2011

Surveillance and sacrifice: Gender differences in the mentoring and advising patterns of Black professors

Kimberly A Griffin, University of Maryland - College Park
Richard J Reddick, University of Texas at Austin

Available at: https://works.bepress.com/kimberly_griffin/10/
Surveillance and Sacrifice: Gender Differences in the Mentoring Patterns of Black Professors at Predominantly White Research Universities
Kimberly A. Griffin and Richard J. Reddick

Am Educ Res J 2011 48: 1032 originally published online 25 April 2011
DOI: 10.3102/0002831211405025

The online version of this article can be found at: http://aer.sagepub.com/content/48/5/1032

Published on behalf of

American Educational Research Association

and

http://www.sagepublications.com

Additional services and information for American Educational Research Journal can be found at:

Email Alerts: http://aerj.aera.net/alerts
Subscriptions: http://aerj.aera.net/subscriptions
Reprints: http://www.aera.net/reprints
Permissions: http://www.aera.net/permissions

Version of Record - Sep 12, 2011
OnlineFirst Version of Record - Apr 25, 2011

What is This?
Surveillance and Sacrifice: Gender Differences in the Mentoring Patterns of Black Professors at Predominantly White Research Universities

Kimberly A. Griffin
The Pennsylvania State University
Richard J. Reddick
The University of Texas at Austin

Previous research documents Black professors’ heavy service commitments and time spent mentoring; yet little work explores how this form of faculty work differs by gender. This intersectional analysis examines narratives of 37 Black professors at three institutions (collected across two studies), focusing on how race and gender shape Black professors’ expectations and experiences mentoring. Findings indicate that racism and sexism influence whether and how Black faculty members mentor in unique ways. Women engage in close, personal relationships and face high gender-based expectations regarding student contact, leading to their carriage of a heavy mentoring burden. Men are more formal and compartmentalize their relationships, partly due to perceived visibility and surveillance, as well as increased likelihood of accusations of inappropriate relationships with female students.

KEYWORDS: faculty, mentoring, gender, African American, intersectionality

While all faculty members must balance service obligations with commitment to their research agendas and professional progress, Black professors (and professors of color more broadly) tend to incorporate racial
uplift in their work and carry heavier service loads than their White colleagues (Allen, Epps, Guillory, Suh, & Bonous-Hammarth, 2000; Johnsrud & Sadao, 1998; Padilla, 1994; Tierney & Bensimon, 1996; Turner & Myers, 2000). This study focuses attention on one dimension of these service obligations, student advising and mentoring. While it is often noted anecdotally that Black faculty members tend to engage students more frequently than their colleagues, analyses confirm Black professors are more often engaged in student interaction and mentoring (Allen et al., 2000; Umbach, 2006). In addition to managing their assigned advising loads, Black professors are often sought out, particularly by students of color, for advising, support, and guidance (Menges & Exum, 1983; Patton & Harper, 2003; Plata, 1996; Tierney & Bensimon, 1996; Williams & Williams, 2006).

Despite the importance of student-faculty interaction for the promotion of positive student outcomes (e.g., Adams, 1992; Kelly & Schweitzer, 1999; Pascarella, 1980; Pascarella & Terenzini, 2005), it has been acknowledged that an overengagement in service broadly, and advising and mentoring particularly, can be problematic for professors. Over time, tenure and promotion decisions have come to rely primarily on excellence in research (Blackwell, 1988; Tierney & Bensimon, 1996; Zusman, 1999). An excessive commitment to service that draws faculty members away from their research responsibilities can hinder their productivity (Blackburn & Lawrence, 1995; Tierney & Bensimon, 1996). Thus, the expectations of administrators, department chairs, and Black students who hope to benefit from the presence of Black faculty members often come into direct conflict with the standards of White faculty members who adhere to the distant, traditional conceptualization of professorial conduct and a system of academic advancement that places value primarily on scholarship (Banks, 1984; Padilla, 1994; Tierney & Bensimon, 1996).

These service commitments are portrayed as part of the shared experience of Black faculty at predominantly White institutions (PWIs). Researchers have compared the mentoring patterns (time spent working with students and the nature of interactions) of White and Black professors; yet we have little understanding of distinctions in Black faculty mentoring patterns. The purpose of this study is better understanding gender differences in the experiences of Black professors as they mentor students. Although many scholars (Blackwell, 1983, 1988; Merriam, Thomas, & Zeph, 1987; Tillman, 2001) have explored the phenomenon of mentoring in higher education, within the context of this study, we subscribe to Kram’s (1988) broad definition of developmental relationships: associations between senior (i.e., faculty members) and junior (i.e., students) individuals focused on the junior members’ personal and/or career development and individual growth. This definition provides room for an examination of both formal mentoring relationships where students and faculty members are assigned to one another and more informal out-of-class exchanges. We examine the narratives of 37 Black professors across two studies of faculty members at PWIs, assessing
the expectations, frequency, and nature of their developmental relationships with students.

Literature Review

Theoretical Framework: Intersectionality

Emergent from the work of pioneering Black feminist scholars such as the Combahee River Collective in the mid-1970s, who forcefully stated how they found it “difficult to separate race from class from sex oppression because in our lives they are most often experienced simultaneously,” psychologist Elizabeth Cole (2009) argues that the roots of intersectionality can be found in the work of pioneering Black theorists such as Anna Julia Cooper, W.E.B. DuBois, and Deborah King. Described as “a central tenet of feminist thinking” (p. 301), intersectionality addresses the dynamic processes through which the multiple social identities to which individuals subscribe converge to shape their experiences (Shields, 2008). As critical race theorist and legal scholar Kimberlé Crenshaw (1989) states, “The tendency to treat race and gender as mutually exclusive categories of experience and analysis” creates “a problematic consequence” (p. 140) that misses important distinctions in how membership in multiple identity groups can affect how people are perceived and treated. Thus, those employing intersectional analysis strive to distinguish the ways in which individuals engage their environments based on multiple identities. Consistent with this frame, we explore how professors’ multiple identities, particularly their race/ethnicity and gender, simultaneously influence not only how they are treated, but also their beliefs and practices when mentoring students.

