the primary Discourses of such students will not be formed in ways which lead to ready acquisition of the secondary Discourses of school and higher education.)

A number of implications for developmental education might be derived from Gee's Discourse theory. When we invite "underprepared" or developmental students to join us in the enterprise of higher education, we invite them into a social world where sets of certain secondary Discourses define the terms of success. Certain modes of social behavior, certain ranges of spoken and written English, certain conventions of dress and of interpersonal relations, and certain modes of inquiry, all of them interpenetrating, interact to define what is appropriate, what is valued, what counts as knowledge in this environment. These secondary Discourses are most typically outside the range of the "everyday" world inhabited by our students as an extension of their primary Discourse. The acquisition of the new secondary Discourses of higher education for such latecomer students is no simple matter. Gee (1998) articulates a number of features necessary for the success of developmental students and which will mark successful developmental programs for "latecomer" students in higher education. Each has implications for our practice. Taken together they add to our capacity to affirm some aspects of current practice and to critique elements of the status quo as evident in the survey of the literature cited earlier.

First, Gee argues that effective efforts aimed at developmental students must have a "low affective filter" (Gee, 1998, p. 16). That is, the new Discourse of higher education must be organized and made available to latecomers in ways which will not promote conflict with their primary and other extant Discourses. He notes that central to this is treating latecomer students and their other Discourses with respect, and "allowing them to actively build on what they already know and feel as a bridge to acquisition of a new Discourse" (Gee, 1998, p. 16). When our utterances and our practice as developmental educators represent the primary and other extant Discourses of our students in a deficit model needing remediation, we have already lost the battle.

Second, latecomers will acquire the Discourse of higher education most efficiently through what Gee (1998) calls "situated practice" (p. 16). He argues that people learn by "engaging in authentic practices within the Discourse [and] finding patterns in those experiences" (p. 16). He draws on research in a number of disciplines to argue that people need "lots and lots of actual and meaningful experiences (practices) in a new Discourse" (p. 16) if they are to acquire it. Developmental education programs which posit a "quick fix" or instruction disembodied from meaningful practice (as some drill and practice programs have been characterized) offer a low probability of success, despite their attraction to legislators and administrators with pinched purses.

Third is the principle of "automaticity" (Gee, 1998, p. 17). Gee asserts the need for developmental students to acquire simultaneously both lower order and higher order skills of the Discourse of higher education in the context of meaningful practice. Through repeated practice in meaningful contexts, the learner masters lower order skills to the point of their being automatic, while the higher order skills are used and also mastered. He uses the example of reading to illustrate. To read efficiently, one relies on mastery of lower order skills (e.g., recognizing words) in order to do the important work of making inferences from the text (the higher order skill). Students will acquire the lower order skill of recognizing words at the level of automaticity only through repeated meaningful practice in actual Discourse contexts (suggesting there is something important to be learned). The principle of automaticity seems to argue for developmental programs in which the authentic-beginner student engages in meaningful practice toward important learning, and suggests, perhaps, that "skills" are acquired only in the context of meaningful engagement with the subject matter curriculum rather than in isolated preparatory skills courses.

Gee's fourth principle is "functionality," which he defines succinctly:

> It is impossible for people to acquire any secondary Discourse unless they truly believe (not just say they believe) that they will be able (and allowed) to actually function (at least eventually) in the new Discourse and get something valued out of it. Of course, one good way to gain this belief is to experience oneself as actually functioning in and benefiting from (at progressively more sophisticated levels) a Discourse as part and parcel of the process of acquiring it. (p. 17)

Developmental programs which isolate students from "real college" and unduly postpone the experience of its benefits are at odds with the principle of functionality. Most importantly, programs which create (or which are perceived to function as creating) an overly "contingent" relation between the student and the mainstream of the institution might be counterproductive.

Students who are engaged in meaningful practice in the ways of the new Discourse of higher education through their developmental programs are, according to Gee (1998), on the right track toward acquisition of the Discourse. But the practice must be structured in ways that the student learns from experience the "right" and "wrong" ways of operating. This is his fifth characteristic, which he calls "scaffolding" (p. 17). As he outlines this principle, Gee notes that latecomer learners engaged in meaningful practice must interact with teachers or others who have mastered the Discourse, so that these "masters" can intervene in the midst of this practice to say "pay attention to this now" (p. 18) or otherwise provide explicit guidance, explanations, or perhaps modeling of the "right" ways of performing within this aspect of the Discourse. "Scaffolding" would seem to argue for developmental education practices such as supplemental instruction, basic writing workshops of small enough enrollment to make the process of intervention possible, supervised homework sessions in mathematics, and other learning situations that are sufficiently constrained to allow the learner to see the teacher as one who intervenes in the process of practice as a trusted coach with mastery cues.

Gee's (1998) sixth principle is related to the idea of scaffolding. He articulates it as "meta-awareness of what one already knows" (p. 18). As noted several times, the acquisition of new Discourses is optimally possible when the new Discourse is not seen as threatening to or demeaning of the learner's primary or other extant Discourses. Similarly, the acquisition of a new Discourse is easiest when the process assists the learner in coming to know better what it is that he already knows on related matters—to know better what it is one has already mastered in the primary or other extant Discourses. An obvious example of this can be found in those basic writing pedagogies in which users of African American Vernacular English (AAVE) acquire so-called "Standard English" through practice which builds on becoming aware of what they already know through their mastery of AAVE.

From the perspective of Gee's (1998) seventh point, for authentic-beginner learners to acquire the new or secondary Discourse of higher education, they must engage in a process of "critical framing" (p. 18) of competing Discourses. Gee notes (1998) that those who are "core members" of a Discourse tend to be "true believers" (p. 18). That is, when we are grounded in a Discourse, we are not disposed toward critiquing it. After all, as we acquire Discourses we are forming the self, or at least the social self, in new ways. This reluctance to critique a Discourse in which we are situated is thus understandable, given the complex interweaving of values, social forms, linguistic forms, beliefs, roles, etc. which comprise a Discourse in which we feel "at home." When we attempt to acquire a new Discourse, it is important that we be able to identify conflicts between old and new Discourses—that we "frame" one within the other in order to see both critically. In the instance of the latecomer student, such critical framing might lead to an awareness of the limits of both the old and new Discourses, and might also help the learner see the potential each Discourse has in their domains of strength.

Finally, Gee (1998) insists that authentic beginners must be involved in a process of "transformed practice" (p. 19) in regard to the Discourses they inhabit. In particular, says Gee

> It is necessary that they come to understand how Discourses work to help and harm people, to include and exclude, to support and oppose other Discourses. It is necessary that latecomers develop strategies of how to deflect the gatekeepers of Discourses when their newly won and hard fought for mastery may be challenged or begin to fail them. It is necessary that they develop the power to critique and resist the impositions of Discourses when these Discourses are used to construct people like themselves as "inferior" (often because they are latecomers [authentic beginners]). (p. 19)

Gee seems to be arguing that those of us who work in developmental education need to invite our students into a very clear discussion of the ways in which higher education as a Discourse operates as an agent of social construction. In the process of helping our stu-

dents to enter that specific Discourse as developmental or "remedial" students, it is critical that we assist them in coming to understand the nature of Discourses in general and the place they occupy from their location as latecomers caught between competing ways and contradictory values on their way into the strange—or strangely wonderful—construct we know as higher education.

The implications of Gee's observations might take us in a number of directions. His theory of Discourse and synthesis of features of educational programs which lead to the acquisition of the Discourses of higher education seem to point toward developmental education programs which (a) respect through rhetoric and practice the students' primary Discourses acquired in family and community; (b) engage students recurrently in meaningful practice in situations where real learning is the goal; (c) provide full disclosure of the terms of success through ambitious and meaningful practice marked by frequent, supported interventions by trusted "masters" which guide the learners toward patterns and ways which are "right" in the context of the new Discourse; (d) build explicitly on what students already know; and (e) disclose the essential features of higher education, its values, and the nature of its practices. At the same time, Gee's theory of Discourse points us away from simplistic deficit models and a preoccupation with assessments which are not thoughtfully constructed and carefully explained. The theory might further provide the basis for critique of developmental programs of short duration or overly limited scope. Gee reminds us that when we invite authentic-beginner students into higher education through the portal of developmental education programs, we invite them into a complexly structured institution with arbitrary norms, into a socially and culturally constructed Discourse which may well be at odds with the "enduring self" (1998, p. 9) of the student as formed within the circle of family and community—and that to do so puts the burden of welcome and inclusion on us, the students' instructors. Above all, the theory of Discourse engages us in an optimistic re-examination of various assumptions and principles which have formed both our professional practice and our literature. In that spirit, we offer this essay as a start toward a discussion of theory.

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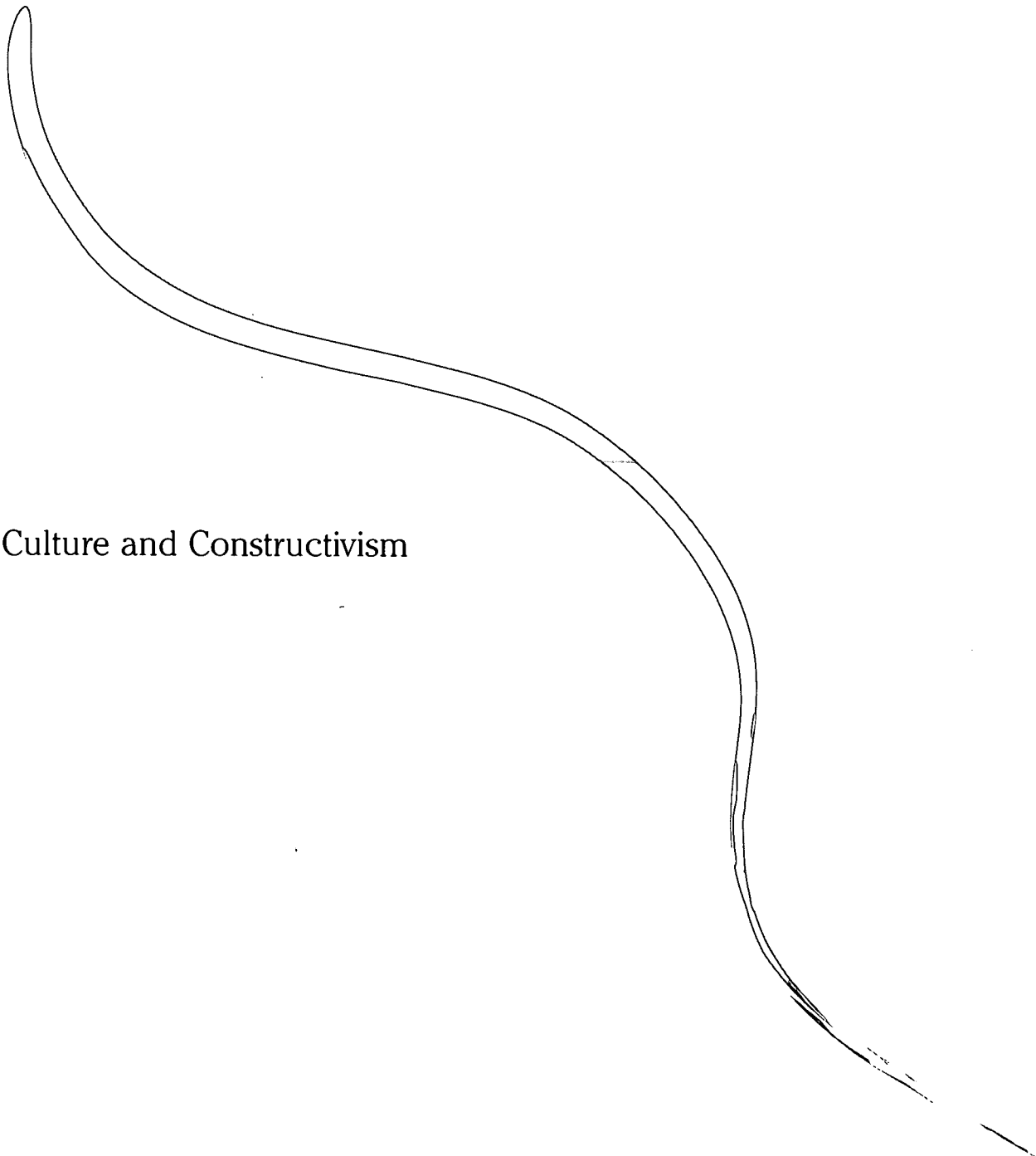

Culture and Constructivism

Is Developmental Education a Racial Project? Considering Race Relationships in Developmental Education Spaces

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As a sociologist teaching in a developmental education unit, I am acutely aware that both disciplines, sociology and education, revolve around White theorists, create spaces that are inherently White, and create a culture of Whiteness that is more apt to study persons of color than to utilize their skills, talents, and ideas. The theoretical arguments and empirical evidence in this article explore the possibility that schools are what critical theory terms a racial project in which everyday school experiences and the school process are racially organized. Often, participation in racial projects silences students of color, and creates barriers to resources much like gendered spaces silence and create barriers for women.

This last year has found the call for a cross-disciplinary theoretical framework for practice in developmental education getting louder. The reasons for this are numerous, but Martha Maxwell (2000) gives both academic and practical reasons. Maxwell states that developmental education "not only lacks academic standing, but its practitioners do not have power to set or even contribute to policy decisions within their academic communities" (2000, p. 8). Judith Shapiro (2000) writes that students tend to define the term "racism" as discrimination based on what we take to mean physical differences of one kind or another. This definition prompted her to ask students what "class" means. What Shapiro expected to hear was a definition of class that included the structure of our society and how socioeconomic inequalities were built into it. However, her students seemed to be concerned about individuals—prejudice against individuals belonging to less-privileged socioeconomic groups. Shapiro's experience provoked her to ask a very important question: Were students also viewing racism exclusively in terms of individual identities and interpersonal relationships? Shapiro's fear is that the goal of creating a more just society had dwindled into a matter of sensitivity training or what she refers to as "sociological illiteracy" (p. A68). She states, "as a person may be illiterate in the most literal sense (unable to read or write), or scientifically illiterate, so a person may be uneducated in the social sciences, and thus unable to make use of the insights and tools that those disciplines provide (p. A68). Her argument is simple. If people know nothing about scientific topics they are "generally aware of their ignorance, readily admit it, and realize the remedy for their ignorance is serious and systematic study" (p. A68). However, when the subject is society, how society operates and why people behave in particular ways, people tend to confuse their beliefs with knowledge. We all walk around with theories about the social world in our heads just like sociologists. Unfortunately, people tend to do it badly. This brings us to our role as educators in a fairly sociologically illiterate society. Shapiro states that as educators, we must take our share of the responsibility to provide "to all of our students...basic tools of social and cultural understanding...to teach them how historical understanding is constructed" (p. A68). Shapiro issues this challenge to social science educators. I would like to issue that same challenge to us as developmental educators.

As our multi-disciplinary and diverse population of educators continues in its efforts to understand and define developmental education, we must not proceed without considering the way we think about race, because how we think affects the way we understand and relate to students of color. This is not to say that developmental educators do *not* consider issues of gender, race, and class particularly in practice. However, developmental education theoretically tends to stand in the same place as other disciplines such as

sociology, as a "White" discipline. Hartmann (1999) recounts that in 1975 a sociologist named Joyce Ladner along other colleagues attempted to ameliorate this situation through the critique of traditional sociology as inattentive to the ongoing struggles for freedom, equality, and justice for people of color. He states that for Ladner, doing so would mean more than studying people of color and their particular problems. Although Ladner and her peers introduced the need for a change in traditional sociology 25 years ago, Hartmann acknowledges that a new millennium has come and the Whiteness of traditional sociology has not been detoured. His claim is that sociology has remained entrenched in traditional ideas because race is not, and should be, treated as a distinct area of sociological specialization. In addition, Hartmann argues the sociology that is specific to race relations tends, unlike other academic disciplines, to be framed in assimilationist theory. History, American studies, legal studies, women's studies, and literature all have taken on the task of treating framing research in a race-critical approach.

This last year has found developmental education attempting to redefine its current theoretical framework based in psychological theory to include a cross-disciplinary approach. One of the reasons for doing so should be similar to those Ladner (1972) stated were necessary for a change in sociology—the traditional framework in developmental education tends to focus on deficit and normative models of student educational attainment rather than on the struggle for educational equality and justice for people of color. What complicates the situation of developmental education is the rich literature that speaks to how we practice as educators. The literature contains impressive consideration of students who do not fit the mainstream picture of education. However, we seldom utilize theoretical frames that help us explain the experiences of students of color beyond their skills. The consequences are that we cannot understand how the structure of our relationship with the institution affects our relationships with our students, regardless of what that institution is, rather than just exploring the student-institutional fit. The introduction of race-critical based theory to a theoretical framework for developmental education is important as part of the foundation of practice. Exploring the processes and mechanisms through which we work as educators is vital to understanding how we practice. However, race-critical based theory acknowledges that individual agency, and the struggle and resistance social actors employ, are not always in opposition to existing structures, but have developed as a part of the reproduction and transformation of those structures. Acknowledging such a presence serves an equally important part in developmental education; that is the effect that a theoretical framework that includes race-critical theory potentially could have on policy.

Race and Schools: What Is Left Out?

Leading theories about race and educational attainment assume that students of color in general have two options: assimilate to an established norm and succeed or resist that norm and fail. The exception to a dichotomous model is found in Hugh Mehan's (1979, 1992, & 1996) work. Mehan's excellent piece of scholarship and example of applied sociology discusses ways in which Latino students resist yet succeed in public school. However, one exception has not yet diminished the prevalence of dichotomous models found in much of the theory. The reason may be that even when citing structural disadvantages as a cause of school failure, resistance to school norms and success are often considered mutually exclusive and determined by student decisions alone. Such an approach ignores the processes and mechanisms through which students are privileged or disadvantaged.

We do, in education, look at relationships in schools as we explore how to understand educational institutions, and there is no doubt that we talk about race and schools. Overall, however, we look at schools through the eyes of those who are employed in the institution, the eyes looking at the population we serve rather than through the eyes and experiences of those we serve. I suggest we think about how relationships experienced in school look through the eyes of students of color. To do so, I will explore how race-critical theory explains a small sample of my empirical data about Chicano Latino students. Between 1996 and 1998, I interviewed 45 university Chicano Latino students participating in a mentor program housed at a large Midwestern university. Thirty-one are female and 14 are male. Thirty-three participating students are bilingual, Spanish and English speaking, and 12 speak only English. University participants ranged in age from 18 to 25. They relate both kindergarten through 12th grade and university experiences.

Chicano Latino Students in School Space

Chicano Latino students more often than not described schools as "White spaces." I had to figure out what this meant. As I looked for patterns in their explanations, I found examples of institutions acting as White spaces through their formal practices. By formal practices I mean school policy, such as admissions, financial aid, and what programs educational institutions provide for students of color, or what is not provided. In addition to formal policies, some aspects of schools as White spaces may be identified through informal practices such as control over the classroom environment, grading practices, and the assignment of negative attributes to Chicano Latinos as a group. The examples for this chapter focus on informal practices because that is where many Chicano Latino students relate the importance of strong cultural identity and with that strength, appear to negotiate the consequences of informal practices occurring in White spaces.

University students often disclosed that they were drawn to certain things as younger children, but not necessarily being aware of these things as part of a cultural identity. As a process, these students nurtured an awareness that their difference is important, and strengthening connections to what made them different is important. This was particularly true in situations where those connections were disrupted. For example, Laticia, a 21 year old Chicana university freshman relates that

> when I got into high school it became something very important to me because I went to a high school where the population was upper class and mostly White. And I learned that I had frustrations with the mentalities or the ideologies that the students had . . . So I think in high school that is when I really tried hard to understand Spanish and get everything down grammatically and verbally. And that is when I started to seek out other opportunities where I could hang on to my culture or gain knowledge of different parts of my history.

When asked if she could remember a specific example of this "White mentality," Laticia recounted a situation in her high school humanities class, basically an English literature class. The class was reading *Heart of Darkness* by Joseph Conrad (1969). In the class discussion, this student had brought up the ignorance of the author by referring to the trek into Africa as darkness, equating the darkness with an evil energy stripping the White men of their will to work and hope. Laticia had even read an essay by an African American writer who made this argument. She went on to tell me that several White students in the class were offended by her comments, saying that Conrad wasn't even talking about race, only about how much vegetation surrounded the river. After the first comment, Laticia raised her hand to participate in the conversation, but the teacher refused to call on her, and after five comments from White students about the offensiveness of this talk about race, the teacher closed the discussion. Laticia talked to the teacher after class and asked why he didn't call on her. He told her, "I did not call on you because I knew what you were going to say, and it is too upsetting to the other students." Laticia tells me,

> I understood that the assumption of the White teacher, that White students, who were the majority of the class, were in need of protection [and that] silenced me. It also taught me that even in academic discussions, I am not part of the White world of my school.

This student clearly understood the school world as White. Furthermore, the power a majority of White students and a White teacher have in a classroom discussion is about more than numbers. How do we discuss this experience? What concepts define patterns like this? The mechanism that allows White teachers and students to participate in a conversation like this one is what I have termed the taken-for-granted organizational logic that orders classroom interactions as White spaces. The environment or climate of the classroom situation was more than chilly for Laticia. She does not say she is "uncomfortable" or that she felt others were not taking her seriously. Nor did she say she felt discriminated against. Laticia defines her experience as someone who is not White upsetting those who are White, consequently being told through words and actions that she should keep that difference invisible. Furthermore, Laticia learned through this experience that appropriate relationships in the classroom are those that keep her difference invisible. White students receive the same messages but in a different way. They were able to participate in the classroom

by being who they are, but not necessarily by being aware that who they are is the norm because the school is a White space. Laticia's White teacher may understand he has authority and therefore power in the classroom, but may not associate that power and authority with practices that reinforce his classroom as a White space. Yet, the teacher by his actions and words made the student of color disappear. This is how invisible White space is to White people in that space, and how visible it often is to the "other" in that same space.

Relationships as Part of Organization Logic and Racial Formation

Feminist theorists such as Joan Acker (1989) and Jennifer Pierce (1995) have addressed the idea of a space operating as a place of advantage or disadvantage. Their research argues that a process exists by which "advantage and disadvantage, exploitation and control, action and emotion, meaning and identity are patterned through and in terms of a distinction between male and female, masculine and feminine" (Acker, 1989 as quoted in Pierce, 1995, p. 30). In addition, Acker's definition of organizations as gendered states that "gender is not an addition to ongoing processes, conceived of as gender neutral. Rather it is an integral part of those processes, which cannot be understood without an analysis of gender" (1989, p. 146). This distinction is important because both Acker's and Pierce's research support the concept of space as gendered, and as having negative consequences for women. The way in which a gendered space operates is through the relationships in that space. What I discovered in the empirical evidence from my study is that school spaces racialize (read like gender) as White space silences students of color, and creates barriers to resources much like gendered spaces silence and create barriers for women in the workplace. In the educational institutions I studied, White space is created and reproduced through a specific kind of organizational logic, a mechanism of informal practice and formal policy that renders "difference" to disappear in order for the institution to appear race neutral. Such an organizational logic does not necessarily support perceptions about race strictly through outward markers of race, such as skin color or surname. The organizational logic is devised through symbolic meanings of what it means to be White in a White space and what it means not to be White in a White space. Organizational logic conceptually exists in other institutions besides education. For example, the law utilizes a kind of legal logic that determined the outcome of the Susie Phipps case in 1983 (Omi & Winant, 1994). Phipps, a light-skinned woman, unsuccessfully sued the Louisiana Bureau of Vital Records in order to change the racial classification on her birth certificate from Black to White. Louisiana's "one-drop" law defines anyone with one thirty-second "Negro-blood" as Black. Therefore, outward appearance, such as white skin, cannot determine the assignment of a racial category because the organizational logic of the courts, a kind of legal logic, maintains the symbolic meaning of what it means to be "Black" in a White space.

Although social scientists have theorized about space as affected by race, no one has defined the process by which organizations become a racialized space as clearly as Acker (1989) has defined organizational spaces as gendered. This is because Acker suggests that in a work organization, power exists in the relationship between what is male and what is female. The concept of space as racialized is also about relationships. The relationship is between a White space, valuing White, male, and middle-class interpretations of what has worth and what does not, and other interpretations of worth. This concept of space as White constructs differences in the school along racial lines and has real and often quite negative consequences for those who are defined as the "other."

The next theoretical point is to define what I mean by racialize. In order to understand race relationships in the school and how these relationships are created and sustained, we need to talk directly about race. For the most part, issues of race and education are discussed through language such as stratification, inequality, and segregation. However, the educational process for many students of color is also tied to cultural identity, original community, and ways that social actors negotiate the educational process. These issues come into play because race relations are a fundamental component of the educational process. Race relations in educational institutions, however, are more complex than prejudice and discrimination. Race relations are a part of the hegemonic workings of the structure and the individual social actor, and linked to how the individual explanations of his or her behavior in the context of peers, family, and school relations.

Michael Omi and Howard Winant (1994) approach these issues theoretically through a process called racial formation. Racial formation is the "socio-historical process by which racial categories are created, inhabited, transformed and destroyed" (p. 55). An ideological link to how we think about race is provided through racial projects connecting what "race *means* [their emphasis] in a particular discursive practice and the ways in which both social structures and everyday experiences are racially organized" (p. 55). Racial formation, according to Omi and Winant, is a "process of historically situated *projects* [their emphasis] in which human bodies and social structures are organized" (p. 58). Racial projects become part of the social structure through our understandings about race that we believe are "common-sense" (p. 59). Common-sense understandings give us the ability to interpret racial meanings according to preconceived notions. These notions condition meanings about who fits into which category and how we expect categorized people to behave. Conversely, our ongoing interpretation of our experiences in racial terms shapes our relations to the institutions through which we are embedded in social structure. On the level of everyday life, we categorize individuals, often unconsciously, in the ways we "notice" race (Omi & Winant, p. 59).

The concept of racial projects is best understood by first defining race. Although I do not define race or ethnicity in terms of physical characteristics, social relations in the United States do categorize individuals and groups according to physical characteristics such as skin color. According to Omi and Winant (1994), "race is not an essence, nor is race fixed, concrete and objective, nor is race an illusion or a purely ideological construct" (p. 54). In other words, there are real material consequences to the way we practice race. Having defined what race is not, Omi and Winant suggest race be defined as a "*concept which signifies and symbolizes social conflicts and interests by referring to different types of human bodies* [their emphasis]" (p. 55). They further argue that the concept of race cannot be minimized, such as viewing the social world as "color-blind," because doing so would mean posing race as a problem or irregularity within the social world when race should be considered a central organizing principle of human representation. For example, like many other students, Josie states that grades are important because they are the way that other people evaluate your academic abilities. As Josie states,

> Grades are important because they are a way that people figure out if you are a hard worker or not and that's important to me. I have a very strong work ethic. I don't care what people think about Latinos, my family is very work oriented and if you have all "Cs" then it looks like you don't do anything...even though you know you're working 35 hours a week and a C would be doing quite well, you know other people's perceptions would be that you're not working.

Laziness as a common expected behavior assigned to Latinos frustrates many university Latino students. At the university level, students often choose which courses they want to pass with high grades and which courses they are willing to simply pass. Latino students believe they may not always make this choice because they do not want people to assume they are lazy or incapable, common expectations and behaviors assumed in the organizational logic of the school. This means White students are advantaged, able to assign a different meaning, to earning a lower grade. For White students, this choice is not about a strong work ethic. Choice may also be about practicality or the ability to prioritize. What Josie says suggests that the organizational logic of the school questions Latino academic ability and, when ability is proven, links the choice to perform at a lesser level to a poor work ethic. Latino students find themselves in the position of doing more when more may not be academically necessary, but necessary to negotiate an organizational logic that contributes to schools as White spaces.

There is a problem with examining school experiences through racial formation. Omi and Winant (1994) state that a conscious understanding of racial formation and racialization empowers the racialized individual to reconstruct racialized identity and to discontinue living in categories that demand we look at them as different. As good as this sounds, their theory still focuses on the subordinate position of the racialized individual. In addition, empowering racialized people to reconstruct their own identity does not necessarily mean others have reconstructed their identity. Students of color, although they may have raised their own consciousness about who they are, have not experienced a change in how they are categorized within the insti-

tution. How do we avoid limiting Omi and Winant's astute observations about racial formation? I suggest we begin to produce a better understanding of race relations in schools by not positioning students of color as the only racialized participants in schools. We need to consider the position occupied by Whiteness as a racial category. Work by David Roediger (1991), David Wellman (1994), and Ruth Frankenberg (1993) examines Whiteness as a privilege often void of racialized meaning among White people. People of color, however, have a clearer understanding of the connection between Whiteness and privilege. Roediger reminds us that "for at least sixty years, Black writers have stated that race in the US is a White problem, with consequences that fall on people of color" (p. 6). The way we continue to approach race is through a color-blind lens. However, color-blind actions erase the color of the "other" and privilege Whiteness as the norm, whereas recognizing racialized differences would highlight that privilege. Why privilege? Because as Cheryl Harris (1993) argues, Whiteness becomes property, something that we own that is as beneficial to us as a piece of real estate.

Recognizing or understanding the consequences of schools as White spaces is important to the educational development of students of color. The majority of the literature suggests that students of color have two options, assimilate and succeed, or resist and fail. My data suggests that Latino students negotiate educational success through other means. For example, Latina students accommodate the organizational logic of the school by appearing to adapt to prominent ideologies. However, through awareness of the school as a White space and their position in that space, they have learned to value other things. They have discovered that White spaces necessitate the creation of what Patricia Hill Collins (1990) calls "self-valuing" (p. 107) to compensate for common-sense interpretations of racial meanings practiced through the organizational logic of the school. This kind of knowledge gathering is different from and beyond what is required of dominant culture students.

Our sociological thinking and general understanding by the larger society of success and failure is reflected in Robert Merton's (1957) argument about assimilation. Merton suggests there are no alternatives other than to accept or reject the "means to an end" assimilation requires. Individuals from other cultures must accept discarding their ways of being in order to assimilate into the American melting pot. Rejection of the means (i.e., discarding one's own culture) proposes not obtaining the ends (i.e., assimilation). The underlying assumption in the informal practices and formal policies of school organizations is success through assimilation. However, the organizational logic of the institution may not allow for complete assimilation because that space is racialized.

Power differentials exist that influence the consequences of an organization logic that distinguishes along race lines. This power exists because once the organizational logic is racialized as White, it is difficult for groups of color to break into that logic. Given the power differentials Whiteness enjoys in the educational institution, as in the larger society, White groups acquire greater benefits from the racialized divisions in the organizational logic and in the organization. Take for example the ability to acquire housing or taking advantage of a legacy admission to an Ivy League university, or racial profiling leading to higher arrest rates of African Americans for smaller offences such as driving without a license. This is not to say that power and control are always intentional or part of a White conspiracy against folks of color. As Gramsci (1971) and Omi and Winant (1994) point out, the social construction of race becomes "common-sense" and hegemony is achieved through what is believed to be commonsensical. The organizational logic at work in the school socially constructs race in a common-sense way. Just as Acker (1989) claims that organizations are not gender neutral even though what is masculine is considered neutral in our society, I argue that the school's organization logic views Whiteness as natural and therefore is considered neutral. Organizational logic, built on assumed ideas and categorizations that White is natural and neutral, permeates that organization's material and symbolic practices and policies. Furthermore, this organizational logic racializes the very space of the institution into a White space, a space that privileges White and disadvantages people of other color. If the organizational logic of the school that privileges Whiteness is not intentional, how may this concept be observed and how is it reproduced?

As Nina Eliasoph (1999) suggests, sociological treatments of how Whites "objectively reproduce racial oppression may be found in how they buy a house in

one neighborhood and not another, pick one school over another, locate a company in one part of town and not another" (p. 483). However, to understand how decisions are made by Whites when neither prejudice (Wellman, 1994) or profit (Kirschenman & Neckerman, 1991) fully account for these decisions, we must look to other kinds of explanations. To begin with, the assumed rules for interaction inside organizations such as the school and in the workplace are subjectively colored with Whiteness in their everyday decisions and activities (Eliasoph, 1999; Fordham, 1988; Gould, 1999). Illuminating ways in which the organizational logic of the school neutralizes interactions may help us understand why many participating in school organizations do not understand that color, especially Whiteness, matters.

More than half of the university students and high school students I interviewed related instances when teachers expressed surprise at their knowledge, writing skills, or preparation for class. Many times, these remarks were related to assumed lack of language or writing skills by someone with a Latino surname. An organizational logic that defines expectations and appropriate behaviors from Chicano Latino students based on a White norm is another observable element that defines school space as a racialized White space. For example, in an American literature class at the university, Josie's teaching assistant (TA) wrote on her first paper, "your writing is coming along well," which she found offensive. She talked to the teaching assistant to find her suspicions were correct—that the TA had assumed because of her surname, she was not American and therefore not English speaking. Josie states that the TA was surprised by Josie's response because she felt she "was responding to my paper in a culturally sensitive manner rather than just critiquing the writing as she would any other paper." What the TA mistook for cultural sensitivity is a liberal response to interpreting a situation through the lens of an organizational logic that responds to difference as less than the norm.

Positive statements are helpful to any student but do not take the place of positive critique. In this case, the TA did not apply positive critique because she assumed the student to lack the skills necessary to write a better paper. Josie identifies this "treatment by my university TA and generally within school as difficult." Josie does not analytically understand what is difficult. However, over time, Josie gathers this information into a kind of understanding that she uses to help her negotiate school practices. She reports, "I figured out how to do school. I appropriated the system and have been doing so ever since." Although not saying so in these words, Josie developed an understanding of school as a White space working through an organizational logic that privileges markers that assume White values, and constrains markers that are assumed to be less than White. The constraint also neutralizes Josie's "difference" by not holding culturally different students to the same standard as "normal" students. In practical terms, this means Chicano Latino students at the university will not benefit from the same level of constructive criticism, one of the most important processes for becoming a better writer. Josie explains she has found a way to negotiate the organizational logic of this space by appropriating the way to "do school." Josie states that there is a difference between "doing" school and learning. She comments,

> I like learning. I like being interested in what I'm learning and I'm not very hard to interest in stuff. Because the one thing I know is that whatever I learn, I relate to myself, and then it is a part of me.

Josie has learned that school consists of more than gaining intellectual knowledge. She has also learned what is expected of her as a student, appropriate responses to that expectation, and a way to "do" a racialized other in a White space. What Josie does is negotiate the organizational logic that neutralizes her difference by making the topic of learning a part of herself. It appears she has found a way to be in the White space of the school without being part of the organizational logic, which would make her disappear. Instead, she mediates that space and gains what she wants: to learn. Regardless of her efforts to appropriate the system, there continue to be expected and appropriate behaviors in a White space that impact Josie's decisions as a Latina student.

Through these experiences, we gain insight into how schools as racial projects function through a White space, and how that space delineates relationships and creates barriers for students of color within the school along race lines. We also see how White space is negotiated through positive resistance. Resistance is a difficult term in that we often attach resistance to fail-

ure, and we also generally perceive it as negative rather than positive. Patricia Hill Collins (1990) argues that African Americans have developed a specific understanding of what is necessary for a Black person to survive in a White world. Collins describes Black women resisting imposed racialized identity through a clear definition of self and identity. Collins states that identity is not the goal, but the point of departure for creating a self-definition that challenges external definers. Self-definitions and self-valuations happen in safe spaces that Black women create for each other. Defining and valuing generates what Collins characterizes as "an independent consciousness as a sphere of freedom" (pp. 142-143). Furthermore, Collins states the process of defining and valuing the self is not about finding an increased autonomy as a separate individual. Instead, Black women's self-defining and self-valuing is found in the context of community. In my study, I found that Latinos often resist White space yet succeed in school by creating safe spaces, spaces that Patricia Hill Collins refers to as "spheres of freedom" (p. 103). These are spaces where self-valuing compensates for common-sense interpretations of racial meanings practiced through the organizational logic of the school. Understanding this phenomenon expands our ability as educational practitioners to help students of color develop in areas previously not considered, but is nonetheless part of their educational development.

Discussion

Let me summarize what Chicano Latino students told me and what observations and analysis of the institutions revealed. The gist is that color-blind actions erase the color of the "other" and privilege Whiteness as the norm. What happens in schools? The taken-for-granted assumption is that educational institutions are race neutral organizations and what is esteemed, White, middle class, male values, is neutral. In other words, schools, as Chicano Latino students inform me, are White spaces. What I discovered in my research is a mechanism that sustains this seemingly color-blind appearance of the institutional process, an organizational logic that advances White, middle class values and disadvantages those who do not fit into this privileged box. This organizational logic assumes a neutral position by distinguishing along racial lines in taken-for-granted aspects of school policy, and informal practices that determine what behaviors for people of color are allowed and expected in White spaces. What distinguishes this process is that "the others" are neutralized, or made to disappear in order for an assumed neutrality to continue. So it is more than marginalization of the other, it is about making the other disappear because recognizing racialized differences would highlight White privilege.

What do students do? My research indicates that Latino students negotiate their educational experiences through a process of self-definition and self-valuing. This process is dynamic, changes over time, and differs from person to person relative to that individual Chicano Latino's personal history. There are, however, patterns in this process that allow us to see a distinct progression in self-definition and self-valuing in connection to the school experience. The process is also affected by the degree to which the individual is grounded in the context of a community that provides a safe space, or sphere of freedom that challenges dominant definitions and valuing.

