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Racialized Technology: Computers, Commodification, and “Cyber-Race"

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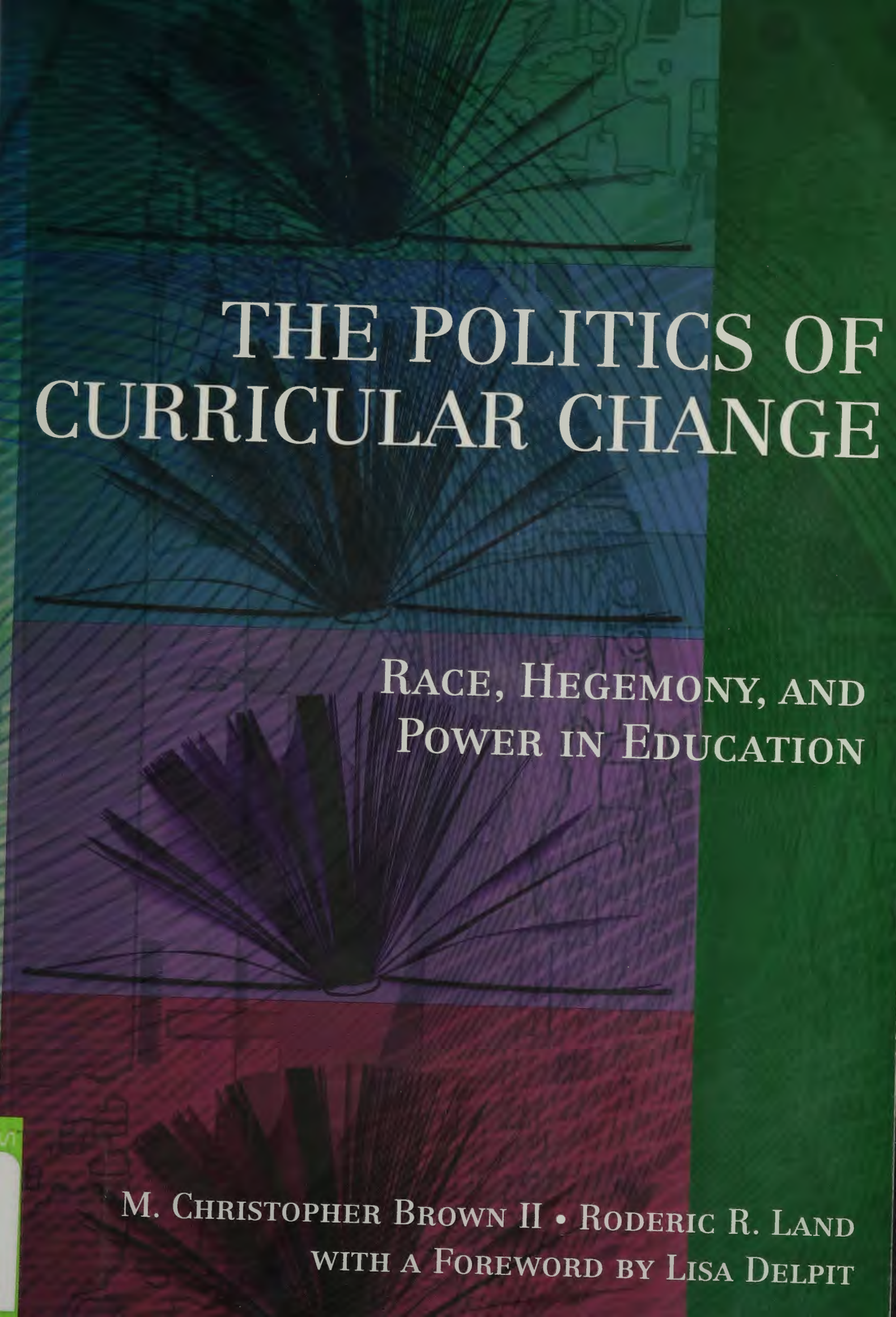

THE POLITICS OF CURRICULAR CHANGE

Race, Hegemony, and Power in Education

M. Christopher Brown II • Roderic R. Land
with a Foreword by Lisa Delpit

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PETER LANG
New York • Washington, D.C./Baltimore • Bern
Frankfurt am Main • Berlin • Brussels • Vienna • Oxford