A growing number of scholars, particularly in Black feminist theory and women’s studies, have addressed how racism and sexism intersect and shape the ways in which individuals and their experiences are perceived. For example, scholars have considered how the convergence of gendered and racial oppression shape our notions of family dynamics, roles, and responsibilities (e.g., Collins, 1998a, 1998b), as well as the societal responses to women of color who are subjected to domestic violence (e.g., Crenshaw, 1991). Similarly, womanist scholars have attended to the ways in which race-, gender-, and often class-based oppression shape a distinctive experience for Black women in the United States (see Collins, 2001; Phillips & McCaskill, 1995), described by Phillips and McCaskill (1995) as “a unique wisdom born of a particular social and cultural history” (p. 1009).

Intersectionality and Experiences of Black Professors in Academe

While offering new insights, it is important to acknowledge that the extant literature is limited in several ways. First, we were able to locate very few studies that used intersectionality to understand the lives and
work of Black professors. Attention largely has been focused on the discrimination Black professors face as a group, with less frequent attention to the ways in which experiences within this community vary by gender. Despite the richness and growth in research indicating that Black professors experience various forms of racism and underrepresentation in higher education (e.g., Blackwell, 1988; Exum, Menges, Watkins, & Berglund, 1984; Hendricks & Caplow, 1998; Johnsrud & Sadao, 1998; Stanley, 2006; Turner & Myers, 2000), there is little consideration of intersectionality within this work, nor is there a clear understanding of how gender and sexism shape the ways in which Black professors may be subjected to racism and discrimination.

Research on Black male students suggests that there may be differences in the ways in which Black male and female faculty members are perceived, indicating that their experiences are strongly influenced by both race and gender (Duncan, 2002; Smith, Allen, & Danley, 2007). Scholars have documented the multiple stereotypes, racist beliefs, and microaggressions Black male students face within educational contexts, highlighting beliefs about their limited academic abilities, lack of motivation, need for extra assistance and support, and likelihood of engaging in dangerous or criminal activity (e.g., Duncan, 2002; Smith et al., 2007). Furthermore, Smith et al. (2007) describe how Black men are closely watched and perceived as potentially dangerous in and outside of campus spaces as a form of hypersurveillence, which additionally brings stress for Black male students, which can have both negative educational and health implications.

It is entirely likely these perceptions extend from Black men’s elementary and postsecondary experiences into their roles as faculty at PWIs, shaping the ways in which Black male professors are viewed and treated. In fact, Jackson and Crawley (2003) discuss how Black male professors have to reconcile aspects of their appearance such as “skin complexion and color, bald head, height, weight, and Black racial features” (p. 35) and work against anxieties and assumptions held by students regarding their level of safety, while simultaneously attempting to teach and establish rapport.

As we examine the ways in which Black men are judged within academic contexts, we also attend to unique challenges facing Black women. Scholars suggest that Black women face sexism that their male counterparts do not and racism that White women do not, leaving them in a position of increased likelihood of experiencing some form of discrimination (Aguirre, 2000; Lewis, 1977; Patton, 2004). Thomas and Hollenshead (2001) found the campus encounters and perspectives of women of color to be distinct from those of other groups. Women of color consistently saw themselves as facing more barriers, described the campus climate as more hostile, were more likely to see their research as devalued, and were less likely to have mentors than men of color, White women, and White men.

Furthermore, the literature does suggest male and female faculty members’ experiences in mentoring relationships may differ. Female faculty
members not only spend more time teaching than their male counterparts, they more often engage students in advising and mentoring relationships (Lindholm, Szelenyi, Hurtado, & Korn, 2005; Park, 1996). Female scholars of color report students, faculty members, and administrators expecting them to be “caretakers” for the academic community by serving in supportive roles unrelated to their tenure and advancement (Aguirre, 2000; Gregory, 2001; McKay, 1997) or being asked to make challenging choices that place commitment to community and commitment to one’s scholarship in diametric opposition (Phillips & McCaskill, 1995) in ways men of color are not.

The Current Study

Research reveals that race certainly has a significant role in shaping the experiences of Black faculty members at PWIs; however, it is important not to forget the influence of gender roles and stereotypes that pervade the academy and wider society. Although they are often included under the same umbrella, the experiences of Black men are likely to be distinct from those of women. There have been some efforts to indicate the differences in the experiences of Black male and female professors (e.g., Bellas & Toutkoushian, 1999; Singh, Robinson, & Williams-Green, 1995; Thompson & Dey, 1998); however, scholarship discussing differences in their mentoring patterns (e.g., whether they work with students, the amount of time spent in developmental interactions, whom they choose to interact with) or how faculty members engage students (e.g., specific behaviors and activities that take place within mentoring relationships) could not be located.

In this study, an intersectional analysis is employed to explore differences between the ways in which Black male and female faculty members construct and experience their mentoring relationships with students. Intersectional analysis adds nuance to our understanding of how expectations and engagement in mentoring differs between Black faculty members and their colleagues, as well as how racism and sexism potentially differentiate the mentoring patterns of Black female and male faculty members. This study addresses two questions: Are there differences in how Black male and female faculty members construct their mentoring relationships with students? and How do racism and sexism influence Black professors’ mentoring patterns and the nature of their interactions with students?

Methods

The research questions are addressed through a study integrating and synthesizing the data collected for two research projects, each one conducted independently by the coauthors of this article. While it may be unconventional, there are several reasons why this approach was chosen. Although these projects were conducted independently, we became aware
of their similar goals early in the research process, and frequently dialogued about our methods, research questions, and emerging findings. We approached data collection similarly, conducting one-on-one semistructured interviews with Black faculty members employed at predominantly White research universities, focusing on life histories, perspectives on mentoring students, and general experiences as members of the university academic community.