Our solutions thus far to educating other than White, middle class Americans are to provide compensatory education, special programs for students of color, and to proclaim schools as dedicated to diversity, multiculturalism, or at the least cultural sensitivity. There are three problems with these solutions. First, these solutions place the burden of change on the victim of an unjust educational system. Although directing efforts to improve the educational experiences of Latinos to Latinos may be helpful, why many of these students need "help" is not clear. Latinos as well as educators and the general public may unconsciously believe they need special help because they are deficient. One of the reasons schools and education in general continue to focus on individuals is because, like Shapiro's (2000) students, we tend to forget the structure of our society and the inequalities built into it. Instead, we are concerned about individuals, easily characterizing their ability or inability to participate fully in the educational process as individual and installing mechanisms for change accordingly. Furthermore, the individual on which the mechanism is focused is usually the person of color, not the seemingly able mainstream student. This is true for special programs designed for marginalized student populations, and for those designed to change the behavior of authoritative groups such as teachers. What we end up with in education in general is watered-down curriculum changes, half-hearted attempts to address

learning style differences, and mandatory multicultural training for teachers and administrators. In developmental education specifically, we continue to utilize deficit and individualistic models and definitions of developmental education masking other kinds of relationships in the educational organization that affect taken-for-granted assessments of student skill and student need. As long as education, educators, and researchers continue to attack the problems in education on an individual level, including our views on racism in the schools, that the privileged group can ignore, we will not change race relations or educational institutions. bell hooks (1994) explains it this way:

> Despite the focus on diversity, our desires for inclusion, many professors still teach in classrooms that are predominantly White. Often a spirit of tokenism prevails in those settings. This is why it is so crucial that "Whiteness" be studied, understood, discussed—so that everyone learns that affirmation of multiculturalism, and an unbiased inclusive perspective, can and should be present whether or not people of color are present. (p. 43)

hooks illuminates a crucial issue in race relations today. White people do not think about race unless they are thinking about people of color. The reason for this is well explained by George Lipsitz (1998), who states that "[W]hiteness is everywhere in the U.S. culture, but it is hard to see...as the unmarked category against which difference is constructed, Whiteness never has to speak its name, never has to acknowledge its role as an organizing principle in social and cultural relations" (p. 1).

What does this mean in terms of developmental education? What would happen if education in general, and developmental education in particular, begins to look at itself, its research, and application as a White space? What would it mean to those participating in the relationships in that space? My analysis of Chicano Latino experience may appear as if once again the entire burden for change is on students' of color ability to find spheres of freedom. To the contrary, students who have found this safe space in which to pursue their education have enlightened us as to the need for structural change, and given us some hints as to how to effect that change.

First of all, we need to pay more attention to race relations as the central subject of discovery. I would challenge White folks in educational institutions to look for and define those taken-for-granted assessments of students and applications of teaching in developmental classes, not in terms of curriculum, but in terms of how the relationships in the classroom are affected by our assumptions. In order to ask these questions about White space and the relationships that take place in that space, researchers and practitioners must first consider approaching their work recognizing institutions as racial projects built on White spaces. The theory in which we ground our research and practice must be considerate of race relations. Our research and practice must recognize the institution as historically and contemporarily built on values and ideas that are specific to one group rather than assuming the neutrality of the spaces in which we work. Our research and practice must recognize that our participation in the social structure, our statuses and roles, are not neutral. Most of all, we must listen to students of color and really hear them. What students tell us is their real experience, and we must believe and respect them rather than dismissing them through our own paternalistic interpretations of their experiences. What students in my research discuss is not racism, or individual prejudice such as Shapiro's (2000) students suggested. These students discuss their relationships to education as a part of the social structure, and we should respond accordingly by seeking structural change. Because we cannot change the entire structure of the institution overnight, we must find a starting point. That point is to allow students of color to find spheres of freedom—give them time and space to address what the reality of their educational process really is in our classrooms, our offices, and in our research. We must consider that the spaces those of us who are the mainstream population research and practice in is a safe space for us, but not necessarily for those who are not like us. If we begin here, we will be giving more than rhetorical responses to the race relations in educational institutions as part of the race relations in the larger social world.

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The Place of "Culture" in Developmental Education's Social Sciences

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Anthropology
Walter R. Jacobs, Assistant Professor
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Recently, developmental educators have argued that we should view students in their full complexities, rather than as "deficits" to be fixed. This position can be actualized in the social sciences sector by retheorizing "culture." Whereas many common assumptions of anthropology stress semiotic meanings of culture and many sociological approaches focus on structures and processes, we argue that developmental education should include both meaning and structure in understandings of culture. We use a cultural studies framework to combine anthropological and sociological groundings into a model of culture that demands that we first access students' pre-college lived experiences and understandings, and work with them to expand, rather than replace, their knowledge with the formal discourses that they must master to negotiate academic spaces. In our model, culture is the collaborative practice of continually making and remaking contexts (i.e., structures and meanings) that provide students with dynamic tools to succeed in the academy and beyond.

To: **pedeltmh@tc.umn.edu, wrjacobs@tc.umn.edu**
From: **burdell@tc.umn.edu**
Subject: **social science classes at GC**
Date: **June 13, 2000**

Hello, my name is George P. Burdell. I am an incoming General College freshman, and I am interested in taking a social science class during my first semester. The last time I had a social science class was during my junior year of high school, and it was pretty basic. I remember that I liked the unit on popular culture best, but I can't recall if that fell under the anthropology or sociology sections. I would like to learn more about popular culture, especially issues about music. Should I sign up for the introduction to sociology course or the introduction to anthropology course? Thank you.

To: **burdell@tc.umn.edu**
CC: **wrjacobs@tc.umn.edu**
From: **pedeltmh@tc.umn.edu**
Subject: **RE: social science classes at GC**
Date: **June 14, 2000**

Dear George,

Your note comes at an interesting moment. We have been asking similar questions as we rethink the curriculum to meet the needs and interests of General College (GC) students. Forgive us if we provide a fairly long-winded, yet indefinite answer to your question. We have used the occasion of your query to begin a dialogue among ourselves concerning the benefits and limitations of our disciplines as well as potential ways to improve and integrate the sociology and anthropology curriculum. Given your direct interest in the issue, we decided to let you in on the discussion. We'd love to hear what you think after reading our responses!

Walt will be able to tell you more about the People and Problems (Introduction to Sociology) course. I will begin by explaining the benefits of anthropology in regard to your interest in popular culture and music.

The major strength of anthropology is that it is comparative. By that I mean anthropologists have studied thousands of

cultures, and therefore make an attempt to understand behavior by comparing different cultural lifeways. For example, rather than study popular culture in the United States alone, an anthropologist would tend to think about those familiar cultural forms as part of the larger human cultural experience. Anthropologists have studied rock and roll music as ritual (Hämeri, 1993), in Australian aboriginal culture (Dunbar-Hall, 1997), Papua New Guinea (Gewertz & Errington, 1996), Western Canada (Johnston, 1980), and throughout the world.

One of the advantages of our comparative methodology is that by studying others' cultural realities we can begin to realize that we, too, have constructed our world. In other words, we begin to see that the interpretive realities we mistake for objective or natural reality are instead specific cultural interpretations of the world. These cultural interpretations of the world are developed partly through "enculturation," the process through which individuals are taught the symbolic patterns shared by others around them. For example, what people in a capitalist society refer to as human nature is instead a reflection of capitalist culture. Similarly, the folk category of race as defined in the United States is a cultural concept, a way of (very poorly) categorizing human phenotypic (i.e., physical) diversity according to cultural beliefs, rather than a set of biologically significant categories (Fish, 2000).

The work of Margaret Mead serves as a third example. Freudian theory, as a manifestation of the Western cultural belief system, holds that human beings experience a major and traumatic break between childhood and adulthood, resulting in adolescent rebellion against the parents. By studying adolescence in other cultures, however, many anthropologists, including Margaret Mead (Mead & Boas, 1928), have demonstrated that adolescence is not this way in all societies. In some societies, for example, the age-period we have defined as adolescence is considered to be full adulthood. Conversely, for other societies, this period is marked by uninhibited social and sexual experimentation, without the extreme personal and intergenerational traumas associated with "coming of age" in Western societies.

It is quite common for us to mistake culture for nature. That is one of the issues we study in Introduction to Cultural Anthropology. Therefore, the study of cultural anthropology is partly a process of discovering the cultural matrices (i.e., webs of meaning) we inhabit. That process of discovery can often be a liberating experience.

Marcus and Fischer (1986) call the comparative aspect of anthropology "defamiliarization by cross-cultural juxtaposition" (p.157), which is just another way of saying that we anthropologists hold up other ways of life as a critical mirror to our own. We do that so we might better understand our own cultural patterns. As a result of such critical exploration, we might find better, more humane ways to construct our cultural realities and conduct our social lives.

In discussing the comparative element of anthropology, I have indicated another major emphasis of the discipline. Anthropologists believe that in order to understand any given behavior or belief of another society, you must first try to understand it within its surrounding cultural context. This is called cultural relativism, and it is the opposite of ethnocentrism. The ethnocentric person tends to judge other cultural behaviors and beliefs based on his or her own cultural value and belief system. Conversely, the researcher practicing cultural relativism tries to understand other cultures on their own terms.

Cultural relativism requires that we understand the internal logic of another cultural behavior or belief, rather than judging others according to our own cultural values. For example, White people in North America have often referred to American Indians as unfriendly or distant, based on the cultural tendency in many Native American cultures to be very reserved with strangers. In many Native American societies, the cultural rules for getting to know another person require significant

time and silence, not to mention the fact that interactions with strangers have had, on the whole, extremely negative consequences for Indian peoples. Conversely, the White tendency is to aggressively shake hands to begin an encounter with strangers, and one is supposed to engage in conversation in order to get to know them. These two cultural modes are often in conflict, and the resulting misunderstandings have had negative repercussions in political, educational, and business settings. White teachers working with Indian students, for example, have often misunderstood the meaning of silence in the classroom.

A number of anthropologists, particularly anthropological linguists, have studied such cultural misunderstandings in depth (Basso, 1970). The goal of such study is to increase people's understanding of others' behavioral tendencies, so that intercultural relations can be based on communication, understanding, knowledge, and respect.

Given your interest in popular culture, the Introduction to Cultural Anthropology course would work well for you. Culture is the main focus of anthropology. Although I cannot speak for sociology (I'll let Walt do that), the historical tendency of sociology has been to emphasize social structure (i.e., society), whereas anthropologists tend to examine the symbolic world (i.e., culture). In other words, sociologists tend to be more interested in social organization, whereas anthropologists tend to emphasize belief systems, ritual life, and the symbolic patterns that the members of a given society share. Therefore, although sociologists certainly are interested in culture, and some are dedicated almost exclusively to such studies, the historical tradition of the field has been to study social institutions and behavior in modern, Western nations. Conversely, although there are certainly anthropologists who study social structures particularly in small scale societies and subcultures, the main emphasis of the field has been cultural life in the non-Western world. Although neither Walt nor I represent these tendencies in our own research and courses, our respective disciplines are largely differentiated according to geographic (First vs. Third World) and topical (Society vs. Culture) foci.

This difference between the disciplines is represented in methodology as well. Sociology, as a field, has tended to emphasize large-scale, quantitative study, emphasizing survey, interview and census techniques. The study of large-scale social structures often requires such methods.

Conversely, anthropologists tend to use "ethnographic" methodology. Ethnography involves long-term study from within a culture. One must spend a great deal of time to learn some of the basic ways of thinking in another culture. In other words, the ethnographer essentially becomes a child again. Just as a child learns largely through trial and error, an anthropologist becomes a student of another culture, learning how to behave by being taught how to, and how not to, behave in that society.

Anthropologists are mainly interested in the "emic" point of view, which is the cultural insider's interpretation of the world. That is as opposed to the "etic" point of view, the interpretation of an outsider. Granted, we always remain outsiders, and will therefore always maintain and express etic perspectives as well, but the goal is to immerse ourselves in the other culture.

Whereas other disciplines will use broad, yet shallow, quantitative methodologies to gain an outline of mass behavior, we live in and amongst a culture for long periods of time, a narrow and deep strategy. Sociologists often work with populations in the hundreds, thousands, or tens of thousands. We tend to focus on small collectives of less than 100 people. For example, a sociologist studying the question of illegal drugs might conduct a survey of thousands of respondents in order to answer a very specific research question, such as relationships between drug use, ethnicity, age, gender, education, occupation, employment, income, marital status, household composition, and other variables. Conversely, an anthropologist would be more likely to live in and among

a group of drug sellers or consumers for a long period of time in order to find out why people sell and buy drugs (Bourgois, 1996). As a result, anthropologists attempt to create a more complete and in-depth picture of an actual cultural world. Doing so, however, requires that one study a relatively small social group. The results are generally deeper in terms of cultural meaning and understanding, but not as broad and generalizable as data derived through traditional sociological methods. Each perspective and methodology has its place and purpose.

Whereas interviews might be considered a deep investigative method in other fields, for us the formal interview might be just day one of a year or two period of living with those in another culture. Thereafter, we emphasize participant observation, which simply means taking part in some of the essential cultural activities of others so that we might understand them better. Rather than talking to them once, we keep a dialogue going for long periods of time, as one would with a friend or family member.

So, getting back to the point, what might this mean in terms of your interest in popular culture and music? Well, that happens to be my area of interest as well. I have been studying the popular culture of Mexico for several years now. In order to do so, I have conducted interviews, observed hundreds of musical rituals from neo-Aztec drumming to Mexican rock and roll, learned to sing boleros, and to dance the danzón (poorly, like a Gringo). I have been studying musical ritual in Mexico City as a form of public pedagogy, examining the ways in which the state, church, and other social organizations attempt to instruct people through musical ritual. I am now writing about that research, primarily for a U.S. audience, because I think people in the U.S. should know more about our "Distant Neighbors" (Riding, 1986).

I bring issues of popular culture and music into my class. The course is based on a workshop format, emphasizing "hands on" student research projects. Therefore, if you were interested in Irish folk music and culture, for example, you might plan and conduct an ethnographic study of an Irish folk music group here in Minneapolis. In class you would study some of the basic theories, concepts, and methods of anthropology, and then apply them in your research project.

However, I am certain that you would also be able to learn a great deal about popular culture and music in People and Problems. Walt's research and teaching also emphasize these issues. He's writing an e-mail to you, too; it should arrive soon. Good luck.

Mark Pedelty

To: **burdell@tc.umn.edu**
CC: **pedeltmh@tc.umn.edu**
From: **wrjacobs@tc.umn.edu**
Subject: **RE: social science classes at GC**
Date: **June 15, 2000**

George-

I received your note a couple of days ago and am thrilled that you are coming to the General College and have an interest in the social sciences. We have a lot of opportunities here and hope that you use them to the fullest extent. Once you arrive on campus, feel free to stop by my office at any time to chat.

I see that Mark (Dr. Pedelty) has already answered your e-mail, and he did a great job of describing his course and his discipline of anthropology. He also did a very good job of describing some of the main ideas of my field of sociology as well! So, I won't repeat what he said, but let me go into a little more detail about how sociologists view culture. I do this because (a) this concept is central to all of us here in GC's social science division, and (b) it'll give you a foundation to better understand your interest in popular culture.

One of the things that you'll discover about most academic disciplines is that they have a specialized vocabulary to describe terms and concepts. Sociology is

no exception. It may be useful, then, for me to provide a glossary of terms here at the beginning of the e-mail so that you can better understand the ideas I explain later.

Glossary

autonomous individualism: belief that a person can obtain any goal with enough effort; other forces are irrelevant

beliefs: ideas about reality

binary opposition: a concept that has two parts, and each part is the exact opposite of the other, e.g., good and bad, night and day, male and female

cultural capital: set of symbolic elements valued by the dominant class, such as etiquette, artistic tastes, speech patterns

culture (summary): group way of life that is simultaneously constrained and enabled by both historical memory and contemporary stratification

culture as map *of* behavior: culture is understood as a force for order and stability

culture as map *for* behavior: culture is understood as scene of debate and struggle

dominant class: those with high-level positions in government, business corporations, or the military

doxa: that state where a person's subjective beliefs closely approximates his or her objective social positions

expressive symbols: representations of ideas and things

hegemony: process by which groups with power maintain power by combination of coercion and consent of other groups

heterogeneous social contexts: situations where people have many different traditions and values

homogeneous social contexts: situations where people are more or less the same

ideology: distortion of reality

mentality: state of mind

norms: rules for behavior

sociological imagination: process of connecting personal experiences with larger structural issues

stratification: unequal distribution of resources and rewards based on social group membership

structuralists: a group of social theorists who believe that humans understand the world in terms of binary oppositions

symbolic interactionists: a group of social theorists who believe that culture is a set of common meanings generated in face-to-face interaction

thick description: detailed, multi-layered, analytical narrative about social group structures and experiences

values: attitudes about what is good and bad

In *Webster's 9th New Collegiate Dictionary* (Mish, 1985), there are two broad classifications of culture. On one hand, culture refers to aesthetics: a cultured person has excellent tastes, moral facilities, training, and so on. On the other hand, culture refers to a patterned way of life of a group of individuals. Sociologists are more interested in the second usage. Within this definition, however, many different approaches to the study of culture can be categorized. Peterson (1979), for example, discusses four broad perspectives on culture: as norms, values, beliefs, and expressive symbols. Wuthnow and Witten (1988), alternatively, lump norms and values into one perspective, and compare that orientation with two others: culture as beliefs and as mentality. Additionally, there are several other ways to classify culture, such as discussed by Griswold

(1994), Mukerji and Schudson (1986), and Swidler (1986). Which are we to use?

I believe that an instructive categorization is one that compares approaches of "culture as a map *of* behavior" with "culture as a map *for* behavior" (Peterson, 1979). Indeed, each perspective leads one to ask very different questions and construct disparate answers: the former sees culture as a force for order and stability while the latter views culture as a process of contentious production and change. I will review these two perspectives in turn, providing examples and discussing their strengths and weaknesses. I will then conclude with a brief discussion of my own orientation to the concept of culture and how it's used in the People and Problems (Introduction to Sociology) course.

Culture as Map of Behavior

In this paradigm, culture is theorized as a force for order and stability: values, traditions, norms, beliefs, and attitudes are seen as regulating the conduct of everyday life. Furthermore, these forces are usually theorized as working implicitly; it is the task of the analyst to discover them and probe their inner workings in relation to larger social structures. For example, you may think that it's "natural" to change classes when the bell rings, or go to your locker at the end of the day, but these things are determined by the set-up of your school; in an alternative school you may not have bells at the end of periods (or class "periods" at all!) or lockers, because the administrators have a very different view of how the school should be run than those of public schools.

A group of theorists called the structuralists help us understand culture when theorized this way. They believe that values and traditions are the result of the human mind ordering experience into categories of binary oppositions (see Mukerji & Schudson, 1986; Williams, 1981). The major problem with this approach, however, has been a tendency to focus on "high" and "low" forms of cultural expression. Such a conceptualization is highly problematic in a society as complex and fluid as the U.S. (Gans, 1974).

Clifford Geertz's (1973) interpretative approach, on the other hand, was instrumental in a shift towards efforts to study popular forms of culture (Mukerji & Schudson. 1988). Emphasizing "thick description" as the means of discovering everyday understandings and cultural practices, Geertz argues that symbolic expression is the defining feature of the human species. Geertz, along with other anthropologists influenced by sociologist Emile Durkheim (like Sahlins, 1976, and Turner, 1967) argue that humans are primarily meaning-making animals instead of profit-making animals, and that symbolic expression is the necessary basis of practical activity. At this point you may be wondering, "just how is shared meaning reached?" Although thick description is very useful within tightly bound homogeneous social contexts, it is of reduced utility when investigating the production and expression of culture in expansive heterogeneous social contexts.

Here the work of Bourdieu (1977, 1990) is useful. His "cultural capital" is a set of symbolic elements that are valued by the dominant class. Individuals, families, and groups are believed to spend resources to gain cultural capital, which is in turn reinvested to gain more valued resources. Note that the focus is on obtaining the perspectives of the dominant class, not the other way around.

A weakness with Bourdieu's work specifically, and the culture as map of behavior camp in general is its reductionism. Social class is the most important force for Bourdieu; he pays little attention to ways in which locations such as age race, ethnicity, gender, and sexual orientation affect things like doxa. For example, Bourdieu would not consider that even if you are from an upper-class family, as someone who is under 21 you can not yet fully participate in American culture: you can't legally purchase alcohol. It seems that culture as map of behavior theorists are too focused on the one or two key

elements that hold the entire cultural world together.

Sometimes, however, a few elements can be effectively isolated to form powerful insights about implicit cultural understandings. When reading *Habits of the Heart* (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985), for instance, I initially thought that interviews with 200 White, middle-class Americans unduly excluded large segments of the population (recall Mark's point that sociologists usually study people in very large numbers). Their resulting discovery, however, of an isolating language of autonomous individualism does seem to be a reality applicable to other groups. Perhaps a major task of culture as map for behavior theorists is to investigate how culture in a homogeneous context operates very differently in another, heterogeneous context: it shifts from a relatively harmonious process of discovering a shared sense of values and norms to a blueprint for never-ending contentious debate and struggle. I now turn to that orientation.

Culture as Map for Behavior

> This revised imagery—culture as "tool kit" for constructing "strategies of action," rather than as switchman directing an engine propelled by interests—turns our attention toward different causal issues than do traditional perspectives [of culture as model of behavior]. (Swidler, 1986, p. 277)

When reviewing Bourdieu's work, it is not entirely clear as to which of our two perspectives he belongs. The notion of cultural capital, after all, does stress that some groups strive to produce and consume symbolic content valued by the dominant class; in a sense, culture as the possession of cultural capital is a resource that individuals can use flexibly to guide behavior. Swidler's concept of culture as "tool kit," however, theorizes culture as an *active* process, where groups explicitly articulate interests and strive to realize them. Cultural capital, on the other hand, is theorized as passively achieved, through such vehicles as socialization through educational institutions (Peterson, 1979); cultural capital is a "switchman" governed by the interests of powerful elites that direct the masses onto certain tracks. Bourdieu, then, belongs in the culture as map of behavior camp.

Staying in the realm of education, the investigations of critical literacy scholars more clearly illustrate the culture as map for behavior perspective (Giroux, 1994; McLaren, 1995). These analysts theorize educational institutions as places where groups bring conflicting understandings of the world to bear on learning. Although the interests of elites are privileged, other groups can—and do—resist the imposition of elite understandings; culture is theorized as the process of setting up alternative perspectives, and expressing these understandings symbolically. There is not one culture that everyone participates in, but numerous cultures that are not uniformly spread through the social system. Individuals face a variety of pressures (from both within and without the various groups involved) as they negotiate in and between various cultures.

Let me give you an example that contrasts Bourdieu's map of behavior with the critical literacy people's map for behavior. If you came to GC and excelled (as we know that you will!), Bourdieu would say that this is because you learned rules by watching and listening to the professors, and then followed the rules without question. The critical literacy people, on the other hand, would say that some type of negotiation took place: you learned some rules of GC but at the same time adapted these rules to take advantage of your ideas and experiences, such as specifically scheduling classes that were taught in a style that uses your strengths.

The tradition of symbolic interactionism can also be said to operate in the culture as map for behavior perspective (Becker & McCall, 1990; Denzin, 1992). Culture, for symbolic interactionists, is understood as the set of common meanings generated in

face-to-face interaction, which are open for flexible interpretation. A weakness with this approach, however, is that too little attention is paid to larger structures that affect local interactions, which is a vitally important consideration in our increasingly non-face-to-face mediated worlds (Gottdiener, 1995).

Analysts operating within the paradigm of cultural studies explicitly examine the importance of mediated communication in symbolic expression and experience. Kellner (1995), for instance, argues that the media have become the dominant influences on subjectivity: both our sense of who we are and how we act are deeply influenced by exposure to mediated information. Furthermore, the individual's position in social groups creates certain forms of symbolic expression that are continually negotiated in hegemonic space (see also Grossberg, 1992; Lury, 1996; Rose, 1994). Culture, in sum, is theorized as a group's response to its social experiences, in an effort to increase its ability to articulate its interests and maximize access to valued resources.

A weakness of the culture as map for behavior perspective is that it often approximates the notion of "ideology" as a distortion of reality, only without negative permutations and connotations; in some cases, ideology can be substituted for "culture." In many cases, however, symbolic expression operates above and beyond mere ideological motivation. For instance, the elaborate expressive styles of many rap music artists and their fans surround desires to make lots of money, more so than they support aspirations of uplifting the community or engaging anti-hegemonic struggle (Rose, 1994). Furthermore, when we expand the scope of analysis, the strength of the perspective becomes its applicability for a large and extremely heterogeneous society like the United States, with its history of conflicting norms and values: groups have and will explicitly express interests and mobilize symbolic expression to achieve ends in other social spheres. Culture as map of behavior, in this context, is quite a powerful construct.

As is probably clear by now, my own orientation to the concept of culture lies squarely within the culture as map for behavior camp. I personally define culture as a group way of life that's simultaneously constrained and enabled by both historical memory and contemporary social stratification. I see this way of life as increasingly mediated: members of social groups use symbolic content, especially in electronic form, to guide the construction of visions of who they were, are, and should be, and how they should interact with other groups. This process, further, is inherently flexible and dynamic, as groups constantly use material and symbolic objects in public- and popular-sphere efforts to define and articulate themselves and their interests in never-ending hegemonic struggle:

> Hegemony always involves a struggle to rearticulate the popular. There can be no assurance ahead of time what the results will be, for it depends upon the concrete contexts and practices of struggle and resistance. Speaking in the vocabulary of popular ideologies, using the logics by which people attempt to calculate their most advantageous position, celebrating the pleasures of popular culture, appropriating the practices of daily life - this is where hegemony is fought and what is fought over. (Grossberg, 1992, p. 247)

Through a combination of force and free will, they persuade other people that the ruling group's interests are really the interests of all the other groups; culture is the ground on which much of this process is done. My People and Problems course, essentially, is a semester-long exploration of how hegemony works in the United States. From time to time I will discuss processes in other parts of the globe, but the focus is on how we can use these understandings to better understand our situation here at home. Eventually, of course, one should know a little about the cultures of other countries in their own right as well as the ins and outs of United States cultures, so I'd recommend taking courses in both anthropology and sociology.

In People and Problems I help students develop their "sociological imaginations" (Mills, 1959), the process of connecting personal experiences with larger structural issues. I use popular culture throughout the course to help students do this: we look at both processes of production (e.g., how things like movies and TV shows are created and marketed) as well as consumption (i.e., how people receive these products and the meanings they construct about them). So frequently we watch clips from TV shows or music videos, or look at print ads, and then have class discussions about them. My class is primarily oriented towards visual media so I don't explore music in as much depth as Mark does, but if you're into music videos you can be sure that we'll analyze a few during the semester!

Overall, because I use the culture as a map for behavior perspective, I'm very interested in working with what students bring to the classroom, so I always build in plenty of time to explore interests that I cannot anticipate ahead of time. Last year, for instance, students were very interested in the Y2K computer problem so we spent an extra day on it. In the future, I expect to devote additional time to hot topics built into the syllabus as well as to explore subjects that students initiate. Who knows, maybe you'll bring up an issue that students will get excited about? I can hardly wait to find out…

-Walt Jacobs

To: **pedeltmh@tc.umn.edu, wrjacobs@tc.umn.edu**
From: **burdell@tc.umn.edu**
Subject: **negatives of sociology and anthropology**
Date: **June 16, 2000**

Dear Dr. Pedelty and Dr. Jacobs,

Thank you for your replies to my question regarding the social sciences at General College. I have one follow-up question. Dr. Pedelty emphasized the benefits of his discipline while Dr. Jacobs looked at strengths and weaknesses of sociology's definitions of culture. Dr. Pedelty, what are some of the negative aspects of your discipline for a student interested in popular culture and music? Dr. Jacobs, is there a big weakness of sociology overall for a student like me?

Thank you,

George P. Burdell

To: **burdell@tc.umn.edu**
CC: **wrjacobs@tc.umn.edu**
From: **pedeltmh@tc.umn.edu**
Subject: **RE: negatives of sociology and anthropology**
Date: **June 17, 2000**

Dear George,

I am very glad that you asked this question. Indeed, there are many limitations to anthropology for a student interested in studying popular culture. And, there are many problems with the discipline of anthropology, in general. I'll cite a few here. Pardon me if I get a bit long-winded. We anthropologists have a tendency to rip apart our discipline. And, ultimately, I believe that is literally what needs to be done to the discipline.

But, as you read this, please remember that these are just my views, not necessarily those of the field as a whole. One of the things that you will learn in college is the importance of turning opinions into actual arguments and supporting each thesis with evidence and a cogent line of reasoning. Hopefully, the arguments I present here will help you decide which discipline best matches your interests.

Let me start my critique of cultural anthropology by citing the strengths of sociology. Sociologists are particularly good at identifying the major problems in large scale, contemporary, Western, capitalist societies. Although anthropologists may suggest alternatives based on comparative study of small scale, non-Western societies, past and present, sociologists usually offer more detailed and engaged critiques of the types of social contexts most of us actually experience in

our daily lives. Sociology is thus often a more practical discipline, contributing more to social change on regional, national, and global scales than anthropology. Anthropology often deals with more marginalized people and problems. Although these problems are important, they may not relate as directly to the experiences of many students as the issues tackled by sociologists.

Sociologists are also good at looking at issues of scale. Anthropological work is generally focused on small-scale collectives, such as rural villages or urban neighborhoods. Anthropologists are often not so hot at putting such local realities into national, regional, and international contexts. With important exceptions, the discipline has only recently turned significant attention to larger scale issues, such as the affects of globalization on national cultural sovereignty and identity. Sociologists have made such issues the bread-and-butter of their discipline for decades.

Likewise, cultural anthropologists are sometimes accused of being cultural determinists. Cultural determinism is the tendency to reduce all explanations to matters of culture. In fact, archaeologists and physical anthropologists often critique cultural anthropologists for overemphasizing the role of culture. Indeed, the emphasis on symbolic reality may cause anthropologists to act as if all of reality is simply constructed, denying any sort of material reality beyond that which is formed via human interpretation. Complex systems of interaction between the physical, social, and cultural worlds may all be reduced to issues of interpretation and "text." As a result of this theoretical bias toward culture, material systems of production and power may be ignored in some anthropological studies. This has negative theoretical and political consequences, particularly for those who suffer the most within these very real material systems. Culture is not everything.

So too, the smaller scale focus of anthropology may have negative moral and political consequences. Although studies involving interpersonal and intercultural misinterpretation noted earlier present an important contribution to the study of social behavior, they may fall short if not combined with more large-scale sociological and historical research. Such large-scale sociological and historical contexts are as, if not more, socially significant than the study of localized interactions. Sure, these studies might help us learn how to engineer more effective interpersonal and intercultural relations, but to what end? Will more effective interpersonal communication really lead to less intercultural and international domination? What of our interactions with the billions of people we never meet, including those who assemble our cars, sew our clothes, or pick our vegetables? Given that the readership of academic anthropology is mainly middle to upper class White people in Europe and the United States, isn't such knowledge concerning the other simply enlightening and thus further empowering the powerful?

Furthermore, what good is smooth intercultural and interpersonal communication, if we are still part and parcel of a much larger social apparatus that privileges most of us living in rich nations? We often prosper at the expense of millions whom we never meet (e.g., every time we buy clothes, shoes, or electronic goods mass produced in Third World sweatshops). Might we not simply mistake good interpersonal relations for actual intercultural and international accord? In other words, the study of how people communicate across cultural boundaries in local and interpersonal contexts is important, but so is the study of the larger class, race, and gender-based systems of economic exploitation we all take part in, whether we realize we are doing so or not. Just as society is made up of much more than interpersonal community interaction, so too should our research do more than simply document the local lives of individual communities.

Sociologists have been better at studying large-scale systems of exploitation. Sociologist Jonathan Kozol's (1991) *Savage Inequalities*, a critique of the educational

system, is a good example. Although anthropologists have been good at helping a mainly Western readership understand the cultural lives of those in other societies, they have tended to do less in terms of studying social power and inequality in the contemporary world. Therefore, although my colleagues in anthropology would cringe if they read this, I would have to recommend sociology, in general, if you are interested in issues of social power and inequality. As for sociology and anthropology at General College, however, you are as likely to study these issues in either course.

Which brings us to the problem of colonialism. Although it is becoming one of the most diverse disciplines in academe, anthropology has traditionally been dominated by White men, like me (although the rest of them tend to dress better). For this and other reasons, the discipline has been correctly criticized as "colonialist." Vine Deloria's (1969) *Custer Died for Your Sins* presents a brilliant and humorous critique of anthropological exploitation. I would recommend reading that if you want to gain a critical view of the history of anthropological research in North America.

Public critiques like *Custer Died for Your Sins* became fairly common in the 1960s, as activist groups in the Third and Fourth World (indigenous communities) began to gain a public voice. Ethnographic research began to be viewed as a form of cultural exploitation and appropriation (i.e., borrowing from another culture for personal gain). Many anthropologists, such as Gerald Berreman (1981), began to publish such critiques from within the discipline itself. The participation of several anthropologists in the Vietnam War and other questionable international programs likewise brought the issue of anthropological ethics to the fore.

Unfortunately, the anthropological response has been less than adequate, in my opinion. Anthropologists have tended to modify theory and rhetoric, but not their basic practices. Although India, Mexico, China, and many other countries have strong anthropological traditions, the field is still mainly comprised of First World academics going out to study Third World peoples. Even when guided by a sense of empathy or political solidarity, the basic social structure and practices of the discipline remain largely unchanged. The sort of critical, inter-subjective research Laura Nader (1972) called for in "Up The Anthropologist" is still rarely enacted. The research "gaze" is still very much top-down. Anthropology is still about relatively privileged people studying relatively oppressed people, although many anthropologists have added White guilt to their theoretical tool kit. Although a handful of us have turned the ethnographic gaze on elites in our own ethnographic work, those in power still remain largely outside the ethnographic gaze.

Yet, there is hope for anthropology. I compare anthropology's colonialist conundrum to Los Angeles' pollution problem. Los Angeles releases about the same amount of pollutants per capita into the air as any other city in the United States. Yet, because Los Angeles is situated in a mountainous coastal basin with prevailing westerly winds, a great deal of its pollution hangs over the city, rather than blowing off into the desert. Los Angelinos are forced to live in their own pollution. To bring the analogy home, anthropology is probably no more colonialist than any other Western academic profession. All Western academic disciplines have a colonialist tradition, be it by omission (e.g., historians, musicologists, sociologists, and others have tended to undervalue non-Western cultures) or commission, as is the case with anthropology. However, because anthropology is dedicated to the holistic study of human diversity, the discipline has had to come to grips with the issue earlier than others. Anthropologists can ignore the problem of colonialism no more than Los Angeles can pretend it has no air-quality issues. Yet, given this legacy of colonialism, and continued vestiges of intercultural domination within the field, does anthropology deserve to exist? I have been asking myself that question for 18 years, and I am no more certain than when I first posed the question.

Which brings us to the problem of cultural relativism, the attempt to understand the cultural perspectives of others. Whereas I cited this concept as one of the positive aspects of anthropology, it can also become a negative. Cultural relativism certainly has its methodological place. After all, even if one is studying a heinous cultural practice, it is useful to first understand its cultural context and intent. If one were concerned about a ritual involving nonconsensual and painful physical mutilation, for example, the best way to stop such abuse might be to gain a clearer understanding of its cultural context and causes.

The problem comes in, however, when cultural relativism is mistaken for moral relativism. Some would believe that an outsider must never take a moral or political stand on cultural issues. Fortunately, most anthropologists now make the distinction between cultural and moral relativism. Although we use cultural relativism to study societies, both foreign and familiar, as human beings we must also take moral and political stands. In fact, the consideration of difficult cultural and moral dilemmas helps us to rethink the difficult questions concerning who can really be defined as "outsiders" or "insiders" in a globally integrated world, when we are all increasingly liminal (i.e., in between) in terms of social practice and cultural identity.

Furthermore, no person or culture is completely bounded. We are all members of multiple, overlapping and intersecting cultural "flows," to borrow a term from anthropologist Arjun Appadurai (1996). There are, therefore, divergent views and dissenters in all societies. As people who have studied cultural problems, we not only have the right but also an obligation to take a position on cultural issues. But I digress. The main point, George, is that cultural relativism has had positive results when applied as a research method, and negative consequences when conflated (i.e., confused) with moral relativism.

Sorry about the earful. You only wanted to know which course to take, and I now I have presented a treatise on my discipline. Regardless, I hope that this will help you choose which discipline best matches your interests. Thanks for sparking this dialogue.

And, by the way, please call me Mark.

To: **burdell@tc.umn.edu**
CC: **pedeltmh@tc.umn.edu**
From: **wrjacobs@tc.umn.edu**
Subject: **RE: negatives of sociology and anthropology**
Date: **June 17, 2000**

George-

Once again, Mark has beaten me to the punch with a richly nuanced answer to your question! Mark gave you some more insights into sociology in addition to revealing new information about anthropology. His e-mail was a long one and you may still be digesting it, so let me add just a brief nugget to piggyback on Mark's point about moral and cultural relativism. My advisor at Indiana University, Tom Gieryn (1994), wrote:

> To be objective is not just to tolerate another's epistemic culture, but to engage in cross-the-border conversations, selectively borrowing what works for you, perhaps seeking to persuade the other of the utility of your knowledge for their projects (success at this can not be guaranteed), never imposing your epistemic culture by force of gun or pretensions of privilege (i.e., rationality, truth, moral purity, standpoint), and using the encounter to examine ceaselessly the foundations and implications of one's own knowledge-making practices. (p.325)

Basically what Tom is saying is that throughout life you will encounter people with radically different perspectives from you, but your job is (a) to try to make sense of where they are coming from, and (b) to combine elements of both perspectives to empower yourself, other people, and the communities around you while rejecting elements that threaten this

project. College is a great place to learn and practice this process, and it is central to both the anthropology and sociology courses here in the General College. Although there are problems with the lessons of both disciplines, we believe that once you've completed both courses you'll be a more well-rounded person. We look forward to working with you over the years…

-Walt

To: **pedeltmh@tc.umn.edu, wrjacobs@tc.umn.edu**
From: **burdell@tc.umn.edu**
Subject: **Is there a Socio-pology?**
Date: **June 18, 2000**

Dear Walt and Mark,

Thank you for the information and advice. I'd like to take both courses, but I wonder if I can fit them both into my schedule? Sounds like the perfect course for me would be something that combines the strengths of both sociology and anthropology. Too bad there isn't a Socio-pology course or something like that!

