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ABSTRACT

This paper is a reaction to a plenary address, "Fairness in Dealing: Diversity, Psychology, and Mathematics Education" by Suzanne Damarin (SE 057 179). Discussed are the importance of language in the repackaging of equity into the construct of fairness in dealing, the role of liberal feminism, race and ethnicity, physically structured marginalization, exclusion of class, victory of equal ability/attainment, and voice in the mathematics classroom. Contains 10 references. (MKR)

A Reaction to Fairness in Dealing: Diversity, Psychology and Mathematics Education

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A REACTION TO FAIRNESS IN DEALING: DIVERSITY, PSYCHOLOGY AND MATHEMATICS EDUCATION

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In her plenary paper, Suzanne Damarin initiates a conversation about restructuring mathematics education in order to serve fairly all students. She employs lenses developed through research and practices of feminisms and cultural studies to conceptualize excellence in mathematics education as constituting and as constituted by equity for individuals of differing gender and ethnicity. In Damarin's cogent analyses, she journeys through important, uneven, and sometimes dangerous terrain. In these comments, while referring throughout to the benefits of linking critical perspectives on research, I comment principally on two aspects of Damarin's paper: language usage and the paper within, concerning race and ethnicity.

Language

> language is not a neutral medium that passes freely and easily into the private property of the speaker's intentions; it is populated—overpopulated—with the intentions of others. Expropriating it, forcing it to submit to one's own intentions and accents, is a difficult and complicated process.
>
> Bakhtin (1981, p. 294)

We have insufficient language tools to handle adequately the shifting meanings of constructs at hand: equity, the nature of mathematics, the nature of school mathematics, authentic assessment, culturally sensitive pedagogies, feminist pedagogies, ethnicity, race, gender, class and feminisms. Damarin helps us bridge discursive traditions by providing language with which we can navigate difficult points of intersection. Much of Damarin's language-work is explicit, such as the repackaging of "equity" into the construct of "fairness in dealing." Some of the work is less obvious, such as the careful phrasing when speaking of individuals who identify or are identified as members of marginalized groups. In some places the language she uses uncovers important areas that might have been otherwise overlooked, in other places cloudiness in Damarin's language reflects the difficulties inherent in the task she has undertaken. I will revisit Damarin's discussion of the term *equity*, and her account of the contributions of the liberal feminist traditions. Both are sites of clarity and ambiguity.

Fairness in Dealing

Damarin makes a bid to discard the baggage of other people's intentions with which the word *equity* is laden. One would be hard put to find a mathematics educator or researcher who does not subscribe to both *equity* and *excellence*. But there is little consensus about their meanings either in isolation or in relationship to the other. The fact that divergent and sometimes conflicting beliefs are held by

proponents of equity creates the problem that Damarin would mitigate by changing the terms of the debate from the narrower views of equity to broader considerations of fairness. As she indicates, Damarin's fairness terminology dampens arguments for equity inspired by economic determinism by shifting the emphasis to individuals and the communities in which they reside rather than the needs of the economy. It is also easier to consider the ways in which people who have succeeded in mathematics have been subject to unfair treatment using a *fairness in dealing* construct rather than *equity,* as it is harder to see the non-achievement of equity when there are equal outcomes in educational attainment or career accomplishments.

However, *fairness in dealing* does not escape some of the more debilitating characteristics of *equity*. Damarin states, for example, that equity is measure dependent - so, of course, is fairness in dealing. Further, I believe that the fairness terminology carries baggage of its own that will create barriers to its actualization. Until there is a real shift in the general perception of intelligence and its distribution, "fairness" is a dangerous term in the heads and hands of those who find comfort and merit in the arguments presented in *The Bell Curve* (Herrnstein & Murray, 1994). While it may not seem equitable to place some youngsters in classrooms which feature non-challenging, minds-off, rote, procedural-driven mathematics; some may argue that such placement is fair for those students who lack the capacity to engage in powerful mathematics along with their more able peers.

The current mathematical reform movement is built upon the twin pillars of excellence and equity. Indeed the entire national school reform movement is linked to discussions of equity and excellence (Goals 2000 for example). Political struggles have been fought and will continue to rage over whose meaning of equity will prevail. An increasing number of studies and policy developments arising from lines of inquiry generated by scholarship in the traditions of mathematics educational research have explicitly or tacitly adopted standpoints which assume the inseparability of excellence and equity. (e.g. see Keynes 1995; Ladson-Billings 1995; Secada 1995; Cuevas 1995; Hilliard 1995; Silver, Smith, & 1995). I think it beneficial to continue to populate *equity* with these intentions.