Struck by the apparent similarities in our respective data sets, it seemed prudent to explore the potential of comparing and contrasting the Black faculty members’ narratives of their developmental relationships with students. Scholars have increasingly written about the potential benefits and challenges associated with efforts to draw conclusions across multiple qualitative studies (e.g., Atkins et al., 2008; Dixon-Woods, Agarwal, Jones, Young, & Sutton, 2005; Doyle, 2003). For example, metaethnography has often been proposed as a way to make comparisons, reveal analogies, and make connections across studies (Noblit & Hare, 1988). The implementation of this form of analysis was strongly considered; however, it was determined to be inappropriate given that it is most used as a way to reanalyze conclusions communicated across multiple published works on a given topic (Savin-Baden & Major, 2006). Considering that the full data sets for both studies were readily accessible, we chose to reanalyze our data through a new theoretical lens and engage in a form of analysis neither addressed with depth in our individual studies.

Doyle (2003) suggests that although case studies are unique and express narratives that are based on participants’ context-bound perspectives, comparisons and syntheses across studies can provide new insights, facilitating deeper understanding. We both operated under the belief that while salient themes related to the intersection of race and gender and their influence on whether and how Black professors could be elucidated through the analysis of one study alone, our analyses and conclusions would be more robust, allowing for comparison of emerging themes across additional educational contexts.

Given the unique nature of this study, great care is taken to describe the participants and process of data collection for each individual study. The ways in which these data were reanalyzed for the purposes of this research project are then explained, followed by the limitations associated with the chosen methodology, the ways in which our identities influence how we approach this work, and steps taken to increase the validity of findings.

Data Collection

Study 1

Study 1 focused on the motivations and methods employed by full-time, tenure-track Black faculty members at a selective PWI engaged in mentoring
relationships with Black undergraduates; however, the interview protocol incorporated a range of topics, including participants’ journeys to the professoriate, their management of professional responsibilities, and their other service obligations. The researcher was expressly interested in faculty members identified by Black students as effective mentors regarding their assistance in psychosocial and instrumental concerns, as well as faculty members who self-identified as engaging in the mentoring of Black students.

*Sample.* Study 1 was conducted at Worth University (a pseudonym), a highly selective, private institution in the northeastern United States. The undergraduate division enrolls roughly 6,700 students in over 40 majors. The undergraduate student body is evenly split by gender and 45% White, 15% Asian/Pacific Islander, 9% international, 7% Black, 8% Latino, 1% Native American, and 16% unknown or other. The graduate and professional school enrollment at Worth is just under 13,000 students, 47.2% of whom are female. Ethnically, this population is 42.8% White, 23.8% international, 10.7% Asian/Pacific Islander, 5.6% Black, 4.2% Latino, 0.5% Native American, and 12.3% unknown or other. University-wide, the Worth faculty numbers 1,252 and is racially/ethnically 79.2% White, 5.7% Black, 4.3% Latino, 10.6% Asian, and 0.3% Native American. Over half (52.9%) of the faculty members university-wide are female.

Nine Worth professors (five women, four men, 14% of all full-time equivalent, tenure-track Black faculty members at the institution) agreed to participate in the study. All participants are referred to by pseudonyms in the reporting of this study’s findings. The faculty members held the following ranks at the time of interviews: two were assistant professors, three were associate professors, and four were full professors. This sample came from a broad array of disciplines and departments, including the arts and humanities, social sciences, professional schools, and natural sciences (see Table 1 for details).

*Procedures.* The sampling methods for this study were driven by the researcher’s interest in learning more about Black professors who served as mentors to Black students. The researcher electronically surveyed Black undergraduate students involved in a Black student support group at Worth to name Black professors who had served as mentors for them or their friends. In addition, the researcher invited all Black professors who met the criteria for the study (full-time equivalent tenure-track faculty with appointments in the undergraduate college) at Worth who self-identified as mentors to participate in the study via a letter and e-mail cosigned by the most senior Black professor at the institution.