To: **burdell@tc.umn.edu**
CC: **pedeltmh@tc.umn.edu**
From: **wrjacobs@tc.umn.edu**
Subject: **RE: Is there a Socio-pology?**
Date: **June 19, 2000**

Dear George,

Although this is coming from Walt's e-mail account, we are both writing this to you. We are in Walt's office, but Mark is doing most of the typing.

There actually is a field of study dedicated to the interdisciplinary study of contemporary culture. It is called "cultural studies." Cultural studies is an interdisciplinary field that draws theory and methodology from several disciplines, including anthropology and sociology. Walt mentioned it in his first e-mail; we'll explain more about it here.

Although there are certainly problems with cultural studies as well, we both believe cultural studies successfully integrates the various strengths of our fields. This is not only the case for the study of popular culture, but for the study of contemporary societies in general. Whereas anthropology can be faulted for focusing overwhelmingly on the study of Third World and rural cultures, sociology can be faulted for its over-emphasis on social research in Western societies. There has been much too little critical, comparative, and cultural study of dominant institutions in the contemporary world (e.g., governmental organizations, corporations, mass media, new technologies).

Cultural studies has attempted to fill that gap. Anthropology and sociology have slowly begun to recognize their respective oversights, however. The sociology of culture and the anthropology of globalization are just two of the areas in which such a growing synthesis is evident. The overly simplistic binary oppositions upon which both fields were organized are rapidly falling apart. We can no longer speak of Western versus Eastern cultures, First versus Third Worlds, society versus culture, or make many similar distinctions without obscuring much more than we clarify. For better or worse, the social and cultural world is being reorganized and integrated in ways that challenge simplistic notions of culture, society, and identity. As these trends continue, sociology and anthropology will undoubtedly continue to change as well. We believe that cultural studies will be a shared discussion point as these sister disciplines continue their discussion concerning the nature of social reality in a globally integrated world.

Therefore, we are working on ways to make our courses more interdisciplinary and relevant as well. Cultural studies is one of the ways we are trying to do this. We believe that this will not only strengthen our courses, in general, but that interdisciplinary social study will also be more useful to General College students as they move on to enter a diverse range of majors and career paths. Interdisciplinary courses also allow us to adapt course content to the desires and needs of students, rather than discipline them from the outset of their college

experience. As has been true in other multidisciplinary and interdisciplinary departments, cultural studies is emerging as one potential means for integrating a diverse curriculum at the General College, not only within the social sciences, but in the humanities as well.

The General College is the University of Minnesota's developmental education unit. Following recent discussion about the purpose of developmental education to establish a pluralistic and discursive framework that builds on students' existing knowledge and practices, instead of one that focuses on standardized deficits and remediation (Lundell & Collins, 1999), we believe that a cultural studies curriculum should provide students with flexible tools to understand and shape a rapidly evolving world. Michel de Certeau (1997) argues that "spectators are not the dupes of the media theater, but they refuse to say so" (p. 31). Similarly, students in the General College are not passive dupes of media (as well as other social) theaters, but often will not question their surroundings. A cultural studies perspective is powerful in that it seeks to make interventions in existing social conditions, at the level in which students are living instead of in the abstract, as in the case of more traditional sociological and anthropological practices.

Eventually we'd like to eliminate "sociology" and "anthropology" designations from our social science courses, renaming them "cultural studies." Further, we'd like to experiment with the very nature of "course." Rather than having 40 or more students meet with one instructor for 16 weeks to broadly cover a single subject area, we will explore possibilities of a modular system in which students are with instructors for shorter periods to study narrower subjects in depth before moving on to other units taught by different instructors. We also hope to experiment with a variety of classroom structures and practices to optimize learning possibilities.

We will begin work on this integrative curriculum design during the 2000-2001 academic year, so it won't appear until the 2001-2002 school year as the earliest possibility. In the meantime, both of us incorporate cultural studies into our current sociology and anthropology courses. Cultural studies demands that individual practices and products, like those of popular music, be examined from multiple perspectives. As discussed in his first e-mail, Mark uses multiple methods (e.g., interviews, participation, observation, comparative analysis) to learn and teach Mexican music in his Introduction to Cultural Anthropology course. Walt's freshman seminar on "Living in the Electronic Information Age" is built around the "circuit of culture," (du Gay, Hall, Janes, Mackay & Negus, 1997) which says that examining a practice or product from the perspectives of production, consumption, representation, identities, and regulation provides individuals with a very rich tool kit to explore contemporary life. Given our deployment of strategies such as these, you will find our courses relevant to your interests in popular culture and music. Check out our web pages for syllabi and other information.

http://www.gen.umn.edu/faculty_staff/pedelty/

http://www.gen.umn.edu/faculty_staff/jacobs/

Have a good summer. We look forward to teaching and learning with you this fall!

Mark and Walt

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Cooperative Learning in the Multicultural Classroom

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This chapter addresses the connectedness between developmental and multicultural education and discusses the role and application of cooperative learning in creating an inclusive, interactive classroom for developmental learners. While examining the theoretical premise behind cooperative learning theories, this chapter highlights the specific worth of such methods in classrooms that involve multicultural curricula. Although paradigms of teaching have focused on instructional role and dissemination of knowledge, the paradigm of cooperative learning emphasizes the value of active learning, shared governance, group accountability, and student-generated construction of knowledge, as a means of creating a community of learning in the classroom.

Tell me I forget

Show me I remember

Involve me I understand

—Ancient Chinese Proverb

Throughout the history of American higher education, students, educators, and the public have wrestled with the question of college curricula. Indeed, the changes in college curricula have been shaped by the historic forces of the time. With the end of the Civil War, the traditional curriculum was criticized for having "little relevance to contemporary life" (Brubacher & Rudy, 1997, p. 266). This same clamor for relevance and inclusiveness was heard during the Vietnam War, culminating in the birth of Black Studies (Brubacher & Rudy, 1997). More recently, the debate on what we should teach in college reached another heated peak in the 1980s when the awareness and demand for a multicultural curriculum swept the nation. In addition, the needs of diverse learners have required us to examine not only what we teach, but also how we teach. With attention to the necessity to reexamine teaching methodology, this paper begins with a description and application of cooperative learning theory, and then focuses on the effectiveness of cooperative techniques in classes with multicultural curricula.

The concept of cooperative learning is not new to the world of academe, but certain forces are pushing it to the forefront for a variety of reasons. From a philosophic perspective, the need to recreate communities of learning stems from what Patrick Hill (1985) calls the "fragmentation of the disciplines and departments and people" (p. 1) in higher education. As we observe our students in the classroom and reflect on our professional relationships, I have begun to question whether the competitive and isolated process of learning has left us so focused on minutiae that we are missing the big picture. Others like Parker Palmer (1991) concur that academia is undergoing a shift from the "atomistic and Darwinian" (Claxton, 1991, p. 22), to a model of reality that is more communal in nature. He argues that "there is a growing sense that teaching and learning don't really happen unless there is some

kind of building of relationships—not only between teacher and students but between teachers, students and subject" (p. 23). Another reason for the growing acceptance of learning communities and cooperative learning is "a changing philosophy of knowledge" (Cross, 1998, p. 4). Cross argues that unlike the traditional view of knowledge, where the learner discovers external realities, the "nonfoundational view of knowledge is built on the assumption of constructivism where knowledge is actively built by learners, working together cooperatively and interdependently" (p. 5).

It is this idea of producing learning rather than the distribution of knowledge in neatly wrapped parcels that separates the Learning Paradigm from the Instruction Paradigm (Barr & Tagg, 1995). In their article, "From Teaching to Learning," Robert Barr and John Tagg argue that to truly reform education we need to look outside the framework of traditional instruction and lecture style teaching where students are passive bystanders. Rather, we need to create "environments and experiences that bring students to discover and construct knowledge for themselves, to make students members of communities of learners that make discoveries and solve problems" (p. 15). It is to this end that cooperative learning seeks to engage students in their own learning process.

What Is Cooperative Learning?

Roger and David Johnson have been working on cooperative learning since the early sixties. Together with Karl Smith, they argue that cooperative learning theory stems from three theoretical perspectives: cognitive development theory, behavioral learning theory, and the social interdependence theory. Each perspective offers a different lens to examine cooperative learning; they suggest that cooperative learning is most strongly rooted in the work of the social interdependence theory. The Johnsons and Smith (1998; Johnson & Johnson, 1997) have examined all three theoretical positions to demonstrate that each provides a different perspective and dimension to the concept of cooperative learning.

From the standpoint of cognitive developmental theory, they reflect on the work of Piaget and Vygotsky (Johnson & Johnson, 1997; Johnson, Johnson, & Smith, 1998) who believe that collaborative learning and problem solving are critical to the construction of knowledge. The work of Piaget is founded in the belief that when individuals interact with their environment, some type of socio-cognitive conflict is likely to occur. The efforts towards managing this cognitive dissonance "stimulate perspective taking ability and cognitive development" (Johnson & Johnson, 1997, p. 97). Vygotsky (1962) posits that knowledge is socially constructed from cooperative group efforts to comprehend and collectively solve problems. Thus, both theorists focus on the cognitive aspects of processing conflict, the result of which is newfound knowledge.

The Johnsons' and Smith's (1998; Johnson & Johnson 1997) examination of the work of behavioral theorists such as Skinner, Bandura, Thibaut, and Kelly suggests that cooperative learning is "designed to provide incentives for members of a group to participate in the group's efforts" (Johnson, Johnson, & Smith, p. 29). More specifically, Skinner focuses on the importance of conditioning and reinforcement in determining behavior. Skinner suggests that behavior modification individually and in groups is based on positive reinforcement of desirable overt behavior (Schultz & Schultz, 1992). His position on verbal behavior is also relevant to cooperative learning in that he suggests that "speech is a behavior and thus is subject to the contingencies of reinforcement and prediction and control, just like any other behavior" (Schultz & Schultz, p. 359). Like Skinner, Bandura has a behaviorist approach, but his theory has a cognitive component as well. Although he agrees with Skinner's notion of reinforcement as a motivation for changes in human behavior, he also posits

> All kinds of behavior can be learned in the absence of directly experienced reinforcement. We do not always have to experience reinforcement ourselves; we can learn through vicarious reinforcement, by observing the behaviors of other people and the consequences of those behaviors. (Schultz & Schultz, p. 366)

Thus, modeling plays a role in learned behavior based on observing and emulating the behavior of others. From the perspective of behavioral modification and concrete learning, one can see the connection between effective modeling and reinforcement of positive behavior in shared governance, open communication, and cooperation in the classroom. Yet, the be-

havioral perspective does not examine the introspective aspects of individual and group motivation towards common goals.

Although the aforementioned theoretical orientations have their supporters, social interdependence theory has been the strongest theoretical basis for the examination of cooperation and competition. This theory has a long history, one that began in the early 1900s when Gestalt psychologist Kurt Koffka suggested that groups were dynamic wholes, and its members depended on each other to varying degrees (Johnson & Johnson, 1997). Koffka's colleague Kurt Lewin (1935) further developed this concept of group interdependence by suggesting that the nature of this dynamic relationship is dependent on two factors. First, the essence of the group is the extent to which the members of the group are interdependent on each other in their pursuit of common goals. The pursuit of these shared goals creates a dynamic whole such that a change in the "state of any member or sub group changes the state of any other member or sub group" (Johnson & Johnson, p. 97). Second, the inherent tension among group members pushes them toward achieving their common goals. Thus, the push and pull of cooperation and conflict within groups, and the manner in which this shapes the achievement of collective goals, was borne from Lewin's theory and research on interdependence.

One of Lewin's graduate students Morton Deutsch (1949) expanded the ideology of social interdependence to develop a theory on cooperation and competition. His theory was based on two principles. The first principle related to the type of interdependence that existed among people in a given group, and the second principle related to "the types of actions taken by people involved" (Johnson & Johnson, 1997). These principles illustrate that the way we are connected shapes the types of outcomes that will result from our interactions. "Positive interdependence (cooperation) results in promotive interactions as individuals encourage each other's efforts to learn. Negative interdependence (competition) typically results in oppositional interaction as individuals thwart each other's ability to succeed" (Johnson, Johnson, & Smith, 1998, p. 29).

David Johnson was one of Deutsch's graduate students, and along with Roger Johnson and Karl Smith, he has continued the work of cooperative learning theory. Although there are differences between the three theoretical perspectives, each provides a valuable dimension to developing and sustaining classroom dynamics that result in student centered learning. At the heart of cooperative learning is the concept of interdependence between members of a group that results in enhanced problem solving and the birth of new ideas. Yet, one should not simplify the concept of cooperative learning into group work. Simply throwing students into groups does not result in the development of community, nor does it dissolve the competitive, individualistic behavior that many students think is expected of them. Simply declaring that the group will be a community is like declaring that there will be world peace. It doesn't work. To create community requires facilitating, teaching, and familiarizing students with what it means to work together.

The unfortunate reality is that most of our students have been accustomed to simply receiving pellets of knowledge from teachers and then regurgitating this material back to us in the form of tests and papers. Hence the questions "Will it be on the test?" Or, "Is this important?" I can hardly blame students for this approach; it is simply what they are used to. To show students that they can be engaged and active participants in their own learning requires specific steps and criteria.

Roger and David Johnson together with other educators (Johnson & Johnson, 1991, 1995, 1997; Johnson, Johnson, & Holubec, 1990; Johnson, Johnson, & Smith, 1991) have written numerous books on facilitating cooperative groups and describe some basic factors that must be set in place to create positive interdependence. First there must be a way to link classroom activities or assignments so that group members need each other's input in order to be successful. Second, there must be a means of capturing individual accountability within the group process. Third, students must be encouraged to help each other and provide feedback to their group members about individual and collective work. This step requires that we as instructors have the ability to model and develop an environment of trust and respectful communication. Finally, because all these pieces rarely fall into place immediately, groups need to have time to reflect and identify ways to improve their collective process of learning (Johnson & Johnson, 1995; Johnson, Johnson & Smith, 1998).

Constructive Controversy: Can We Disagree?

It is also important to note that although cooperative learning encourages accountability and shared learning, it does not require that members of the learning community engage in agreeable group think. Quite the opposite is true. In fact, Johnson, Johnson, and Smith (2000) have introduced the concept of constructive controversy to engage students in discussion and debate in the classroom. They suggest that constructive controversy exists when there is dissonance between the beliefs, information, and conclusions of two or more students around a given topic. This dissonance results in a process in which both put forth cooperation and conflict in an effort to reach a resolution. "Controversies are resolved by engaging in what Aristotle called 'deliberate discourse' (that is, the discussion of the advantages and disadvantages of proposed actions) aimed at achieving novel solutions (that is, 'creative problem solving')" (p. 2).

Although controversy is not uncommon in classrooms, the way in which instructors facilitate controversy and the level at which student groups are working effectively together will determine whether disagreement results in new knowledge and synthesized arguments or pointless yelling matches. To develop an environment that fosters creative conflict, instructors need to examine the role of the questions they are asking students to answer. Do the questions invite debate and synthesis of knowledge, or are they limited to responses that demonstrate mastery of facts? Do the questions open the door to new inquiry and collective problem solving? This takes us back to the notion of setting a standard of cooperation in the class. Research comparing constructive controversy with concurrence seeking and individualistic learning suggests that controversy in a cooperative context "induces more complete and accurate understanding of the opponent's position (and feelings) and greater utilization of others' information" (Johnson, Johnson, & Smith, 2000, p. 7). In addition, constructive controversy promotes "greater liking among participants than concurrence seeking (avoiding disagreement to reach a compromise) and individualistic efforts" (Johnson, Johnson, & Smith, p. 7).

These findings are particularly relevant to creating community and creative conflict in classrooms that focus on multicultural curricula. Why? For starters, as many colleges have incorporated cultural diversity requirements into their curriculum, students who may not have opted to enroll in a "diversity" class are required to take one. Second, even students who choose to participate in such courses are surprised and fearful of the broad range of ideological differences that exist between them and their peers.

As we examine racism, classism, homophobia, sexism, and ableism, classroom reaction can range from strong resistance to complete shutdown. If there is engagement, it often translates into angry outbursts, blame, and the inability of two parties to listen to each other. How do we help our students cross the chasm between resigned resistance and misdirected anger to a place of "creative" conflict? How do we help them create a space where their ideas and diverse experiences become the impetus for a paradigm shift allowing them to see the world from many different perspectives? Cooperative learning and constructive controversy theories provide a powerful template for creating community and trust in the developmental multicultural classroom.

The Relationship Between Developmental Education and Multicultural Education

Spann and McCrimmon (1998) argue that three terms, "remedial," "compensatory," and "developmental," have emerged to define the educational experience of students who are "underprepared." The term remedial implies a deficiency in the student and therefore a push to fix or remedy the issue. The use of the term compensatory began in the 1960s, as part of Lyndon Johnson's War on Poverty, when the goal of education was "the lessening or removal of environmental induced deficits" (Spann & McCrimmon, p. 41). Although the former term focuses on remedying the deficit, the latter acknowledges that the deficit is not innate but a result of external factors. Both terms however, smack of negativity and tend to label their referents. Hence, in the 1970s faculty working with at-risk students chose to remove the negative connotations by referring to their work as developmental. This term focuses on the students' "potential rather than the deficits" (Spann & McCrimmon, p. 41). By refocusing on potential, developmental educators ar-

gue that they also take a holistic approach to their students—focusing on academic transition and personal development beyond the limited realm of academic skills alone (Higbee, 1996; Spann & McCrimmon, 1998).

In an effort to further articulate the difference between what is considered remedial education and the work of developmental educators and students, Higbee (1996) writes:

> Among the meanings of "develop" are "to evolve the possibilities of...to promote the growth of" (*Webster's New Collegiate Dictionary,* 1981, p. 308). "Development" is defined as "the act, process, or result of developing" (p. 308). "Remedy," meanwhile refers to "a medicine, application, or treatment that relieves or cures a disease...something that corrects or counteracts an evil" (*Webster's New Collegiate Dictionary*, p. 970). To remedy is "to provide or serve as a remedy for" (p. 970). Pardon me if I bristle every time I hear someone refer to what I do as remedial...My students are not sick, and they do not need to be cured. They are evolving, and the possibilities are limitless. (pp. 63-66)

This argument further illuminates the fact that academically underprepared students are not the only ones served by developmental education. Rather, the ideology of promoting intellectual and holistic growth serves the needs of "the learning disabled, the visual and hearing impaired, those with mobility impairments, the English as a Second Language student, the student-athlete, the returning adult student, and the first generation college student" (Spann & McCrimmon, 1998, p. 41).

The same themes of deficiency and lack have been challenged by multicultural educators in their battle to incorporate cultural pluralism into the educational process. Multicultural educators face those who assign a deficiency orientation to students who are "socially or culturally deprived" (Sleeter & Grant, 1988, p. 38). These terms are code for students of color, multilingual students, students with disabilities, and low-income students. Much like developmental educators, multicultural educators have challenged this model by creating their own paradigms of teaching. There are numerous approaches to multicultural education that honor difference and illustrate the value that diversity brings to the learning experience. Two approaches that I will highlight include the human relations approach and the multicultural education approach.

Human Relations Approach

The theoretical background for the human relations approach comes from general psychology and social psychology (Sleeter & Grant, 1988). Like cooperative learning, this approach is also referred to as intergroup education, and focuses on "helping students communicate with, accept, and get along with people who are different from themselves" (Sleeter & Grant, p. 77). This movement towards reaching and teaching students at an affective level began during World War II and continued after the war in an effort to eliminate discrimination, not only abroad but also at home in the United States. Human relations advocates argue that to use this approach effectively it must be infused in the curriculum and actively involve students in the process of learning. They also suggest incorporating real life scenarios into the understanding of intergroup hostilities and most importantly, creating a classroom environment in which a student's ability to be successful is not dependent on the failure of others in the class (Sleeter & Grant). These premises clearly reflect social interdependence as discussed with respect to cooperative learning and support the ideology of an environment that facilitates sharing of knowledge, resources and problems.

Multicultural Education Approach

Although multicultural education has now become the catch phrase for much of the work involving race, class, gender, homophobia, and disability issues, the multicultural education approach grew out of the 1960s when the potency of the civil rights movement pushed for a reassessment of the deficiency orientation. Sleeter and Grant's (1988) review of the literature demonstrated five primary goals of the multicultural education approach: "(a) Promoting the strength and value of cultural diversity; (b) promoting human rights and respect for those who are different from oneself; (c) promoting alternate life choices for people; (d) promoting social justice and equal opportunity for all people; (e) promoting equity in the distribution of power among all people" (Gollnick, 1980,

as cited in Sleeter & Grant, p. 137). Thus, the multicultural education approach celebrates the ideology of cultural pluralism and is not limited to issues of race but examines the similarities of racism, sexism, homophobia, classism, and ableism as systems of oppression.

Why is this important to developmental education? In my view, developmental education seeks to meet students at their level of proficiency and work with them to unearth their potential. This involves the teaching of discipline related skills, critical thinking, and college expectations, but it also involves the holistic development of the person. The understanding of who we are as individuals is deeply tied to our ability to reach our full potential.

Secondly, developmental students are a diverse group of learners. This not only demands that we have a greater understanding of their diversity, but that we as educators use this rich tapestry of difference to allow students to teach each other. In addition, it is interesting to note that students taking developmental courses are "more likely than those not receiving [developmental] help, to have a family income of less than $20,000 annually, to have been born outside the United States, to speak a language other than English at home, and to be people of color" (Burd, 1996). This suggests that many of our students have experienced the systemic effects of marginalization in multiple avenues of their lives and identities. To acknowledge this is important, and to allow students to learn how to be self-advocates is part of the developmental process. Given these realities and themes, I believe there is a powerful connection between the work of developmental and multicultural educators, and that cooperative learning provides a vehicle by which we serve the needs and target the potential of our students.

Applying Cooperative Learning to the Multicultural Classroom

There are some distinct connections between the philosophy of developmental education, cooperative learning theory, and multiculturalism. Each perspective acknowledges the role and needs of the individual, the give and take between student and teacher, and the powerful role of peer relationships in the classroom. Yet, the issue of resistance is one that many of us face in the classroom.

How do we reach a level of honest dialogue and intellectual exchange around multicultural issues when students are deeply fearful about venturing into this dangerous territory? Given this dilemma, the concept of creating a classroom that is a "safe space" is critical and yet difficult to attain. Simply requiring a cooperative spirit does little to create it. Hence, the idea of cooperative learning involves an active process in which students are invited to define the very space they want to inhabit. Allowing students to own and belong to the process of developing trust is one way to begin.

Early advocates of multicultural education argue that "the ideology of multicultural education is one of social change—not simply integrating those who have been left out in society, but changing the fabric of society" (Sleeter & Grant, 1988, p. 139). With this concept of change comes fear, acted out as active or passive resistance (Chan & Tracy, 1996). This resistance is further aggravated because students in a given classroom are at different levels of their own identity development (Tatum, 1996). Thus, creating a sense of ownership in the classroom process is integral to developing trust and dissolving resistance.

A first step is to let the students define what they understand by the word community. Working in small groups to collectively define the meaning of community allows students to initiate ownership and accountability of the classroom experience. One group in my Multicultural Relations seminar generated the following definition of community: "community is a group of people of different races, colors, cultures and gender who come together to learn, teach, communicate to become stronger, develop friendships and understand one another's problems." Rather than perpetuating individualistic competition, having students articulate what they hope for in terms of peer interaction creates a "personal transaction among students and between faculty and students" (Johnson, Johnson, & Smith, 1991, p. 10).

Tied to defining community is the necessity to stipulate rules by which the community can thrive. Although rules are sometimes associated with a teaching paradigm that seeks to control student engagement, rules can also serve as positive guidelines that provide the structure needed for trust and safety in the multicultural classroom. Again, it is the students who

must take responsibility for developing these rules. The reality is that this task may be daunting for first year developmental students. One option is to provide each small group with a template of rules allowing them to add, subtract, and revise the template. Groups can then be invited to share their final result while articulating their reasoning behind each rule. As students begin to develop the rules, it is often their definitions of community that guide the creation of rules. Working in cooperative groups within the first week of the semester, students in my Multicultural Relations seminar created the following stipulations for their classroom community: "Each person has an equal voice. We will create a safe environment and protect one another and our surroundings. We will work together for common goals. Each person will contribute by doing their share."

As the semester moves on, the instructor can model and facilitate appropriate use of the rules established by the students themselves. In addition, the process of developing collective rules gives students an early experience in constructing and articulating their own ideas and addressing the importance of individual accountability within the group.

Embedded in the model of cooperative learning is the use of classroom space. There are two pieces to the concept of classroom space. The first is the actual physical space. Is it accessible? Can students who are required to participate in cooperative groups physically look at each other? "Face to face promotive interaction" (Johnson, Johnson, & Smith, 1991, p. 19) is critical to the process of sharing opinions, working on shared tasks, and engaging in creative conflict. If our classroom set-up does not allow students to look at each other, know each others' names and hear each others' stories, then the depth of the interaction is already limited. When students struggle to define their experiences with racism, or to share deep ideological differences around women's roles, their ability to engage in authentic conversation is already reduced if they cannot see each others' faces, emotions, and most importantly each others' humanity.

Although the effective use of physical space is vital, metaphoric space is also important. Parker Palmer (as quoted in Claxton, 1991) discusses the paradoxes that are inherent in creating a safe classroom space. He suggests that although it is important to create a liberating space, this openness must be tempered with some boundaries. For example, as students gain trust and begin to articulate their opinions and prejudices, this can only happen effectively if there is some assurance that the discussion will not turn into an experience resembling daytime television talk shows. It is here that the modeling of classroom rules becomes important for the instructor. In addition, as we push students to examine systemic institutionalized oppression, there must be space to allow students to apply the abstract to the lived experience. For example, when speaking of social construction of race, students can be invited to discuss how this relates to their own identity. One multiracial student in my Multicultural Relations seminar said "I have found that society forces you to be in one box or another, the boxes I am referring to are the Black and White boxes. It is crazy how being just what you are is not good enough." Thus, the classroom space must allow for "the little stories of the individual and the big stories of the disciplines" (Palmer, 1998, p. 76).

With the establishment of trust comes the opportunity for creative conflict. This, too, involves practiced efforts. Inherent in the idea of engaging in constructive controversy is the capacity to listen. Most of our students, and indeed many of us, are so involved in expressing our own ideas that we do not fully hear the ideas of our peers. Group exercises that push students to fully hear and digest the thoughts of their peers are integral to developing their capacity to engage in meaningful dialogue with one another.

Given that the notion of creative conflict is new to many students, there is a necessity to provide them with structured means of engaging in the process of disagreement. By providing students with case studies or mock scenarios around multicultural issues, we give them a vehicle to engage in constructive conflict and create a forum within which they can weave their own voices into the context of theory. This format also provides them with a safe and somewhat structured environment in which to air difference, share perspective, and apply what they have learned to the lived experience. Once trust is established, students are likely to engage in creative conflict without the safety net of case studies or debates. Rather than enhancing tension, constructive controversy has been found to "promote greater liking among participants than either concurrence seeking or individualistic efforts" (Johnson, Johnson, & Smith, 2000, p. 6).

Although cooperative learning strategies enhance the development of community and constructive conflict, the reality is that resistance is inherent to any type of learning that requires a paradigm shift. Thus, it is quite normal that expressions of student resistance range from dissonance and confusion to frustration and even anger. One way to address this is simply to acknowledge the reality of resistance. If the instructor can bring the idea of resistance into the collective consciousness early in the game, students have the opportunity to engage in self-reflection and can examine the source of their fear. Allowing students to express their feelings in writing via e-mail or in-class responses provides an outlet for this resistance.

As instructors we can bring various issues into the classroom by allowing students time to self-reflect and then summarizing these themes in the classroom. One student in my Multicultural Relations class wrote via e-mail: "This white [sic] privilege thing has thrown me for a loop. A teacher in high school touched on it for a day but wouldn't discuss it. How that it is being thrown in my face to look at and acknowledge, I don't want to. Almost that I don't want to accept it is true."

Given that this was not a lone response, I was able to readdress the issue of White privilege by asking students to describe their feelings around the concept. This resulted in a productive discussion that could not have occurred without engaging students in individual self-reflection.

Finally and most importantly, our own identity as instructors and our level of comfort with the learning paradigm will shape the classroom experience. Parker Palmer (1998) wrote that "good teaching cannot be reduced to technique, good teaching comes from the identity and integrity of the teacher" (p. 10). Thus, as we ask our students to develop as change agents, we must continually examine our own ability to take risks and model cooperative learning.

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Constructivist Perspective and Classroom Simulations in Developmental Education

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Constructivism and developmental education both conceive of education in the broadest terms, are focused on student needs and abilities, and demand instructor creativity and flexibility. The theoretical foundations for constructivism are very compatible with developmental education, and constructivist methods are effective with developmental students. Simulations provide an effective method for implementing constructivist principles into developmental classrooms. Classroom simulations are versatile, active learning activities, which can be designed to foster cooperation, collaboration, information exchange, consensus building, and individual or group competition. Simulations also stimulate student interest and involvement in the course, and promote long term retention of content material.

This chapter describes the compatibility of constructivist learning theory with classroom simulations as a teaching method in a developmental education context. First, the theoretical basis, principle concepts, and educational implications of utilizing a constructivist approach are explained and examined. Secondly, parallels and correlations are drawn between constructivism and developmental education. Finally, classroom simulations are discussed as an effective teaching method for implementing constructivist learning theory with developmental students. The simulation examples provided were created and designed by the author for use in history classes in the General College at the University of Minnesota. The General College provides developmental education by integrating academic skill development into freshman level content courses.

Classroom simulations are active learning activities that place students in the role of decision makers assessing the various options available in a particular situation. Students discuss the options, negotiate with others, and ultimately reach consensus or majority decisions concerning the issues under consideration. These activities can generate multiple outcomes providing the opportunity to compare and contrast the various results and reach a deeper understanding of the concepts involved. The emphasis is on understanding *why* something happens and not on memorizing *how* it happens. Short (e.g., 20 to 40 minute) classroom simulations are efficient in the use of class time, adaptable to a variety of teaching objectives, and enjoyable for the students. They can be designed to foster cooperation, collaboration, information exchange, consensus building, individual competition, group competition, or a mixture of these at different levels or stages in the simulation. Activities can have students working individually, in pairs, triads, small groups, medium sized groups, or as a whole class.

Constructivism

Constructivism is founded on scientists' best understanding of the brain's natural cognitive processes and growth: new information or concepts are integrated with old knowledge to derive new insights (Feldman, 1994). The Association for Supervision and Curriculum Development has defined constructivism as "an approach to teaching based on research about how people learn. . . . each individual 'constructs' knowledge instead of receiving it from others" (Scherer, 1999, p. 5). According to Caine and Caine (1994), "The brain needs to create its own meanings. Meaningful learning is built on creativity and is the source of much joy that students can experience in education" (p. 105). "Inquisitiveness is what drives...learning, and constructivism is the theory that cognitive scientists have devised to explain how an in-

dividual progresses from inquisitiveness to new knowledge" (Abbott & Ryan, 1999, p. 66).

Student experiences generally run counter to this perception of the learner playing the crucial, determining role in his or her education. The traditional classroom is focused on the teacher as the provider of content knowledge, perspective, and analysis. These components are conveyed by the instructor through a lecture format, in structured activities, or in an exchange of probing questions and student responses. The student role is primarily passive and limited to listening, reading, and working through routine exercises. Evaluation consists of students repeating recently received factual information in the form of papers or responses to test questions (Brooks & Brooks, 1993).

Constructivist theory posits a much more balanced interaction with knowledge passing from teacher to student, from student to student, and from student to teacher. Likewise, students as well as teachers can be the sources of perspective and analysis. Constructivist teachers assist students in processing, transforming, and internalizing new information. Although there are many commonly used evaluation methods for the imitative behavior required in the traditional classroom such as multiple choice tests or essay exams, assessing the deeper individual understanding achieved through constructivist methods is considerably more difficult. Teachers must develop methods and strategies to assess this student-constructed knowledge (Brooks & Brooks, 1993).

Smith (1977) assessed critical thinking in college classrooms, focusing on four activities: instructor encouragement, questioning procedures, cognitive level of participation, and interaction with peers. Active involvement in the class resulted in higher critical thinking scores than for students with minimal involvement. Teachers developing and implementing instruction based on constructivist theory employ methods and activities that promote "active, hands-on learning during which students are encouraged to think and explain their reasoning" (Scherer, 1999, p. 5). Thus, in a constructivist classroom, student experiences and perspectives are valued and teachers specifically develop lessons to elicit and challenge student suppositions.

Theoretical Foundations

Constructivism has a rich theoretical foundation. John Dewey (1936) advocated experiential learning through field studies and immersion activities, arguing that "isolation of subject matter from a social context is the chief obstruction in current practice to securing a general training of the mind" (p. 79). Jean Piaget (1970) believed that mental structures developed gradually as learning was constructed through the organization and integration of new information and experiences. His concept of discovery learning had students manipulating objects and content information, analyzing what they observed, and reaching conclusions based on this evidence. He theorized that, in the process of assimilating this knowledge, students will think differently about a concept as a result of their experience and interaction with other learners. Lev Vygotsky (1978) claimed that individual learning was primarily the result of a social process. He argued that "human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them" (p. 88). Meaningful social interaction allows the student to construct a group meaning of a complex idea and then internalize this idea with a deeper individual understanding.

Human intelligence is much more complex and varied than our traditional narrow definitions of it (Armstrong, 1994; Gardner, 1983, 1993; Lazear, 1993). Gardner (1983) recognized intelligence as the human capability to solve problems and identified multiple intelligences consisting of verbal, logical, spatial, musical, kinesthetic, interpersonal, intrapersonal, and naturalist. This multidimensional concept of intelligence has implications for the ways students learn, the application of effective teaching methods, and the need for a variety of assessment methods. Each student has available a variety of different sensory mechanisms to support integration of new information with existing knowledge. To facilitate this process, the instructor utilizes a wide array of teaching methods that enable the students to construct their own understanding and knowledge of the topic.

Brooks and Brooks (1993) have identified five central tenets of the constructivist teacher's role in the classroom. First, the students' points of view are valued and sought by the teacher, who then designs and

modifies instruction based on that knowledge. Second, students' suppositions based on their life experience are challenged through class activities or discussion. Students are afforded the opportunity to reassess their suppositions and either confirm, recant, or modify them. Third, constructivist teachers convey the relevance of classroom activities and knowledge to the students' lives. Fourth, lessons address major concepts promoting a deeper understanding of the whole rather than the memorization of small factual data. Fifth, assessment of student knowledge and understanding is conducted in the context of daily classroom activities, not as a scheduled paper-and-pencil test at the end of a unit of study.

In the application of constructivist theory, the broader student role is subdivided into three specific roles: the active learner, the social learner, and the creative learner. Students are cast in an active role where they discuss, organize and analyze information, observe activity, and then hypothesize and reach conclusions. Knowledge and understanding are not constructed individually but in dialogue with others, and facts are only "true" in that social context. Thus, historical truths depend upon the social perspectives of the original observer and the later interpreters, while scientific truths rest upon social assumptions and are determined through a social critical process that belies their supposed objectivity. Constructivists believe that the learner creates or recreates knowledge and understanding, and the teacher's role is to facilitate the student's creativity by providing class activities that allow the student to discover theories and perspectives leading to a deeper understanding of the knowledge (Phillips, 1995).

Creating a constructivist classroom requires imagination, persistence, and dedication. "It is easy to imagine [classrooms] in which ideas are explored rather than answers to teachers' test questions provided and evaluated. . . . Easy to imagine, but not easy to do" (Cazden, 1988, p. 54). Some learners will not welcome the high levels of cognitive reasoning required for constructivist learning, preferring to be told the content information. Some students have developed successful strategies for the traditional classroom and may perceive the constructivist techniques deceptive, manipulative, and time consuming (Perkins, 1992). For the teacher, lecturing, asking questions, and fielding answers is much simpler and more controlled than creating the activities that allow students to construct their own understanding. Testing recall of knowledge provided by the instructor is much easier than assessing the understanding and knowledge constructed by each individual student.

A variety of outside pressures exist that tend to inhibit the use of constructivist theory. At the secondary level, the recent widespread efforts by state governments to increase accountability and establish state wide standards and evaluations emphasize the factual recall tests to the detriment of constructivist teaching methods (Brooks & Brooks, 1999). At the collegiate level, large class sizes, common exams for multiple sections, prerequisite requirements, serial courses, and transfer comparability all tend to place the emphasis on the coverage and delivery of content rather than on the facilitation of individual students to construct their own knowledge and understanding. Unfortunately, the comprehension of learning theory is limited among political leaders and the media, and they tend to utilize those evaluation methods that are the most readily available and easiest to understand. As a result, teachers at all levels may find it safer to use traditional methods because they can clearly document content coverage and focus on the recall knowledge needed for the test.

Constructivism and Developmental Education

The contrast between traditional instruction and constructivist learning is comparable to the shift in terminology and philosophy for the education of at-risk students from remedial education to developmental education. Remedial education focuses on the reiteration of missed content so that past academic failures can be rectified, while developmental education recognizes the student as a work in progress and fosters both cognitive and affective growth. Remedial models seek to "fix" students, while developmental models recognize the array of strengths and weaknesses that each student brings to the class and seeks to develop the whole student (Boylan, 1995; Higbee, 1993). Within this frame of reference, traditional instruction aligns well with remedial education, while constructivist activities are very compatible with developmental education.