Library of Congress Cataloging-in-Publication Data

The politics of curricular change: race, hegemony, and power in education / [edited by] M. Christopher Brown II, Roderic R. Land.
p. cm. — (Counterpoints; vol. 131)
Includes bibliographical references and index.
1. Education—Curricula—United States. 2. Curriculum change—United States. 3. Politics and education—United States.
4. Multiculturalism—United States. I. Brown, M. Christopher.
II. Land, Roderic R. III. Series: Counterpoints (New York, N.Y.); v. 131.
LB1570.P58 375'.006—dc22 2003022444
ISBN 0-8204-4863-X
ISSN 1058-1634

Bibliographic information published by **Die Deutsche Bibliothek**.
Die Deutsche Bibliothek lists this publication in the "Deutsche Nationalbibliografie"; detailed bibliographic data is available on the Internet at http://dnb.ddb.de/.

Cover design by Dutton & Sherman Design

The paper in this book meets the guidelines for permanence and durability of the Committee on Production Guidelines for Book Longevity of the Council of Library Resources.

275 Seventh Avenue, 28th Floor, New York, NY 10001
www.peterlangusa.com

Printed in the United States of America

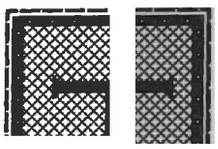
To Steven P. Thomas
who taught me that the only limit
to the possibility of change
is the will to create it;
to Anthony A. Pittman
who has most supported my right to change;
and to Nigel P. Pierce for suffering
through my changes and endeavoring to do the same.

—mcb2

~*~8~*~

To my entire family
for their unwavering support;
to my academic fathers – David L. Eanes,
William A. Smith (B.P.), William T. Trent,
Laurence Parker, and James Anderson; and
most importantly to my biological father,
James E. Land (Ben),
who is reading this from above.
Love and miss you always.

—rrl



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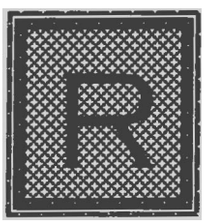

RACIALIZED TECHNOLOGY: COMPUTERS, COMMODIFICATION, AND "CYBER-RACE"

Jamel K. Donnor

One of the great tragedies of modern education is that most people are not taught to think critically. The majority of the world's people, those of the West included, are taught to believe rather than to think.

—Haki Madhubuti (1999)

When Beverly Gordon remarked that the twenty-first century would be marked by a "battle for control over who would educate minorities within Western societies and the nature of that education" (1990, p. 88), I do not think she or anyone else could have imagined what would be the role of information technologies in this fight. The U.S. Department of Education in 1999 hosted a forum entitled "The Future of Technology in Education: Envisioning the Future." The proceedings of the forum resulted in the identification of "emerging priorities" (p. 1). These priorities include: (1) All students will be technologically literate and responsible "cybercitizens," and (2) Education will drive the "E-learning economy." More recently, the International Society for Technology in Education, in collaboration with the Milken Exchange on Education Technology, published the "National Educational Technology Standards for Students" (1998). In it they postulate that "our educational system must produce technology capable kids."

With such "emerging priorities" in education come new pedagogical concerns and assumptions about how best to pursue this endeavor. For example, in what ways are information technologies ideologically and epistemologically biased? In discussions specifically addressing computers within the context of education, cultural theorists of technology (Bowers, 2000; Bigum, 1998; Bromley, 1998) assert that computers and computer-related discourse are firmly rooted within a Western discourse, which has no room for "others." Bromley sums it up best by stating, "Far from being neutral instruments, computers, like other technologies, are involved in many ways in the construction and use of power: in the way they are designed and built, in how they are sold and to whom, and in how they are used...They partake in an epistemology that promotes certain visions of knowledge and notions of who counts as a knowing subject" (1998, p. 2). Computers and the courseware they operate are not objective instruments; instead, they are involved in the construction and use of power in terms what counts as knowledge, and how knowledge gets constructed.