The interviews in Study 1 took place between October 2006 and February 2007. Faculty members in the sample participated in a two-stage phenomenological interview process with the researcher (Seidman, 1998).
<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Academic Area</th>
<th>Rank</th>
<th>Tenured?</th>
<th>Institution</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Dodd</td>
<td>Male</td>
<td>Professional</td>
<td>Full</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Albert Banks</td>
<td>Male</td>
<td>Social sciences</td>
<td>Full (emeritus)</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Alice Butler</td>
<td>Female</td>
<td>Social sciences and professional</td>
<td>Full</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Calvin Carson</td>
<td>Male</td>
<td>Social sciences</td>
<td>Full</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Corrinne Davis</td>
<td>Female</td>
<td>Arts and humanities</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Darren Coleman</td>
<td>Male</td>
<td>Professional</td>
<td>Full (emeritus)</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Darren Jefferson</td>
<td>Male</td>
<td>Mathematics and engineering</td>
<td>Full</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Derrick Ellis</td>
<td>Male</td>
<td>Arts and humanities</td>
<td>Associate</td>
<td>No</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Diane Willis</td>
<td>Female</td>
<td>Life and physical sciences and professional</td>
<td>Associate</td>
<td>No</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Eileen Smith</td>
<td>Female</td>
<td>Social sciences</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Eric Carter</td>
<td>Male</td>
<td>Professional</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Felicia Adams</td>
<td>Female</td>
<td>Interdisciplinary and social sciences</td>
<td>Assistant</td>
<td>No</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Fred Benson</td>
<td>Male</td>
<td>Professional</td>
<td>Full</td>
<td>Yes</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Geneva Morris</td>
<td>Female</td>
<td>Science and engineering</td>
<td>Associate</td>
<td>Yes</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Iris Hayes</td>
<td>Female</td>
<td>Mathematics and engineering</td>
<td>Associate</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Jackson Brown</td>
<td>Male</td>
<td>Life and physical sciences</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Jason Henderson</td>
<td>Male</td>
<td>Arts and humanities</td>
<td>Associate</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Jonathan Baker</td>
<td>Male</td>
<td>Professional</td>
<td>Assistant</td>
<td>No</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Karla Trent</td>
<td>Female</td>
<td>Social sciences</td>
<td>Associate</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Keira Bailey</td>
<td>Female</td>
<td>Social sciences</td>
<td>Full</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Kevin Jones</td>
<td>Male</td>
<td>Social sciences</td>
<td>Associate</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Kwame Farriss</td>
<td>Male</td>
<td>Social sciences</td>
<td>Assistant</td>
<td>No</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Leonard Freeman</td>
<td>Male</td>
<td>Social sciences</td>
<td>Full</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Academic Area</th>
<th>Rank</th>
<th>Tenured?</th>
<th>Institution</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda Owens</td>
<td>Female</td>
<td>Social sciences</td>
<td>Full</td>
<td>Yes</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Marilyn Taylor</td>
<td>Female</td>
<td>Social sciences</td>
<td>Assistant</td>
<td>No</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Matt Miller</td>
<td>Male</td>
<td>Humanities</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Michael Norman</td>
<td>Male</td>
<td>Arts and humanities</td>
<td>Full</td>
<td>Yes</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Michael Stuart</td>
<td>Male</td>
<td>Life and physical sciences</td>
<td>Full</td>
<td>Yes</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Michelle Womack</td>
<td>Female</td>
<td>Social sciences</td>
<td>Associate</td>
<td>No</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Paul Bate</td>
<td>Male</td>
<td>Mathematics and engineering</td>
<td>Assistant</td>
<td>No</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Paula James</td>
<td>Female</td>
<td>Professional</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Reginald Spencer</td>
<td>Male</td>
<td>Social sciences</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Teryn Mitchell</td>
<td>Female</td>
<td>Humanities</td>
<td>Assistant</td>
<td>No</td>
<td>Column</td>
<td>Study 2</td>
</tr>
<tr>
<td>Theresa Evers</td>
<td>Female</td>
<td>Arts and humanities</td>
<td>Full</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Vonda Williams</td>
<td>Female</td>
<td>Social sciences</td>
<td>Assistant</td>
<td>No</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
<tr>
<td>Wallace Pearson</td>
<td>Male</td>
<td>Social sciences and professional</td>
<td>Associate</td>
<td>Yes</td>
<td>Oceanside</td>
<td>Study 2</td>
</tr>
<tr>
<td>Willa Porter</td>
<td>Female</td>
<td>Social sciences</td>
<td>Associate</td>
<td>No</td>
<td>Worth</td>
<td>Study 1</td>
</tr>
</tbody>
</table>
The first interview explored their life histories (formative experiences, pathways to the professoriate), and the second explored their mentoring experiences in depth (motivations for serving as mentors, successes and challenges in the mentoring role, and relationships with undergraduate students). Each interview took 60 to 90 minutes to complete, and all were audiotaped and subsequently professionally transcribed.

Study 2

Study 2 explored the experiences of Black professors at predominantly White research universities, focusing on their mentoring relationships with students. The researcher did not focus on relationships with students from a specific student group; rather, the goals of the study included distinguishing between the different relationships faculty members formed with students based both on their institutional contexts and student characteristics (e.g., gender, race/ethnicity, status as a graduate or undergraduate, academic ability).

Sample. Data were collected from faculty members at two different institutions: Oceanside University and Column University. Oceanside University is a public institution, located in the western United States. It serves over 37,000 students; approximately two thirds are undergraduates. The ethnic breakdown of the total student population at Oceanside in the fall of 2005 was 37% White, 33% Asian, 13% Latino, 7% international, 4% Black, and 0.5% Native American. The majority of professors are White, constituting 66.4% of all faculty members on campus. Almost a third of the roughly 1,400 faculty members at Oceanside are from minority groups. Specifically, 2.4% are Black, 5.1% are Latino, 21.2% are Asian/Asian American, and 0.3% are Native American. Furthermore, just under a third of full-time, tenure-track faculty members institution-wide are women (28%).

Column University is also a large public institution, located in the Mid-Atlantic United States. Comparable in size to Oceanside, Column enrolls approximately 35,000 students; 25,000 are undergraduates. In the fall of 2005, 55% of all students at Column were White, 12% were Asian American, 11% were Black, 5% were Latino, and 0.3% were Native American. The majority of the 2,000 faculty members on campus are White (69.7%), with 5% of faculty members at Column classified as Black, 2.3% Latino, 8.5% Asian/Asian American, and 0.1% Native American.

Seventeen Oceanside professors (10 men, 7 women, 51% of the Black faculty population) and 11 Column professors (6 men, 5 women, 11% of the Black faculty population) agreed to participate in this study. All participants are referred to by pseudonyms in the reporting of this study’s findings. Twenty-six were full-time professors, and 25 were tenure-track professors at the time of their interviews. Five participants were assistant professors, 11 were associate professors, and 12 were full professors at the time of their
interviews. Faculty members were from a diverse group of departments and programs, with the largest proportion teaching in the social sciences ($n = 12$), followed by professional programs ($n = 5$) (details appear in Table 1).

**Procedures.** Key administrators in contact with Black professors at Column and Oceanside assisted with compiling contact lists to recruit participants for the study. A snowball sampling technique (Bogdan & Biklen, 1998) was further employed for this purpose. Participants were asked to recommend other Black faculty members who could add additional insight through their involvement in the project. Recommenders contacted nominated faculty members, who were asked to directly contact the principal investigator if interested in participating.