Constructivism and developmental education have broad intersections. Both conceive education in the broadest terms, are student-centered, and display ultimate respect for student capabilities and contributions. Both focus on enhancing student skills and potential; fostering creative, flexible, and diverse teaching methods; and elevating the intellectual discussion in the classroom. Constructivism recognizes that the outcome of the constructive process is different for each student, while developmental education recognizes the mixture of strengths and vulnerabilities that each student exhibits.

Developmental students have had limited success with traditional forms of instruction and evaluation and should not only benefit from constructivist methods, but should welcome the change. "Rather than focus on intense, encyclopedic recall, constructivist learning leads to deep understanding, sense-making, and the potential for creativity and enterprise" (Abbott & Ryan, 1999, p. 68). Many developmental students bring life experiences or cultural perspectives that would not be expressed in a traditional class but could be elicited by a constructivist instructor for the benefit of the entire class. Developmental students have affective needs as well as cognitive needs, and some measures of those affective needs are more accurate in predicting success in college than achievement tests or high school grades (Higbee & Dwinell, 1990; Higbee, Dwinell, McAdams, GoldbergBelle, & Tardola, 1991). The most successful programs for poorly prepared students "also deal with the affective side of being a student: poor self-concept, passivity, lack of confidence, fear of failure, lack of interest in subject matter, and so forth" (Astin, 1984, p. 11).

Historical Simulations in the Classroom

In a historical simulation, students are given the role of historical decision makers, provided with sufficient background information to evaluate the various decision options, and then asked to render a decision in the historical situation. Simulation design and student groupings vary depending on the historical material and the desired learning outcomes.

Simulations are effective in stimulating lively class discussion and promoting critical thinking. They can prompt students to reconsider prevailing assumptions and adopt new perspectives as well as serve as a stimulus for a number of individual student or group research projects. These research projects could include investigating the historical background of the situation, identifying the factors that promote or inhibit a resolution, contrasting the simulation with actual decisions, or assessing the influence of particular individuals or groups in the final outcome.

A series of research studies into the educational effectiveness of classroom simulations and games has determined three general benefits when compared to traditional instruction. First, the use of simulations in instruction greatly enhances the retention of content information over longer periods. Second, simulations promote student interest in the particular topic of the simulation and in related class content and assignments. Moreover, students assume a more favorable attitude toward the subject area, in general, and are more motivated to do well in the course. Third, simulations prompt increased student interaction and a greater willingness of students to communicate and contribute in small group discussions. All of these attributes would be very beneficial to developmental students and enhance educational outcomes (Bredemeier & Greenblat, 1981; Druckerman, 1995; Randel, Morris, Welzel, & Whitehall, 1992).

Simulations involve some level of role playing by the students, but these roles can be very specific, as an historical individual; more general, as a representative of a country, region, or state; or very generic, as in a decision maker assessing the historical options. An example of a generic role playing simulation would be Recent World Crises in which groups of four or five students simulate a United Nations commission seeking a political resolution to one of the following world crises: Northern Ireland, West Bank, Bosnia, or Kosovo. Students receive ethnic and religious data for the region in dispute and the two countries contending for the region, but all labels and names are fictitious so the students cannot determine which crisis they are considering. Subsequent discussion can contrast the decisions of the student groups, compare aspects of the four crises, or focus on any discomfort or shift in position when the identities in the crisis are revealed.

Maps may be employed in some simulations to convey information to the students, to designate various territorial options, and to ultimately visually display

student decisions. Map simulations are particularly appropriate when focusing on diplomatic conventions, trade agreements, explorations, and colonization. An example of a map simulation would be the Treaty of Versailles that requires student triads to determine the boundaries of the new countries in Eastern Europe following World War I. Each triad receives one map depicting the location of ethnic groups, a second map indicating the areas that contained religious majorities, and a transparency map to superimpose over the others. In the process of determining boundaries, students discuss various aspects of nationalism and the relative importance of religious and ethnic identities as well as recognize a variety of boundary disputes that have plagued the region throughout the twentieth century.

A reward system may be incorporated in the simulation that creates a competitive situation between groups while fostering cooperation within each group. These game simulations are particularly useful when simulating political disputes where groups of students seek their own rewards, but must also negotiate and compromise to reach a consensus or political bargain that achieves their goals. An example of a game simulation would be Sectional Politics, in which students consider six political issues and negotiate resolutions acting as the U. S. Senate between 1830 and 1850. Each six-student senate has one pair of students representing the Northeast, one pair the Southeast, and one pair the West. Each pair argues for their region's positions and receives points for decisions favorable to their region.

The competition inherent in the game simulations promotes learning because long-term memory is enhanced by activities or ideas that elicit emotion. One of Caine and Caine's (1994) twelve principles of brain-based learning states that "emotions and cognition cannot be separated and the conjunction of the two is at the heart of learning" (p. 104). The game points achieved in the simulation have no effect on student grades or evaluation and are meaningless outside of the simulation. Yet, winning and losing in the simulation generates emotions in the students. In the Sectionalism simulation, the negotiations sometimes result in one region consistently being left out of the political bargaining, resulting in student frustration and even anger. This provides a teaching moment because the students can consider the emotion of northerners who feared that "Slave Power" controlled the government, or of southerners who perceived that the other regions of the country were "ganging up on them."

Johnson and Johnson (1979), renowned for their work in cooperative learning, claim that conflict in the classroom can be positive or negative depending on its management. Conflicts provide "valuable opportunities to increase student motivation, creative insight, cognitive development, and learning" (p. 51). Disagreements within the group result in increased interest and creativity, a reassessment of assumptions leading to conceptual conflicts, and higher levels of reasoning and problem solving. Creating controversy in the classroom promotes learning and intellectual development because the purpose of controversy "within a cooperative group is to arrive at the highest quality solution or decision that is possible" (p. 56).

Constructivism and Classroom Simulations

Classroom simulations provide a method for implementing constructivist principles into developmental classrooms. "The central problem that constructivist educators face is not a guiding theory, but concrete strategies and tools for institutionalizing these theoretical and practical understandings into more inclusive classrooms" (Hyerle, 1996, p. 15). The simulation experience provides a variety of possible interactions, sequences of events, and alternate resolutions. Students construct meaning based on their interpretation of the simulation experience and the knowledge acquired in the process.

Simulations seem well suited for a constructivist approach to developmental education. They promote student interest in the simulation topic and related subject matter while encouraging participation in a social learning process that exposes students to new concepts and ideas (Druckman, 1995). Lack of motivation is a characteristic often attributed to developmental students and often suggested as the explanation for their previous lack of success in traditional classrooms (Lowery & Young, 1992). Also, "for decades, developmental educators have argued informally that many of their students bring to the classroom a certain, often indefinable, savvy about the world and how it works that escapes detection on standard diagnostic and placement tests" (Payne & Lyman, 1996, p. 14).

Simulations provide students with a variety of opportunities to display their array of talents and abilities.

In their article, "Constructing knowledge, reconstructing schooling," Abbot and Ryan (1999) write,

> In constructivist learning, each individual structures his or her own knowledge of the world into a unique pattern, connecting each new fact, experience, or understanding in a subjective way that binds the individual into rational and meaningful relationships to the wider world. (p. 67)

Classroom simulations provide an experience that each student can interpret, analyze, and place into his or her own context. Role playing activities involve preparing students to participate in active learning situations that teach both content and specific skills (Glenn, Gregg, & Tipple, 1982). This experiential learning of social or political interactions may be more important to the developmental student than the factual knowledge conveyed by the simulation.

The social learning process of students is promoted by their interactions in these activities. Simulations "expose students to teamwork activities" and are "effective as vehicles for team-building" (Druckman, 1995, p. 184). Sharan (1980) found that team learning methods fostered relationships with group members, enhanced individual student involvement, and improved attitudes toward learning, while increasing cognitive learning and promoting the construction of meaning. The student who would score well on paper-and-pencil tests due to an extensive factual knowledge, might also have an advantage in simulation negotiations. However, success in the simulation would also require the exchange of information, negotiations, and bargaining over positions, and ultimately, the determination of group decisions.

Instructors employ a variety of small group activities and techniques in the conduct of classroom simulations as well as in the assignments that are associated with the simulations. Helen McMillon (1994) conducted a study to evaluate the effects of small group methods on the academic performance of underprepared minority college students. She found that "they developed a strong cohesive and collaborative system for working together as a group, enhancing their individual cognitive and affective skills: analytical thinking, comprehension, decision making, problem solving, communication, assertiveness and motivation" (p. 76).

Conclusion

The theoretical foundations and basic concepts of constructivism are very compatible with the goals of developmental education. Both are student-centered, showing respect for student capabilities and contributions while focusing on enhancing student skills and potential. Both require diverse, creative teaching methods and innovative systems of evaluation that elevate the intellectual discussion in the classroom. Simulations provide very versatile active learning situations for implementing constructivist principles into developmental classrooms. Utilizing a variety of formats, they can be designed to foster cooperation, collaboration, information exchange, consensus building, and individual or group competition. Simulations provide alternate decision options and a variety of possible results, allowing students to construct meaning based on their interpretation of the simulation experience and the knowledge acquired in the process. These activities increase student interaction, foster class discussion and provide various opportunities for related assignments in the course. Simulations also stimulate student interest in the subject and promote long term retention of content material.

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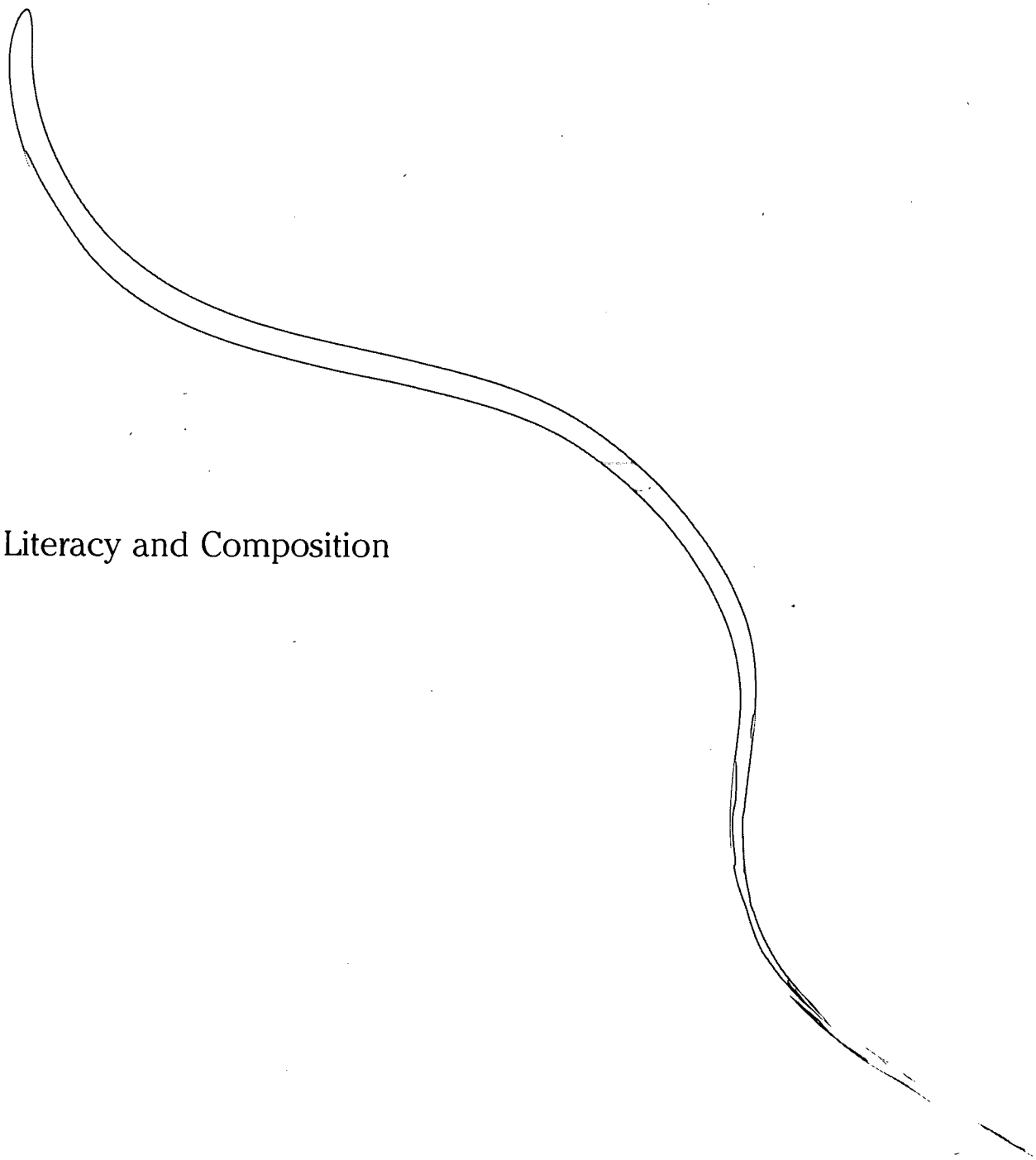

Literacy and Composition

CRDEUL

Getting Basic: Exposing a Teacher's Deficiencies

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This article traces the evolution of a teacher-researcher's conception of her work as both scholar and teacher in basic writing. She questions how her pedagogical goals and practices should change in light of her research within a developmental education program. It is her realization that these questions require a deeper reflection on and articulation of the theories that inform both basic writing and developmental education, and their impact on teachers and students. In particular, she emphasizes the importance of challenging the still dominant, though often implicit and unintentional, deficit models.

Last year, at my first research presentation in my new job at the University of Minnesota's General College (GC), I told my colleagues I was wrestling. In my classroom, in my thinking, and writing, and reading, I was wrestling with the question of how my teaching of writing should change in light of the fact that I was teaching basic writing (BW) in a developmental education (DE) setting. Should I spend much more time explicitly and directly teaching something called "academic discourse?" Would I spend more time "correcting" rather than responding to their writing? Should I stop having them write in multiple forms–poetry, dramatic monologue, because those wouldn't be immediately or directly relevant to the rest of their university writing, even if I believe it would help them develop as writers? How would I balance teaching them the conventions and expectations that I knew would be imposed on their texts, with teaching them to simply write, to become more comfortable and confident as writers in any given form?

My research project grew out of these subsequent questions. However, I now am questioning that question itself. What was it that prompted me, in spite of 11 years of teaching writing at every level, from basic writers to senior-level writing majors to English as a Second Language students to doctoral students, to even imagine I should abandon what I have learned about writing development simply because I was now in an institutional setting formally marked as "developmental" or "basic?" Why was it that, implicitly, I was adapting my standards to those imposed from without, and to standards I know do not enable and support the development of writers when they are used as the primary basis for teaching or assessing writing? Why was it that I was suddenly so attuned to watching out for what my students lacked? What they could *not* do?

Last year I was just beginning to think about how I myself had internalized and was struggling with the deficit model which informs, still, so much of our work in basic writing and developmental education. This model, which identifies students according to what they "lack" in terms of preparation or skills or abilities, leads us to approach our students as exactly that, *lacking*. We see them, meet them for the first time even, already seeped in assumptions about all that they *cannot* do. I did not imagine that I would do this. I did not even believe I was doing it at the time I was doing it! But I kept saying things to Tom Reynolds, my colleague and Co-Director of the GC Writing Program, "these students are not 'real' basic writers!" "These students are not at all like the basic writers I had out East." And even, "where are the 'basic' writers around here?" Why was I always so surprised? Because, the undercurrent here, the subtext, the unspoken theory about basic writers and developmental education that I was implicitly buying into, was that the primary characteristic of our students is their lack, is their deficit.

We know this underlies the institutional impulse to separate them out. In fact, the same institutional logic separates us from the institution. We, as faculty, have also been diagnosed as *lacking* in the university culture and have existed in the sometimes precarious margins; because we foreground our teaching and invest time and attention in our classes, it is assumed that we cannot also be real scholars, our research can-

not be as rigorous or as productive or as legitimate. Because the university economy values the "tangible" output of research over the less tangible production of quality learning and teaching, the forms of our labor have historically been less valued, if not invisible, and sometimes even called into question altogether. As Deborah Mutnik (1996) said of basic writing, which is also applicable to developmental education in general:

> The disempowerment of Basic Writing [developmental education] teachers has the same socioeconomic roots as the alienation and despair of many Basic Writing [developmental education] students. Marginalized teachers play an important role in any analysis of academic borders, especially the low status of Basic Writing [developmental education] classes, frequently staffed by part-time, temporary, and female faculty. (pp. 29-30)

For the faculty at GC, one of our projects during the past year has been to consider the various theories underlying both pedagogy and scholarship in developmental education. Because many of us come to this work from disciplinary affiliations, rather than an originary grounding in developmental theory and pedagogy, we have been interested, in both local and national discussions, to flesh out these questions: is there a dominant theory or philosophical framework informing our work as developmental educators? Has that theory been clearly and explicitly articulated? Or have we worked without the benefit of a shared, visible conceptual framework? Furthermore, of what use is a theory? What value is there in claiming and consciously adopting a theoretical framework? My own comments above show me that what Donald Graves, a composition scholar, once said in passing is indeed true: "You can't get out of bed without a theory." Or, in my case, you can't step into your basic writing class without one, even if you don't know you've got it. In other words, theories are not just formal clusters of abstract statements distinct from us, but also less formally shaped or articulated beliefs and ideas that guide our actions.

Regardless of whether we are aware of it or not, some underlying assumptions, some narratives, guide our everyday actions as teachers and writers. I was reacting to and acting on larger cultural narratives, or theories, about remedial students, about underprepared students and about what we should be teaching them, about what they need or lack, and how to best go about providing that. I did not consciously adopt that narrative. I did not intentionally devalue or demean my students and their abilities and potential. In fact, in other contexts—at a presentation last year, in our teacher development meetings within GC's writing program, in discussions with people who questioned my decision to leave a doctoral-granting English department to come here to GC—I was actively contesting that narrative. Still, my teaching was affected by it, or at least my thinking about my teaching was. I was considering whether or not to abandon what I knew about how writing happens and how writers develop simply because of the institutional, disciplinary, and cultural categorizing, labeling, and separating of these students.

I also came to those questions and to that narrative of my students and their deficit because of my reading in basic writing and developmental education. Or maybe because there is something called Basic Writing, separate from something else called Composition. Even that separation suggested to me that something was going to be qualitatively different here. I also came to it through discussions with people about what they do in their General College writing and writing intensive (WI) courses. That is, I came to adopt part of the theory not through inquiry into the larger ideas or formally articulated beliefs, but through looking at people's practices. Practice itself has come to be central to both basic writing and developmental education. On the one hand, that is a signal difference that I want to value because I believe that, especially when pedagogy is at the center of our research, it is important to be aware of the context where our work takes place, to be attentive to the different demands, pressures, and realities we encounter in our institutions and our classrooms. However, as my own blindness above indicates, and as Stephen North (1987) observes of Practitioner Inquiry, it is often fundamentally "reactive: The Practitioner needs to decide what to do as a means to an end determined by someone else, imposed from outside, beyond the bounds of the teacher's immediate relationship with the students" (quoted in Horner & Lu, 1999, p. 21). Practitioners are concerned with

> what has worked, is working or might work in teaching, doing or learning writing. However, practitioners needs to know *what* to do, not nec-

essarily *why*. This bedrock pragmatism is habit-forming. Practitioners tend to become habitually impatient with complicated causal analyses, which in turn makes them relatively cavalier about such analyses, even for the purposes of inquiry. (North, quoted in Horner & Lu, p. 21)

I think North's (1987) and Graves' point here is that we may come to some actions without much reflection. We may come to an action without any consideration of alternatives. We encounter the action as "natural," as "just the way things are" or "the way they need to be." This has been part of the wrestling within and in relation to composition since its beginnings: the seeming quandary of studying and theorizing, of critically inquiring into that, writing, which has *appeared* to be or has been culturally and institutionally understood to be "self-evident," "natural," or inscrutable, but transmissible. The assumption in this chapter, then, is that we profit from stopping to take stock of–or, as Gramsci (1987) suggests, to critically inventory–our choices and the frameworks that inform them. One of my aims, then, is to identify and critically reflect on the beliefs that guide pedagogy in my own teaching as well as those that animate or constitute what is called "Basic Writing." Critical reflection requires, of course, attending to the specific contexts (i.e., social, disciplinary, institutional, cultural, material, historical) within which theories are shaped and operate. A second related aim is to develop a partial map of the field and to orient myself as teacher and scholar, within that landscape. Obviously, I hope to invite others, new and veteran writing and developmental education teachers alike, to orient themselves as well, to make conscious choices about where we are and where we would like to be, as well as how we are going to get there.

I want to find an answer to that question I found that I kept posing, "how should my teaching of writing change in light of the fact that I am teaching 'basic' or 'developmental' writing?" Now I have in some ways moved to explore and critique the assumptions underlying the question itself. At least in terms of how I was initially, tentatively answering it: my teaching should somehow become more "basic" was my intuitive, practitioner's response, a response informed by theories I hadn't examined or consciously adopted, in fact, by theories I was contesting on other fronts. A theory that was also contested by my students who showed themselves, in multiple ways, to be far more capable than I had expected or given them credit for—from producing a public newsletter for a nonprofit agency in our community service writing course, to analyzing our readings, to engaging in rich and lively discussions about the complicated issues and texts we were working with. In other words, in various contexts and in multiple ways, my students behaved and spoke as writers, they did the work of real writers; they did not behave or perform in ways our culture has come to associate with basic or remedial or pre-writers. What was missing in my early formulation of the question was attention to both the macro and the micro, as well as the inevitable and mutually-determining relationship between the two. This attention to macro and micro strikes me as essential. As my own ignorance demonstrates, when we work without an awareness of both the macro and micro and the relationship between them, we are doomed to miss part of the picture. As Hull, Rose, Losey Fraser, and Castellano (1991) put it,

> moving between the micro-level, close examination of oral and written communication and the macro-level investigations of society and culture–seeking connections between language, cognition and context. Without the microperspective, one runs the risk of losing sight of the particulars of behavior; without the macroperspective, one runs the risk of missing the social and cultural logic of that behavior. (pp. 321-322)

Thus, my research began in answer to a now complex question and began as a longitudinal case study of writers as they move through their university careers. I collected all of the writings done in the first year from seven students who will meet with me for interviews, and continue to pass on to me their writings, teachers' responses, and the assignments that prompted those texts. I was also curious to hear from the students about what they believed enabled and fostered their intellectual and writerly abilities. My hunch was, of course, that development is a much more messy and nonlinear, recursive process than we, in our composition courses, our WI courses, and the institution itself, generally allow for, and I was interested in gaining insight into how we might more effectively work with that mess, how we might learn

from these students' writings and reflection in order to fully support and not fight against development in our classrooms.

My future research aims, then, to synthesize or create a conversation that connects questions of pedagogical theory and pedagogy practice. First, I think the question of how we teach basic writing is still an important one. Because of the assumptions about our work and our students, because of the pressures on us and our students to "perform," because of the demands placed on us and our students to assume the position (e.g., of successful generic student, of successful generic writer, of effective teaching of an entity known as, but not really known at all, academic discourse), we are not free—as sometimes I was while housed in the department of English—to experiment without attention to boundaries and borders and external expectations and pressures. Even should I choose to challenge those, I must acknowledge them and consider how such a challenge will empower or support my students, because I am always aware that their position in our university and its culture is still seen as marginal, is still understood as provisional, and is still identified by lacks and deficits. I am not centering around how my teaching should change because of the faulty assumptions I carried with me last year, but rather how my teaching is changing as I learn from and with my students here, as I come to better understand the expectations brought to bear on their texts by others, and as I study, reflect on, and revise my work in these classes, with these students. Also, I am curious about studying what the literature in basic writing and developmental education tells me about who I am teaching and about how, what, and why I should be teaching. For me, the relationship between these components—the who, what, how, and why of teaching or teaching writing—is the site on which I can synthesize questions of theory and practice. I am deliberating over how I initially answered these questions, studying the literature in our fields for the answers to be found there, and studying my own classroom in order to understand how my experience working in particular sites is affecting a revisioning, a re-seeing of the answers to these questions. That is, I am no longer extracting the how from the what, who, and why. This means, I hope, that I am embedding my practice in a conscious theory and formulating that theory in relation to the study of my practices.

Mina Shaughnessy (1976) offers a useful articulation of one of the major shifts in how I am conceptualizing this project. She says,

> We are much more likely in talking about teaching to talk about students, to theorize about *their* [her emphasis] needs and attitudes, to chart *their* development, and to ignore the possibility that teachers also change in response to students, that there may in fact be important connection between the changes teachers undergo and the progress of their students. (p. 234)

What I hope future research in basic writing and developmental education can explore, then, is how we develop as teachers in light of learning from and with our students, rather than how we evolve as teachers by acting on pre-existing, unarticulated assumptions about who our students are, what they need, why they need it, and how to best deliver. Revisioning or reseeing has been central to all of my research thus far (Lee, 2000), as both a kind of organizing metaphor and a process worth continually engaging in, for teachers, students, institutions, and culture alike. Our research should not simply describe what is, or prescribe better practices for working within existing conditions, but rather should generatively imagine ways of intervening in and reforming what is. Our work as developmental educators, in and outside of our classrooms, should enable and support the revisionary efforts of others involved in this work.

Let us move to some particulars now. First, we have the question of how the legacy or tradition of research in BW gets read, represented and misread, and misrepresented. There is a tendency, I think, on the part of us "young guns" (i.e., new faculty, or those of us new to work in developmental education) to gloss over that which was radical about earlier work in our field because instead we shine the light on what, in today's context, seems regressive, accommodationalist, and repressive. Because we are frustrated to find ourselves in a situation all too similar to that of our forerunners, we blame them for not being radical enough, not seeing enough, not doing enough, and not fighting enough. Still, I think we need to turn our critical lens more often than we have *outward*—to critique the institutional and cultural discourses that have so much influence over how our work is understood and what is

expected, often implicitly, of us and our students (i.e., miracle work, really). As Hunter Boylan and Barbara Bonham (1994) in developmental education and Sharon Crowley (1998) in basic writing point out, the number of programs and curricula for developmental education and basic writing, and the proportion of students assigned to them, has remained largely stable for 150 years. There are not *more* basic writers now than before. Students are not less prepared now than before. This has not changed. The other thing that has not changed is that we have not been able to claim disciplinary status and a vocal, equal, and viable role in the institution because the attitudes about us and our students remain unchanged, and—although a developmental program like General College is an exception—the support for and understanding of our work, in the institution as well as in the popular imagination, has not changed.

For the purposes of my research, I am therefore hoping to spend less time ungenerously reading the existing literature for its deficiencies and gaps, and more time reading it for what it can offer me, both in terms of understanding where we have been and for understanding what we need to do in order to get where we want to be. Here, to illustrate the kind of reading I mean, are two quotes, one from Shaughnessy (1977) and then Mutnick's (1996) reading of Shaughnessy. Shaughnessy warns us to be mindful of not asking students:

> to look at a piece of writing as something that *contains* its meaning as a pound of sugar might be said to contain its weight. The text stands outside, then, separate from the reader, impersonal and invulnerable. When the student writes his [*sic*] paper, it does not occur to him that he is a writer producing reading, he remains a writer producing writing. This alienation of student writer from the text robs him of important insights. (p. 223)

Further,

> Teachers promote a narrow and inhibiting view of perfection by ignoring all stages of the composing process except the last, where formal correctness becomes important, and by confronting students with models of good writing without ever mentioning the messy process that leads to clarity. *The messiness is indeed writing* [italics added]. . . . the composition classroom should be a place where the writer not only writes but experiences in a conscious way the stages of the composing process itself. (pp. 79, 81)

And now, here is Deborah Mutnick (1996) assessing the contributions of Shaughnessy:

> the problems Shaughnessy addressed were linguistic ones: how to induct these students, these outsiders, into the discourse of the university and by extension, dominant culture. Despite the democratic impulses that guided such efforts, the pedagogical focus on standard language, particularly surface level errors, as the key factor in academic success masked the underlying problems of racism, classism, and other forms of social inequality that necessitated open admissions in the first place. From its inception, Basic Writing has served contradictory functions, giving students a chance to develop reading and writing abilities that are then often foreclosed by inferior instruction–skills, drills, rote exercises and an overemphasis on error. (p. 8)

Both of these scholars produce important and radical insights into our work, yet it strikes me that I did not read quite the same Shaughnessy as Mutnick did. It also strikes me that I wrote similar statements about Shaughnessy's work when I first read it in graduate school. At the time, I was putting pressure on that text to be radical in ways I would validate, and I missed what is indeed radical about it. The text has not changed; what has changed is the knowledge I bring to it, and my own context in which I read it.

For Shaughnessy to make space for and give legitimacy to the messy process of writing and to writing as a process of *making*, not simply transcribing or containing already existing meaning, is an important intervention in the dominant assumption that the central purpose of BW is to clean up our students' writing, or that, within DE, our central mission is to "fix" perceived deficits. To foreground and insist on attention to the *whole process* of composing, a process that many students have never been introduced to and are unaware that all writers undergo, is a profound shift from earlier models that attended primarily to drills-and-skills and correctness.

At the same time, Mutnick (1996) emphasizes the macro-context that informs our local decisions, and reminds us that standards, and our ways of reading and assessing, are not inevitable or neutral, but rather are situated, constructed, and linked to a variety of extra-curricular conditions. Therefore, Mutnick presents an incredibly important insight: we have *choices* about how we read and assess, choices about the standards we construct. Here, her text builds on Shaughnessy's (1977), addressing the pressure we all feel in BW to somehow ensure that our students produce error-free prose, or to see it as the sole indicator of competent, effective writing, even though we know that is impossible. It is impossible because all developmental studies show that, as writers develop, they continue to make new mistakes and even to fall back to making old mistakes because they are conquering new forms, more complex ideas, longer texts, and new vocabularies and concepts. I remind myself: writing is messy; learning is messy. Not only the writing of a single text, but the development of writers as a lifelong process; not only the learning that goes on within a single course, but learning *how* to learn, how to be a successful student—this is messy business.

As I am researching what others have to say about teaching writing, teaching basic writing, teaching developmental education, as I am studying my own practices and their effects, one of the things I realize is that we just do not know enough about the writing demands placed upon our students throughout the university in order to enable us to effectively prepare them specifically for those demands. What we do know is that those demands are multiple and varied. We know that, even as we all refer to academic discourse as though it is a stable and unchanging and known entity, it is anything but that. We also know that most teachers are not doing the work of teaching students how to meet the particular rhetorical demands they assign to them, assuming instead that those demands are self-evident or already learned. However, as Herrington and Curtis (2000) note in their longitudinal ethnographic study that followed four students all the through their university careers:

> Explicit instruction...involves more than requiring, explaining or even modeling the *hows* of composition. It involves full explication of the *whys* as well. As Francois's confusion and Nam's question, "what is an essay?" [as well as Stephen's question, "what the hell do you want from me?" (p. 388)] imply, there is nothing "natural" about the essay or about other written forms...All four students [in our study], from their first to last semesters, encountered a truly dizzying array of writing assignments and teacher expectations about them. Depersonalized reports for psychology and sociology; similarly depersonalized literary analysis, on the one hand, and highly personalized pieces, on the other, for comparative literature; self-contextualizing social inquiries and critiques for anthropology and education; "objective" summaries and arguments for philosophy as well as sociology. While some teachers described precisely what formal rules they expected students to follow . . . , few if any explained why those rules existed, what purpose they served and what significance they held, or how they differed from other conventional demands outside or even inside their own disciplines. (p. 387)

This leads me to think carefully about what it is I can and cannot adequately and effectively hope to accomplish in my first and second semester courses. It leads me to realize the importance of a continued effort to educate faculty from all disciplines about how writers actually develop and about how to use writing productively—for learning and for representing what has been learned—in their courses. It reminds me that I cannot teach my class in isolation from the rest of my students' courses, as some sort of feel-good recess where we are all excellent and excited writers. But it also means I cannot aim simply to prepare them for the wildly divergent set of demands they will face and for the ineffectual, even if well-intended, pedagogy they will encounter. However, this is not to say our task is impossible or so unpredictable as to be immune to preparation and deliberation. Herrington and Curtis (2000) go on to remind us about something we probably know about teaching writing, or anything else for that matter; it is something incredibly simple, a principle borne out in my own pedagogical theory and practice.

> Each student [in our study] reported learning most from instructors who gave them positive recognition as thinking persons behind and within their prose; each reported learning far

less—or nothing at all—from those who did not. Teachers who dismissed or demeaned the students' own felt presence within their writing—whether it was there explicitly or not—were resisted, perhaps actively or passively, but always resisted. And that included instructors who turned writing into a simply "academic" matter...And each [student] demonstrated that, without implicit or explicit invitation from their teachers to be heard within their written forms, they disengaged from the task as well as the text, writing less or less coherently, and learning less in the process. (p. 361)

This is so obvious a point that I think we often overlook it, whether in theory or in practice. We forget to talk about how important it is for writers, and any writer in any writing situation, to believe that what they have to say will be heard, read, engaged, and will matter. We often ask students to write simply as a performance, to prove that they have learned what we wanted them to learn, and read what we asked them to read. We then correct how they went about proving it. How much more effectively might our time be spent responding to, or conversing with what they have said, and what they are thinking? What if we spent time drawing them into a conversation between two writers, two readers, and two thinkers? Much of my own course is organized around providing precisely this sort of occasion, among students, between myself and individual students, between students' texts and the texts we read.

This, then, has become a central thread of my research project. Treating students as *writers*, as Shaughnessy (1977), Mutnick (1996), Sternglass (1997), Haswell (1991), and Herrington and Curtis (2000) have all emphasized, is crucial to our success in helping them develop as writers. This is an absolute turn-around from focusing on what they need, what they lack, and what I must give them. I do not suggest we should ignore the weaknesses in our students' writing, nor that we should simply celebrate all of their work unconditionally and uncritically. To do so would be disrespectful of the effort and time they put into their work. It would be to *not* engage their writing. But I wonder how we can revision what it means to engage students' writing, so that, even in the midst of the pressures of a stack of papers or of so much to cover in our courses, we commit time to studying and concentrating on the writing they produce. How can we treat it as writing that matters, writing that deserves to be engaged, and writing that says something? How can we center our courses around providing this element which, in every case study I have read, is deemed by students and researchers alike to be central to their motivation, commitment, and development as writers?

This bucks the trend indeed. It directly challenges and revises the dominant myth that what students lack is knowledge about correct prose or about what constitutes error or error-free-ness in prose. It contests the notion that our students are best served by being corrected. I think most of us work daily in our classes to contest the dominant myths about underprepared students. I think we work hard and successfully to help our students learn and to provide them with a sense of what "the game" is and how to play and even, as Gee (1999) suggests, with the empowering belief that sometimes they have the right to "call" the game because the rules are fundamentally unfair. But what I don't think we have done yet is take a public enough stance on this. We are so often fighting simply for our survival, or have spent our time sharing practitioner knowledge with one another in order to meet the exigencies and demands of our daily work in the classroom, that we have not had the time or the luxury to claim more space, in the university or in our culture. We have not been able to demand a revisioning of the space we do claim: it is not a "privilege" for these students to have been "granted" access to the university, at least not any more so than for any other admitted student. It is a responsibility of the university and its faculty to provide not only this access, but the means to ensure all students' success. Sometimes, this means we have to challenge more vocally the standards to which we and our students are held. Other times it means we need to re-educate more actively and work to change the institutional culture and the popular imagination (i.e., the media, legislation, stereotypes).

Here, for instance, are how some researchers in BW and DE have articulated the need to demand a reciprocal relationship between our local missions, institutions of higher education, and our society at large. Shirley Brice Heath (1983), who did an ethnographic study of three communities (i.e., two working class, one White and one Black, and one White middle class) in North Carolina identified specific lin-

guistic features in preschoolers that predicted their performance in school. She traced those features to the oral behaviors displayed and passed on in their home communities. Heath's hope was to use this knowledge to enable teachers to examine and influence their teaching practices so as to benefit *all* communities. In other words, understanding the literacy practices students brought with them to the classroom could help teachers understand individual learners' strengths and needs rather than teaching to a generic or universal student. Teachers who participated in Heath's study as students in her class did indeed change their teaching practices as they came to possess a deeper understanding of and respect for the context within which different learners are embedded, such as in their homes, communities, and schools.

Eventually, however, the increased pressure to conform to standardized tests and so-called objective assessment measures led to ever-dwindling teacher autonomy. Consequently, Heath (1983) says, many teachers were forced "to choose either to leave the classroom or to revert to transmitting only mainstream language and cultural patterns" (p. 368) in spite of their knowledge that this would not ultimately be as successful for most students. She concludes,

> unless the boundaries between classrooms and communities can be broken, and the flow of cultural patterns between them encouraged, the schools will continue to legitimate and reproduce communities of people who control and limit the potential progress of other communities and who themselves remain untouched by other values and ways of life. (p. 369)

Here also is Martha Marinara's (1997) cautionary conclusion upon examining what she calls the disappointing legacy of basic writing thus far, in which the basic writing course has effectively become

> an introduction to academic discourse, an introduction to what a scholarly conversation is about and looks/sounds like. The university doesn't change; the knowledge and work that is most valued by the university doesn't change....Instead, the narratives of [traditionally underrepresented students], rather than acting as a transgressive collective, are subtly shaped to fit representations of cultural knowledge that serve to reproduce the academy intact. The academy effectively shields itself from the transformation it would realize if it recognized that when students learn, they create meaning from past experiences, making connections with rather than merely assimilating new knowledge...The university's role as a change agent is incomplete and unspectacular. Rather than reconstructing the culture of the academy so that it is more enriched, academic literacy as a gatekeeper to education only gives access to standard rhetorical conventions and thought...Change is not enacted on notions of academic excellence or epistemologies, but on those students labeled "remedial" or "basic." (pp. 4-5)

This leads me to the final question I have posed for my research, as well as a question I believe we should prioritize in our research on developmental education: instead of wondering how I should be changing my students so they can be successful in the university, and instead of just wondering how my teaching should change so I can help my students develop as successful writers, I want to foreground how the university itself, and yes, the popular imagination as well, should be changed by the presence and participation of these traditionally underrepresented students. Without pursuing a fundamentally reciprocal notion of change, wherein the institution, its representatives, its students, and the prevailing culture explicitly respond to and impact one another, I fear we are doomed to simply keep on keeping on, fighting our forerunners and one another, rather than truly creating a more democratic and vital society, both within and outside of the university.