The Role of Liberal Feminism

Damarin argues that gender equity narrowly defined as equal male/female outcomes failed as an analytical tool for liberal feminist because its use did not yield results. She indicates that the line of research emanating from the liberal feminist from about 1970 has provided a lack of guidance for the achievement of equity and that there have been no fundamental changes in its attainment. These claims appear to be in contrast to Damarin's own description of the scope of the work of liberal feminist and her report of their findings. According to Damarin, a goal of liberal feminist researchers was to prescribe changes in the treatment of girls within and outside of the classroom which could increase their performance in mathematics. I believe they did just that. I think the changes in course enrollment were fundamental changes which resulted from enactment of educational

policies generated from this line of inquiry. I think the research of this genre produced strategies for use by educators and other care givers that make it possible for white middle- class girls to perform just about as well in mathematics as their white middle-class brothers.

Looking back towards 1970, I see a variety of fundamental changes in the position of girls in relationship to boys in school mathematics. I think teachers have available to them tools such as GESA (Gender Expectations/ Student Achievement) training[1] that can make substantial differences in the mathematical achievement of girls in their classrooms. Still, it may be that my differences with Damarin are more semantic than substantive. Like Damarin, I agree that in concert with the "victory" of near equal achievement and declared equal ability/aptitude between white girls and boys,[2] many eyes have shifted to a different prize. (I will return to this victory in the next section) Many no longer see as desirable, for any student, the achievement of the mindless proficiency with symbolic manipulation that was equated with excellence in mathematics only thirty years ago. Many want the mathematics classroom to cease being a place of silence and/or fear for the majority of students. The lot of all students, but especially students underserved by traditional mathematics programs, will be improved greatly as we find ways to rewrite the scripts that currently tell students that doing, enjoying, and succeeding in mathematics is not an appropriate enactment of their various identities along lines of gender, race, ethnicity, class, etc. The shifts in focus for many communities of color and feminist communities away from a notion of equity that meant equal opportunity to digest American-European male-centric curriculums and pedagogies have resulted in promising research and theory building. Further the traditions of mathematics research can benefit from these efforts.

Race and Ethnicity

Damarin weaves a thread of race/ethnicity throughout her paper. She speaks of diversity in mathematics education using gender fairness as a case. For me, the race/ethnicity sections failed even though I am in total agreement that there are important and deep parallels between the work being done in feminist discourse communities and the work being done in other research communities that bring a critical/cultural perspective to their research. It is important to examine critically the absences and biases of European-American psychology and to seek the culturally specific ways that students understand the world. A curriculum and pedagogy that provides for connected knowing of connected knowledge and processes seems beneficial to all students. Educators should strive to help students find their voice

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[1] Information about these materials is available from GESA, Graymill Foundation, Route 1, Box 45, Earlham, IA, 50072

[2] Certainly there have also been reports of equal or better achievement of girls compared to boys within ethnic groups of color. However, since the intersection of possession of skin with high melanin content and attendance at grossly underfunded schools is so large, the achievement difference between most of these groups and white children is a more significant factor than within group gender equality.

in mathematics. It is imperative that we establish educational policies that acknowledge and support different ways of knowing and demonstrating competencies in mathematics. These all seem derivable from findings or hunches within a multitude of research paradigms. But, given my many agreements with Damarin, I still am uncomfortable with the physical structure of her analogous reasoning and I am cautious about possible inferences that could be made from the content of some of her arguments.

Physically Structured Marginalization

While it may appear to white middle-class able-bodied females that gender is the major cultural vehicle that the world uses to encourage and constrain them, it is true that other factors, race, class, health, etc. are also used in the communities within which they interact to organize their life possibilities. Simply put, those from dominant groups do not see their dominant features as salient in the construction of social arrangements from which they benefit. Damarin does not make this mistake, but the organization of her paper marginalizes females and others from non-dominant backgrounds in the United States. Given the physical separation of gender and ethnicity, and given the fact that most of the gender work is done in relationship to white females here and in Europe and Australia, it is difficult not to read part of the paper - the main part- as pertaining to white middle-class women and the other part as pertaining to how other folk are or are not like white middle-class women. A further marginalization occurs as blacks are taken to be the modal ethnic/race group. Almost all extended examples are taken from this group giving what might seem like honorable mention to members of other groups.