Upon agreeing to participate in the study, all participants were referred to by pseudonyms and identified by their broad academic areas of interest rather than specific departments to ensure confidentiality. Interviews took place between January 2006 and June 2007. Each participant then engaged in a one-on-one semistructured interview (Bogdan & Biklen, 1998) exploring their paths to the professoriate, experiences on campus, perceptions of professional expectations and obligations, and relationships with both undergraduate and graduate students. The interview protocol was developed on the basis of a review of the literature on the experiences of African American faculty members, particularly their participation in developmental relationships. Interviews took approximately 60 to 90 minutes to complete. All participants were asked for permission to tape record interviews for verbatim transcription.

**Data Analysis**

We began data analysis for the current study by rereading our respective interview transcripts and writing detailed memos on the emergent themes related to differences between male and female professors’ campus and mentoring experiences. These memos were exchanged, and we compared and discussed the similarities and differences across data sets. We both identified distinctions between Black faculty members’ experiences on the basis of gender, and we discussed the specific differences observed within each data set.

In the next step, the individual data sets were combined into one larger data set. We each read all of the interview transcripts, focusing specifically on the differences between male and female faculty members’ narratives. We each completed separate memos for the male and female participants in our samples, including specific examples and quotations from faculty members’ narratives illustrating observed trends in mentoring patterns (time spent working with students, nature of faculty-student interactions) and how these mentoring patterns were perceived as distinctive from those of their colleagues. Furthermore, memos captured the ways in which
professors worked with students, whether and how this varied by student identity, and the factors and forces that shaped the ways in which they mentored.

Again, these memos were exchanged, discussed, and served as the basis for development of a list of codes reflecting the themes emerging from the data. One researcher coded the aggregated data set, applying codes to specific quotations from participants’ narratives using ATLAS.ti software. Once codes were applied, the software was useful in aggregating quotations categorized within the same code. Data that were assigned the same code were read and reread to challenge and confirm emerging themes from the memos and used to compose an initial report of the study’s findings, which was repeatedly revised by both of us.

Ensuring Credibility

We used several strategies to foster the credibility and validity of our work. First, we were mindful of our identities and how they intersected with the study. One of us is a Black woman and the other a Black man. While gender identity may have enhanced and limited the participants’ willingness to discuss issues of gender and sexuality, we both engaged in robust conversations with participants about the role of gender in their mentoring work. We worked to establish rapport with study participants, and we believe that our identities are a reflexive asset in establishing trust and obtaining authentic accounts from the participants (Hammersley & Atkinson, 1995). However, we did not assume that a shared racial/ethnic background equaled absolute understanding, and we both took special care in interviews to ask participants to explain their experiences and ways of knowing in full.

We also used the unique strategy implemented in this project to improve the validity of their findings. We both regularly questioned each other, challenging the evidence provided to support a theme with disconfirming evidence or supporting themes with additional data. Furthermore, validity concerns were addressed through the strategies each of us implemented in our individual studies. We both researchers used audiotaped recordings and professional transcription services, and we shared our coding and memos with an interpretive community (Kvale, 1996; Maxwell, 1992, 2005; Seidman, 1998).

Limitations

There are several limitations to this study. First, as noted above, the mode of analysis for this study is unconventional, and there are notable challenges associated with combining qualitative data sets. The data were not collected using a common set of research questions, though we were in communication with each other in the research design and analysis aspects.
of their respective studies and hence share somewhat congruent features. The universities studied are all research-intensive institutions with specific missions in higher education. Findings from this study may not be generalizable to Black faculty members working at other types of institutions. Furthermore, we acknowledge that the purposive nature of the sampling in this study precludes applying the findings to all Black faculty mentors. Thirty-seven participants, no matter how diverse, cannot possibly represent the diversity of personality types in the professorial ranks and of course are in no way representative of the full range of experiences within the Black faculty populations at their respective institutions. It is also likely that faculty members electing to participate in either study brought a stronger sense of racial and ethnic identity and that individuals who have a strong commitment to the process of mentoring would express greater willingness to participate in a study focusing on this activity. Finally, we acknowledge that our analyses are based on faculty members’ perceptions of others’ beliefs and expectations. We did not interview students or faculty members’ colleagues to confirm the accuracy of these perceptions; however, we assert that individuals’ perceptions constitute their reality and influence their environmental experiences and outcomes (Hurtado, Milem, Clayton-Pedersen, & Allen, 1999). As such, individuals’ perceptions are valid and important to address.

Findings

Professors across both studies shared a similar perception: They and their minority colleagues more often formed developmental relationships with students than their White colleagues. For example, Vonda of Worth University described how Black faculty members had “so many time demands on us” and noted that “it really is a sacrifice of time to be involved in mentoring at any extensive level.” Also addressing the unique demand for Black professors, Calvin explained that the stark underrepresentation of Black faculty members at Oceanside leads communities of color to be excited by his presence, responding with the following: “Oh God, we’re so happy to have you here! We’re gonna invite you to everything!” Thus, being one of few Black faculty members made him a valued commodity, particularly among students of color, and they reached out to him often with their expectations and demands.

While Black faculty members widely acknowledged high demand for their support and mentorship, there appear to be some gender differences. In particular, there was great consistency in the extent to which Black male and female faculty members reported their desire to work with Black students in particular and consequently uplift the Black community. However, faculty members’ narratives suggest there are differences between male and female faculty members and how they work with students on the
basis of their identities, racialized experiences in the academy, and gendered expectations.

Black Women Relating in a Multidimensional, Proximal Manner

Black women in our sample more often described engaging with students in a proximal, semifamilial manner. Most Black female participants emphasized their closeness with students, demonstrated through attentiveness to their personal lives. Women appeared more open to discussion about family, finances, and the struggles their students faced outside of the classroom. In other words, the mentorship displayed by Black women faculty members included both instrumental and psychosocial support, the latter being demonstrated in participants’ efforts to get to know their students beyond their academic and professional identities.