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Bakhtin's Notion of Dialogic Communication and a Discourse Theory of Developmental Education

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This article explores Mikhail Bakhtin's theory of dialogism in relation to Dana Lundell and Terence Collins' recently proposed Discourse theory of developmental education. Built on ideas put forth by James Paul Gee, the role of developmental educators in such a theory is to help students add Discourses to their primary, home Discourses. It is important to note and theorize the role of communication when working with students within this framework. Bakhtin's writings on the dialogic nature of communication offer an expanded, socially involved notion of student-teacher exchange. Building communication around this model values student experience and secures the student-teacher relationship as one that necessarily recognizes students as fully able communicators.

One of the more important challenges facing developmental educators is how to build on the literacies that students bring with them to college. No longer a new insight, students communicate effectively, rationally, and intelligently in a number of linguistic registers and textual forms, with various purposes determined by local circumstances (Heath, 1983; Rose, 1985). Some of this practice may intersect with "standard" written English as usually mandated in school settings, but some may not. This situation has left educators asking new questions about how to prepare students for success in college and beyond. Instead of asking how teachers can better convince students to leave behind their home languages and behaviors associated with literacy in favor of those that will give them success in school, many literacy researchers have begun to see education as implicated in the larger project of individuals developing a wide assortment of literacies. For many, an improved task for literacy instruction is to give students practice in and knowledge of historically standard forms such as the formal essay while also encouraging them to draw on and develop literacies unrecognized, and often undervalued, by the academy.

Discourse Theory and Bakhtin's Notion of Dialogic Communication

Dana Lundell and Terence Collins (1999) have addressed this situation, implicitly, in their attempt to theorize developmental education, after the ideas of James Gee (1996, 1998, 1999), as one of students taking on new "Discourses." In this view, we acquire at home, and then bring to school, a "primary Discourse," which "forms our language uses and defines for us the basic terms of human interactions" (Lundell & Collins, pp.12-13). Primary Discourse shapes us into participants in the world who use "culturally specific vernacular language" (p. 13) with accompanying "interpenetrating patterns of values, 'knowledge,' language, beliefs, roles and relationships" (p. 13). Gee's (1999) term of "authentic beginners" (p. 1) describes students who have not successfully brought together their primary Discourse with those "secondary" Discourses of the school (Lundell & Collins, p. 14). Crucially, secondary Discourses are acquired only by way of successful mediation through one's primary Discourse (Lundell & Collins, p. 13).

Gee's Discourse theory leads Lundell and Collins (1999) to suggest a number of tentative approaches and directions for developmental educators: basic respect for student Discourses, which are closely tied to identity; repeated, "meaningful" (p. 17) practice of secondary Discourse practices as a way to acquisition; an unmasking of the correct practices of secondary Discourse so that students understand what they are to do in order to take hold of that Discourse; construction of secondary Discourse knowledge on student knowledge carried from the primary Discourse; and a building of a critical awareness of how primary and secondary Discourses are related to one another.

Lundell and Collins describe, along with Gee, a scenario that accounts for the various sites of academic and nonacademic literacy and student ownership over any one Discourse. Their view is convincing in its valuation of students' non-school literacies (the vernacular) as they come into contact with school-based literacy. But what is the process for taking on new Discourses? Their theory suggests, but does not elaborate on, a basic *communicative* ground on which the acquisition of Discourses occurs for students. Indeed, although Discourses encompass entire "ways of being in the world" (p. 19), it is communication among students and masters of secondary Discourses that facilitates acquisition of those Discourses. Each of the directions suggested for developmental educators by Lundell and Collins points to a kind of communication that must occur if students are to be successful in their attempts at acquiring secondary Discourses. Together, the directions suggest that the kind of communication that needs to occur is a complex, dialogic one. Developmental education has traditionally been the domain of nontraditional students (Payne & Lyman, 1996). If these students are to successfully acquire new Discourses, then communication that encourages exchange within a number of different registers will have to provide the basis for such learning.

Mikhail Bakhtin's (1981, 1985) theory of the dialogic offers developmental educators a way to picture teaching as a communicative act with students that demands recognition of the wider context of that communication. When joined to the Discourse theory of Lundell and Collins (1999), it provides a way to imagine what takes place at the intersection of primary and secondary Discourses. As students seek to acquire a secondary Discourse, the information that is exchanged and the practices that are acquired occur in a process made clearer by Bakhtin's theory. Although first proposed in relation to literary texts, Bakhtin's theories hold broader significance for many communication processes. In particular, an examination of the basic Bakhtinian notion of the "utterance" (1985, p. 120) opens a sense of possibility for a necessarily broader definition of communication within the act of teaching than that afforded by traditional deficit models of developmental education.

A Widened Notion of Communication Within the Act of Teaching

Traditional models of developmental education assumed that students brought deficits of various sorts with them to college and that the task of educators was to impart the needed knowledge so that they could "catch up" to their peers. Bakhtin's (1985) notion of the utterance, a necessarily relational act embedded in social relations, suggests that this model may have closed off much of the richness of the teaching situation by framing the student-teacher exchange as one that relied on a more or less monologic model of knowledge transmission. Teaching writing, for example, has traditionally been defined as an erasure of deficits through the transference of rules that were not understood or attended to by students in the past (Berlin, 1987).

From Lundell and Collins' standpoint, on the other hand, communication would involve exchange of language to be understood as issuing from two different Discourses, two different ways of living in the world, each respectable and coherent. Communication within this scenario would also appreciate words and language as rich with meanings that may not be easily translated across Discourses. Furthermore, the two languages of students and teachers would inform and respond to the other; secondary Discourses would become informed by students' primary Discourses, as well as the reverse. Making the negotiation of the difficulties involved in such exchange a primary goal of education, the project of teaching would involve constant attentiveness to language on this level.

Bakhtin's (1985) communication schema is best understood as an ongoing series of essentially social acts, or utterances, that take place as language events. Utterances involve three forces acting equally to pro-

duce the communication event: the speaker, the "hero" (Bakhtin, 1989, p. 399), which can be understood as a productive, forceful, almost personified subject, and the listener. In his revised notion of the traditional speaker-message-listener model of communication, Bakhtin gives a social significance to the utterance that arises both out of the immediate situation as well as the identities and histories of each of the three interacting elements. In Bakhtin's (1985) words, [t]he concrete utterance...is born, lives, and dies in the process of social interaction between the participants of the utterance. Its form and meaning are determined basically by the form and character of this interaction" (p. 401). Charles Schuster (1998) has likened Bakhtin's theory to a whirling, planetary "orbit" (p. 3), each of the three elements acting on the others in order to create communication. Determining the significance for any utterance involves analysis of both the immediate situation of communication and the socio-historical roots of that utterance. For developmental educators interested in a dynamic interchange with students and the materials of education, Bakhtin offers a model of communication that assigns value to *all* the players in that exchange.

When thinking about the implications that Bakhtin's theory holds for developmental education, particularly Lundell and Collins' model of acquisition, it helps to imagine education as Bakhtin's multi-layered scene of communication. As teachers help students to acquire a secondary Discourse, students face a situation in which they seek to communicate with teachers about the various habits and expectations of the secondary Discourse. This is an exchange that must recognize the student's move as a communicative act of vast complexity. Too often, perhaps, teachers recognize student utterances, and here the term can be used broadly to include the many familiar forms of educational "communication" such as tests, projects, papers, and speeches, as emanating from a position of intellectual paucity or educational failure. In Bakhtin's (1989) view, such utterances carry far more complex meaning stemming from their social embeddedness. As participants who understand that this complexity exists, teachers and students create a space in which the communicative exchange occurs not only on the level of evaluation as conceived of from within the overriding secondary Discourse of education, but also as from within a framework of wider social realities and ideologies that have also created such utterances.

The dialogic opens up communication as a social act in a number of ways that can be demonstrated by considering the particular area of writing instruction. In order to demonstrate how deep the social significance of any one utterance may be, it helps to think of texts produced by students as a familiar site of analysis. Some researchers who have sought to apply Bakhtin's ideas to the area of student writing have limited their analysis to features of student texts. Thomas Recchio (1998), for example, analyzes a student text in terms of four "discourse modes" (p. 200) that he finds, each, in Bakhtinian terminology, "interanimating" (p. 204) the others. An effective teaching strategy, Recchio claims, would be to make the student aware of these modes as competing for control in the piece of writing and as in need of consciously making use of the modes in order to produce what the paper lacks, a sense of coherence.

But a wider construction of the scene of writing around Bakhtin's ideas is also possible. Construing dialogism in terms of a broad notion of textuality, Nancy Welch (1998), for example, discerns multiple "voices" in a student's text and sees discussion of the text as an opportunity to "recognize those forces that have shaped who the student is and how he or she writes" (p. 223). Where Recchio uses dialogism in order to arrive at a more informed notion of dealing with student deficits, Welch sees the teaching situation as one in which the teacher is helping the student "take charge" of her text but also of "the person she is and the person she is becoming" (p. 223). In framing the situation to include the student as a person and learner with an identity beyond the immediate task of the paper at hand, Welch shows how a Bakhtinian notion of the radically social nature of the communicative utterance represented by the paper obtains value in teaching.

Welch and Recchio both deal with multiple presences ("voices" or "modes") in student texts, but it's also important to see how, from a Bakhtinian perspective, texts invite discussion around the contexts that produce them. In this sense, the social sphere that envelops the immediate communicative situation also informs and constitutes the act of communication represented in the student text. As an illustration, I recently gave an assignment to my basic writing class that asked them to write about the relevance of *The Narrative of the Life of Frederick Douglass* (1993) for

us as readers today. One of my students got stuck fairly quickly, I learned in a conference, because he felt that Douglass' text involved the history of another race and so had little to do with him. He had started the paper by pointing to Douglass' learning experiences, but did not know where to go from there. His paper could be said to have "lacked" precisely at the point where learning the demands of the secondary Discourse represented by my class did not filter through his primary Discourse. Nevertheless, he had told me earlier in the course about the opportunities that he enjoyed in his job at Home Valu to learn skills that he considered valuable. Through conversations related to earlier writings based on that experience, we worked out that he did indeed have connections to Douglass, whose experience was, of course, thick with learning opportunities that he created in the face of no freedom. From my perspective, the student was learning to deal with the Discourse of college writing, inventing and practicing language that links important ideas like opportunity and freedom to particular texts like Douglass' *Narrative*. From his perspective, the student was learning to take on the practices of college writing through his own experience as a worker. More to my point, we worked with what was not in the draft by establishing a line of communication around the text of his experiences.

Although I do not claim that the exchange with my student led to a better piece of writing, our conversation took place around a wider notion of revision than what would generally be described by writing process theory. In fact, though, such conversations do make students better writers by enlarging their knowledge of the contexts that shape the writing done at the college level and by joining the context of the student's life to a deeper, more informed sense of audience. In Lundell and Collins' (1999) words, "the acquisition of a new Discourse is easiest when the process assists the learner in coming to know better what it is that he already knows on related matters, to know better what it is one has already mastered in the primary or other extant Discourses" (p. 16).

Application to Developmental Education

Higbee and Dwinell (1997) have performed research that shows how successful developmental education students point to smaller classes as meaningful to them when looking back on their experiences in the University of Georgia Developmental Studies program. I believe that such conversations like the one I describe here, and which are made possible in those smaller classes, play a large role in establishing lasting connections to educational institutions more generally. Bakhtin's formulation of the utterance as a thoroughly social construct gives a theoretical basis for making such a move.

Moreover, my interaction with the student also demonstrates how it is possible to engage the larger project pointed to by Lundell and Collins (1999) of disclosing the nature and values of higher education. Douglass' story of self-education, my student's story of meaningful education happening for him in his job, and my assignment all point to a reading not only of Douglass' text but of the education available to Americans. Our discussions made use of and discussed the terminology of education as a social construction. Not simply a matter of what might "fit" or "fix" his paper, we talked about educators acting with specific interests in mind, politicians acting within a debate over school funding, and about the role of students in maintaining the system. Establishing communication at this level, above the immediate tasks of the class, is important if students are to understand that Discourses operate within and as systems of power. Lundell and Collins also point out that awareness of primary and secondary Discourses as such allows students to see their relative strengths within each and presumably make appropriate decisions based on that knowledge. One can imagine, as well, how this "metadiscourse" might extend into the areas of student services.

In addition to the above, Bakhtin's rich formulation of the concept of the utterance provides a possible underpinning to the Discourse theory task of building on student knowledge. According to Bakhtin, the utterance is best conceived of as an act that is not originary, but rather responsive. In Michael Holquist's (1990) words, it "is always an answer to another utterance that precedes it, and is therefore always conditioned by, and in turn qualifies, the prior utterance to a greater or lesser degree" (p. 60). Bakhtin emphasizes the responsive quality of utterances in order to disengage readers from the idea that any piece of language holds meaning in itself.

Responsivity is important for a number of reasons related to teaching developmental students. One is that

communication of and between student and teacher takes place within a frame understood to be one of constant exchange. When students seek to gain knowledge of and practice a secondary Discourse, the expectation that there will be back-and-forth communication assures students that the promise of education is real. Teachers who see communication as primarily one-way toward students ignore the need for clarification, explanation, and other communicative acts that are essentially two-way processes. This is especially important when considering that the language of a secondary Discourse is arrived at only by way of the primary one. If teachers are to understand and appreciate students as fully able communicators, then responsivity is important to build into a model of communication.

Another side of responsivity is that it frames language events as essentially historical. For teachers and students to understand that utterances obtain meaning through the long line of utterances that came before is to open up the act of teaching to historical scrutiny. Bakhtin (1981) is emphatic on the point that much is available to be read into language utterances:

> All words have the "taste" of a profession, a genre, a tendency, a party, a particular person, a generation, an age group, the day and hour. Each word tastes of the context and contexts in which it has lived its socially charged life; all words and forms are populated by intentions. (p. 293)

This is a potentially powerful view of language for developmental education. When communicating the expectations of the secondary discourse, for example, teachers need to hear the many utterances of past years that reside within those expectations. In the field of writing, it would involve the repeated statement of rules for correct language use as announced by speakers able to define it for others, for example. From the student perspective, it might involve the confusion, anger, and resentment over past exclusionary educational practices, whether through explicit utterances of the past or through silences that speak as loudly. Such deep reading into the significance of particular utterances is not beyond what Bakhtin theorizes as the full, and really limitless, range of social factors that lie behind an utterance.

Conclusion

Bakhtin's model of communication enables developmental education practices to be conceived as more fluid, layered acts. Assumptions of an always-active communication network and a deep social significance encourage and facilitate the act of acquiring new Discourses. Although much more could be drawn from Bakhtin's theory and applied to the model, the basic design of the model demonstrates its usefulness to developmental education theory.

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Developmental Writing Instruction: The Intersection of Basic Writing, ESL Writing, and Traditional College Composition

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Basic writing programs as well as English as a Second Language (ESL) writing programs are increasing in number at state colleges and universities throughout the country. Freshmen who enter composition classes in these programs have received little attention in research compared to traditional freshman writers. Students in developmental writing programs are frequently assumed as having to acquire academic skills that traditional college freshmen students already have mastered. However, by stressing basic writing skills, we may end up doing these students a disservice in their academic writing development by removing them further from traditional freshman writers, which is the exact opposite of the ultimate purpose of basic and ESL writing programs. The composition skills needed to communicate effectively in an academic context are acquired slowly through acculturation, which is a process that is likely to be very similar for all freshman writers.

One of the major problems in the field of college composition and academic writing in general is that English as a Second Language (ESL or L2) composition and native English freshman composition (first language or L1) traditionally have been treated as two entirely separate fields of ideology, pedagogy, and research. Additionally, L1 college freshman composition has recently divided into the sub-areas of traditional college composition and developmental or basic writing. This development is partly due to the current influx of less traditional college students entering the academy and needing to learn how to participate in academic written discourse. Traditionally, English (L1) composition has been associated with typical English studies involving literature and traditional rhetoric, whereas ESL (L2) writing has been part of applied linguistics, accommodating itself to the prevailing standards of research in that field (Santos, 1992). However, in the cross-cultural context of the English language, we cannot afford to keep these areas so sharply divided in the college composition classroom, and it may be that we need a consensus about how to approach the teaching of English composition cross-culturally, whether that is L1 or L2 (Connor, 1996, 1997; Larsen, 1997; Lisle & Mano, 1997; Santos, 1992; Severino, 1997; Smith, 1981; Sternglass, 1998). In short, although composing and second language acquisition usually are considered two separate fields of research and pedagogy, they will have to merge for teachers and learners of English composition in the college classroom (Raimes, 1985, 1987).

This chapter will synthesize some ideas from traditional theories of rhetoric and college composition, as well as contrastive rhetoric and the acquisition of secondary academic discourses, and discuss how we possibly, through the intersection of these areas, can bring together the fields of traditional composition, basic or developmental writing, and ESL writing. These sub-areas of writing and composition research have been treated too exclusively—almost as entirely different fields. However, the current focus on language as communication should bring the study of rhetoric and traditional composition closer to both ESL writing and basic writing. This should be the case as communicative competence in a given language, or language variety for that matter, involves social and cultural skills as well as traditional linguistic skills (Prior, 1998; Sternglass, 1998). For this purpose a certain knowledge of the theories behind such concepts as culture, reality, and audience seems important in all sub fields of writing instruction. Within traditional rhetoric studies language is universally acknowledged as an ambiguous system, which is not surprising given the interactive relationship between culture, language, and rhetoric.

This chapter will by no means attempt to provide an ultimate explanation or conclusion as to how the study of rhetoric and the teaching and learning of traditional composition, basic writing, and ESL writing are related. It will, however, offer some views on how different theories of rhetoric can be used successfully in writing instruction in all these areas. In other words, the very common and much debated theory of contrastive rhetoric, an ESL writing stalwart, can and should successfully merge with the more traditional rhetorical theories of L1 composition research for the benefit of the field of college writing in general (i.e., traditional freshman composition, basic writing, and ESL writing). Ultimately, the convergence of these subfields seems only a natural development given the status of English as the world's lingua franca for international and cross-cultural communication.

Troyka (1987) has bemoaned the fact that basic writers have been overlooked in college composition research, and it seems that the same can be said of ESL writers (Kim, 2000; Raimes, 1991). Troyka (1987) partly attributes this to the fact that these groups represent a nontraditional population of college students. However, with the surge of interest in and need for developmental programs at state universities, whether it is basic writing or ESL, this population now constitutes a very large part of the total number of freshman composition students, and therefore it is important to explore whether these students have similar problems and concerns in the acquisition of academic writing skills (Kim, 2000). Consequently, composition instructors need to consult a broad spectrum of the literature and research in order to fully explore the issues related to the intersection of traditional college composition, basic writing, and ESL writing. This will involve research on contrastive rhetoric and ESL writing (L2 context), as well as traditional rhetoric and its influence on native English college composition, and especially how it affects the recently emerged basic writing (L1 context).

Rhetoric and Contrastive Rhetoric in Writing Instruction

We know from previous research within the field of contrastive rhetoric that different languages and cultures exhibit a range of rhetorical styles and structures for presenting ideas in writing (Connor, 1996, 1997; Grabe & Kaplan, 1989, 1996; Kaplan, 1966, 1987, 1988). Some awareness of such rhetorical differences is important and valuable for any composition teacher. Professionals within the area of ESL teaching are likely to be familiar with the characteristics of different rhetorical patterns of composition, dominating in different cultures, which were first identified by Kaplan (1966) more than 30 years ago. Those patterns seemed to convince teachers and researchers that there is such a thing as "second rhetoric acquisition" involved in the process of learning to write in a second language. But at the same time, literature on World Englishes (Kachru, 1984, 1990; Smith, 1981) has presented a different perspective on the issue of contrastive rhetoric and ESL writing as well as L1 English composition. Seen in the light of English as the world's lingua franca, it might be that we should start considering the entire field of composition, L1 and L2, as much more integrated. English is in the process of becoming "deethnicized" and "denationalized," and this seems a very important aspect to consider in composition research, as this deethnicization is likely to influence both research and teaching on ESL writing and native English writing (Loveday, 1982).

Consequently, such knowledge of different rhetorical patterns should not be limited to differences between languages. This can be illustrated by Gee (1996), for instance, who has argued that secondary discourses within the L1 can present just as many obstacles and complications for students as can second language differences. Gee defines secondary discourses as "those [discourses] to which people are apprenticed as part of their socializations within various local, state, and national groups and institutions outside early home and peer-group socialization" (p. 137). According to Gee, these secondary discourses are often the more formal ones, such as the ones required in academic settings, and consequently also college composition. This view is supported by Geisler (1994), who has stated that academic fields usually move student writers away from their "home culture toward the more formal culture of the Academy" (p. 168). As many basic or developmental writers often are referred to as latecomers to academia, they will need training in such formal second discourses, much like the ESL writer will need training in the second language.

These are important issues with which many researchers in the basic writing field find themselves wrestling today. As a matter of fact, as early as 20

years ago, David Bartholomae (1980) went as far as to compare basic writers with second language learners in the way that they can be considered to be at a certain stage on the interlanguage continuum. This theory is supported by Lisle and Mano (1997), who have argued that distinctions traditionally drawn between ESL students, speakers of nonstandard English, basic writing students in general, and more traditional college composition students are inadequate and much too simplified. These distinctions are too simplified because even monolingual native English speaking students use a "contact variety of English" (p. 13) that does not necessarily work for academic purposes. Consequently, most freshman student writers, regardless of background, share the process of acquiring a secondary discourse for academia or academic culture.

At the same time, Connor (1996) has stated that as the globalization of discourse patterns occurs, composition teachers and researchers should learn more about levels of adequacy and acceptability of both first and second language writing and the inevitable intersection of these two areas. Contrastive writing research will benefit extensively from the insights of researchers of cross-cultural English, regardless of whether that is between languages or between different social or cultural groups within the same language. Many researchers and scholars (Connor, 1996, 1997; Kachru, 1984, 1990; Leki, 1997; Silva, 1997; Smith, 1981) have argued that more of this kind of cross-cultural composition research on expository, argumentative, and persuasive styles is needed on a larger scale, in order to possibly be able to define what is an appropriate goal for written English composition for cross-cultural academic purposes. This may also help foster a general or universal acceptance and understanding of multiple or alternative rhetorics and culturally different rhetorical styles.

Contrastive Rhetoric and the College Composition Classroom

It is by now a generally accepted fact in cross-cultural composition research that the writing of a non-native speaker can present a different rhetorical pattern from traditional English prose. As rhetoric is a mode of thinking for the achievement of a designated end, it is concerned with what goes on in the mind in terms of analysis, data gathering, and interpretation, and therefore rhetoric is predetermined to a certain degree by norms and values, which may appear differently in different cultures (Connor, 1997; Kaplan, 1966, 1987). In other words, it is the writer's frame of reference that determines what is written down on the paper in a composition situation.

Kaplan's (1966, 1987) ideas, it should be mentioned, have been widely contested and debated, although their influence and importance in taking contrasting analyses from the sentence level to the more universal paragraph and full text level cannot be underestimated. For example, one of the criticisms of contrastive rhetoric has been that Kaplan's identification of discourse patterns in different cultures could seem somewhat ethnocentric, as it was based on Western or American rhetorical patterns as the norm. However, most of the criticism explains that it is not the theory itself that should be contested, but rather the way it often has been misinterpreted by language and writing teachers (Leki, 1991). For example, Raimes (1991) and Connor (1996) have argued that Kaplan's initial or original theory of contrastive rhetoric erroneously made teachers infer that transfer from a first language usually was a negative influence on second language writing, which is not necessarily always the case. As Connor (1996) argues: "It is time to analyze the achievements of contrastive analyses of composition in order to determine its universals as well as its cross-cultural particulars" (p. 6).

With above implications in mind, it seems most valid that Loveday (1982) has called for a degree of mutual tolerance and willingness to accept different rhetorical patterns. This is supported by Raimes (1991), who has stated that with both native and non-native English composition, we will have to stop and question "the value of prescribing one form of text . . . as the one privileged form of text, presented as the most logical and desirable, with which other learned systems interfere" (p. 418). We may need to move away from composition as colonization and recognize the value of the alternative rhetorics that non-native English writers and other culturally diverse students may bring to the college composition classroom and not "treat them only as features that interfere with effective communication" (Raimes, 1991, p. 418). Lisle and Mano (1997) also champion this view, and go on to say that even though we may already have acknowledged the new multicultural and multiethnic background of our students, and consequently a similar multicultural na-

ture of rhetoric and composition, there seems to be a gap between professional talk and professional practice—the practice being what goes on daily in the composition classroom. According to Lisle and Mano (1997) "most composition and rhetoric instruction remains monologic and ethnocentric" (p. 12), mostly because the majority of rhetoric textbooks still ignore the interests or even existence of culturally diverse students.

Furthermore, second language writers are often told that the problem with their writing is that it is "out of focus," "lacks organization," or "lacks cohesion," as they simply violate the expectations of a native English speaking reader (Kaplan, 1966, p. 45). These are phrases originating in the initial theory of contrastive rhetoric, but given the complications discussed above, the problem facing an updated or more current theory of contrastive rhetoric, then, is to question who exactly this native English speaking reader is. It seems that such a reader too often is assumed to be a representative of the Anglo-European majority culture of the academic world, most often because, as Lisle and Mano (1997) point out, the majority of rhetoric and composition textbooks "uncritically endorse familiar Euro-American rhetorical conventions. Although they demonstrate a desire for fresh approaches, they seem trapped by tradition, failing to address the serious challenges that ethnic diversity poses to our assumptions about language and rhetoric" (p. 13). As a consequence of this national and ethnic diversity of logic and language, Prior (1998) calls for more research in the world of academic writing that provides "close attention to, and progress in, studies of communication, discourse and rhetoric" (p. 3).

In fact, all this can be linked with Linda Flower's (1992) comments on writer-based prose. She has noted that although student prose may often be inadequately structured for the reader, it does possess a logic and structure of its own just like composition in different languages and different cultural contexts. This structure serves important functions for the writer's effort to think about a subject—a strategy for dealing with information. Flower (1992) concludes: "If we could see writer-based prose as a *functional system*—not a set of random errors known only to English teachers—we would be better able to teach writing as a part of any discipline that asks people to express complex ideas" (p. 23). Exactly the same can be said about recognizing cultural differences when teaching composition in a second language or basic writing setting.

If we bring together all the aforementioned views and comments, it seems that if we as writing instructors and researchers strive toward promoting a more common knowledge of contrastive rhetoric within the general field of composition, and not only among those concerned with ESL writing, we may become more effective in closing this gap between professional talk and practice (Lisle & Mano, 1997). At the same time, it is important to remember that contrastive rhetoric is not a methodology for teaching, although some of its findings can be applied to the teaching process (Grabe & Kaplan, 1989, 1996; Kaplan, 1988; Leki, 1997). Indeed, with the increasing number of international and culturally diverse students enrolled in American colleges, and the increasing number of all students regardless of culture, taking part in academic discourse communities in the cross cultural context, it is equally important for the teacher of L1 English composition courses, as it is for the ESL (L2) teacher to be aware that different rhetorical structures and styles exist.

In the final analysis, contrastive rhetoric can serve as a reminder to writing teachers that what seems to be perceived as inadequacies in a student's writing performance simply is a result of coming from a cultural tradition that is not rooted in what most of the time is considered appropriate academic discourse by the dominant culture. In order to address this problem, Lisle and Mano (1997) have suggested that we work on finding approaches to composition instruction that emphasize the cultural knowledge that diverse students bring with them to the university.

Contrastive and Traditional Rhetoric: Applications in ESL Writing and Basic Writing

Sandra McKay (1992) has stated in the introduction to her book, *Composing in a Second Language*, that part of the problem of teaching composition in general, and ESL writing in particular, is due to the lack of consensus of what composition actually is, which is something that researchers of basic writing (L1) often find themselves debating as well (Bartholomae, 1993). Recurring terms such as "thinking process," "style," "organization," and "form" reflect the complexity of the process of composition (McKay, 1992, p. vii). Current research that has been

focusing on writing as a dynamic and recursive process involving activities such as generating ideas, planning, evaluating, and revising is interesting the cross-cultural and ESL context as well as in a basic writing context, as there certainly are cultural differences in how individuals go about these tasks—both between languages and between different cultures within the same language. In the basic writing field this becomes an issue as well because we often will find classrooms including a wide variety of cultures although the students may, or may not, share English as their first or native language.

In any event, a shared knowledge of rhetoric and writing seems to be fundamental for success in an academic writing situation, and the more that can be learned about cultural differences as well as language and dialect differences, the more effective we can be as writing teachers. The necessity of such knowledge can be illustrated by Leki (1995), who has pointed out that not only writing teachers, but even more so subject area teachers, show a disturbing degree of confidence in the universality of their judgments of ESL student writing. According to Leki's (1995) research, most instructors seem to believe that their definition of good writing represents the norm for the entire academic community, and very often that norm has to do with the correctness of form and grammar rather than content, development, and support of ideas. Consequently, Leki (1995, 1997) calls for a need for more faculty awareness of different student backgrounds and differing assumptions about writing that faculty are likely to hold. With such awareness will come a better preparation of students and their writing in academic contexts, which is essential with the increasingly diverse college student population, including ESL writers and native English speaking, culturally diverse writers. Leki's point is very similar to Sternglass' (1998) lament that writing instructors frequently have preconceived opinions about the so-called basic language skills of second language and second dialect college writers, and therefore, in teaching these students, end up paying more attention to language technical skills rather than content in their writing, which is a disservice to the students.

This is where some knowledge of contrastive rhetoric could become a very important and useful tool for any writing teacher, although currently almost exclusively ESL teachers seem to be familiar with such research, which is unfortunate. Connor (1996) has acknowledged that "contrastive rhetoric research owes much of its current revival to the important role that the teaching of writing plays in undergraduate education in colleges and universities in the United States" (p. 59). The teaching and research of composition at the college level have simply helped transform contrastive rhetoric, and this has begun to make it more visible for other researchers and professionals, not only those concerned with ESL (L2) writing.

Furthermore, given that the importance of traditional rhetorical theories in relation to ESL writing has generally received very little attention, and seen in the light of the new cultural diversity of college composition discussed above, it seems relevant to consider traditional rhetoric and contrastive rhetoric together in college composition instruction for the benefit of both L1 and L2 developmental writing. Berlin (1984) has stated that for effective composition and communication to take place a writer must have reasonable social control over the language in use, which is often just as much an issue for a native English speaking, academic newcomer (i.e., new to the college community and discourse) as it is for an ESL writer (Sternglass, 1998).

At this point, I would like to turn the above discussion of contrastive rhetoric around and suggest that in order to successfully incorporate theories of contrastive rhetoric into the broader field of writing instruction, we need to look at it not as an alternative, but rather as a supplement to more traditional theories of rhetoric. As a starting point here, I am reminded of James Berlin's (1984) views on the concept of "reality." He states that "[e]very rhetoric has its base in a conception of reality, of human nature, and of language" (p. 1). Rhetoric is, he continues, ". . . ultimately implicated in all a society attempts. . ." and, moreover, ". . . it is the center of a culture's activities" (p. 2). If this is the case, one would think that academic writing would create quite a few problems for a basic writing student who has to wrestle with this new academic culture and learn to create the type of discourse deemed appropriate in such a setting. The world consists of numerous different cultures, which consequently would have as many different rhetorics, which again would lead to almost just as many realities. These realities and rhetorics, then, are something to be aware of in both the ESL classroom, which seems

to have been the case, and the basic writing classroom, which seems to *not* have been the case. This is exactly where knowledge of contrastive rhetoric gains its importance and can expand into native English composition. Prior (1998) also has acknowledged this by stating that it is important for any student writer to become aware of social, cultural, and historical conventions of written language that may vary from context to context. In the final analysis rhetoric can be paralleled with communication, which in turn links up with the current emphasis on communicative competence in second and foreign language teaching and learning. Again, this focus on communicative competence could successfully be expanded into the basic writing classroom.

Perelman (1982), another rhetorician, has argued for a "new rhetoric" (p. 45) acknowledging and stressing awareness of different rhetorical styles in communication and argumentation, whether these are between cultures or academic disciplines. As teachers we should practice this awareness in the composition classroom. Consequently, Perelman's new rhetoric argument seems to further emphasize that it is important to bring ESL and English L1 composition closer together, as both are concerned with communication through writing. As argued by Connor (1996), classical, traditional rhetoric has "given researchers and teachers tools for analyzing invention and text strategies of persuasion and argumentation cross-culturally, with the 'new rhetoric' providing a focused examination" (p. 64). All this seems important in considering L1 and L2 college composition as two parts of an integrated whole, and crucial for the teaching profession to deal with when discussing and researching the problems and concerns novice writing students may have.

The Composition Curriculum: Teaching and Assessment in ESL Writing and Basic Writing

In order to fully explore the intersection of L1 and L2 developmental composition, it is important to consider the curriculum within these two sub-fields of writing instruction. Given the above discussion of research on contrastive rhetoric and literature on composition and traditional rhetoric, it seems inevitable that we also try to integrate L1 and L2 writing in terms of the curriculum.

Curriculum Content and Pedagogy

Unfortunately, most research on curriculum making and pedagogy within the field of writing has followed the same trend of treating L1 and L2 writing as almost mutually exclusive. At the same time, the terms curriculum making and pedagogy within the general field of education sometimes seem to have been considered too much as separate entities in terms of theory, practice, and research. Doyle (1996) has stated that "the meeting point between these two domains has always been somewhat fuzzy" (p. 486). He attributes this partly to the fact that the terms are associated with separate phenomena: "curriculum making" specifies *what* is to be taught, content selection and arrangement; whereas pedagogy generally refers to the human interaction during actual teaching or, in other words, the *how* of instruction. As a result of this distinctiveness, Doyle (1996) asserts that much work and research "within each domain has gone on as if the other did not exist" (p. 486). However, it seems essential that we find a common ground for curriculum making and pedagogy in L1 and L2 college composition given the convergence of skills needed in both.

Alderson, Clapham, and Wall (1995) have stated that validity and reliability should be among the overarching principles when we are designing a way to teach and assess our language learners and their writing. In terms of assessment it would be safe to say that essay writing will almost always present itself to be one of the most subjective areas of instruction. It is often the responsibility of the teacher to clearly state what the requirements and objectives are in different writing assignments, and hopefully this will minimize students' confusion about what is expected in terms of their academic writing performance. However, very little research has been addressing how expectations of form and content are communicated between teachers and students (Prior, 1998). In these terms, the tasks of the ESL student writers should not be significantly different from those of native English speaking college composition students, whether these are basic writers or not. Almost all writing students will have to face the fact that composition to a large extent is much more subjective than their calculus or geography class. For instance, one consequence of this subjectivity is that the freshman writing instructor teaching basic writing or ESL should be able to take a more significant role as a curriculum maker than other

teachers. In the classroom, this would mean that the writing teacher should not only partly control the *how*, but also a good slice of *what should* be taught, and consequently should create a healthy fusion of the curriculum and the classroom pedagogy.

All this corresponds well with Clandinin and Connelly (1996), who have stated that college teachers have more autonomy and "influence over their work and course design" (p. 385) than teachers on other educational levels. College composition certainly is no exception. However, Alderson et al. (1995) bring up a point that may lead us to believe that this fusion will not work as well when we are talking about college level ESL writers. They state that the problem is that ESL writers may have difficulties with the conventions of technical use of such words as "discuss" or "illustrate," which are commonly used terms in assignments for college composition classes. Therefore, we need more rigid attention and set goals for working with vocabulary items and other technicalities when teaching ESL writing (Alderson et al.). Although it is true that while evaluating ESL student writers, we need to make sure they know what these terms involve, it is very likely that L1 basic writing students often have similar difficulties with such terms.

Many native English speaking students come out of high school and have never had to do much essay writing, much less had to deal with what it means to "discuss" or "reflect" on a particular writing prompt; these terms represent to them an unfamiliar academic discourse. For example, I continuously have to stress to my basic writers and regular freshman composition students what these terms mean and what is expected in such an assignment. On the other hand, I have often had ESL students with fairly extensive writing experience in their own language who would have no problems with the terms, as long as they knew the actual lexical translation, simply because they had developed some academic skills in their native language or culture. So, in that respect, it seems that the novice composition students are very similar regardless of whether they are regular L1 college composition students, basic writers, or ESL writers. Consequently, what happens in the writing classroom for all these groups of students should not be significantly different. In short, the research and the shaping of the writing curriculum and the pedagogy should be considered very similar for all these college composition learners.