Race not only plays a significant role in the design of information technologies such as computers and computer-assisted courseware, but it is also essential to the understanding of the ways in which such "pedagogical devices"[1] are used in the education of African Americans. Technologies—such as those discussed here—that are created within Western societies are designed for sole purpose of maintaining the present status quo in education (Carter, 1998). The overarching goal of this essay is to articulate a re-conceptualization of information technologies within education by examining the dominant uses of computers in the education of African American children. This objective will be met in part through the use of the theoretical framework known as critical race theory (CRT).

Second, I argue that the concept of racialized property is a way to speak of information technologies themselves. I will support my argument (1) by drawing on examples that discuss the pedagogical uses of computers in education, and (2) by discussing the social relationships that are formed because of property. Regarding (2), property is more than a material object owned for private benefit. "Property," as it is employed here, is not only meant to refer to a way in which social relationships are shaped and determined through the use of information technologies. Property has more

to do with information technologies being mechanisms that solidify the educational status quo.

Lastly, I will argue that one strategy for disrupting the ideological and epistemological biases of technology is to engage in what Ladson-Billings (1995) calls "culturally relevant pedagogy" (CRP). CRP's thorough examination of the computer-based education of African American students shows that there is nothing revolutionary about the methods employed in this education. Instead, the current ways in which computers are used in educational settings that are predominantly African American prepare the students to be consumers of information, rather than producers of it.

Critical Race Theory

Critical race theory (CRT) is a contemporary theoretical framework that criticizes white hegemonic discourse and power, analyzes the social disparities between races, and challenges popular notions of the construction and employment of race, racism, and racial power in American society. CRT is based on (1) incorporating the "absolute centrality of history and context" (Crenshaw, Gotanda, Peller, & Thomas, 1995); (2) rejecting notions of objectivity and neutrality; (3) recognizing that racism is endemic in U.S. Society (Bell, 1995); (4) employing a variety of theoretical traditions including Feminism, Marxism, post-structuralism, and critical legal studies to provide a more complete analysis of raced people (Tate, 1997); (5) incorporating one's "experiential knowledge" which posits "reality" is situational and socially constructed (Ladson-Billings, 1998, p. 11); and (6) working toward the elimination of racial oppression with the goal of ending all forms of oppression (Crenshaw, Delgado, Lawrence, & Matsuda, 1993).

CRT in this discussion serves to (1) historicize and contextualize these technologies, and (2) reject the dominant notion of neutrality and objectivity that proponents of these devices promulgate.

CRT in Education

Currently, there is a cadre of education scholars that have started the daunting task of applying CRT as a cutting-edge research paradigm for understanding and informing how race, racism, and racial power within education occurs and is structured. Ladson-Billings (1998) has cogently articulated how CRT explains the way race, racism, and racial power affect:(1) the educational experiences of African American students (i.e., instruction); (2) the educational outcomes of African Americans (i.e., assessment); (3) the allocation of resources (i.e., funding); (4) the content of the official school curriculum, thus making it a "culturally specific artifact designed to maintain a White supremacist master script"; and (5) school desegregation (pp.18–21). In addition, Ladson-Billings and Tate (1995) argue for a CRT perspective in education based on the following propositions: (1) race continues to be significant in the U.S.; (2) American society is premised on "property rights rather than human rights"; and (3) "the intersection of race and property creates an analytical tool for understanding inequity" (p. 45).

I will use CRT to argue that the pedagogical use of technology presents problems of actual use, as opposed to access. Such an understanding runs counter to the popular assumption that information technologies will improve the education of African Americans.

Racialized Property

Borrowing from Ladson-Billings and Tate's (1995) thesis of the "intersectionality of race and property" I submit that the way in which technology is used in the education of African Americans is such that the students should be viewed as *racialized property* (p. 48). I contend that in order to fully comprehend the race—both its formation and effects on material outcomes—in the U.S. one must understand the construction of property within this setting, and vice versa. In other words, race and property in America are intertwined concepts. According to Harris (1995) "the origin of property rights in the United States is rooted in racial domination" (p. 277). For example, she asserts that it was the "racialization of identity and