Two female professors at Column offered clear examples of salient experiences when they attended closely to students’ personal problems outside of the classroom. For Iris, her close attention to the performance of a Black female student enrolled in her class led to a conversation about prioritizing goals, delivered in a caring, proximal manner. As time progressed, Iris noticed that “I didn’t see her [the student] for a few lectures—so I thought, ‘Okay, she’s dropped my class.’” However, the student appeared for a lecture soon after, and Iris called the student into her office. The student eventually admitted that she had missed class because she was working extra hours to pay off her credit card bills. Iris took an approach that one might term as maternal, invoking the significance of the student’s connection to her mother and her future, telling the student,

“You’re not going to do well on the final. You’re probably going to have to re-take this class, and you just cost your mom a lot of money.” And I said, “At this point in your life, you should not be caring so much about how you’re dressing.” So I was trying to explain it mathematically to her, hoping that she could see, get her priorities straight.

Similarly, Teryn at Column shared her experience of being one of two Black women at her previous institution and the close level of engagement and personal support they provided students. She described the students who sought her support:

All of a sudden they [students] were coming out of the woodwork—for everything—from, “I need help with class,” to “My life is falling apart,” to “Oh, my God, I don’t know what I’m going to do, I need money.” I mean, it was really a lot . . . women of all races, but particularly African American and African women. From their first year to their last year, just needing stuff.
Thus, these women sometimes took initiative and were sometimes asked to engage in students’ lives outside of the classroom, supporting and offering guidance beyond the academic arena that resembled parental advice more so than what would expect of an academic figure or advisor.

This level and form of contact appeared to be distinctive from what was observed and expected of Black male professors. Karla, a professor at Column, offered a direct example of the different ways in which men and women worked with their students. She discussed her observation of a male colleague interacting with a student in a manner that shocked her:

I was in a hearing . . . and my male colleague basically said to a student, “I don’t really care about your daughter being sick. We need to focus on what you need to do for this dissertation.” I remember thinking, “Whoa, okay!” Ultimately his philosophy is, “Look, everyone’s got an excuse, but they’ve got to get stuff done.” I would never say that—because, that’s just a style difference. I would never say that.

As Eileen, a professor at Oceanside noted, “Women faculty in general and women of color are more likely to get sucked in to the lives of students in a way that I am just not sure that male faculty members do.” Thus, in addition to volume, the differences in mentoring between Black men and women for Karla, Eileen and others appear to be related to the nature of student interaction and the level of care demonstrated.

Male faculty members rarely spoke about their perceptions of their female colleagues and their levels of engagement with students. However, Derrick at Worth did perceive Black women as more readily accepted and expected to engage in intimate support roles:

[Black women] are sort of expected to be the nurturer—and so they find themselves in it more often, and they can just take up the role. They can just sort of start, and play the role and the student will respond to it.

Derrick’s comment suggests that women may be likely to serve in a supportive role than men and that students may feel more comfortable with them in a nurturing role, or disclosing personal challenges they are facing. His words are particularly interesting in that they go beyond describing women as simply wanting to have more personal relationships with students. Rather, he notes that women are “sort of expected [italics added] to be the nurturer.”

Linda, a longtime faculty member at Worth, also mentioned the different expectations applied to male and female faculty members: “I do think that as a woman faculty, there are expectations that just aren’t there for men faculty. And I think mentoring is one of the big ones.” Willa, too, related that the caseload of mentoring was skewed toward her, as one of the few
Black women in her department, and that she was expected to be more supportive and accessible to students.

While it is possible that these expectations are congruent with their interests and desire to engage with students on a more personal level, not all Black female faculty members fully embraced this role. Rather, several acknowledged the significant costs associated with personal interactions with students. Alice described how a brief meeting would often go much longer, simply because there was a need to address issues beyond the instrumental:

When you have these extra connections you might have a meeting—that you have 45 minutes set aside to meet about your research, but then you might have another 45 minutes because you’re talking about some personal issue . . . that 45 minutes of scholarly stuff ends up being an hour and a half because you talk about other things . . . is that a drawback? There’s just so many benefits that come from that too. But the time—the time in a day, there’s only a certain amount of time.

Thus, while potentially rewarding, Alice acknowledges the time cost that must be paid when choosing to attend to students’ personal issues and concerns, which could prevent her from getting other important work completed. Felicia also described multiple encounters with students where she offered personal support, which was rewarding, but also “so time consuming and exhausting,” noting the negative impact these relationships had on her time to do research. Although Karla was surprised that more men did not engage in the personal lives and concerns of their students, she noted that she “should be a little more judicious with my time” when it came to working closely with students. After describing spending an afternoon working with a student who had significant personal problems, Teryn described students’ expectations of the level of personal care she could offer as “an enormous burden” and “draining,” expressing frustration with the energy she expends on these relationships:

you’re trying to finish your own work and teach courses and publish and do all the things that our profession requires of you, it really is a lot, and then when you have to argue with your institutions about why they should pay you a certain amount of money because you did this cultural work which enables them to retain the very students that they say they want . . . it becomes a pain in the butt, then you get tired of that.

Teryn connects her personal engagement with students as positively related to student retention but sees it as unsupported, not valued, and an extra draw on her time that was not professionally rewarded. She went on to note that she specifically sought relationships with graduate students with
whom she could discuss and focus on her scholarly work and strove to disconnect herself from students' personal lives.

Black Men Engaging in a Formal, Compartmentalized Manner

Black men across both studies describe relating to their mentees in a more formal, distant manner. While there were a few notable exceptions where professors described taking on “father figure” types of relationships with their male students, Black male professors mainly approached their relationships with students with prudence and boundaries. One reason for this approach was a concern for maintaining appropriate levels of respect for the role of teacher and student. Jonathan of Oceanside commented, “I try to monitor the sort of informality sometimes that students can have, then you have to remind them that you’re the professor.” He continued,

I’m just thinking for a [Black] student sometimes on campus, sometimes they might sort of think “Oh, he’s somebody that I can relate to and talk to like a friend.” And I have to remind them that we are in different roles.