Additionally, ESL students often may have to face other, more program-specific complications. In order to illustrate this further and show how it relates to the intersection of research, curriculum making, and pedagogy for within any type of college writing, I will draw on some of my experiences in the Intensive English Program at Southern Illinois University (SIU), especially the part of the program called English for Academic Purposes (EAP), which is the last step in the program before the students enter regular credit bearing courses. Looking at Doyle's (1996) definitions, the curriculum or content in this program has already been strictly written out in the program handbook. The positive aspect of this practice is that it at least ensures some kind of plan or general standard according to which the students' writing will be assessed. However, the written products of the students are graded analytically according to a very rigid scale, as opposed to holistic scoring, which is the norm in most L1 college composition including basic writing. This assessment, then, is instrumental in deciding whether these ESL students are ready to move on to regular L1 composition classes. Although holistic scoring may be questioned in terms of its validity in ESL writing (e.g., Tedick & Mathison, 1995), it seems that such inconsistency in using analytic and holistic scoring in ESL and L1 writing respectively does not allow the ESL writing teacher the same autonomy and flexibility in both the content and the process as the L1 writing teacher, which in turn may constitute a disadvantage for the ESL writer compared to the L1 student writer.

One of the main reasons that the ESL program at SIU and most other programs like it tend to have stayed this rigid for so long is probably the influence of the ESL writing textbook. There is a plethora of textbooks on how to organize and structure ESL composition classes, and they all address issues that they consider are important for ESL writers. Most of them end up focusing heavily on a rigid structure and organizational issues (i.e., the somewhat outdated five paragraph essay) as well as sentence level problems rather than higher order skills that are generally recognized by the L1 writing field as necessary for effective college composition. It is common for an ESL writing program to adopt one of these textbooks and base the curriculum of its writing course on it.

On the other hand, most traditional L1 college composition programs are de-emphasizing rigid structure and sentence level issues in writing, and tending to

focus more on critical thinking, involving issues such as stating and developing arguments and using supporting details. L1 basic writing seems to be split between a rigid structure similar to ESL writing and the more progressive approach of traditional college composition. In any event, in an approach emphasizing content, development, and critical thinking, the teacher is left with more freedom to choose a thematic direction of the course and use this to select a textbook, which often is an anthology containing a number of readings concerning the course focus. Through this critical reading of texts, the teacher is allowed more flexibility in terms of writing specific content for the course and consequently is much more in charge of his or her own curriculum in the writing class. There still are some overall curricular issues to address, but the teacher and the students avoid the confining feeling that Venezsky (1996) refers to when discussing a "*prescribed curriculum*, which is textbooks and other curricular materials that define or prescribe not only the content of courses but also the sequence of topics and quite often the pedagogical strategies to employ in teaching them" (p. 439). Such a strategy does not leave the class or the teacher with room for much creativity in the learning situation. Unfortunately this may still be the case in some basic and ESL writing programs.

The Importance of Higher Order Skills in Composition

The bottom line is that whether we are talking about ESL writing students or students with English as a native language, we will always have to make sure that the learners know the requirements of a writing assignment and that they possess the background knowledge needed to complete it. However, by having the background knowledge come from within the composition class, it becomes easier to control and assess writing only, and consequently it also leaves the teacher more in control of the writing class curriculum. At the same time, the more holistic view of writing assessment in regular L1 composition classes seems to call for more individuality and creativity in the students, which tends to help the learning process as they are actively involved in it and are encouraged to think critically about content. In his discussion of curriculum and pedagogy Doyle (1996) touches upon this issue when addressing the importance of tasks in the classroom (i.e., immediate interpretative demands):

> [T]asks frame both pedagogy and curriculum...if, for instance, a teacher asks higher order questions during class discussions but holds students accountable in written work only for knowing definitions of key terms, it is unlikely that students will, over time, pay much attention to classroom discussions. (p. 504)

As a result of the reliance on textbooks and rigid structure of composition, it seems that, in many instances, higher-order thinking is left out of ESL writing classes (Raimes 1991), and according to Sternglass (1998) often also basic writing classes, whereas the freedom allowed teachers in traditional or regular L1 composition classes promotes higher-order skills and critical thinking, and therefore provides a healthier, and maybe more effective, learning environment. For the same reasons, then, it seems that the ESL writing teacher becomes more of a curriculum consumer, concerned only with pedagogy, whereas the regular L1 composition teacher becomes a curriculum maker, concerned both with shaping the curriculum and with classroom pedagogy; and worse yet, L1 basic writing teachers may find themselves somewhere in between these two extremes.

In 1860, Herbert Spencer argued that children and students "should be *told* as little as possible and induced to *discover* as much as possible" (as cited in Pinar, Reynolds, Slattery, & Taubman, 1996, p. 73). What Spencer argued about curriculum making and pedagogy some 140 years ago is still a progressive idea and should be an important issue in the field of college composition, regardless of whether for traditional L1 college composition, basic writing, or ESL writing. College composition instruction should end up being very much on a trial and error basis: learning by doing. The instructor should take more the role of a coach or tutor who is guiding the students through the acquisition process—rather than correcting the students and determining or dictating their learning process. This should also enhance student motivation as the learning process will seem more applicable to each student's own individual situation and therefore improve the outcome. However, the continuous rather rigid outlook of many ESL composition and some basic writing courses seems to put these writing students at a disadvantage by not providing these opportunities to the same extent that they are provided for regular composition learners.

However, recently we have been seeing scholars and researchers of L1 basic writing focus more on overall global skills in writing instruction. Bartholomae (1993), for instance, has emphasized the importance of the integration of reading and writing skills in order to develop the critical thinking and reflection that is necessary for successfully performing the type of academic writing and discourse that is required on the college level. Bartholomae's philosophy is, basically, that a course in writing is a course in reading and vice versa, which means that students should learn how to work on what they read through writing. His premise is that students may show reluctance and uncertainty in talking about and reacting to what they read, but when teaching written composition, our aim should be coaching students in these tasks, and thereby helping them develop as writers and critical readers and thinkers.

As a result, critical reading further becomes a focus of academic writing instruction through presenting students with challenging texts in order to empower and provide them with the tools necessary for analyzing and responding to what they read. Bartholomae (1980, 1993) holds that instead of focusing on writing in isolation, we should make it an issue to have the students read a lot, not only concentrating on what our students read, but focusing more on what they can learn to do with what they read in terms of producing their own argument and reactions, and reflecting on it in writing. This view is also reflected in much of the empirical research done with basic writers in recent years, and Schriver (1992), among others, has called for scholars to conduct more research on the thinking processes and experiences of student writers and readers in cultural contexts. At the same time, both Prior (1998) and Sternglass (1998) remind us that composition instruction and academic writing should not be looked at in a vacuum. Freshman writing instruction should rather be considered an important step in helping these students acquire academic discourse—parts of a learning, acquisition, and enculturation process into academia that takes time. This approach to writing instruction can be further illustrated by Gee (1989), who has stated that "discourses are not mastered by overt instruction, but by enculturation (apprenticeship) into social practices through scaffolded and supported interaction with people who have already mastered the discourse" (p. 7).

According to Bartholomae (1993), basic writing students have been short-changed, even though there seems to be a current interest in the field of developmental education. He calls for a need to define exactly what kind of phenomenon the designation basic writing represents, rather than just consider it a course of instruction. Bartholomae (1980, 1993) and Shaughnessy (1976) hold that we simply know too little about the students who are placed in such classes and programs: we know little about their performance as writers, we know little about their prior experience, and preciously little about how they themselves experience their basic writing classes. Teachers just assume that basic writers fail to perform effectively what other conventional freshman writers are successful in doing. We need further details on their supposed lack of success in academic writing.

Additionally, in composition research, both Bartholomae (1980) and Williams (1981) have lamented the early over-emphasis on mechanical and grammatical correctness and "error hunt" that often seems to occur in writing instruction in high school English classes, as well as in developmental writing classes in college. By reducing student writers to working with isolated sentence level issues, we neglect the fact that these students bring with them diverse experiences that can help them develop academic writing skills, and much the same can be said about ESL writers (Leki, 1995). In other words, a preoccupation of teaching sentence level skills will most likely only stifle and alienate these students further in their acquisition of critical writing and thinking skills (Kim, 1997; Williams, 1981), as it does not help them develop the language of written academic discourse. As a result, college freshmen often exhibit limited confidence in terms of their writing skills.

The problem with this type of practice has been expressed by Perl (1979), who has stated that students will begin to "conceive of writing as a 'cosmetic' process where concern for correct form supersedes development of ideas. As a result, the excitement of composing, of constructing and discovering meaning, is cut off almost before it has begun" (p. 333). However, if we in developmental writing classes (basic as well as ESL writing), focus on critical thinking skills as a tool for these students to reflect on the extensive and diverse experiences they bring with them to their college classes, we should be able reinstate the excitement of composing into these students. Consequently,

their awareness of academic writing standards can be developed through their own experience, which is likely to be more effective than trying to teach the students narrow technical skills.

These ideas can be further illustrated by Yeh (1998), who talks about student writer empowerment through acknowledgment of different cultural and social backgrounds of students in academia. When sociocultural issues are taken into account, it becomes clear that isolated sentence level instruction and grammatical drilling and exercises will not be sufficient for the successful learning or acquisition of academic writing.

This is similar to ESL learning, where attention to cultural and social issues is essential for the ESL learner in order to acquire the necessary skills to perform and communicate academically in English. In fact, Johns (1995) credits the emphasis on communicative competence within the ESL writing field to the process movement in the general field of college composition, as this process approach has helped steer ESL pedagogy and research away from looking at academic writing as merely an afterthought in the teaching of reading and spoken language into becoming a separate and legitimate field that may hold similarities with the general field of college writing involving both L1 and L2. If we look at college writing in this more global context, mastering the discourse of academic writing as well as *writing in context* will essentially be the same as gaining *communicative competence* in that particular type of discourse.

Summary

An attempt to combine research in traditional rhetoric and L1 composition with research in contrastive rhetoric and L2 composition will benefit all subfields of college writing instruction, especially developmental writers in basic and ESL writing programs. The composition skills needed to communicate effectively in an academic context should be acquired slowly through acculturation (Sternglass, 1998), which is a process that is likely to be very similar regardless of whether we are dealing with basic writers or ESL writers. Bringing L1 and L2 writing instruction and research closer together this way should also help us move toward some kind of standard or consensus for teaching written English composition in academic and cross-cultural contexts. Early research within the field of English college composition was almost exclusively devoted to examining products and processes of native writers, but with the current intercultural outlook of the English language, we will have to take second language and "second culture" writers further into consideration in future research.

With all these implications in mind, it seems inevitable that there also is a need for bringing the requirements, curriculum, pedagogy, and assessment of ESL writing and native English college composition in better synchronization with each other. In her chapter on "Recommendations for Instruction," Sternglass (1998) emphasizes that acculturation to academic writing conventions takes time, and early instruction is crucial. Consequently, it is naive to believe that we can turn students into finished writers in the course of a freshman writing class or class sequence of a semester or academic year, regardless of whether we are working with traditional students, basic writers, or ESL writers. The acculturation process could take several years, which means that composition instructors can only initiate the process by providing the students with tools for future use. Such tools should involve critical reading and critical writing immediately from the beginning of this process. For that end, Sternglass (1998) argues that "students in basic writing classes . . . should not be treated differently from students in so-called regular composition classes . . . all students should be exposed to the challenges central to their development as thinkers and writers" (pp. 297-298). This, among other things, means that no students should feel that they are in a particular writing class because they lack the basic skills that other students may have.

As Williams (1981) has argued, writing teachers tend to categorize developmental writers as a group of students who simply need help in overcoming mechanical and grammatical errors and improving their language use and vocabulary. By reducing basic writers and ESL writers to working with these isolated issues, we neglect the fact that these students bring with them diverse experiences that can help them develop academic writing skills. Urzua (1987) has expressed similar concerns and concluded that when ESL students were given more freedom and control over their writing topics and learning to communicate content, their voices came through more strongly and the writing became more effective on all levels from content

and development to grammar and other surface structures (see also Savignon, 1983). In other words, it seems the tendency is to emphasize higher-order skills such as critical thinking, content, and student experience in traditional freshman composition classes, but when it comes to basic writers and ESL writers, we may tend to get preoccupied with teaching more basic, technical writing skills on the sentence level, which is likely to alienate these students further from academia, as it does not help them develop the rhetorical language of written academic discourse (Kim, 1997; Sternglass, 1998; Williams, 1981).

In short, through this type of disservice, we may be separating and removing developmental writers (L1 basic writers and ESL writers) further from traditional freshman writers, which is the exact opposite of the ultimate purpose of basic writing and ESL writing programs.

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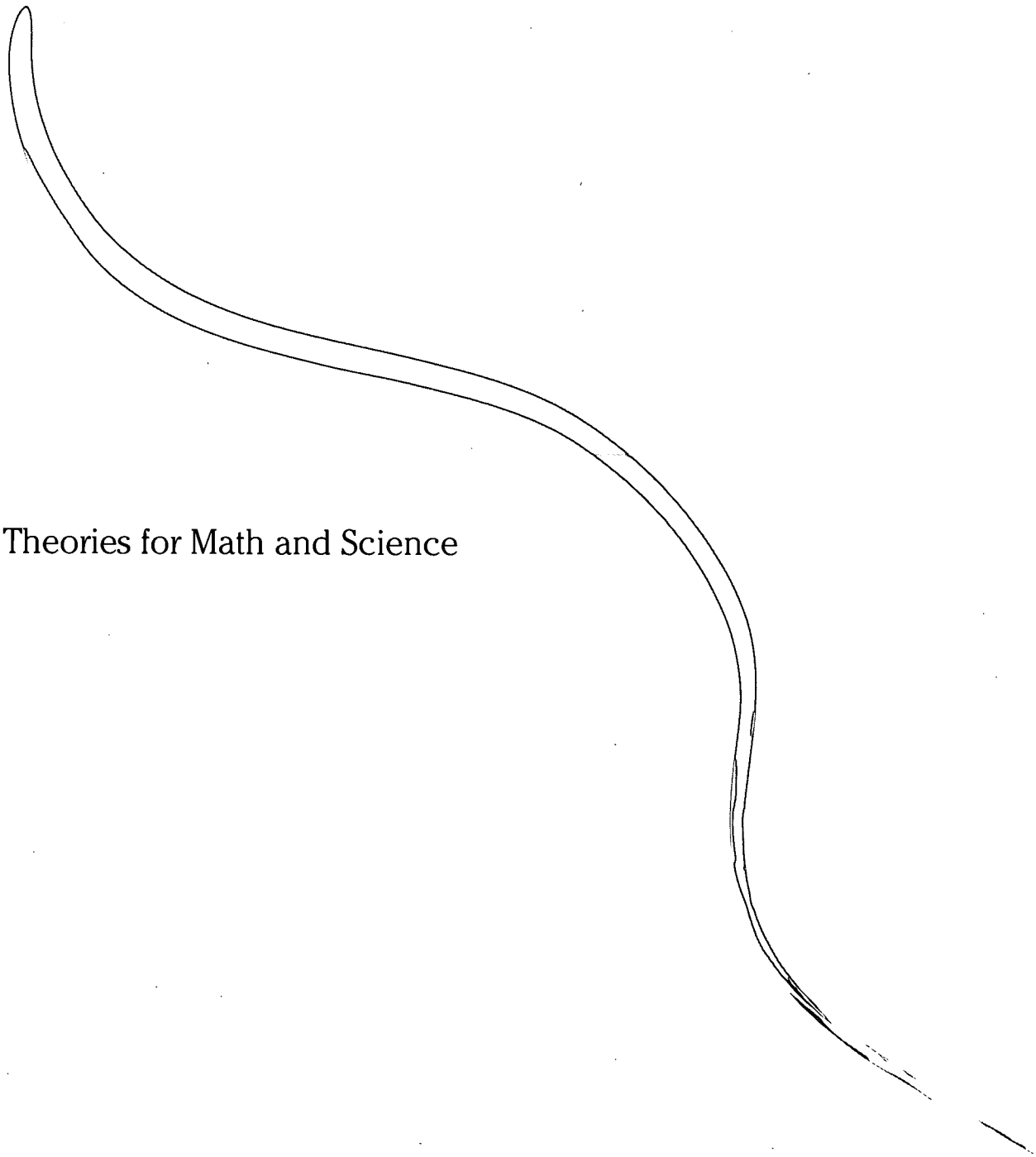

Theories for Math and Science

CRDEUL

New Directions in Science Education for Developmental Education

Randy Moore, Professor
Biology

Despite decades of reform, science remains a hostile neighborhood for most students in developmental education. To remedy this, and thereby increase the number of students considered to be the "best and brightest," I propose that science instruction move from objectivist teaching to constructivist learning by changing what and how science is taught. These changes include (a) emphasizing discovery-based activities; (b) supplementing discovery-based instruction with tutoring, cooperative learning, and interactive learning; (c) addressing the social and cultural aspects of science; and (d) emphasizing communication skills and multiple ways of learning. These changes will increase the success in science by all students, especially those in developmental education.

Throughout the past century, science education has been repeatedly "reformed." For example, following World War I, science education was reformed to help students participate more effectively in democracy. Many of the most popular science textbooks of that time, such as George Hunter's (1914) *A Civic Biology* (the textbook made famous by the Scopes "Monkey Trial"; see Moore, 1998a), had titles that emphasized the connection of science with society. Ironically, few people noticed that this goal—that is, helping people participate in government—was denied to many disadvantaged students, ethnic minorities, and women.

The next wave of science education reform was triggered by the Soviet Union's launch on October 4, 1957, of Sputnik I, the first orbiting artificial satellite. This event announced to America that nature's secrets—unlike political secrets—could not be concealed and that the United States had no monopoly on the laws of nature. Worried that the United States could not compete in a technology-based world (Gabel, 1994), policy-makers spent millions of dollars to put science education back in the hands of scientists. Much of this effort involved sending thousands of high school teachers to universities for graduate degrees and summer training, as well as hiring scientists to develop curricular materials to equip teachers with the latest scientific information (e.g., the Biological Sciences Curriculum Study; see Majumdar, Rosenfield, Rubba, Miller, & Schmalz, 1991; Moore, 1998b). Funding for science increased dramatically as science became increasingly popular; thousands of students wanted to be scientists and astronauts. However, science also became very competitive; challenges such as "Are you good enough for science? If so, you may be good enough for NASA!" became common. Teachers began to select the "best and brightest" students, but paid relatively little attention to the individual needs of students or the social constraints of science and teaching (Hurd, 1970). Many students—especially women, ethnic minorities, and those from financially disadvantaged backgrounds—continued to be denied access to science and the benefits of reform (Anderson, 1983).

In the 1980s, students' poor scores on standardized tests again caused policy-makers to worry if the United States could compete in international markets (Education Commission of the States, 1983; National Commission on Excellence in Education, 1983). The resulting wave of science education reform focused on educational standards and teacher preparation (Hurd, 1983) and ultimately led to programs such as *Science for All Americans* (American Association for the Advancement of Science, 1989). *Science for All Americans* described skills that all students should possess such as an understanding of the key concepts of science, a familiarity with the natural world, an understanding of the interdependency of science and technology, and the ability to use knowledge and skills

to enhance the quality of one's life. In most cases, however, "all Americans" continued to exclude students in developmental education programs.

More recent attempts to reform science education have involved "systemic reform" aimed at producing "a coherent system of curriculum controls" (Fuhrman & Malen, 1991, p. 244) that emphasize standards for teaching and learning science. When these programs were implemented, many educators hoped that the much-publicized "science education crisis" had been addressed. As in the past, however, those hopes were largely unfounded, for today's "college science courses [remain] notorious for poor teaching," and "the vast majority of college students are not ... learning science" (Leonard, 2000, p. 386; also see Lord, 1994; Seymour, 1995). Although science can be an attractive place for many of the best and brightest students, it remains hostile to most at-risk students, especially minorities and women.

Many of the groups of students who have been repeatedly ignored by the various reforms of science education are students who are disproportionately represented in developmental education programs (Atwater & Brown, 1999; Minicucci, et al., 1995). The promise of "science for all Americans" (e.g., National Research Council, 1996; National Science Foundation, 1996) has remained elusive. As noted by Donmoyer (1995), it has been "easier to give something to everyone rhetorically than it is in reality" (p. 34).

How Science Education Often Excludes At-Risk Students

Many science programs continue to exclude large numbers of students, especially at-risk students in developmental education. This exclusion results from several long-standing and deeply entrenched biases regarding *how* and *what* science is taught:

1. Science virtually everywhere is taught with an objectivist approach based on knowledge being a commodity that can be imparted. Objectivists rely overwhelmingly on lectures because they believe "they can open the student's head, pour in knowledge, close the student's head and then have the student take a test" (Leonard, 2000, p. 386). This objectivist approach, even when instructors describe their teaching as "hands on" and "student centered," is based almost exclusively on declarations of "facts" rather than on science being a discovery-based process influenced by culture and society (Roychoudhury, Tippins, & Nichols, 1993, 1995). Large, impersonal, and pedagogically monolithic courses emphasize and reward the memorization of these facts, an approach that is reinforced by eight-pound "introductory" textbooks and instructional approaches that give little consideration to alternate ways of knowing or teaching. This is important, because the lack of appropriate learning-strategies, especially student-centered strategies, is the largest variable that contributes to attrition of students in science classes (Cannon, 1999). Although the objectivist, lecture-based approach to teaching science minimizes the cost of delivering a course, it is inconsistent with how science is done. Moreover, it often discriminates against students, especially those in developmental education, who have alternate ways of learning.

2. Students able to compete effectively within the narrow objectivist approach to science are deemed to be the best and brightest students. Not surprisingly, these students are seldom from developmental education backgrounds. On the contrary, they are usually younger versions of the scientists themselves.

3. There is a strong selection-pressure for students who fit the narrow, prescriptive criteria of most science courses, and an equally strong selection-pressure against virtually all other students. These selection pressures often discriminate against students who comprise developmental education populations. As a result, science usually continues to be presented as it always has been presented—namely, from a narrow perspective that excludes or stereotypes women and minorities (Figure 1) and, in the process, alienates many students in developmental education (e.g., Harding, 1991; Kahle & Meece, 1994). Clearly, if this approach to teaching science continues, few new groups of students will benefit (Atwater & Brown, 1999).

4. Scientific knowledge is portrayed as being independent, unbiased, and free of personal, social, and cultural influences such as gender, race, and class (Harding, 1991; Longino, 1990; Moore, 1997). This portrayal of science gives little or no consideration to nurturing, contributions by and topics of interest to women and minorities (e.g., minorities as role models in science, prenatal care; see Atwater, 1994; Howes, 1997; Kahle & Meece, 1994), alternate ways of learning, or whether the "facts" of science could be biased

by culture or society. Indeed, any consideration of these aspects of science is often ridiculed as political correctness or a lowering of standards.

5. Science is often taught as being independent of other ways of knowing. This positivistic "one best way" of teaching science often creates problems for developmental education students, especially women (Barton, 1997, 1998), for it de-emphasizes relationships and connections while promoting domination and "command of nature in action" (Francis Bacon, as quoted in Fox-Keller, 1985, p. 34). Similarly, many American Indians learn science best by identifying relationships and changes, observing, and evaluating science in a large context. Although scientists often study natural phenomena within such contexts, science is often taught in a reductionistic way in which natural phenomena are studied out of context (Atwater & Brown, 1999).

The products of these biases are disappointingly predictable: Despite decades of reform, students in developmental education continue to face many unnecessary obstacles in science (e.g., many programs increase boys' confidence, while decreasing that of women; see Vasquez, 1998). Not surprisingly, then, many "at-risk" students avoid science; for example, women are less likely than men to take courses in chemistry, calculus, computer science, and other sciences. Similarly, more than 40% of students who enter college with an interest in science opt for other majors (Astin & Astin, 1993).

The compensatory "add 'at-risk' students and stir" programs implemented to address earlier wrongs have often failed because they have placed the responsibility for science education reform on those already marginalized by science, especially those at-risk students in developmental education. As a result, most students in developmental education continue to feel implicitly inferior and unwelcome in the neighborhood of science. Perhaps these problems are to be expected; after all, the lack of success in science classes by at-risk students has not been due merely to their absence from science classrooms. On the contrary, it has been largely due to what and how science is taught. Because these aspects of science education have not changed significantly, most of the long-standing obstacles to at-risk students remain.

Figure 1. The media has often stereotyped the contributions of women in science. For example, when Maria Goeppert Mayer (a professor at the University of California at San Diego) won the Nobel Prize for Physics in 1963, the headline in a local newspaper emphasized her maternal rather than her professional status. Photograph and article reprinted by permission of *The San Diego Union-Tribune*.

WORLD RENOWNED—Dr. Maria Goeppert Mayer, 57, holds the slide rule she uses in the study of nuclear physics that won her a Nobel Prize today. She is a University of California professor here.

S.D. Mother Wins Nobel Physics Prize

Dr. Mayer 1st Woman in U.S., 2nd in History So Honored

By FRANK HOGAN

Dr. Maria Goeppert Mayer, 57, a research chemist

New Directions for Science Education in Developmental Education

For science education to be inclusive, we must proactively rethink the nature of science and shift the emphasis of reform from the alleged deficiencies of developmental education students to the deficiencies and biases of science and science education. Only this type of reform will make science accessible to all, including those students who have long been silenced by and excluded from science.

The science education reform that I suggest requires a philosophical change from the current objectivist approach to a constructivist one in which knowledge is constructed by learners rather than imparted by teachers; that is, I advocate a pedagogy through which learners build knowledge based on discovery-based experiences rather than exclusively on

authoritative sources such as teachers and textbooks (Roth, 1994). These constructivist approaches stimulate learning by *all* students because they immerse students in science, show students how relationships and knowledge are situated within the discourses of scientific knowledge and authority, and demonstrate to students the cultural, social, and historical aspects of science, in the classroom as well as in society (Hiller, 1995). Constructivist teaching is also a powerful way of helping students understand science, challenge ideologies that justify inequalities, break silences, and discover the liberating power of science (Barton, 1997, 1998), for it can enhance learning and success by at-risk students. Indeed, just as a change in teaching style and philosophy can enable at-risk students to learn the same science curriculum as traditional students (Minicucci, et al., 1995; Woodward & Noell, 1991), so too can comparable changes such as those described here enhance the success of developmental education students in science. These changes must include changing how and what science is taught.

Changing How Science Is Taught: Emphasizing Discovery-Based Learning

The National Science Education Standards try to improve science education by encouraging that "inquiry into authentic questions generated from student experiences [be] the central strategy for teaching science" (National Research Council, 1996). Discovery-based activities enhance learning because they make the teaching of science more consistent with the practice of science. Although no one pedagogical approach or technique can meet all students' needs, discovery-based learning can be a great educational equalizer, for it gives students the autonomy to learn science by pursuing questions and investigations of their own design (Costenson & Lawson, 1986; Sundberg, Armstrong, Dini, & Wischusen, 2000; Welch, Klopfer, Aikenhead, & Robinson, 1981). Despite these benefits, however, little discovery-based learning occurs in most science classes (Edwards, 1997). Indeed, most of today's science activities are "cookbook" activities that involve little or no creativity, critical thinking, discovery, or engagement.

I urge science teachers to use more discovery-based ways of teaching science. There is much evidence that this will increase learning by all students, especially by students in developmental education programs. For example,

1. When developmental education students are exposed to discovery-based instruction, they score significantly higher on tests that evaluate scientific knowledge than do students given only traditional instruction (Mastropieri & Scruggs, 1993). Discovery-based teaching enhances learning (Cannon, 1999; Leonard, 2000; Leonard & Penick, 1998; Lord, 1994; Roth, 1994; Seymour, 1995).

2. Most students prefer and learn more from discovery-based activities, despite the fact that they often find these activities more challenging than traditional ones.

3. Students want to design their own experiments, even if such activities require more work (Edwards, Luft, Potter, & Roehrig, 1999; Morrow 1999). When immersed in discovery-based learning, many students better understand the purpose of their work and learn more (Morrow, 1999).

4. Experimental studies, philosophical discussions, and instructors' testimonials show that students learn more when exposed to constructivist, discovery-based experiences (Cannon, 1999; Lawson, 1988; Leonard, 2000; Seymour, 1995).

Although discovery-based learning is a powerful way to learn science, it must occur in a larger context that is supplemented by activities that reinforce learning and success, such as personalized tutoring and mentoring, summer research experiences, cooperative learning, open-ended learning experiences, and interactive methods that decrease the distance between the student, the teacher, and the subject being studied (e.g., see Lord, 1994; Project Kaleidoscope, 1994). These techniques are especially helpful to developmental education students, for they help students learn more, feel more confident about themselves, become more motivated to learn, and become more receptive of diversity (Johnson & Johnson, 1987). Each of these teaching techniques makes students a potential teaching resource and enables them to ground their perspectives in experience. However, like other pedagogical tools, these techniques must be used properly to enhance learning. For example, consider cooperative learning, which has become increasingly popular as teachers have realized that traditional instruction in science often (a) encourages students to work alone

and in competitive atmospheres (Johnson & Johnson, 1987), both of which can alienate large groups of students; and (b) fails to teach students the importance of and skills necessary for working in groups to solve problems. There can be pitfalls with cooperative learning; for example, the group work involved in cooperative learning can be greatly influenced by race and gender (Rosser, 1997). Moreover, effective cooperative learning requires building positive interdependence and teaching cooperative skills. There is a big difference between merely putting students into groups and designing teaching strategies that help students to learn cooperatively.

Changing What Science Is Taught: Expanding The Pool Of Best And Brightest

Classrooms are not homogenous; on the contrary, they are mosaics of diversity. Consequently, teachers must select curricular contexts and instructional strategies that engage and address this diversity. The traditional "one-size-fits-all" approach to science teaching does not fit all, nor does it necessarily always identify or reward the most capable or promising students.

To increase the success of at-risk students in science, and thereby broaden the pool of best and brightest students, I suggest that teachers change *what* science is taught by considering the following:

1. Design science courses that actively involve students and their experiences in the guided construction of knowledge in relevant, nurturing, meaningful, and inclusive ways. In addition to increasing students' knowledge of and experience in science, this approach helps students see themselves as part of science. This approach to science education differs significantly from the objectivist survival-of-the-fittest approach typical of most science courses and programs.

2. Instead of merely transmitting facts, expand the kinds of observations beyond those typical of traditional science courses and research. Do this by defining science within the discourse of human agency and in its larger contexts of culture, society, community, and authority. To accomplish this, teachers must understand the needs, norms, and discursive practices of their students.

3. Make learning more accessible by applying principles of Universal Instructional Design, an instructional philosophy based on a flexible and customizable curriculum. That is, recognize that cultural styles affect learning, and that different students learn in different ways (Atwater, 1994; Leonard, 2000). Expose students to multiple ways of knowing and doing science that reflect social, historical, and political contexts in which science is learned and done (e.g., how federal funding often guides science down self-serving paths; see Howes, 1997; Hubbard, 1990). Emphasize that science is connected to and influenced by other ways of knowing and doing that permeate all aspects of society.

4. Explicitly address the social and cultural biases of science that limit how and what science is taught and learned. Science, and therefore the "facts" produced by science, is not value-free. Rather, science—a human endeavor subject to human bias, ambitions, and social conditions—has a cultural history that often promotes White men and ignores or stereotypes others, as depicted in Figure 1. Although the blatant sexism and racism of the 1960s and 1970s have largely disappeared from textbooks, such biases continue to appear in more subtle ways (e.g., women and minorities are highly represented in illustrations but are absent from the written text; the roles of women and minority scientists are often omitted or included only as a token mention; the concerns of women and minorities are often overlooked; see Dujari, 2000; Kahle, 1985; Kramarae, 1980; Rosser & Potter, 1990; Whatley, 1988). These biases are found in most depictions of scientists (e.g., in films, books, movies, and cartoons; even science cartoonist Gary Larson portrays scientists as men), and often extend to science policy. For example, before 1993, when President Clinton signed legislation requiring the National Institutes of Health to include women and minorities in all of their clinical health studies, there was no federal policy to adequately enforce the representation of these two groups in public health research. As a result, scientists and science teachers often lacked data for a variety of important phenomena that affect women and minorities (e.g., the contraction of AIDS by women; see Link, 1998). Whenever possible, teachers must expose and eliminate these biases by screening textbooks and all other aspects of their courses for stereotypes (e.g., racial, gender-based, socioeconomic), language that is offensive to particular groups, and other features that might distract students from learning (e.g., see Nedergaard, 1990; Rosser & Potter, 1990).

5. Recognize that students must discern a new culture if they are to learn science. A student's ability to discern this new culture is determined largely by the extent to which she or he can "understand, investigate, and determine how the implicit cultural assumptions, frames of references, perspectives, and biases within [science] influence the ways in which knowledge is constructed within [scientific disciplines]" (Banks, 1982, p. 21). If this is ignored, students and teachers will often be left feeling as if they've walked "into a dark cave from which there is no exit" (Reichert, 1989, p. 10).

6. Explicitly and repeatedly show students the contributions of women and minorities in science, and discuss how our knowledge and perception of science might be different if science were dominated by women and minorities (e.g., Galupo & Gasparich, 2000; Zacks, 1999). This will help students develop a critical consciousness through which they can challenge the status quo of the political, social, and cultural dimensions of science.

7. Develop personalized mentoring programs that address students' primary concerns (e.g., advising, career opportunities, self-image, and self-confidence). Such programs, when properly designed, organized, and evaluated, can have a positive effect on students' decisions to pursue, appreciate, and enjoy science. Effective mentoring programs benefit everyone, especially women, minorities, and at-risk students in developmental education (Association for Women in Science, 1993; Grant & Ward, 1992).

8. Teach students to communicate their ideas effectively to others. These communication skills can be enhanced by a variety of techniques, such as using "one-minute papers" that summarize students' learning and concerns, student-led discussions (with faculty supervision), e-mail, and journals in which students write about what they are learning (Hedges & Mania-Farnell, 1999; Moore, 1997). All of these pedagogical techniques increase interactions between teachers and students by transforming the impersonal and monologue-like lectures typical of most classrooms into a more personal dialogue between students and teachers. These dialogues, in turn, help students listen to, contribute to, and work through an ongoing discussion of their observations, relationships, and ideas. Stimulating a dialogue between students and teachers not only gives students increased access to teachers, and vice versa, but also helps teachers understand and address students' concerns about their learning.

For developmental education students to succeed in science, teachers must change their approach from an objectivist "survival-of-the-fittest" approach to a constructivist one involving discovery-based learning, different ways of knowing, and nurturing. These changes in how and what science is taught will not only enhance learning and promote success, but will also help students appreciate the liberating power of science for solving problems, addressing inequalities, and understanding our world.

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Theoretical Views and Practices Supporting In-Context Developmental Strategies in the Physical Sciences

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An increasingly diverse group of entering freshmen who are viewed as having the potential to compete in a degree program and ultimately complete a bachelor's degree are demonstrating serious needs to improve their study skills or strengthen some areas of their basic content knowledge or both in the physical sciences. Several strategies that encourage students to develop and practice effective study skills within the context of a degree-credit physical science course are made possible by adapting course structure and content organization. Strategies include highly repetitive practices of testing and feedback, short-answer type exams requiring extensive use of quantitative information, bridging between the familiar and the unknown, emphasis on the holistic view of the subject, and hands-on practice of the processes of inquiry.

Many American colleges and universities are continuing to experience an increasing need to serve freshmen who are labeled as academically underprepared or less prepared to compete in college courses. Astin, Parrott, Korn, and Sax (1997) found over the past 30 years that the percentage of freshman students who stated that one of the most important reasons for going to college was to improve their reading and study skills has actually doubled, from 22% to 43%. Sax, Astin, Korn and Mahoney (1999) reported in an inventory of freshmen at all institutions that 13% had received tutoring or remedial work in mathematics and over 5% had received similar help in science in high school. When asked if they expected to need special tutoring or remedial work in college, the percentages doubled for mathematics and science at 26% and 10%, respectively.

The widening range of student needs upon entering postsecondary education has placed a strain on the ability of the academic system to accommodate all students equally well. Conflicting views among faculty and administrators raise questions about the appropriateness and impact of a process-oriented curriculum on the quality of the more traditional discipline-based curriculum (Greene, 2000). During the past 30 years, many public universities have adopted variations of a back door admissions policy (Reisberg, 2000) as enrollment demand has increased. This practice allows students who have not met minimum entrance standards to be provisionally admitted for the spring or summer term on a second chance basis where they have an opportunity to show that they can be academically successful. However, due to huge enrollment demands and associated costs, an increasing number of colleges and universities have discontinued this opportunity .

The increase in students requiring additional academic support may be due to a higher percentage of high school graduates going on into some type of postsecondary education because they and their parents are being told by educators, politicians, and executives in the workplace that they cannot command a salary that will meet their needs without a bachelor's degree or a highly specialized job skill. Astin et al. (1997) found that three-fourths of all freshmen reported that one of the most important reasons for going to college was to get a better job. The same survey also points out that nearly three-fourths of the freshmen said that another important reason to go to college was to be able to make more money. This is in contrast with what freshmen reported 30 years ago, when only 50% said that increased income potential was an important reason for going to college. Whatever the reason, a significant percent of new students have lower high school rankings and possibly lower standardized test scores that resulted from gaps in their prior learning.

Sax et al. (1999) point out that a different reason for the increased number of underprepared students is the alarming increase in academic disengagement that is reported by freshmen as they reflect on their high school experiences. Approximately 40% report frequently feeling bored in class compared to 26% from 15 years ago. In addition, 63% reported occasionally or frequently coming late to class compared to less than 50% from 35 years ago. Finally, those reporting that they have overslept or missed a class or appointment nearly doubled, with 36% now compared to 19% from 32 years ago. Sax concludes that this increasing disengagement dramatically increases student need for remediation courses in the high schools and in college.

