

TITLE: Underprepared Students' Gendered Reactions to the Challenge of Introductory College Mathematics Require Gender-Sensitive Relational Tutor Response

ABSTRACT: As a female mathematics support professional, I have repeatedly documented apparent gender differences in underprepared college students' expression of similar core problems as they attempt required mathematics courses. For my dissertation study I was embedded in an introductory statistics class of 13 students at a small urban, predominantly white, state commuter university college in the Northeastern U.S. I provided mathematics counseling for the 10 volunteer participants. I adapted Stephen A. Mitchell's (1988, 2000) relational conflict theory, which integrates the three major relational psychotherapies: object relations (cf. Fairbairn, 1952), self psychology (cf. Kohut, 1977), and interpersonal (attachment) psychology (cf. Bowlby, 1973), as a framework for understanding the state of my participant's mathematics selves. Three categories of student emerged from the study: Category I students with sound mathematics selves (good mathematics preparation—with respect to the demands of the current course—and sound self esteem) and Category II students with undermined mathematics selves (adequate preparation but compromised self esteem). In focus here are Category III students who have underdeveloped mathematics selves, typified by underpreparation and low mathematics self esteem (Knowles, 2004).

Category III women in this study (e.g., Karen) expressed their underdeveloped mathematics selves with underconfidence, hysteria or depression linked with anxiety, and angry detachment or unstable dependence, while Category III men (e.g., Mulder) expressed theirs with overconfidence, grandiosity, and resistance. Their transference of previous mathematics teacher relationships, my countertransference reactions and how I helped Karen and Mulder differed markedly also despite what emerged to be these students' similar core issues. My analysis suggests that gender difference in students, in particular, those identified with their stereotypical gender-role, was a key in the development of such differing efforts to protect underdeveloped mathematics selves (cf. Carper, 2001; Chodorow, 1978, 1999; Sadker and Sadker, 1994, 2002). To the concomitant question with respect to effective support that emerged, I show that key

relational approaches I developed to help were also necessarily gender-sensitive. The implications of this study for practice and further research are also discussed.

References

- Bowlby, J. (1973). *Separation: Anxiety and anger* (2nd ed. Vol. 2: Attachment and loss). New York: Basic Books.
- Carper, A. (2001). *Hysteria and Narcissism: Two concrete representations of the experience of gender*. Unpublished Doctoral Dissertation, Adelphi University, Garden City, NY.
- Chodorow, N. (1978). *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press.
- Chodorow, N. J. (1999). *The power of feelings*. New Haven, CT: Yale University Press.
- Fairbairn, W. R. D. (1952). *An object-relations theory of the personality*. New York: Basic Books, Inc., Publishers.
- Knowles, J. M. (2004). *Brief relational mathematics counseling as an approach to mathematics academic support of students taking introductory courses*. Unpublished Doctoral Dissertation, Lesley University, Cambridge, MA.
- Mitchell, S. A. (1988). *Relational concepts in psychoanalysis: An integration*. Cambridge, MA: Harvard University Press.
- Mitchell, S. A. (2000). *Relationality: From attachment to intersubjectivity* (Vol. 20). Hillsdale, NJ: The Analytic Press.
- Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls*. New York: Charles Scribner's Sons.
- Sadker, M., & Sadker, D. (2002) The miseducation of boys. In *The Jossey-Bass reader on gender in education* (pp.182-203). San Francisco: Jossey-Bass.

Respectfully submitted by

Jillian M. Knowles

Assistant Professor, Mathematics

Endicott College,

376 Hale Street,

Beverly, MA 01915

USA

e-mail: jknowles@endicott.edu

phone: 978 232 24846 (work); 978 270 4062 (mobile)

[Doctoral Studies completed through Lesley University, Cambridge, MA 02138 USA; Ph.D. in Educational Studies awarded May 2004]

NOTE: I have submitted for publication an article with the same title: *Underprepared Students' Gendered Reactions to the Challenge of Introductory College Mathematics Require Gender-Sensitive Relational Tutor Response*