While Jonathan made note of his youth as one reason for taking this approach, Derrick at Worth noted that just by virtue of having completed his formal education, he felt that was outside of range for a conventional friendship with students:

I wouldn’t say that I’ve had anything that resembles a friendship with the undergraduates. . . . I think that even though I’m relatively close to their age, I still have them by 20 years. So there’s so much that we can—so far we can go in that direction. They rarely know anything about me, for instance, very little about my personal life.

Jason at Column similarly noted that he was “not really a friend because there’s always that break, that line that you have to have between student and the teacher.” Darren, a professor at Column, expressed his need for distance in stark terms, noting he has often told students, “I don’t want to know everything about your life. I just want to know as much as I need to know to help you succeed.”

An interesting difference emerged when comparing responses from Black male faculty members at Worth with those of their colleagues at Oceanside and Column. One Column faculty member (Kevin), alludes to what male Worth faculty members explicitly discuss: how they sensed that they were being watched and how this translated into concerns about misperceptions of their relationships with female students—and worries about
accusations of sexual impropriety. Kevin, of Column, discussed his “trepidation” in broaching close relationships with students:

I see so many men of color getting into trouble in the academy in terms of having, I would say, ambiguous relationships with students of color. And when I say getting into trouble, I mean everything from lawsuits to being thrown out of academia to just gos-siping around. . . . I just never ever wanted that. And I just felt like if it means I can’t be as close as some people are to their students, then that’s something I have to live with. But I don’t ever want it to be said that people questioned the nature of my relationships with my students.

Faculty members at Worth University engaged this sense of being watched and observed to ensure that they were not engaging in inappropriate relationships with their students. In Fred’s interview, a casual comment about his tendency to form closer relationships with male students led to this surprising disclosure. When asked why he tends to feel more comfortable asking men of color about their social and personal lives than women, he responded his behavior was based on “two things”:

One is, I’m much better able to read the signals about when have we developed enough of a relationship that I can express interest in you beyond just the instrumental; the obvious professor-student, professional-work. And ’cause I’m a heterosexual man, I’m also aware—not wanting to cross a boundary of intimacy that the relationship may not be appropriately developed for.

Fred later expanded on this concern to his Black male faculty colleagues, noting, “My guess is that African American men, I think, are more sensitive to the dangers of bringing sexuality into the public space.” When discussing how he tended to meet with male students outside of class, but not women, Derrick remarked,

As a Black man, it’s a little trickier. You don’t want, with females, to presume that role—it gets tricky there. You don’t want to seem overly familiar or trying to create intimacy or something that they didn’t initiate. It’s harder, you have to take it with care.

Kwame, another Worth professor, made these concerns more clear: Relationships with women students were inherently risky, because of the potential for misunderstanding and a perception that Black men have less credibility should an accusation of impropriety arise: “It’s especially tricky for Black men in university situations. Because if someone leaves the door, and tells a story, it’s more likely to be believed—because our authority is already compromised by the fact that we’re young Black males.” Kwame makes clear what Derrick and Fred insinuate: the potential risk of
a misperceived comment to a female student could be career ending. Here, academic titles and prestige fail to insulate Black male faculty members from centuries-old tropes of hypersexuality and predatory behavior.

**Discussion and Implications**

Despite its importance and salience in the experiences of Black faculty members, we argue that mentoring patterns are not determined by race alone. Consistent with principles of intersectionality, our findings suggest individuals experience environmental phenomena differently on the basis of the conflation of their social identities (Collins 1998a, 1998b). Specifically, our findings suggest that expectations, the ways in which faculty members engage students or the nature of the relationships they form appear to vary on the basis of gender.

First, our analysis points to intimate connections between Black female faculty members and their mentees. While it would be unfair to say Black men never engaged their students in close relationships and were uncaring about students’ personal lives, Black women across all three institutions more often communicated their understanding of students’ desires to discuss personal needs and experiences outside of the classroom. Underlying the narratives of close, familial support, however, is a troubling tendency for Black women to assume a greater load of mentoring responsibilities, engaging in a form of mentoring that is more personally taxing and time-consuming.

We compare this trend to the “Black tax,” or expectations that Black faculty members generally will meet more often with students than their White colleagues because of high demand for their wisdom and attention (Cohen, 1998; Padilla, 1994). Researchers suggest while this engagement in service can be detrimental to research productivity (Padilla, 1994; Tierney & Bensimon, 1996), professors of color may embrace these expectations in some ways and choose to engage students because it is consistent with their commitment to the uplift of underserved communities (Baez, 2000; Banks, 1984; Stanley, 2006). Our findings suggest that women may have an additional “gender tax,” which rather than addressing an expectation of time is an anticipated level of personal support to students. This is similar to noted expectations that women will serve as “academic caretakers” (Aguirre, 2000; Gregory, 2001; McKay, 1997), meeting students’ educational and social needs.

While the “gender tax” may be experienced generally by female faculty members, it is layered over the “Black tax” when describing the experiences of Black female faculty members, creating a unique lived experience based on the intersection of their identities. Consequently, our intersectional analysis suggests that Black women may simultaneously have the tendency to work with more students than White faculty members, as well as more
closely and personally than male faculty members. Notably, more time spent with students often means less time spent on research, the criteria on which tenure and advancement is most significantly based (Tierney & Bensimon, 1996). Thus, by engaging in the close, personal mentoring relationships some students desire, Black female faculty members are left at additional risk during the academic advancement process.

This trend is especially problematic in that there is some indication that Black women may be expected to engage with students in close familial ways, regardless of their desire to do so and despite the personal costs. This may be reflective of larger gender expectations about the nature of “women’s work” as being related to caring and supporting others (Hochschild & Machung, 1989) or stereotypes of Black women as “mammies” and caretakers, happily working themselves to exhaustion and putting the needs of others before their own (West, 1995). If Black women are in fact expected to embrace these roles in ways that Black men are not, how are women who choose not to form these relationships or are frustrated by these expectations perceived? Previous research suggests that when Black women reject or downplay these expectations, they are subject to stereotypes of “the angry Black woman” and perceptions by students and colleagues that they have an “attitude” (Harlow, 2003). The extent to which women are expected to rather than choosing to engage in close, personal mentoring relationships with students rather than those that focus on “just business” should be explored further in future research to determine the salience of this phenomenon in the lives of Black female professors.