Another perspective relating to these trends is addressed by Shea (1993) concerning the widening chasm between student expectations and faculty expectations. In one case, the students asked their geology teacher if he was going to give them a precise study guide that outlined the content to be covered, specifically listing the topics that would be in the next test. He said, "No!" He told them that he would briefly discuss the test during the previous class period and that he expected each student would develop any materials and methods of study that he or she felt would be most helpful. The same professor also had a student ask him if he was sure the exam he was taking was for the geology course he was currently enrolled in because the student thought it was too difficult. The upshot of these incidents is that the faculty member blames the student's attitude, and although it is not mentioned, the student likely criticizes the professor's attitude.

The teaching of physical science at the freshman college level is complicated due to a view that physical science and developmental education do not mix. This feeling arises because most physical science courses are highly quantitative and require that the student is already proficient in the required level of math and demonstrates the ability and discipline to read and understand science text materials. To make the point, in some secondary schools, students are required to have successfully completed two years of algebra (i.e., through intermediate algebra) before they can take their first high school course in physics.

College physical science instructors, as cited by Shea (1993), expect that students who enter their classes will be proficient in math, at least at the level specified in the course requirements, whether it be through intermediate algebra, or more likely through college algebra or first-term calculus. Text materials are usually written in a quantitative style that is more difficult to read than ordinary prose. This happens because much of the work in the physical sciences involves highly accurate measurements, precise procedures, and detailed analysis. Because of its precise nature, information often must be communicated in numerical form, such as equations, graphs, tables, maps, or charts rather than straight prose. Instructors do not want, or cannot take the time, to teach the math and other topics from basic science that students are expected to have learned earlier. Many introductory physical science courses are part of a sequence for a major so that an instructor is expected to cover certain content during the term. Often these serve as "weed-out" courses, which most often affect students who are least prepared.

There is a pressing need for colleges and universities to accommodate the ever-widening range of incoming freshmen who require extra assistance in skill building. This points to a strong need for bridging the teaching of introductory physical science with the teaching of developmental strategies. As I examine science teaching journals, much of the emphasis is content-centered, not student-centered. On the other hand, the developmental education journals are more student-centered, but they usually do not address the teaching of physical science. The ideal is to get both groups talking to each other and urge them to collaborate at conferences and through their publications.

It seems that much of the developmental support provided in postsecondary institutions is separate from the content courses in which the students need it. Students may be advised to take certain free-standing study skills courses or basic science preparatory courses before they enroll in the degree-credit introductory physical science course they really want. In many cases this may be necessary.

Gebelt, Parilis, Kramer, and Wilson (1996) argue that students may not be adequately motivated in the freestanding courses, whereas if the developmental work is taught in the context of a course offered for graduation credit they might be more motivated because they recognize the purpose for taking it. They

assert that the achievement of those students who are required to use study skills directly in the context of the course is higher than it is for those who have taken freestanding skills courses at an earlier time. Levin and Levin (1991) emphasize that study skills tend to be learned more easily when there are opportunities for application of those skills accompanied by frequent feedback and reinforcement. Francisco, Trautmann, and Nicoll (1998) found that students were more willing to address their need for help and participate in opportunities to help their study skills when interventions were closely associated with a degree level science course.

A third problem is that taking these freestanding courses lengthens the time a student must attend college before graduating, which increases the cost of education and uses up financial aid. In addition, at some institutions developmental courses are expensive to teach resulting in an additional fee on top of normal tuition costs.

In-Context Developmental Strategies

The previous section provides some rationale for making the case to provide developmental support within the context of an introductory degree-credit physical science course. General College (GC) faculty at the University of Minnesota have experimented with this in-context method of delivery for more than 20 years. Over time many faculty have adapted the general education curriculum to enable academically underprepared students to learn and practice effective study and learning strategies that can help them succeed in working toward a bachelor's degree. During the last decade we have seen steadily increasing transfer rates from General College to degree-granting schools and colleges of the University of Minnesota, which indicates that we are increasingly more effective in serving at-risk students. This leads to the following efforts, along with rationale that supports in-context developmental strategies in physical science courses.

Personal Philosophy

Each teacher develops a personal philosophy of what his or her course should look like and how that course should be taught depending on the content, the nature of the students, and the outcomes and requirements that the course must fulfill. A teacher's beliefs or personal viewpoints are also influenced by the combination of one's background, attitudes, and experiences. Tobin, Tippins, and Gallard (1994) emphasize that teachers' beliefs are pervasive in the classroom and influence the role of the teacher, planning and decision-making processes, and ultimately how a course is taught. They highlight the importance of how the personal theories guide each teacher's practice in the classroom, including how student centered the instruction is.

Mallow (1986) expands on this notion by emphasizing that the teacher's self-perception can ultimately have a profound impact on the student's attitude toward science. The teacher's attitude influences whether or not the student develops confidence in his or her ability to learn science. Mallow also notes that a major contributor to the student's development of science anxiety is the teacher who conveys the message that he or she is elitist and tries to impress the student that he or she is smarter than the student.

Each teacher is unique, so no two teachers will view or design a course exactly the same way. This diversity allows one to teach to his or her strengths and, at the same time, forces one to change and improve how he or she serves students because they are also different from each other. By the time students have completed two years of work in GC, they will have been exposed to diverse areas of knowledge, study-skill strategies, and will have experienced diverse ways of thinking about themselves, their place in the world, and their future roles in society.

A teacher's personal philosophy is guided by the mission of the college and by departmental philosophies. In turn, that philosophy influences the following parameters one establishes for his or her courses. Included are the (a) organization of the course content and order of topics, (b) degree of difficulty and sophistication of the course, (c) types and methods of study skill strategies to be implemented, (d) methods of instruction, (e) level of expectation of student performance, and (f) methods of assessing student progress and achievement.

A physical science course that is designed to help students improve their study skills and their understanding of basic science and mathematics—which at the same time enables them to learn the principles,

concepts, and terminology associated with the particular subject matter—involves adaptations to how content is taught and how student learning activities are incorporated. In practice, the developmental support runs simultaneously with the content portion of the course.

Typically, a class of 40 to 60 students exhibits tremendous diversity in basic science background, scientific and quantitative aptitude, maturity, attitude toward course and instructor, confidence in doing well in the course, and willingness to get involved in the course. My experience with these students is that they usually fit into one of three categories of those who will (a) achieve well academically from the start, will not need intervention, and will earn a good grade; (b) do poorly early, but then will respond to suggested intervention strategies, make changes, and end up with a good grade; and (c) begin poorly, but will not, or refuse to, take advantage of suggested intervention efforts and will fail or do very poorly at the end of the term.

In-Context Developmental Strategies

Any developmental strategies are intended to motivate students to buy into the educational opportunities that lie before them so that they take ownership in their own educational endeavors. Motivation can take on many forms. It can result from the student realizing that a teacher cares enough to provide the necessary help, or a student understanding, for the first time, a concept or procedure that he or she earlier thought was too difficult to master. Student needs arise for many possible reasons, but we should not concern ourselves with the causes or placing blame. In some cases, no one is at fault. Instead, we must do our best to assess their needs and enable students to develop the confidence, competence, and attitudes that will help them overcome or bridge their gaps.

As a teacher, one of my goals has always been to enable underprepared students to learn and develop confidence in new and effective study skills. Continued practice of those new skills, accompanied by some academic success, can motivate the student to become comfortable in using them. In this way, the student is more likely to abandon the old nonproductive study skills that did not lead to earlier academic success. Students need help to buy into the new strategies, and in some instances students must be taught how to use new study techniques. It is not enough to say to them, "You have to study harder," "You must work harder," or "You must change how you study for this course," and then turn and walk away, leaving them on their own to determine how to accomplish this. In some cases they do not know how to study harder or how to change their behavior.

Frequent Testing

The practice of frequent testing and feedback has been used in GC 1111: Science in Context: Weather and Climate, in which students take an exam each week in the quarter system (i.e., nine per quarter) and biweekly in the semester system (i.e., seven per semester). The repetitive use of study skills associated with mastering short-answer type exams encourages students to practice those strategies that lead to understanding rather than focusing mainly on rote memorization. A typical exam tests content and process that is presented in lecture, text materials, and labs. Each exam is one class hour in duration and is mainly a short-answer type with very few objective questions. Each short-answer exam is only partially factual, with the first being the most factual. With each subsequent exam the questions become increasingly demanding with the questions asking students to draw conclusions based on information from maps, charts, data tables, and diagrams that are available to them during testing. Most frequently the questions contain the words: how, why, when, explain, define, and describe. Some problem-solving questions begin with "Suppose that..." that ask the student to conclude or predict what will happen.

The pattern of testing described above places increasing demands on students to develop and use specific study strategies and increase the level of application of knowledge repetitively week after week. Wambach, Brothen, and Dikel (2000) point out the value of increasing demandingness and frequent feedback as necessary for helping students to become self-regulating, and thereby successful, in their academic endeavors.

Another benefit resulting from this testing practice is the fast start, immersing students in the course very early. In other words, "They hit the floor running." I believe that many of our students do not know

how to handle the dead time that elapses between the first day of class and the first major exam or the time between consecutive major exams. They think they understand what is taught but tend to let certain important learning activities slide, and consequently do not do well on the exams. I believe that it is necessary to shorten that initial dead time as much as possible. Having the first exam during the second week of a 15 week semester allows students an opportunity to recover if they did not do well. If they received a good grade on the first exam, they will be greatly encouraged and motivated.

I have designed the first exam to be quite factual and difficult, but not a "killer." It is necessary to push students carefully into the unfamiliar early in order for them to experience growth. The content tested in the first exam is new to them. If they have studied the assigned material and completed the first lab, they will do well and they will be motivated by a sense that their effort has paid off and that they have learned something new. If they do not do the work, they will not do well. For those who do not do well on the first or second exams, I try to initiate dialogue to diagnose what went wrong. Usually the reasons are apparent, and we discuss strategies to correct the process. Some will conscientiously follow advice while others will not; it is their choice. Those who do adopt new strategies often see an improvement in their grades even though the exams are increasingly difficult. They learn very early what it takes to succeed in the course. Levin and Levin (1991) emphasize that students who receive direct guidance in establishing new and more effective learning strategies are better equipped to succeed academically in future courses. I include the following quote by a former student in the course syllabus: "The course is relatively easy if you take it seriously and do the assigned work. It is a very difficult course if you do not put the effort into it."

The repetitive nature of three classes per week, a two hour lab per week, an exam every other week, and one written critique on current topics due every other week helps students actively establish a weekly routine in the course. They know what to expect each week. This process provides special opportunities for them to develop strategies that help them overcome difficulties they may have with test taking, overcoming test anxiety, note taking, time management, or improving their concentration and attention span.

I believe that frequent test preparation enhances learning. With biweekly testing, students focus most of their attention on what has been assigned over the prior two-week period. It is easier for them to get their heads around the knowledge and processes that will be tested. It also allows for more in-depth testing of the topics compared to what can be accomplished in a one-hour exam covering several weeks of work. It should be pointed out, however, that each exam draws from content studied earlier in the term. If the students understand the earlier topics better they will perform better on subsequent exams.

Higher Order Thinking Skills

Bloom (1956) stresses that even though the gaining of information and knowledge is important, the primary goal of instruction is to enable students to do something with that information and knowledge. It is expected that students will select appropriate techniques, information, and knowledge when encountering a new problem or situation.

Furthermore, Zoller (1997; 2000) maintains that the primary goal of current reform efforts in science education is to strengthen our students' higher order thinking skills. This means enabling students to participate effectively in the decision making and problem solving processes in our society. Likewise, the developmental education program in General College is intended to facilitate students' ability to move into a college-level program and ultimately complete a bachelor's degree. This means that they need to be able to master new knowledge and the applications of that knowledge, as well as compete successfully with other students. Once they transfer to a degree-granting program, they will begin pursuing a major, and must have perfected their own study strategies and basic knowledge to a level at which they have confidence in themselves as competitive students. With this premise, I feel that it is necessary for them to be well acquainted with short-answer exams because they will encounter mostly short-answer and essay exams in their future work. I do not believe that multiple-choice and true-false exams prepare them adequately because of the differing thought processes involved.

Students will encounter heavy emphasis on application if they pursue coursework in the physical sciences. This is the basis for having them use data from

maps, charts, graphs, equations, and tables to make inferences and draw conclusions. This approach helps many students realize that they can do science. Successful experiences of this type may encourage some of them ultimately to consider a degree program in the sciences.

Applications that involve handling quantitative information enable students to think about and view the field, whether it is meteorology or physics, in a way that is similar to that of professionals in those fields. Having this perspective is extremely helpful to novices who wants to pursue one of those fields because they can more easily understand what the professionals are saying as well as understand course materials.

Science in Context

Two in-context notions are addressed in this chapter. What has been discussed so far is study skills in context. What follows is a discussion of content in context or learning about science content based upon experiences with the familiar. In GC we have experimented with the "Science in Context" notion since the mid-1960s to enable underprepared students to learn basic science within the context of something with which they are very familiar. Bloom (1956) makes this notion clear by stating that the abilities and skills needed for critical thinking and problem solving are drawn from one's previous experiences. This requires some understanding of the new situation. It requires prior knowledge or methods that can be used, and it requires some ability to recognize the appropriate relationships between prior experience and the new situation. In GC 1111, the familiar provides the basis that can lead to the application and understanding of new concepts, principles, and terminology from physics, chemistry and biology. As an example, this allows them to infer the whys and hows of the weather. This notion is expressed in the statement: "Each of us knows a lot about the weather, but we know very little about meteorology." Meteorology is mainly the physics of gases, fluid dynamics, energy transfer, and energy transformation. The study of the atmosphere and its weather and climate is loaded with a considerable amount of basic science.

Svinicki (1993-94) expands on the value of connections between prior knowledge and knowledge to be learned, positing that learning is easier and faster if there are more connections. More connections increase the comfort zone between the student and the new knowledge. Also, instruction is aided if all the students in a class have comparable prior knowledge. To some degree, this is true in a course in weather and climate where most of the students share a common understanding of what weather is even though they do not know what causes it. In a weather course, it is often appropriate to explain the science behind some atmospheric phenomenon if it just occurred, is happening, or will be happening soon. As in any course of study, students may have faulty or wrong knowledge. This is very true with how people may explain the hows and whys of weather. Svinicki suggests that it is important to correct those wrong notions when connections are being made between the known and the unknown.

Course Organization

Occasionally, an instructor, in order to better serve underprepared students, may change the course organization and order of topics so that it looks very different from a traditional course in the subject. This is difficult to do but may be necessary in order to help the students make better sense of the subject matter. The traditional small scale to planetary scale perspective of the weather and climate in the traditional course is not always appropriate for some students who would better understand the planetary to small scale instead. Some of the difficulties in changing the perspective include objections from other colleagues and professionals in the field who were traditionally trained as well as introductory textbooks and published lab manuals that may not be suitable materials for a nontraditional audience. Often these published materials assume a level of sophistication of student knowledge and quantitative ability that is above that of a particular student cohort. All of this usually results in the teacher writing new materials for the developmentally based course.

I designed GC 1111 into a course that I believed would be more appropriate for the underprepared student. Earlier discussion describes attempts to incorporate developmental support directly into a degree credit course. The content and topics in GC 1111 have been reorganized beginning with the planetary or global viewpoint and then proceeding toward the small scale, or local perspective. I have written an extensive

set of study notes that serve as the primary study guide for the course. These notes provide a detailed guide to which pages students should read in a traditionally organized textbook.

I believe that many students need to see the whole picture first in order to better understand the parts. Zoller (2000) addresses some of the features that a new model for teaching higher order cognitive skills should include. One of the guiding constructs of such a model is the need for a holistic, systemic, and interdisciplinary approach. A benefit of this approach is that students are able to grasp and learn how to produce weather forecasts much earlier in the term than in the more traditional course. This is important because we usually are not too interested in past weather, or even current weather, but are much more concerned about what will happen in the future. Being able to predict weather motivates students to actually learn about the atmosphere in more depth. This inquiry-based process demonstrates to the students that they, in fact, can do science. This is a strong motivator.

Methods of Inquiry

A final strategy is based on concerns relating to difficulties some underprepared students encounter with mathematics, and quantitative work in general. During my experience in teaching introductory physical sciences and developmental mathematics, I have observed the frustration of those students who did not master arithmetic or algebra during the elementary and secondary school years. They are turned off by the prospect of having to take courses in those areas again in college. In some cases they had bad experiences for any of several possible reasons. The resulting negative attitude they have towards math, and in some cases, the quantitative demands of the physical sciences, is compounded because taking developmental math lengthens their stay in college and consumes financial aid.

Most often, standard algebra courses place considerable emphasis on the steps involved in simplifying expressions and solving equations with less emphasis on applications. It is discouraging to find that too many students do not understand what graphs, equations, and inequalities are. What do they mean? How do we read them? Where do they come from? In addition, they often do not know how to collect good data, nor do they know how to construct an appropriate graph. In many cases they do not understand the independent and dependent relationships between the variables in which the value of one variable influences the value of the other.

I have had the opportunity to experiment with having students do science in GC 1160: Physical Science Laboratory (no longer offered) and GC 1163: Physical Systems: Principles and Practices by carrying out the steps or processes of inquiry, or what some people call the scientific method or the methods of research. Students begin by observing some kind of physical phenomenon that is actually a result of the interaction of two variables. The phenomenon must be simple and easily understood by students. This allows them the opportunity to focus mostly on the inquiry process itself. Observations consist of taking measurements of changes of the two variables during the interaction between them. Graphs, equations, and inequalities are eventually developed from these simple measurements. The students follow precise procedures to collect the most accurate data. Next they perform error analysis on the data to understand the variability and approximate nature of their measurements. The analysis process continues by constructing a visual picture or graph of the relationship between the variables. Equations or inequalities are constructed from the data and the graph. Graphs, equations, and inequalities are models that define and represent the relationships between the variables. These models can then be used to predict other interactions without having to rerun the experiment. A frequent comment by students who have worked through the inquiry process is, "Oh, that's what it is all about!" I believe that it is necessary for students to have hands-on experience of the observation and analysis processes in order for them to realize what graphs, equations, and inequalities are all about. Even though it takes additional time to complete those initial steps of the inquiry process, it helps students buy into the role and purpose of mathematics in their academic work.

The process outlined here is not restricted to the physical sciences. Obviously this can be a valuable learning activity and should be offered in other natural science, social science, business, and technology courses. The outcome of such an experience can be extremely valuable as students continue their education. The confidence and the insight they gain may

encourage them to pursue degree options that they had thought were out of reach for them. They may confidently enroll in courses that have a heavy research component.

Conclusion

Strong intervention strategies should be available and used during the student's first term of enrollment. Courses that are entry points for new freshmen should be structured in such a way as to identify those individuals who need help very early in the term. They all do not need intervention, nor do they all need the same kind of intervention. Some students may need help in both study-skill development and preparation in basic science content, while others may need help in one of those areas. They should be identifiable very early in their first physical science course so that they can make certain course corrections and ultimately be successful in the course. Success breeds success.

Intervention strategies must be cut back or curtailed in subsequent terms so that students do not get too dependent on them. They should be expected to study and compete on their own, with only a very limited safety net available, before they transfer. The developmental process must be designed to motivate students to develop their strengths and overcome their weaknesses to such a level that they are confident about their own ability to compete academically.

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A Selectionist Approach to Developmental Education

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Developmental students are typically defined as a special population. They are most often served by special courses rather than by mainstream courses taught with more effective and diverse pedagogies applicable to a wide range of students. We argue that the current approach tacitly assumes deficit and is a product of essentialistic thinking. We further argue that selectionism provides a more useful philosophical framework for developmental education. We make an analogy to evolutionary thinking to foster a view of developmental students as products of environments that have selected behaviors unhelpful in educational settings. We conclude that this selectionist focus on the environment shows more clearly how to structure effective developmental education environments.

At the National Association of Developmental Education (NADE) web site (www.umkc.edu/cad/nade/nadedocs) one can view the association's goals and strategic plan. These documents provide a picture of what NADE considers important and how it will work to further developmental education. The definition of developmental education adopted by NADE (1995) appears in the preface of this monograph. This broad definition and goals statement, with its heavy emphasis on the individual, suggests that developmental education is any educational intervention targeted to the specific needs of individual learners and implies that nondevelopmental postsecondary education does not accommodate a wide range of learners.

We believe that the rigidity of conventional pedagogy used in college classes has led developmental educators to conclude that students who fall outside of the "usual" range of college students can be served best by "special" courses. The other possible solution, creating more effective and diverse pedagogy for a wider range of students, is much less tenable given the entrenchment of college faculty in their disciplines and the lack of funds needed to implement sweeping changes in college classrooms. Therefore, despite the broadness of the definition of developmental education, it has mostly been operationalized as courses in reading, writing, mathematics, and study skills. In fact, more than 85% of all educational institutions test and place students into developmental education courses (Lewis & Farris, 1996). Typically, when students enter postsecondary institutions they are classified as ready or not ready for the college level curriculum. If admitted, students who are judged not ready are assigned to courses where they will learn the skills necessary to be fully prepared for college work. These students are often described as having deficits or special needs that must be addressed before they can enter the institution's mainstream.

Many assumptions are implicit in this model. It assumes that students' past behavior in academic situations accurately predicts their future behavior. It assumes that students who have not been successful in academic situations have defects in their abilities, skills, or attitudes that explain their lack of success. It also defines preparedness as a fairly stable quality possessed by students that can be measured. In any case, students placed into developmental courses tend to pass them. For example, Lewis and Farris (1996) report that 79% of students taking developmental education

courses in the U.S. succeed in them. Similarly, Boylan, Bonham, Claxton, and Bliss' (1992, November) national study of developmental education outcomes showed positive results. What we do not know is the proportion of students who could succeed in nondevelopmental courses if the methods used to teach those courses addressed the needs of a broad range of learners. Unfortunately, research suggests that too many students who start college with developmental courses never reach the nondevelopmental curriculum.

Statistics compiled from community colleges in California (Little Hoover Commission, 2000) cast doubt on the extent to which current developmental programs prepare students for the ultimate goal of degree completion. Whereas 85% of these community colleges consider transfer as their primary mission, and 31% of entering students state their goal as transfer to a baccalaureate program, only 3% actually do transfer. In California 10.4% of all community college students enrolled in developmental education courses with 80% completing them successfully, but only 26% went on to take even one higher level course (Little Hoover Commission). Even more disturbing, a study of community college students' patterns of success (Broughan, 2000) found that 57% of working class African Americans placed in multiple developmental courses failed to complete a single course for graduation credit. These outcomes are depressingly similar to what Richardson, Fisk, and Okun (1983) found in the Maricopa County Community College system two decades ago. They reported that few students who entered the developmental education program emerged from it successfully. If these data are representative of the U.S. at large, one could argue that developmental education is not achieving its goals. We think the primary problem is that developmental education is founded on a deficit model that labels students rather than instruction as the problem.

We have argued that the prediction-placement model (i.e., assess deficits in reading and writing and place students into skills courses) by which most of developmental education functions is problematic (Wambach & Brothen, 1990). The moderate, positive correlations between standardized tests, past grades, and future performance make grades and test scores useful in selective admissions situations where not everyone who wants to attend an institution can be accepted. If a college can only serve 1000 students, it seems reasonable to admit the 1000 deemed most likely to succeed. The decision not to admit a particular student does not mean that individual would not succeed if he or she had been admitted. It means that, given a surplus of applicants, the institution can decide to serve another applicant instead. In fact, in most situations where applicants are rejected, there is some probability the student would succeed if admitted. When students are accepted who fall below the usual admissions criteria, these students are often identified as "deficient" and in need of intervention. They are typically labeled as developmental students.

Some charged with the task of teaching or advising developmental students are finding the concept of "deficit" problematic (Higbee, 1996). Working from post-modernist perspectives, scholars in the field of basic writing have found the entire notion of who is prepared or not to be a complex and political one. For example, Faigley (1992) rejects categorization and stresses the importance of process in basic writing. Iris Young (1990) takes a political perspective and argues that rights and power are not essential "things" but exist in relation to social structures. Although not abandoning the task of teaching students academic forms of writing, they reject the notion that students who do not yet know the forms are somehow defective. Instead, they propose identifying the skills a student already possesses and building academic writing skills on this foundation. Students' prior skills include proficiency with language forms and cultural knowledge not generally valued by higher education institutions. This is consistent with the approach we take here.

Yet the notion of deficit does not go away. In the common discourse of developmental education, students are often described as "developmental" or "underprepared" or "at risk." Reading courses are said to make up for lack of ability or interest in reading, and traditionally structured remedial writing courses strive to improve the inability to write complete sentences. In this paper we will argue that the concept of deficit is a product of essentialistic thinking, the belief that we can know the "essence" of a person. We will propose that selectionism, the idea that useful qualities are selected by environments, provides a more helpful philosophical framework for developmental education.

Essentialism from Aristotle to the Evolutionary Synthesis

Fuss (1989) points out that "Essentialism is classically defined as a belief in true essence—that which is most irreducible, unchanging, and therefore constitutive of a given person or thing" (p. 2). Aristotle's "types" were an early systematization of such essentialist thinking (Sober, 1984). Aristotle characterized things and people as deviations if they were not identical to their type. These deviations were caused by interferences that kept the entity from exhibiting the qualities of its type. Thus, "student" is a type, and developmental students would be seen as deviations from it. Remediation, then, is necessary to restore the deviation to its normal state.

From a biological perspective, essentialism is "a belief that the variation of nature can be reduced to a limited number of basic classes, representing constant, sharply delimited types; typological thinking" (Mayr, 1997, p. 307). In developmental education, typological thinking is evidenced most often through division of students into types by virtue of the stable characteristics they are said to possess (e.g., deficits, skills, learning styles, etc.) and then either helping students overcome the deficit (e.g., a skills course) or finding educational interventions adapted to them (i.e., teaching compatible with their learning style). Fuss (1989) makes a distinction between real essences that "are discovered by close empirical observation" and nominal essences that are "produced specifically by language" (pp. 4-5). We believe that essentialist concepts in developmental education are of the second type because their empirical basis is weak. We will review briefly some pertinent literature and make some proposals that suggest a way out of what we see as a problem for developmental educators.

To understand the pervasiveness of essentialistic thinking in our enterprise, a historical perspective is helpful. Mayr's (1997) history of biology provides parallels to the issues facing developmental education. He points out that Copernicus, Galileo, Kepler, Newton, Descartes, Leibniz, and others developed the basic principles of the scientific method still in use today. Their Christian perspective caused them to view the universe as an orderly "machine" whose universal laws could be divined with the new methods developed during what has come to be called the scientific revolution. The science of mechanics (i.e., movements of planets, etc.) conformed well to the machine metaphor, but it soon became apparent that the mechanistic approach was insufficient for the finer grained analysis necessary for more complex systems. The complexities at the atomic level in physics and the complexities of life in biology demonstrated the importance of random factors and functional relationships between variables.

In biology, two perspectives vied for dominance—Physicalism and Vitalism. Physicalism was mechanist, reductionist, determinist, and essentialist. Its model was the Cartesian machine whose parts operated according to a basic "blueprint." These parts were universal and defined the essential nature of organisms. Vitalism was a reaction to this that was deemed metaphysical by the physicalists because it replaced Cartesian dualism with the concept of a "vital force" that set living things apart from the nonorganic world.

Both views were found wanting in basic ways. Physicalism simply could not explain the complexity that laboratory studies were revealing about life and had no answer for why the machine acted as it did. Vitalism foundered because it relied on essentialist notions such as the preformist hypothesis of egg development (i.e., that the essential structure—a homunculus—was present from the beginning) that were reduced to absurdity by better thinking and advanced optics. Their replacement, Organicism, took the best of both and had the decided advantage of being consistent with Darwinian theory. Its two main features, the genetic program and emergence, are thoroughly selectionist. The genetic program is subject to natural selection and provides the direction that past selection pressures deemed to be most useful.

Emergence is a developmental concept but is very different from the vitalist notion of development as unfolding—the notion that inherent form (e.g., the homunculus) simply has to be let out. Emergence progresses from lower stages through the greater complexity of higher stages. This process too is subject to selection. Development in the old vitalist, unfolding sense thus tends to be essentialist because it implies an unvarying, predetermined process. Development in the progression through stages sense is not essentialist because it is subject to environmental pressures.

The evolutionary synthesis of the 1930s and 1940s united Mendelian genetics and Darwin's theory, putting his two key principles, common descent and natural selection at the center of biology. Darwinian theory postulated two things necessary for evolution, variability and adaptability. A new, more successful species is created because its parent organisms had the genetic diversity necessary for it to be adaptable to changing environmental conditions. Importantly for developmental education, this notion can be applied to individual behavior as well as to species. With this approach, we are accepting Wilson's (1998) challenge to demonstrate points of unity between the biological and social sciences.

The Environment and Radical Behaviorism

The most powerful determinant of evolution is the environment. Natural selection ruthlessly eliminates whole species while it allows some adaptations to survive and even flourish. We are not making a strictly evolutionary argument here but instead are reasoning by analogy. Using evolutionary concepts may strike some as inappropriate in a social context. But we feel justified because Darwin himself borrowed heavily from social science in his thinking (Sober, 1984). We trust that we have been careful enough so that our analogue does not recall the problems of so-called "Social Darwinism," which treated winners and losers in society as the result of natural, unavoidable processes. Our argument is closer to Dawkins' (1989) application of Darwinian thinking to culture and Wilson's (1998) concept of gene-culture coevolution. That is, that the most adaptive characteristic that evolved in human beings is culture and that cultural transmission provides the greatest part of an individual's environment. Because culture accounts for most of what happens in education, the parallels we draw to it are crucial to our argument. We treat an individual's behavioral repertoire (e.g., attitudes, habits, skills, etc.) similarly to how the species concept is treated in biology. Species adapt, continue, or disappear just as an individual person's habits do. Species have variability in the sense of genetic diversity while an individual's behavioral repertoire can take many possible forms. Both genetic traits and an individual person's behaviors may prove to be adaptive or not. Genetic characteristics are inherited while behavioral repertoires are transmitted through cultural mechanisms such as educational institutions. Finally, evolution proceeds over time just as a behavioral repertoire becomes more adaptive as a function of its environment.

In his development of radical behaviorism in the 1930s, B. F. Skinner adopted Ernst Mach's approach to cause and effect (Chiesa, 1992). Mach rejected the mechanistic and essentialistic cause and effect notion of force in physical systems and replaced it with the concept of functional relation. Because "causes" suggest agency, Mach built on Hume's assertion "that notions of agency, force, or necessity of connection are superfluous" (Chiesa, p. 1289). The Machian school also rejected a priori (e.g., Kantian) models (Loving, 1997) and signaled the developments in quantum physics and relativity theory. Skinner's application of Mach's philosophical approach, in concert with a selectionist approach to human behavior, was a radical innovation that is far from mainstream psychology today (Palmer & Donahoe, 1992).

Just as biologists recognize the genetics of species to be highly variable, Skinner conceived of behavior as highly variable (Palmer & Donahoe, 1992). Genes and behaviors are both selected by the environment. Both operate by the process of variability-selection-retention. A subset of behaviors from a large number of possible behaviors is retained because the environment selects them. Thus, there are few mechanistic causes of behavior with only simple mechanisms such as the salivary reflex having identifiable cause-effect relationships. The environment is the closest thing to a causal agent in that it selects and maintains complex behaviors through the reinforcement it provides naturally or through reinforcement contingencies set up by other individuals or the culture. Behavioral repertoires are functions of the environments in which they exist. Conceiving of events and behaviors as products of functional relationships means focusing on the relations rather than searching for causes inside the person that may or may not be subject to manipulation.

In contrast, most of psychology and education conceives of behavior as the product of complex mechanisms. The memory "system," learning styles, and so on, that reside in the person are said to affect behavior. Without a demonstration of their existence apart from their status as hypothetical constructs, they are essentialist concepts. Much of developmental education has taken this approach as well.

Essentialist Concepts in Developmental Education

There are two questions that, if answered affirmatively, can identify an essentialist concept in developmental education. First, does it divide students into neat categories? Second, does it appeal to the existence of a stable trait without strong empirical evidence for its existence? That is, does it have the status of a hypothetical construct?

Ironically, developmental education exists partly because of essentialist thinking. Some students are "qualified" for regular admission while others, perhaps missing a cutoff on some qualification measure by one point, are defined as developmental students. This may be typological thinking, but just as instructors must determine the line between A and B grades, we appear to be stuck with some categorization. However, there are some types of categorization that are not so helpful.

First, within developmental education we often place students in remedial courses because they missed a cutoff score on a reading or writing placement test. This is not only typological thinking but also implicitly assumes the existence of a reading or writing competency that can be validly measured. Second, we may try to match our teaching to students' learning styles. This categorizes students and assumes that students possess a generalized internal filter that seeks specific types of input on some a priori basis. And third, assuming that real deficits exist also assumes that there is something missing in the student and that we can measure it accurately and reliably. How can we escape these three negative aspects of concepts so basic to our field?

A Selectionalist and Functionalist Approach to Developmental Education

Recently we (Wambach, Brothen, & Dikel, 2000) proposed the broad outlines of a theory for developmental educators. This theory does not take the prototypic positivist approach as originally defined by Auguste Compte, "that a real, objective world exists independently from individual perceivers and that science merely discovers the mechanisms of this objective world" (Loving, 1997, p. 448). It is grounded in important, educationally relevant aspects of students' environment.

The theory we proposed (Wambach et al., 2000) utilizes two process-oriented concepts: demandingness and responsiveness. These concepts characterize what is important about the environment rather than qualities of the student. Environments (e.g., college courses, instructional techniques) vary on how much they demand and how responsive they are to students' needs. In this view, there are no essential characteristics about students that developmental educators must identify, measure, or change to help them become successful. This is not to say, however, that students do not differ in important ways. We believe it is useful to research these differences and convenient to name them as traits, attitudes, and so on, as long as we recognize them as ways of responding to the environment rather than as essential student qualities (Wambach & Brothen, 2000).

Just as demanding natural environments "fine tune" species to produce more adaptive qualities in organisms, so do demanding educational experiences select ever more effective academic behaviors. A responsive natural environment rewards positive adaptations with survival. A responsive educational environment provides feedback to students so that effective behaviors are strengthened and retained.

B.F. Skinner demonstrated the utility of a selectionist, functionalist approach for psychology. He also wrote passionately about applying these concepts to education (Skinner, 1984). We think his conceptualization of the individual as a locus of forces is useful in thinking about developmental education. Skinner often spoke of himself and others as a locus of forces (Catania, 1992). These forces provide the context in which behavior occurs. While highly interactive, they can be grouped for discussion as genetic makeup, reinforcement history, and current environment. We believe it is useful to view our students and our task in helping them according to these three forces.

First, the role of genetic makeup in student behaviors relevant to our actions as developmental educators is sketchy. Personality traits (Eysenck, 1998) and general intelligence (Jensen, 1998) are based at least in part on genetic factors. The argument has always centered on how much. It seems to us that genetic

factors specify practical limits to behaviors (e.g., a very short person may never be a basketball star). But we never see such clear examples in our work with students. Perhaps the human genome project (Ridley, 1999) will settle what has always been a controversial issue, but it is not something we have any control over. There are more important things for us to focus on instead. In our own research, for example, we find the less stable, and thus less essentialistic, variable of task effort to be more important for our students' success than academic aptitude measured by scholastic aptitude tests that are highly correlated with IQ scores (Brothen & Wambach, 2000).

Second, our students bring to us a reinforcement history that is 18 or more years long. In this time, students have acquired behaviors they typically use in academic settings. Some of these behaviors enable success in some settings and not in others. Some behaviors have led to success in the past, but need to be modified as new situations are entered. Students have also acquired some behaviors incompatible with academic success such as habitual television watching or substance abuse. They may also have acquired responses to academic environments that interfere with success such as test anxiety, falling asleep while reading, or generalized learned helplessness in academic situations. We think often of our late General College colleague Henry Borow's comment that many of our students have been repeatedly "clobbered" by the educational system. Once again, we cannot control the past, but an awareness of it may prove useful in determining what activities might benefit our students.

Genetic make-up and reinforcement history resist our ability to directly affect them. They also have in common the notion that something is different about students because of their differing genetic programs or reinforcement histories. As long as we view these forces as affected by selection, we escape the essentialist trap and may even find useful ideas for how to do our work better. Some may not agree that genetics or reinforcement history are so important. For them, and us, we suggest an alternative. For the most part, in regards to our work as developmental educators, we can ignore them. The third force, current environment, is where we should concentrate our energies.

Conclusion

Throughout this paper we have made the analogy to evolutionary thinking that environments select behaviors. Central to our argument is that a selectionist approach to developmental education is useful because it helps us view our students in a more useful and optimistic way. Instead of deficits we see students who are products of environments that selected behaviors that may not be helpful in educational settings. If we continue to focus on the environment, the selectionist approach helps us decide what educational environments should look like.

Our task as developmental educators should be to create environments that select new, adaptive behaviors. Instead of viewing students with myriad learning styles before us in the classroom that would be impossible for us to accommodate equally, we see students with different reinforcement histories ready to have new behaviors added to their repertoire. Our (Wambach et al., 2000) theory focuses on current environment. It suggests that we implicitly assume that all of our students are at the same place, even though they actually may not be. It states that the social environments we create in our classrooms should be constructed in ways that foster adaptive educational behaviors. The theory states explicitly that these environments should be demanding and responsive. It is difficult to do both of these when our students have not had prior success with high school courses or with standardized tests. The findings of the Little Hoover Commission (2000) that 74% of developmental students did not progress beyond one developmental education course suggest to us this was because they did not feel challenged. But challenge without responsiveness is a recipe for more immediate failure—the educational environments we create must be demanding *and* responsive.