the racial subordination of [B]lacks and Native Americans [that] provided the ideological basis for slavery and conquest...undergirding both was a racialized conception of property implemented by force and ratified by law" (p. 277). Chattel slavery relied first on the identification of people based on physical traits and lines of descent in order to determine who would be "free" and who would be enslaved (e.g., Africans). Second, it required the creation of a system to regulate the relationships of those who were "free" and those who were branded as slaves (e.g., slave codes). For instance, Watson (1989) writes that English slave law in America shaped the lives of the early African Americans in a manner in which "one might almost say that a slave belonged to every citizen—at least he was subordinate to every white" (p. 66). The slave codes enabled whites to purchase Africans for the purpose of labor, as well as dictate how whites were to control their property.

Therefore, the concept of racialization aids in the historicizing and contextualizing of computers. The concept also rejects the neutrality of these devices and their use, contending that their design and content are rooted in a Western epistemological system. More importantly, these devices also perpetuate that system via behavioral objectives and assessments imposed on the learner; they determine what counts as knowledge and how it is constructed.

"Property," for the purposes of this argument, does not refer to the private ownership or use of a tangible object or commodity (e.g., automobiles, land, homes) for personal or economic benefit per se. Although this tends to be the dominant way of understanding property, that understanding will be used as a platform upon which to put forth a more critical and expansive articulation of the concept. Property is not only a human construction designed to exclude and manipulate those who do not possess it; it is also an institution that legitimates these unequal relationships under the guise of being a natural phenomenon. According to Macpherson (1978) "the meaning of property is not static. The actual institution, and the way people see it, and hence the meaning they give to the word, all change over time...The changes are related to changes in the purposes which society or the dominant classes in society expect the institution of property to serve" (p. 1).

Pedagogical Use of Computers in the Education of Urban African Americans

Of the various educational uses of computer-assisted instruction, drill and practice is by far the most dominant approach (Harper, 1987; Kosakowski, 1998; Streibel, 1998). Within educational settings where the student body is predominantly African American, drill and practice is the primary mode of computer use (Carver, 1999). Becker and Ravitz (1998) suggest that in working class schools there tends to be an emphasis on "punctuality, neatness, obedience, and structure because these are the attributes conducive to subordinate labor" (p. 2). By contrast, they indicate that creativity, independence, and higher-level thinking skills are taught to students from middle-class and elite schools in order to prepare the students to maintain their socioeconomic status. As a pedagogical method, drill and practice employs the principle of trial and error (DeVaney, 1998). This principle is premised on two assumptions: (1) "students usually learn more, and learn more rapidly" (Kosakowski, 1998, p. 1); and (2) students can "master" the class material when allotted sufficient time (Streibel, 1998). The learner within this pedagogical paradigm is constructed as a consumer, and the learning process is rationally managed.

Drill and practice programs are based on behaviorist theories of learning, which emphasizes "stimulus, response, and reward" (Healy, 1998). Learning is framed within very individualistic terms and presumes the following: (1) the student has received previous instruction in the subject; (2) instruction is to follow a controlled, step-by-step linear sequence of sub-skills according to an algorithm embedded in the computer program (rote skill building, and pattern skill building; Streibel, 1998); (3) there is a right-wrong answer binary that exists within the logic of the context; (4) instructional interaction occurs in the form of a question-answer format; (5) immediate feedback on each student's response is considered positive; and (6) this approach "frees" the instructor from the more routine aspects of teaching (e.g., grading papers and recording student progress; Cuban, 1986). As a result, the students are not active participants in the learning process. Instead, they are told by the machine that their answer does not "compute." More importantly, this consumer relationship ensures the students' dependency on the machine because it knows more than they do. Thus the "relationship" between the

student and the computer is grounded in consumption, because the students' abilities are judged against a set of predetermined expectations and outcomes.

The drill and practice approach in computer-assisted instruction is meant to supplement the teacher and the curriculum. The educational goal of drill and practice courseware is to provide practice for the basic skills the student has already learned. It is designed to put forth a query and elicit a response from the student. If the student does acquire new skills or learning, it is the result of trial and error instead of directed learning (Gagné, Wager, & Rojas, 1981).