The experiences of Black men in mentoring relationships appear qualitatively different from those of women and highlights the ways in which both gendered expectations and racism can shape the mentoring patterns of Black professors. Many of the Black male participants across both studies restricted their mentoring relationships because of concerns that their intent would be misinterpreted. The men in the sample conveyed perceptions of hypersurveillance, the sense they were being watched with great caution. Such perceptions help explain why Black male faculty members tended to approach mentorship with caution. Knowledge of prevalent social stereotypes framing Black men as somehow dangerous appeared to Black male faculty members to impose limits on intimacy with students. Black male faculty members were particularly cautious with female students. They kept female students at a distance, limiting the necessity of having to explain even the suggestion of sexual impropriety. This may be reflective of age-old tropes about Black men’s hypersexuality, particularly threatening to White women (Hutchinson, 1997; Wriggins, 1983; Thompson & Louque, 2005).

As this is the only recent qualitative inquiry examining how race and gender influence the mentoring practices among Black faculty, these findings do a great deal to deepen our understanding of how and why Black faculty members form relationships in various ways and perhaps offer greater
understanding of the patterns we observe. For example, our findings inform our understanding of homophily, which suggests that humans tend to categorize one another on the basis of social characteristics and then seek to interact with others who are in their own social categories (McPherson, Smith-Lovin, & Cook, 2001). Homophily is particularly salient in the study of mentoring: People tend to want mentors and choose mentees who are similar to them in either race or gender (Allen, Poteet, & Burroughs, 1997; Bowman, Kite, Branscombe, & Williams, 1999). The expressed desire of Black male faculty members to work with Black male students may be reflective of homophily; however, our findings suggest it is more complicated. Rather than simply being attracted to one another by similarity, Black professors are bound and influenced by racialized and gendered assumptions, particularly the violence of Black men and the caretaking role of Black women. Therefore, Black male faculty members may be choosing to work with Black male students because they are similar and want to engage in community uplift, but it also seems that their choices are constrained.

In addition to being personally challenging, these patterns of behavior maintain the patriarchy present in American higher education and shift more of the “Black tax” to Black female professors. Despite the fact that Black women maintain far greater representation and higher levels of academic achievement in higher education than Black men (Harper, 2006; Ryu, 2008), Black male faculty members outnumber Black female faculty members and are more likely to be tenured (Allen et al., 2000; Harvey & Anderson, 2005). If access to Black male faculty members is limited to those students with whom they feel more comfortable (in this case, men), the attention of female students (who make up a larger proportion of the student body) seeking Black role models could likely shift to Black women, who are represented in smaller numbers. Thus, we are left with a situation in which the more underrepresented group, in this case Black female faculty members, is engaging more significantly in an activity that is more detrimental to their ultimate career achievement, maintaining the disparities we see in the professoriate.

Furthermore, if Black men by choice or fear of accusation are not engaging in close mentoring relationships with women generally, and Black women specifically, this may translate to trends observed in the literature suggesting that women have more limited access to mentoring than men (Constantine, Smith, Redington, & Owens, 2008; Singh et al., 1995; Thompson & Dey, 1998). Considering the centrality of close student-faculty relationships and mentorship to student success, particularly in graduate education (Adams, 1992), the more limited array of options Black women have in terms of mentoring may diminish their likelihood of entering the professoriate.

As we consider the implications for practice associated with this work, we are immediately called to add our voices to those who advocate for
a reconsideration of how decisions regarding academic advancement are made. While research universities often focus on and reward faculty members for their engagement in research (Tierney & Bensimon, 1996), consistent with Boyer’s (1990) arguments, we suggest there are multiple forms of scholarship in which faculty members are engaged. While we certainly must reward professors for their commitment to the creation of new knowledge, engaging in service and close work with students also should hold great value. As such, promotion and tenure committees should both be aware of and appropriately weight the service contributions of Black male and female faculty members.

It also must be acknowledged that not all Black faculty members engage in this activity equally. Of particular note is the burden resting on Black female faculty members, who operate under tropes emphasizing their nurturing qualities as women, attracting and managing a more significant load of students seeking instrumental and psychosocial support. Not all women will be able or willing to serve as “academic caretakers,” and to expect all to mentor students in a close, familial way is an unfair requirement. On the other side of the equation, Black male professors operate under the cloak of surveillance, not unlike their experiences in society generally. Institutional leaders cannot assume that one’s identity as an academic will trump their race and gender in the minds of students, staff members, and colleagues. Departments and campuses should engage in frank conversations about historical and societal influences that affect Black men and women in academic settings and strategize about how these communities can challenge stereotypical perceptions. Furthermore, institutions can and must disrupt these damaging behaviors by creating clear protocols for advising and mentoring for all members of the academic community.

Note
Both authors contributed equally to the development of this article. We would like to thank the Interdisciplinary Relationships Science Program at the University of California, Los Angeles (UCLA); the National Science Foundation’s Integrative Graduate Education and Research Traineeship Program; the UCLA Institute for American Cultures; the Bunche Center for African American Studies; Penn State’s Minority Faculty Development Program; the Harvard Graduate School of Education Dissertation Support Fund; and the Mellon Mays University Fellows Research Grant Program of the Woodrow Wilson National Fellowship Foundation for generous financial support in the completion of this research. We would also like to thank Nolan Cabrera and Jessica Bennett for their thoughtful help and feedback.

References


Manuscript received December 11, 2009
Final revision received February 17, 2011
Accepted March 2, 2011