We (Wambach et.al., 2000) have laid out some guidelines for how demanding and responsive environments should be constructed. Developmental educators currently look to mainstream postsecondary education for teaching models. We believe we must look elsewhere. Until postsecondary education in general is reformed, which is unlikely to happen anytime soon, developmental educators should begin to change

now. We (Brothen & Wambach, 2000) have outlined our selectionist approach in the classroom. We are certain others exist. It is important to remember that even though our classes, or students' entire college experience, may be a small part of students' lives, the environments we create are very likely to make a positive difference in their lives (Pascarella & Terenzini, 1991). We believe most developmental educators do this naturally. We hope this chapter helps us all think of ways to do this more explicitly.

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Applying Theory to Practice: Mediated Learning and the American Mathematical Association of Two-Year College Standards

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This chapter considers theory and research related to computer mediated learning, a student-centered approach incorporating interactive multimedia software, and considers why mediated learning may be one approach to successfully incorporating the American Mathematical Association of Two-Year College (AMATYC) standards into developmental mathematics programs. In response to growing pressure to improve mathematics education in postsecondary courses below the level of calculus, AMATYC published Crossroads in Mathematics: Standards for Introductory College Mathematics Before Calculus *in 1995 in an effort to set standards for intellectual development of students, pedagogy, and content for these courses. Implementing these standards has proven to be a challenge for many developmental mathematics programs. Mediated learning environments, when structured appropriately, may be one avenue for developmental mathematics programs to incorporate the AMATYC standards.*

During the 1980s and early 1990s mathematics education was under pressure to make changes at all levels. The American Mathematical Association of Two-Year Colleges (AMATYC), an organization whose primary mission includes the development and implementation of curricular, pedagogical, assessment, and professional standards for mathematics in the first two years of college, responded by publishing *Crossroads in Mathematics: Standards for Introductory College Mathematics before Calculus* (i.e., AMATYC *Standards*; AMATYC, 1995). This document provides standards for the intellectual development of students, pedagogy, and content in mathematics courses below the level of calculus. Implementing these standards, however, has frequently proven challenging for developmental mathematics programs. Computer mediated learning, a student-centered approach incorporating interactive multimedia software, may be one approach to successfully implementing the AMATYC standards.

Impetus for the Development of the AMATYC Standards

In the years leading up to the publication of the AMATYC *Standards* (1995) a series of publications called for change in mathematics education across all levels. *Everybody Counts* (National Research Council [NRC], 1989) states specific recommendations for changes in mathematics programs from kindergarten through graduate school. In *Moving Beyond Myths* (NRC, 1991) the National Research Council recommends that significant changes be made in the undergraduate curriculum, and in *Reshaping College Mathematics* (Steen, 1989). Lynn Steen proposes an outline for an undergraduate curriculum.

Much of the call for change in how mathematics is taught across all levels was influenced by two factors. First, there was widespread dissatisfaction with student performance in mathematics, especially when compared with international students. *The Mathematics*

Report Card, (Dossey, Mullis, Lindquist, & Chambers, 1988) stated, "Although more students appear to have mastered basic mathematical skills and concepts in recent years, few achieve the higher range of mathematics proficiency" (p. 7). *The Underachieving Curriculum*, (McKnight, Crosswhite, Dossey, Kifer, Swafford, Travers, & Cooney, 1987) stated, "From an international perspective, U.S. yield in mathematics is very low" (p. xiii). The authors describe the mathematical yield of a system as the product of two quantities: the proportion of high school students that is enrolled in advanced mathematics courses and how much mathematics those students know. The second factor that contributed to the call for change in mathematics education was the release of reports such as *A Nation at Risk: The Imperative for Educational Reform*, (National Commission on Excellence in Education, 1983), and *Everybody Counts* (NRC, 1989), which suggested that the United States would be economically disadvantaged if students did not obtain stronger mathematical backgrounds. In response to these concerns, the National Council of Teachers of Mathematics (NCTM) articulated a set of standards for mathematics education from kindergarten through twelfth grade in *Curriculum and Evaluation Standards for School Mathematics* (NCTM, 1989) and AMATYC published standards for postsecondary courses before calculus in *Crossroads in Mathematics: Standards for Introductory College Mathematics before Calculus* (AMATYC, 1995).

The AMATYC Standards for Intellectual Development, Pedagogy, and Content

The standards articulated by AMATYC (1995) provide direction for developmental mathematics programs and a "yardstick" by which programs may be evaluated, as follows:

1. The standards for intellectual development address desired modes of student thinking and represent goals for student outcomes. Students are expected to engage in substantial mathematical problem solving; participate in modeling using real-world data; expand their mathematical reasoning skills; develop the view that mathematics is a growing discipline interrelated with human culture; acquire the ability to read, write, listen to, and speak mathematics; use technology appropriately to enhance their mathematical thinking; and develop mathematical power (AMATYC, 1995, pp. 9-12).

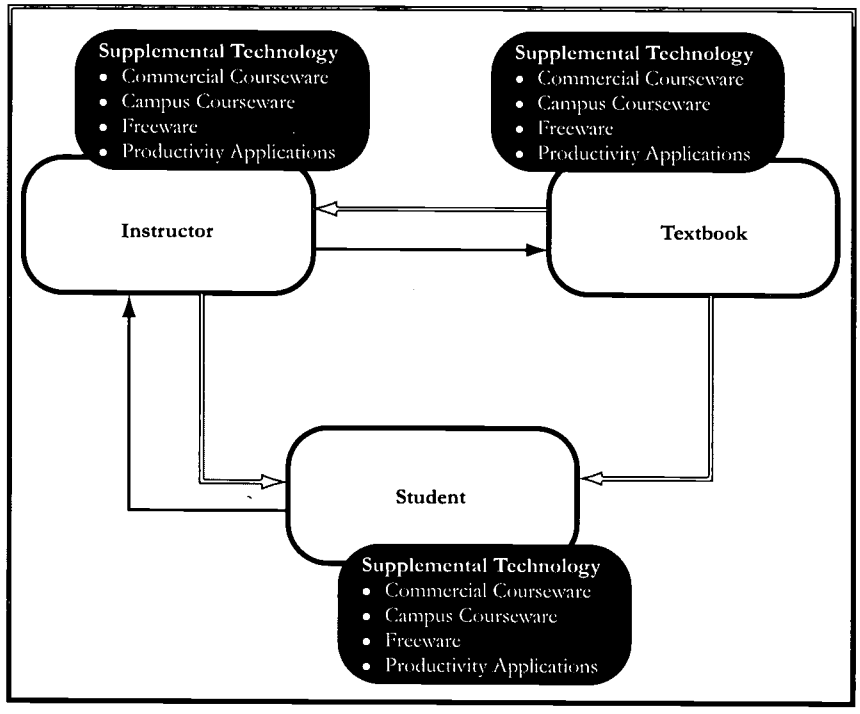

Figure 1. Mediated learning model of instruction and learning.

2. The standards for pedagogy recommend the use of instructional strategies that provide for student activity and interaction and for student-constructed knowledge. Mathematics faculty are expected to model the appropriate use of technology; foster interactive and collaborative learning through student writing, reading, speaking, and collaborative activities; actively involve students in meaningful mathematics problems that build upon their experiences; use multiple approaches — numerical, graphical, symbolic, and verbal; and provide learning activities and projects that promote independent thinking and required sustained effort (AMATYC, 1995, pp. 15-17).

3. The standards for content provide guidelines for the selection of content that will be taught throughout introductory college mathematics. Students will develop number sense, translate problem situations into symbolic representations, develop spatial and measurement sense, demonstrate an understanding of function, use discrete mathematical algorithms, and analyze data and use probability (AMATYC, 1995, pp. 12-14).

The AMATYC *Standards* (1995) describe desired outcomes for developmental mathematics students and programs but do not provide details on how programs should achieve these standards. The document *Crossroads in Mathematics: Programs Reflecting the Standards* (AMATYC, 1999) provides an overview of an array of programs that attempt to incorporate the AMATYC standards but again, not specific blueprints for implementing the standards. It is left to individual developmental mathematics programs and faculty to develop an approach to implementing the standards that best serves their students. An instructional model that an increasing number of programs are incorporating, for various reasons, is mediated learning.

Mediated Learning

Mediated learning is defined as a learner-centered model of technology-mediated instruction (Gifford, 1996). In this model the individual learner is at the center of the teaching and learning enterprise and is given access to and considerable flexibility in the use of a variety of instructional support resources including interactive multimedia instruction and assessment, the instructor, and text.

This allows learners to: (a) exercise more effective and efficient control over their own learning; (b) secure real-time assessment and feedback; (c) secure more information on their own learning through individual and achievement and progress reports; and (d) receive more individualized learning assistance from instructional staff (pp. 18-19). It is technology-mediated instruction because interactive multimedia software is the primary vehicle to deliver the instruction, feedback to student interactions with the technology, and assessment. The instructional staff provides individualized assistance when requested by students.

Mediated learning environments can be structured to support important goals of developmental education, yet allow instructors great flexibility in structuring their courses. Frequent assessment and feedback, for example, can be provided by both the software and the instructor. As students navigate through the software they enter or select responses and receive immediate feedback through the software. They may also discuss with the instructor their reasoning for selecting a particular response or seek clarification of the feedback provided by the software. Feedback is also given to students as they work on, or when they complete, the "checkpoint" question given daily. Students are encouraged to work on these together, which allows them to receive feedback and assistance from classmates.

Another goal of developmental education is to enhance the retention of students. An important step in retaining students is early intervention by the student's instructor and advisor when needed. The computer database provides the instructor with detailed information about each student's success and time on task for each lesson, thus allowing the instructor to quickly assess the progress of each student so that intervention can take place early if the student is not progressing sufficiently. The software allows the instructor to set up courses in a way that lets each student learn in a flexible way (e.g., choice of navigation paths, pace, access to instructor as needed for individual questions). It also allows the instructor to build in a high level of organization and structure (e.g., written objectives for each topic, schedule of homework assignments and exams for the semester, daily checkpoint questions, dedicated times and location for software use and class meetings) that promotes keeping students on track to

meet course objectives. This is another important characteristic of developmental education.

Mediated learning environments necessitate that students and instructors take on different roles than in traditional lecture courses. In the mediated learning model students navigate through interactive multimedia lessons that present the mathematical concepts and skills and provide immediate feedback. Students are able to navigate along a path and at a pace (provided they stay on schedule from day-to-day) that fits their individual preference. The instructor, who is freed up from having to present a lecture, provides support for students individually or in small groups by clarifying explanations provided by the software, assisting students in solving problems using paper and pencil, or engages in tasks that support successful student outcomes such as monitoring student progress, providing feedback and helping students develop good study habits. The text is one form of media, and thus is part of a multimedia learning environment. The text lists the objectives; provides explanations of concepts, procedures, definitions, and other information; and contains the homework problems. The text also serves the important role of making the course material accessible to students when they do not have access to the multimedia software.

It is also worth contrasting mediated learning with the "bolt-on" model of technology-mediated instruction. When contrasted with mediated learning there are two important distinctions worth noting. First, in the bolt-on model the technology is bolted on to the existing components of the traditional learning environment, the instructor, textbook, and the student. Technology of this type is usually designed to support student learning of particular concepts or skills but not to be the primary vehicle to deliver instruction and feedback for the entire course. Second, because of the inadequacies of the bolt-on technology to be the primary vehicle to deliver the course content and provide feedback, the learning environment remains primarily teacher-centered rather than student-centered.

Until recently the technology available for developmental mathematics and other disciplines generally fit the bolt-on description, was used for drill-and-practice, did not incorporate rich multimedia presentations of the content, and provided limited feedback. One consequence of the fact that the widespread use of high quality interactive multimedia software is a relatively recent phenomenon is that much of the existing research is related to first generation technology-mediated instruction, rather than interactive mul-

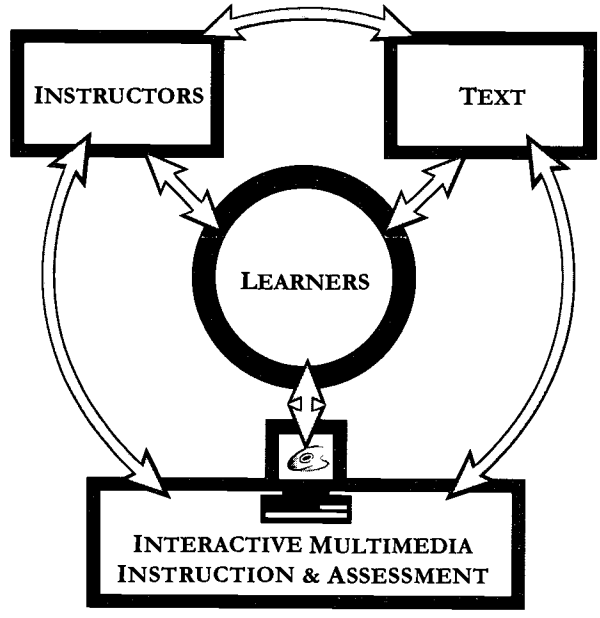

Figure 2. The bolt-on model of technology-mediated instruction in higher education.

timedia software used in mediated learning environments.

Gifford (1996) claims mediated learning enables students to:

> 1. Exercise more effective and efficient control over their own learning. This is achieved by enabling the student to navigate through topics and lessons over a number of distinct instructional pathways, at his or her own pace, while spending as much time as required working any given topic, exercise, or problem, until the appropriate level of mastery has been achieved.
>
> 2. Secure real-time assessment and feedback. This is achieved by enabling the student to receive performance feedback when it is most useful, new instruction when it is required, and extra assistance when it is needed and practical.
>
> 3. Secure more information on their own learning. This is achieved by enabling the student to receive individual achievement and progress reports on a timely basis, sufficiently detailed and directive that the individual student becomes more adept at monitoring and regulating his or her own learning progress.
>
> 4. Obtain situationally appropriate learning assistance. This is achieved by enabling the student to receive support from teachers or teaching assistants that is informed by detailed assessments of the individual student's strengths and weaknesses, as analyzed and reported by a specially designed instructional support system.
>
> 5. Obtain more individualized learning assistance. This is achieved by enabling the student to receive more one-on-one and small group tutoring from instructors and teaching assistants than is feasible in the learning environment dominated by the lecture-presentational approach to instruction. (pp. 18-19)

There is evidence to support Gifford's (1996) claims that mediated learning can be an effective instructional model. The ability to control both the pace of the learning and the navigation path provides students with an opportunity to learn mathematics in a manner that is usually not possible in a traditional setting. Students who "exercise more effective and efficient control over their own learning (Gifford, p.18)" are able to do so because of the interactivity of the software. Najjar (1996) examined the research related to interactivity and stated:

> Interactivity appears to have a strong positive effect on learning (Bosco, 1986; Fletcher, 1989, 1990; Verano, 1987). One researcher (Stafford, 1990) examined 96 learning studies and, using a statistical technique called effect size (difference between means of the control and experimental group divided by standard deviation of the control group), concluded that interactivity was associated with learning achievement and retention of knowledge over time. Similar examinations of 75 learning studies (Bosco, 1986; Fletcher, 1989, 1990) found that people learn the material faster and have better attitudes toward learning the material when they learn in an interactive instructional environment. (p. 131)

Feedback is another key component of the mediated learning model. There is research that shows feedback is important to student self-regulation and self-efficacy (Hattie, Biggs, & Purdie, 1996; Kluger & DeNisi, 1996). Kluger and DeNisi found that feedback should be specific to the task, corrective, and done in a familiar context that shapes learning. In the mediated learning model feedback is available to students from both the software and the instructor. As students progress through the software they are frequently presented tasks that require interaction on their part. Immediate feedback is provided for every student response. If a student answers a question incorrectly on the first attempt, hints or suggestions are provided to point the student in the right direction. Students may then attempt the question again. Following the second attempt, a detailed step-by-step solution and explanation is provided. Students are also able to receive detailed feedback from the instructor during class as they engage in the multimedia lessons, attempt questions using paper-and-pencil, or other areas related to student performance such as course progress and study skills. In the mediated learning model the instructor has the time to provide this type of feed-

back and support throughout the entire class meeting because he or she does not present a lecture.

Reviews of research on the impact of technology-mediated instruction on student learning have consistently found that technology-mediated instruction can have positive effects on student learning (Becker, 1992; Khalili & Shashaani, 1994; Kulik & Kulik, 1991; Niemiec, Samson, Weinstein, & Walberg, 1987). The review by Kulik and Kulik examined 248 controlled studies covering technology-mediated learning in a wide range of courses and learners. In 81% of the studies considered students in technology-mediated settings obtained higher mean examination scores while in the remaining 19% of the studies students in the traditional settings had higher scores. In 100 of the 248 studies there was a significant difference in exam performance, with 94 of the studies favoring the technology-mediated environments.

Interactive Multimedia Software For Mediated Learning.

In developmental mathematics the technology currently being widely used is interactive multimedia software capable of presenting the course content, practice of new skills, and immediate feedback. Multimedia is the use of text, graphics, animation, pictures, video, and sound to present information (Najjar, 1996). Kaput and Thompson (1994) point out three aspects of electronic technology such as interactive multimedia software that "enable deep change in the experience of doing and learning mathematics" (p. 678). First, the ability to interact with the technology, referred to as interactivity, means that a student's actions yield a reaction on the part of the machine, which in turn sets the stage for interpretation, reflection, and further action on the part of the student. The second aspect is the control designers have in creating the learning environments. Kaput and Thompson state:

> One can engineer constraints and supports, create agents to perform actions for the learner, make powerful resources immediately available to aid thinking or problem solving, provide intelligent feedback or context-sensitive advice, actively link representational systems, control physical processes from the computer, and generally influence students' mathematical experiences more deeply than ever before. (p. 679)

This second aspect of control in creating the multimedia environment provides the opportunity to create an environment that need not be followed in a sequential manner. The third aspect Kaput and Thompson refer to is connectivity. This is technology that links teachers to teachers, students to students, students to teachers, and the world of education to the wider world. Academic Systems Corporation (2000) currently offers the option of browser-based interactive multimedia software for developmental mathematics that includes the ability for instructors to post online notes and a feature that allows students and instructors to exchange electronic messages. Features such as these, coupled with the ability of the software to deliver the course content and provide immediate feedback, is resulting in the Academic Systems software increasingly being used in location-independent instructional formats.

Although considerable research remains to be conducted related to the effective implementation of interactive multimedia packages in developmental mathematics, there is evidence that some programs have been able to improve completion rates and grades using mediated learning. In 1998 Academic Systems Corporation reported on their website (http://www.academic.com) that data on pass rates of 23,000 students in entry level mathematics classes from campuses around the country showed that 52% of students in traditional sections passed compared to 63% of students who passed using software from Academic Systems. In a study at California State University-San Luis Obispo, students who studied introductory algebra, intermediate algebra, or both using software from Academic Systems earned a significantly higher proportion of final grades of C or better in conventional precalculus courses when compared to students who studied the same courses in conventional classrooms (Baker, Hale, & Gifford, 1997). It is worth noting the outcomes of students using mediated learning from Academic Systems Corporation because Academic Systems claims that more students purchase their *Interactive Mathematics* for three courses, Prealgebra, Elementary Algebra, and Intermediate Algebra, than any single textbook title (Academic Systems, 1999).

Discussion

Developmental mathematics programs have been working to implement the AMATYC standards since they were published in 1995. Mediated learning appears to have merit as one means of enhancing student outcomes, at least for some developmental mathematics students. Features such as rich multimedia presentations of concepts, immediate feedback, and interactivity allow students to learn mathematics in ways not possible in a traditional lecture course and give students greater control over their own learning. Students also benefit from greater opportunities to discuss mathematics individually with their instructor and to receive feedback about their work. For students who need greater flexibility in terms of time and location for learning, the mediated learning software allows students access from any location with a personal computer (PC) and Internet access. The features of mediated learning, along with the flexibility that it affords instructors in setting up courses and students in learning, results in instructors being able to incorporate activities into their program that support the AMATYC standards. For example, our daily checkpoint questions promote mathematical communication and reasoning, the use of built-in technology tools and lessons support the use of multiple representations, and our students are actively engaged in the learning process as they read mathematics and interact with the software. In implementation models where students have access to the software outside of class, such as a lab on campus with a tutor available, valuable class time can be freed up to have students work cooperatively on problem solving activities or projects, which further supports implementing the AMATYC standards.

At the University of Minnesota General College we are in the process of developing and validating an inventory to inform students in which course format, mediated learning or traditional lecture and discussion, they will be most successful and satisfied. Students are also assisted in selecting their choice of instructional format through orientation sessions, meetings with advisors, and discussions with mathematics instructors. Through these efforts we attempt to place students in the learning environment that best matches their learning style. There is growing evidence that instruction that allows students to learn using their preferred learning style can lead to improved student outcomes (Higbee, Ginter, & Taylor, 1991; Lemire, 1998).

There has been little discussion in the developmental mathematics community about how mediated learning can support the AMATYC standards. This may be due to several reasons. First, the very process of initially offering instruction involving interactive multimedia software requires significant time and effort to review software options, ensure that the necessary hardware and technical support is available, develop a curriculum plan and an implementation plan, and communicate important information about changes in the mathematics program with others such as administrators and advisors. Second, because mediated learning represents a dramatic shift in how developmental mathematics is taught from the traditional lecture format, many instructors are still feeling their way through the basics of this type of instruction. In the early stages of mediated learning there tends to be a focus on issues such as handling technical problems, learning how to effectively support student learning as they use the software during class, and attempting to develop a course structure that incorporates the benefits of multimedia instruction while at the same time provides an environment that keeps students on task and leads to successful outcomes. However, with experience and thoughtfulness about how to best serve their students, developmental mathematics programs may find that mediated learning can be an asset when striving to incorporate the AMATYC standards into their program.

The standards for intellectual development advocate that students acquire the ability to read, write, listen to, and speak mathematics, engage in substantial problem solving, expand their mathematical reasoning skills, and use technology in ways that enhance their mathematical thinking. The standards for pedagogy state that faculty should foster interactive learning through collaborative activities, model the appropriate use of technology, and model the use of multiple approaches – numerical, graphical, symbolic, and verbal. Unlike many students in traditional lecture courses who sit passively, or at most studiously take notes of what the instructor writes on the board, students in mediated learning environments are actively engaged in the reading, listening, and the working of mathematics. The interactive nature of the software necessitates that students read and attempt to make sense of what they have read in order to enter or select appropriate responses. To facilitate students' abilities to communicate mathematically, and to strengthen their mathematical reasoning and problem solving

abilities, our students are given daily paper-and-pencil "checkpoint questions." Students are encouraged to work together on these by sharing their strategies, explaining their mathematical reasoning, and justifying their answers. Instructional staff provide guidance and feedback when necessary as students work on the checkpoint questions, but also view this as an opportunity to communicate mathematically with students. The instructor does not lecture, making it is possible to have extended conversations with students about their mathematical thinking and reasoning. Even though a mediated learning environment makes significant use of multimedia software, it is appropriate to set aside times when students can work together collaboratively in small groups or through cooperative learning. This supports the standard of interactive and collaborative learning and is supported by research showing that it often contributes to increased academic success (Davidson & Kroll, 1991; Johnson & Johnson, 1989; Thomas & Higbee, 1996).

The standards also encourage the use of multiple representations-numerical, graphical, symbolic, and verbal, along with the appropriate use of technology. Interactive multimedia software incorporates frequent use of multiple representations such as symbolic, tabular, graphical, and written words. This frequent use of multiple representations strongly supports the development of mathematical understanding as defined by Hiebert and Carpenter (1992) in the *Handbook of Research on Mathematics Teaching and Learning,* who state:

> A mathematical idea or procedure or fact is understood if it is part of an internal network. More specifically, the mathematics is understood if its mental representation is part of a network of representations. The degree of understanding is determined by the number and strength of the connections. A mathematical idea, procedure, or fact is understood thoroughly if it is linked to existing networks with stronger and more numerous connections. (p. 67)

The Lesh Translation Model (Lesh, Landau, & Hamilton, 1983; Post, Behr, & Lesh, 1986) describes how translations that form connections between modes of representations can be performed either between modes of representations or within modes of representation. A translation between modes would include translating from an algebraic equation to a graphical representation. A translation within the same mode of representation would include translating from an initial graph to a graph where the scales on the axes have been changed. Interactive multimedia software, with its ability to quickly and easily generate various representations, interactive nature, and built-in tools such as graphers, may help students develop the ability to translate between and within modes of representation, and thus increase the development of mathematical understanding.

Well designed multimedia software may also support the standards when it incorporates real-life situations that model the mathematics under consideration and by forming connections to other disciplines. Engaging students in real-life situations and forming connections to other disciplines that students find meaningful can be a challenge. The use of video, animation, graphics, and sound provide software engineers with the tools to model real-world situations and form connections to other disciplines in ways that aren't possible in a traditional environment. The use of multimedia and built-in tools such as graphers and scientific calculators support the standards of using technology, multiple approaches (i.e., representations) and developing mathematical power. Mediated learning embeds the use of the technology directly into the learning environment, rather than using it in a support role such as in the "bolt-on" approach, allowing students to actively learn, explore, and conjecture with the technology at all times.

Summary

The *AMATYC Standards* (1995) articulate standards for the intellectual development of students, pedagogy, and content for postsecondary courses below the level of calculus. Mediated learning shows promise, based on current theory and research, as a type of learning environment in which the AMATYC standards may be implemented. As developmental mathematics educators gain more experience in mediated learning environments and more research is conducted, specific details about various implementation models for incorporating the AMATYC standards into a mediated learning environment will emerge. At the University of Minnesota General College we continue to have one eye on our mediated learning environment, and the other on the AMATYC standards,

as we continue our research to bring into focus our vision of how to incorporate the AMATYC standards into a mediated learning environment.

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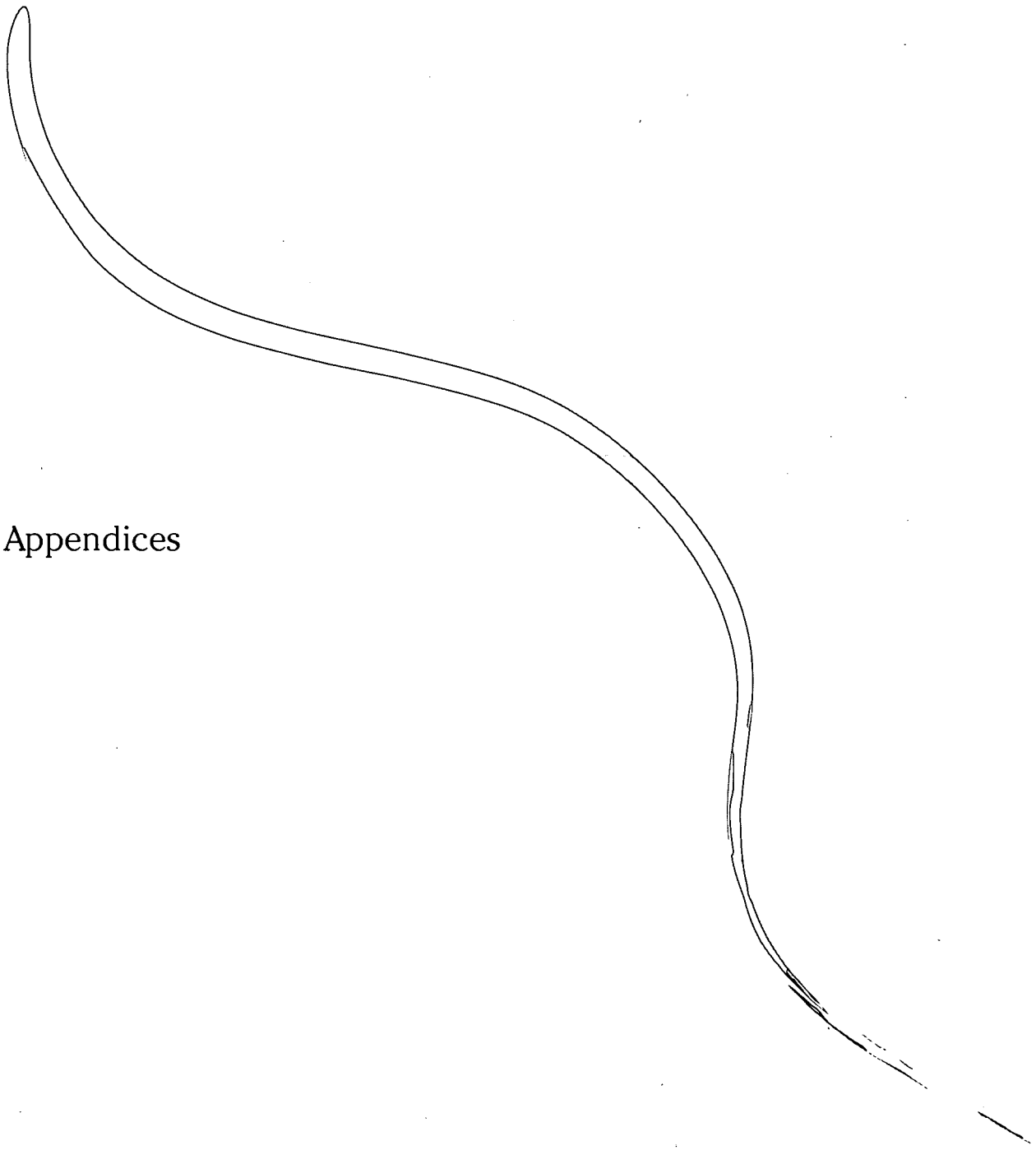
Appendices



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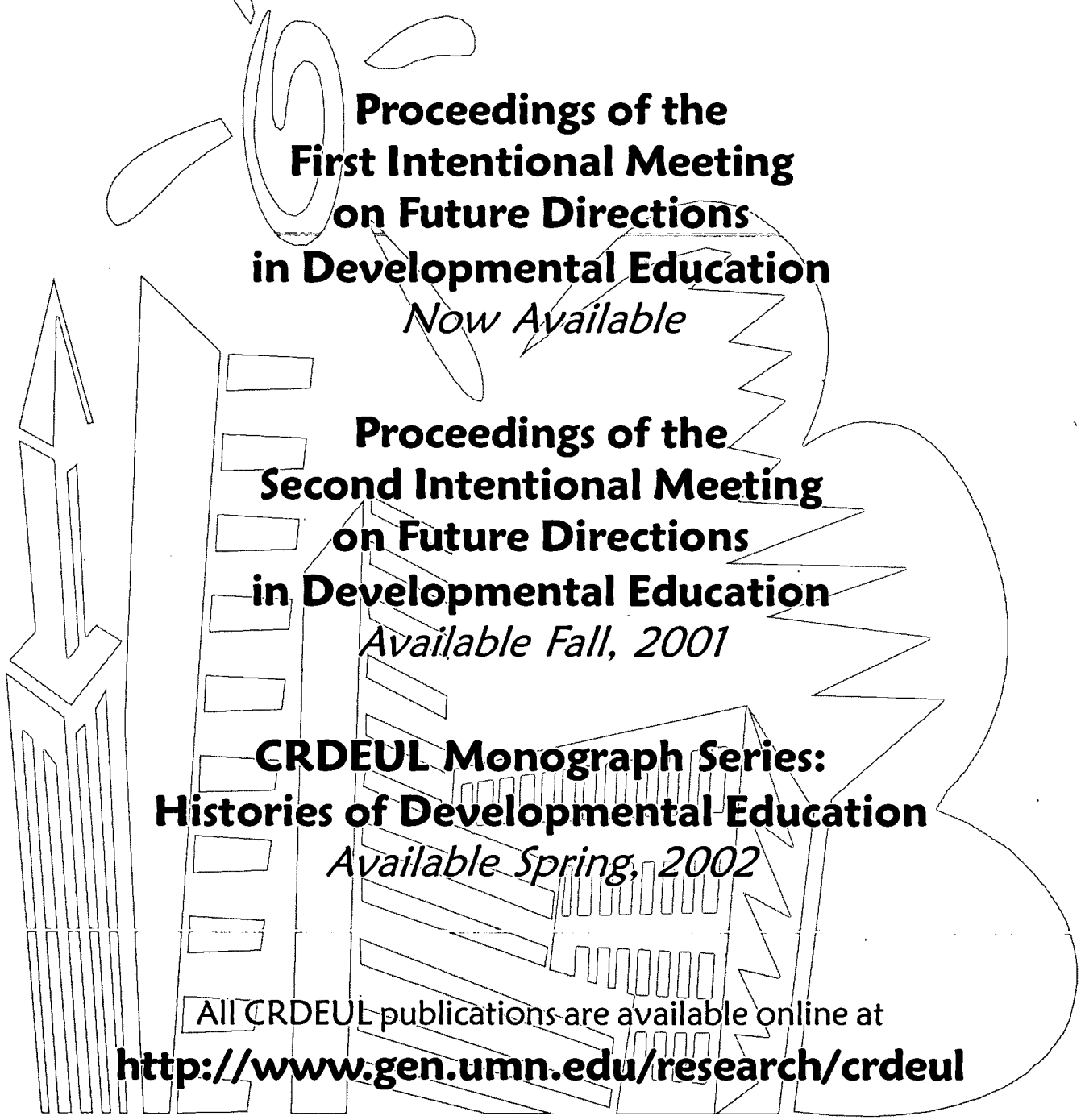

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Call For Submissions - CRDEUL Monograph Series

Exploring Urban Literacy and Developmental Education

The third annually published independent monograph sponsored by The Center for Research in Developmental Education and Urban Literacy, General College, University of Minnesota.

We encourage and invite developmental educators across the country to contribute to the third independent monograph in a series sponsored by the Center for Research in Developmental Education and Urban Literacy (CRDEUL). The goal of these monographs is to build strong research and theoretical foundations in the field of developmental education from the perspectives of teachers, researchers, and support services specialists.

The third monograph will feature an exploration of issues related to access and "urban literacy," which are at the heart of developmental education in urban settings. It is important to examine the framework of developmental education as it addresses the needs of urban students. In particular, developmental educators need to understand the intersections and impact of such issues as race, class, and gender; second-language acquisition; workforce literacy and training; disability culture; and other issues that may adversely affect traditionally bypassed, disadvantaged, or underrepresented students as they enter college.

Research has suggested that urban students acquire and practice a diverse range of "literacies" or "Discourses" (James Paul Gee, 1998, *Social Linguistics and Literacies*) in navigating their social, family, community, and educational settings. These practices may assist, or sometimes impede, their access to the cultures and literacy practices valued in higher education. As developmental educators, we need to identify these issues and understand how they shape student development and learning along all continuums of education, both before and as they enter college settings. This will further contribute to the development of relevant student learning theories for developmental education, specifically as it can better define the diverse needs and backgrounds of urban students.

Articles for this monograph might explore and expand the following questions:

- What is "urban literacy" as it relates to developmental education theory, research, policy, and practice?
- Which theories might contribute to this definition?
- What are some issues that are unique to urban settings that impact students entering developmental education programs?
- Which other types of "urban literacies" might be identified across the disciplines, as it relates uniquely to issues impacting urban students; and what are some possible multi- or interdisciplinary perspectives we need to address (i.e. multiculturalism, technology access and literacy, urban environmental issues, workforce literacy, and the impact of welfare reform initiatives in higher education)?
- What are some student stories that might illustrate the kinds of "urban literacies" we need to acknowledge in our work and begin to serve better in our programs?
- What K-16 connections and continuums of learning should we address in the field?

- Which programs and community relationships have been forged in the field that uniquely address issues of "urban literacy" and developmental education?

- How does "urban literacy" relate to access and policy debates in higher education?

Submissions (see attached form) must be postmarked by **February 16, 2002**. Manuscripts will be forwarded to the editorial board for peer review. Authors will then be notified regarding the status of their proposals and receive recommendations and feedback by April 5, 2002. Manuscript revisions will be due by June 15, 2002. The final publication goal for this monograph is fall 2002.

Refer to the attached guidelines for authors for further information related to manuscript submission. This information is also available online at (http://www.gen.umn.edu/research/crdeul/).

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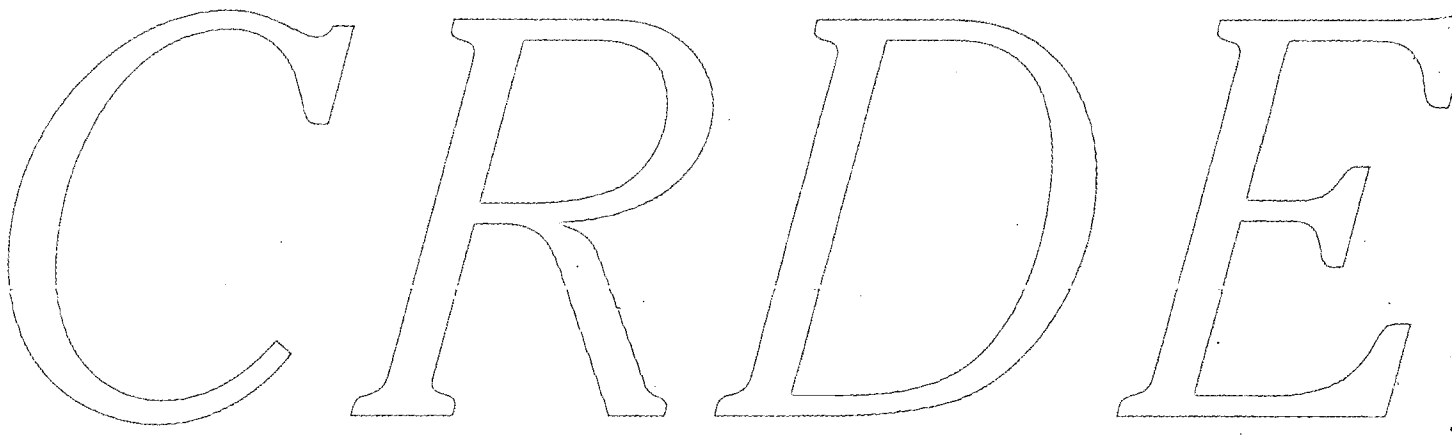

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