

## **Resolution for the Retirement of Analúcia Dias Schliemann**

May 19, 2010

With this resolution, the faculty of the Education Department and other affiliated programs, centers, schools, and departments at Tufts University intend to honor a very special professor and driving force on the occasion of her retirement. Tufts University gained an extremely accomplished and world-renowned scholar when she joined the faculty of Arts and Sciences 16 years ago. Ana completed her studies in her native Brazil, her master's degree in France, and her doctoral degree in London. She was a researcher and university professor in Brazil for 23 years before joining Tufts. Ana joined Tufts in 1994 as an Assistant Professor, the university perhaps not realizing how lucky they were that Ana decided to apply to the open position in Mathematics Education in the Education Department. We all acknowledge that given her previous tenure and stature in the fields of cognitive psychology and educational research, a tenured position would have been more appropriate. In 1996, she joined the Psychology Department as an affiliated faculty member. In 1998, just 4 years after joining Tufts University, she was promoted to the rank of Professor of Education.

Ana made her most important mark in the fields of psychology and education in the 1980's with her work on everyday mathematics and especially the street mathematics of illiterate sellers, carpenters, fisher men and women, and cooks in her native Brazil. Ana's work with her colleagues in Recife, Brazil, highlighted the incredible mathematical, intellectual, and logical resources that these young and not-so-young workers brought to bear on their successful businesses. In spite of this, these active entrepreneurs have been consistently and systematically rejected from the school system. Her seminal work in this area, *Mathematics in the Streets and in Schools*, published in 1988 in the original Portuguese and in 1993 in English by Cambridge University Press, has a much more telling title in Portuguese and Spanish: *Na Vida, Dez; na Escola Zero* and *En la Vida Diez, en la Escuela Cero* which translates as *In Life 10, or A, In School 0, or F*. Children and adults who could perform quick and accurate computations on the street, for instance, could not do so within the school context. Ana's work on everyday mathematics, carried out over twenty years ago, was so instrumental and eye opening in Latin America that it continues to follow and sometimes even haunt her to this day. Even though she has developed other ground-breaking areas of research, she continues to be invited, to this day, to give plenary conference presentations related to her twenty-year-old research on everyday mathematics.

In 1993, Ana took a year's sabbatical at TERC, a Cambridge-based mathematics and science research institution. She was joined with her now-husband David Carraher. Once she joined Tufts University a year later, applying for the position advertised in the Education Department with little hope that she would actually be hired, she began to slowly transition towards the exploration and study of elementary schoolchildren's learning of algebraic concepts and representations, or Early Algebra, as this area of research has come to be known. Although this might seem like a drastic change in direction and focus, the common thread from everyday mathematics to Early Algebra seems obvious and natural to those who know her and her work. In everyday mathematics, Ana's work highlighted the sophisticated

intellectual work underlying the everyday activities of children and adults rejected and marginalized from the school system. While others focused on what was “wrong” with these children and adults, Ana insisted on what was wonderful, and amazing, and inspiring. The same is true of her work on Early Algebra. After decades of a deficit focus on all the difficulties and obstacles faced by adolescents when first learning algebra, through her research Ana shifted the emphasis and instead has spent the last decade focusing on young children’s ability to learn algebra, highlighting the “algebraic character of arithmetic”, and in a way debunking the accepted wisdom that adolescents usually lack the intellectual resources to tackle algebra. It is quite telling that in 2007 the *Handbook of Research in Mathematics Education* for the very first time included a chapter dedicated to Early Algebra, separate from the chapter on Algebra, co-authored by Ana and her husband David.

In her latest endeavors, Ana has engaged in research on young children’s understanding and learning of science, specifically the particulate nature of matter. We have no doubt that once again Ana will leave her mark in this new area of investigation.

Ana’s publications through the years include books, book chapters, and many, many journal articles. She has published frequently in the *British Journal of Developmental Psychology*, *Cognition and Instruction*, *Developmental Review*, *For the Learning of Mathematics*, *The Journal of the Learning Sciences*, the *Journal of Mathematical Behavior*, the *Journal for Research on Mathematics Education*, *Learning and Instruction*, *New Ideas in Psychology*, as well as in Portuguese-language research publications.

Ana was the driving force behind the creation of the PhD program in Mathematics, Science, Technology, and Engineering (MSTE) Education. The program highlights one of Ana’s most important qualities: her ability to speak and work effectively and competently across disciplinary boundaries. The PhD program, Ana’s child in some sense, is currently thriving and successful and has brought increased attention to the Education Department. The department and the School of Arts and Sciences will most certainly remember Ana because of her passion for, as well as passionate push for, the MSTE Education program, for the relevance of both practice and research for education, and for the need to rely on primary sources in our research. In Spring, 2009, Tufts University recognized Ana’s many contributions through two awards: the Seymour O. Simches Award for Distinguished Teaching and Advising Award, as well as the Outstanding Contribution to Graduate Studies Award.

Ana has been joined in most of these endeavors by her friend, then companion, eventually partner, and now husband and constant colleague, David Carraher. Ana and David share a passion not only for research, but also for good food, wonderful conversation, France, and their grand-niece Débora. This retirement will be well enjoyed with never a dull moment, between Foster’s Pond in Andover and Ste. Suzanne in France, with regular visits to Recife to marvel and delight in their family’s growth. However, we do not doubt that Ana will have a hard time closing a permanent door on research and scholarship, for which she is deeply passionate.

Ana will most certainly be remembered not only for her intellectual and scholarly projects, but also for her always positive and joyful outlook on life, as well as for constant willingness to share her time, her ideas, and herself with her students and colleagues. For her many contributions to the study of learning and development and for her many contributions to

teaching and to Tufts University, we are all extremely grateful. On behalf of her colleagues and students, we move that this resolution on the retirement of Professor Analúcia Dias Schliemann be included in the minutes of the faculty and that a copy of the resolution be sent to her.

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