Culturally Relevant Pedagogy

Culturally relevant pedagogy (CRP) in essence is a pedagogy that is diametrically opposed to the dominant methods used in the instruction of students of color. CRP not only contrasts with the mainstream teaching pedagogy of drill and practice, but is specifically committed to collective, not merely individual, empowerment" (Ladson-Billings, 1995b, p. 160). This pedagogical discourse is premised on the following three tenets: (1) "students must experience academic success"; (2) "students must develop and/or maintain cultural competence"; and (3) "students must develop a critical consciousness through which they challenge the status quo of the current social order" (p. 160). What begins to stand out immediately is that the learner within this discourse is a "producer" of knowledge rather than a passive consumer.

CRP discourse and knowledge is viewed as being in flux: It is shared, recycled, and constructed. Furthermore, teachers must be passionate about knowledge; they must scaffold or build bridges to facilitate learning. Finally, assessment must be multifaceted, incorporating multiple forms of excellence. This approach contrasts to drill and practice, where knowledge is not only fixed but also disconnected from the learner experientially (Ladson-Billings, 1995c, p. 481). The learner within the CRP paradigm is not merely a producer for the sake of producing, but also in order to meet the criteria of academic success, cultural competence, and critical consciousness (Ladson-Billings, 1995, p. 480). For example, this form of liberating education

provides the student with heuristic tools and skills to critique ideas, by problematizing common-sense understandings (Gordon, 1994, p. 65). Again, such an approach runs counter to the superficial knowledge that gets produced through activities such as rote memorization, imparting "facts," and trial and error.

Woodson (1993/1990) had called pedagogical approaches such as drill and practice into question during the early part of the twentieth century. He not only questioned their relevancy to African Americans, but also noted that the methods were of little use to their survival. Moreover, pedagogies such as drill and practice were a means of controlling African Americans. According to Woodson (1990):

> ...[T] he educational system as it has developed both in Europe and America [is] an antiquated process which does not hit the mark...The so-called modern education, with all its defects, however, does others so much more good than it does the Negro, because it has been worked out in conformity to the needs of those who have enslaved and oppressed weaker peoples. (p. xii)

Furthermore, the computer education that is predominantly used in urban African American settings develops a procedural knowledge base. For example, mathematical problems are solved not as a result of trying to solve community problems, but rather by following memorized rules (Tate, 1995).

Perhaps the best example of the merging of the principles of CRP with information technology is "science, technology, and society education (STS)" (Waks, 1991, p. 195). STS has two general guidelines: (1) relevant concerns must be infused across the secondary curriculum, and (2) issues must be first seen as relevant by the students, and be "likely to require ongoing attention in students' adult lives" (Waks, 1991, p. 199). I believe the principles that ground this educational approach are a possible first step in making computer learning a culturally relevant enterprise since the approach takes the student and his or her community as a starting point.

Information technologies as they are used in the education of African American students in urban settings are nothing more than a fragmented projection of a white supremacist psyche. The history of African Americans' experience with technology has been one that has "proved perhaps irremediably devastating to their hopes, dreams, and possibilities" (Walton, 1999, p. 3). Walton also notes that it was Western technology that was responsible for the transatlantic slave trade. Europeans, Arabs, and eventually Americans exchanged Africans for "Western technological wizardry (e.g., firearms and metals), and those same slavers used guns, vastly superior to African weapons of the time" (p. 5).

One could argue that this is the case with information technologies because such devices break cultural boundaries (Willhelm, 1970). To speak of a cultural break is to refer to the increased role these machines have in shaping education, rather than the other way around. Therefore, it would be wrong to continue to place all of our "eggs in the access basket" without understanding what it is that we are getting access to. CRP is required in order to enable urban African American students to understand technology and in turn become producers in a postindustrial society. As DuBois (1973/2001) observed, the increased economic reliance on machines impacted the education of the African American. He writes, "ours is the double and dynamic function of tuning in with a machine in action so as neither to wreck the machine nor be crushed or maimed by it" (p. 104). What is being called to our attention is that education for African Americans first requires training as it relates to their position within society, and then a "technical" training of sorts to function within society (DuBois, 1973/2001).

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[i] For a complete definition of this term read Bernstein's chapter on the social construction of pedagogic discourse.