### The Importance of Being Ernesto: What Quantitative Onomastics Reveals about Multiculturalism in America.

Aleksander Dietrichson, Columbia University

This paper takes a big-data approach to the exploration of onomastics. Based on publicly available data, we find that patterns in the distribution of proper nouns, specifically first names, middle initials and surnames, reflect known social patterns in the United States, and provide some evidence of social change. We discover that onomastics goes beyond first-name fashions and indeed tell stories about our society. Using big-data technologies we further attempt to test some of the hypotheses put forth in the realm of *psychonomics* and *onomastic determinism*, such as *Halls Law of Social Standing (1964)* and the *Weston Alphabetic Neurosis Theory (1967),* both of which were refuted, but produced curious and interesting results in the process. Several visualization techniques are proposed that make for intuitive and accesible understanding of the structures in question. A model for projecting historic patterns and tendencies to a synchronous context is developed and a methodology for testing the models appropriateness is proposed. It is shown that knowledge of a person’s first and last names can be used as predictors in social and educational research, and it is demonstrated that big-data technologies are both appropriate and helpful in linguistic research. Practical applications in the field of learning analytics are discussed.

**Keywords:** Onomastics, Big-data Technologies, Pattern Detection, Learning Analytics