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Dear Editors Thorp, Shilatifard, and Remis:

PhD student Olivier Binette and myself both of Duke University submit a **solicited review article** “(Almost) All of Entity Resolution” to *Science Advances*.

Very often information about social entities is scattered across multiple databases. Combining that information into one database can result in enormous benefits for analysis, resulting in richer and more reliable conclusions. The application areas touched by entity resolution include voter registration, official statistics, human rights violations, patent inventions, health applications, among many others. Disciplines that utilize both applications and methods include statistics, biostatistics, computer science, machine learning, political science, and others. The goal of our review article is to review nearly almost all of entity resolution in such a way that it can be read and understood by as many communities as possible given that the current state of the literature is mathematical and overly technical, making the entry point difficult for those in the computational social sciences.

More specifically, we review motivational applications and seminal papers that have led to the growth of this area. Specifically, we review the foundational work that began in the 1940’s and 50’s that have led to modern probabilistic record linkage. We review clustering approaches to entity resolution, and semi- and fully supervised methods, which are being used throughout industry and academia in applications such as human rights, official statistics, medicine, citation networks, among others. Finally, we discuss current research topics of practical importance.

We would like to request Aaron Clauset as Deputy Editor. In terms of reviewers, we would like to request the following as reviewers for our paper:

Mauricio Sadinle, msadinle@uw.edu, University of Washington; Serge Aleshin-Guendel, aleshing@uw.edu, University of Washington; Yves Thibaudeau, Yves.Thibaudeau@census.gov, United States Census Bureau; Megan Price, meganp@hrdag.org, Human Rights Data Analysis Group; Ted Enamorado, ted@wustl.edu, University of Washington St. Louis; Nick Monath, nmonath@cs.umass.edu; Dinusha Vatsalan, Dinusha.Vatsalan@data61.csiro.au, Ben Rubinstein; benjamin.rubinstein@unimelb.edu.au; Neil Marchant; nmarchant@unimelb.edu.au; Andy Toole; Andrew.Toole@uspto.gov; Jody Heck Wortman, jph34@stat.duke.edu; Giacomo Zanella, zanella.gcm@gmail.com, Brunero Liseo, brunero.liseo@uniroma1.it; Andrea Tancredi, andrea.tancredi@uniroma1.it; Peter Christen, peter.christen@anu.edu.au, Partha Lahiri, plahiri@umd.edu, Rebecca Nugent, rnugent@stat.cmu.edu, Kayla Frisoli, kaylafrisoli@gmail.com.

We appreciate consideration of our paper, and please do not hesitate to reach out if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'RCS', with a stylized flourish at the end.

Rebecca C. Steorts