Exclusion of Class

Quite understandably given space constraints, Damarin made a decision to exclude discussions of class. I have come to believe that particularly for people of color in the United States that considerations of ethnicity, gender, and class in isolation from each other are less useful than considerations of individuals and groups in more complex constellations which illuminate multiple overlapping identities. I confess an inability to envision a paper that would have meaningfully dealt fairly with members of all major intersecting equity-groups. Perhaps we could write the series of papers, suggested by Damarin, of equity journeys emanating from different perceptual starting points.

Victory of Equal Ability/Attainment

The decisions of feminists to shift to a search for women's ways of knowing mathematics and to find ways to "fix school mathematics" come from a position of power. Feminists have evidence that girls are equal to boys in both mathematical ability and aptitude. They also now have evidence of near equal attainment in course taking, undergraduate degrees, and high school grades for white boys and girls. Clearly, if girls want to do school mathematics they can. Many ethnic Americans of color do not have the advantage of interacting in schools where

others will no longer assume that they are intellectually inferior to white Americans.[3] Although existence proofs abound that this ethnic student, that class of poor children, a specific school or district showed mathematical excellence by traditional measures; those examples too often function as the exception that proves the rule.

There is no doubt in my mind that the entire mathematical education enterprise needs reforming for all students and teachers. It is also clear to me that the attainment difference between white middle-class females and oppressed people of color makes the call for culturally relevant teaching (especially of "fixed mathematics") qualitatively different than the call for gender relevant teaching for white middle class females. As an educator/ researcher in favor of such changes, I am fearful that teachers and other care takers of students from backgrounds that are not white and middle class will provide educational experiences that may equip students for the 21st century but will make them ill prepared for next year's high stakes non-state-of-the-art-exam. Practitioners and students are caught in the shifting sands of the appropriate nature of school mathematics and assessment. The changes in curriculum, pedagogy, and assessment in school mathematics should be systemic for all communities, but they must be systemic (at least locally) to provide safety from blatantly unfair individual consequences for students who are members of non- dominate ethnic groups. (See Delpit, 1988) for a discussion of the dilemma of teachers of students from non-dominant culture/classes). All of the gender/ethnicity analogy sections proceeded from this point of power difference. The magnitude of the difference jeopardizes the validity of analogies across the gender/ethnicity sections of the paper.

Voice in the Mathematics Classroom

> Now that the audience for feminist writing and speaking has become more diverse, it is evident that we must change conventional ways of thinking about language, creating spaces where diverse voices can speak in words other than English or in broken, vernacular speech. This means that at a lecture or even in written work there will be fragments of speech that may not be accessible to every individual. Shifting how we think about language and how we use it necessarily alters how we know what we know. . . . I suggest that we do not necessarily need to hear and know what is stated in its entirety, that we do nor need to "master" or conquer the narrative as a whole, that we may know in fragments. I suggest that we may learn from the spaces of silence as well as spaces of speech, that in the patient act of listening to another tongue we may subvert that culture of impe-

[3] I certainly do not mean to imply that middle class white girls are not now subject to terrible and invidious myths of female mathematical incompetence. I am only indicating that the research arsenal available to help middle class white girls in their battles are vastly greater than those available to many American ethnic groups of color.

> rialism that suggests that one is worthy of being heard only if one speaks in standard English.
>
> bell hooks (1994, p. 174)

I applaud the NCTM's emphasis on mathematical communication and Damarin's endorsement of mathematical autobiographies as means for students to bring voice to their study of mathematics. It is a device that I have found useful in my teaching of both school aged children and adult teacher candidates. Still, I caution us from rushing to embrace written communication about mathematical understanding or feelings about mathematics without paying attention to cultural issues. Narrow criteria of "proper" discourses that ignore whether or not an idea was clearly communicated to a reasonable audience of peers and teachers are inappropriate building blocks of modern mathematical communication classroom environments and assessments. Hopefully, emerging rules of legitimate discourse will not artificially discriminate against users of non-standard Mathematical English terminology or grammar. Valid criteria is more responsive to the quality of the ideas communicated, the logical coherence of the presentation, and the clarity of the communication than to hegemonic syntactical, grammatical forms of decontextualized mathematical discourse typically found in traditional high school and college mathematics textbooks. Again, nothing in Damarin's paper suggests that she would be guilty of silencing students who are slow to warm to communicating through journals or in standard English.

Summary

Near the end of her paper, Damarin treats us to a description of a black psychologist opening presentation of optimal psychology. The fuzzy logic image of the still and moving pen will always be with me. Damarin's' paper is an example of "both/and" reasoning. She manages to walk a path both around the edges and through perspectives so diverse that only a "both/and" thinker could manage to carry others along on such a journey.

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