Text-mining Social Media to Study Mental and Physical Well-being

Lyle Ungar
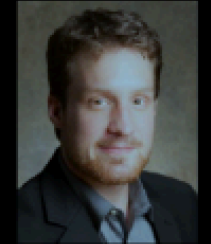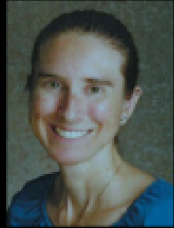
University of Pennsylvania

What psychological factors drive well-being?
And how can social media measure them?
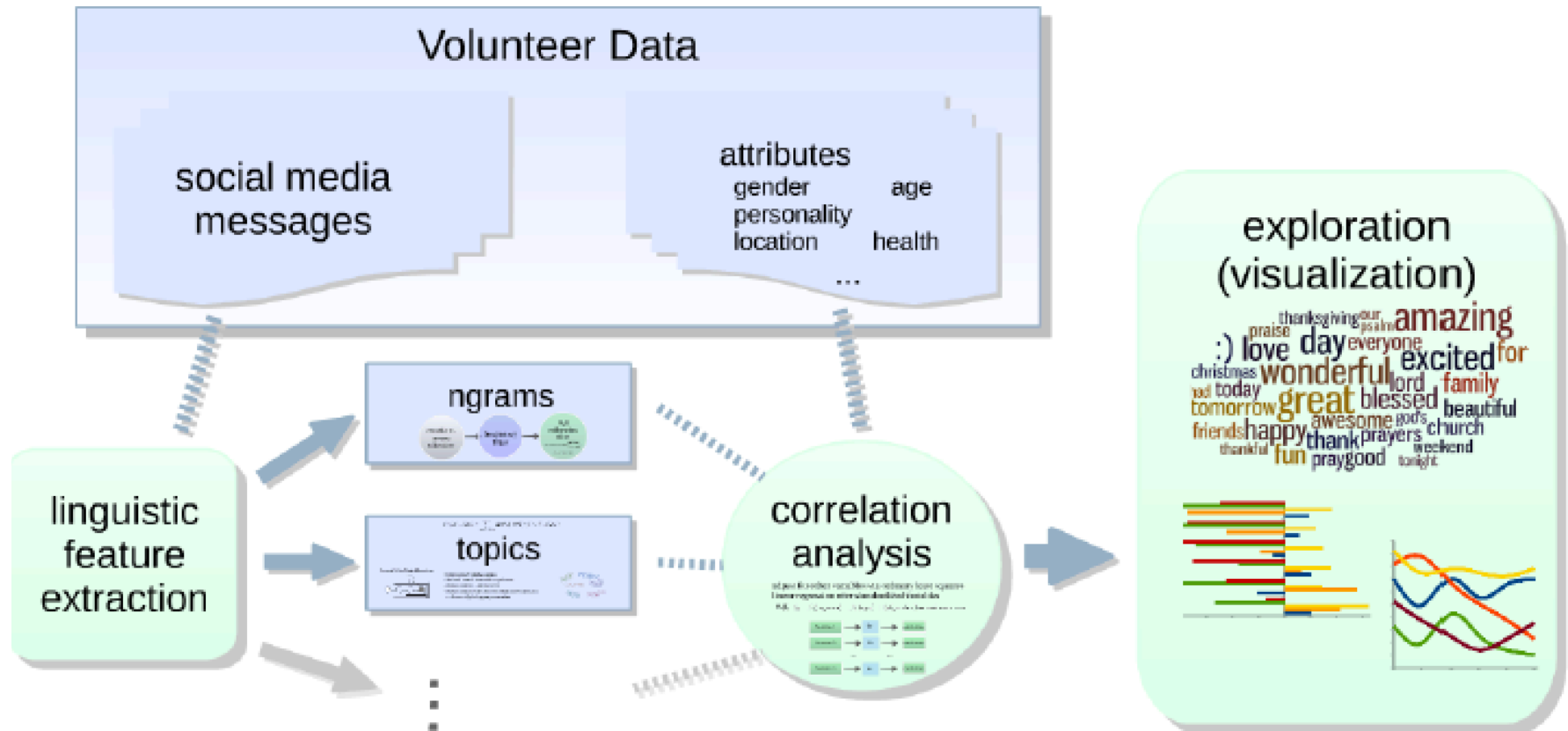
wwbp.org

Collaborators

Andy Schwartz

Rosie Hancock   Darwin Labarthe
Richard Lucas   Luke Dziurzynski   Michal Kosi
Yiyi Guo   Sneha Jha   Gregory Park   Shawno
Tadas Antanavicius
Chris Weeg   Lyle H. Ungar   Robert Backer
Jeanette Elstein   Margaret Kern   Rigel Swavely
Liwei Xu   Stephanie Ramones   George Wan   Megha Agrawal
Dolores Albaraccin   Maarten Sap   Johannes Eichstaedt
Achal Shah   Emily Larson   Martin E. P. Seligman
Brian Galla   Libby Benson   Eduardo Blanco   Marie Foregeard
Annie Roepke   Yoon Hwang
Arsenij Kouriatov   Raina Merchant   Saif Mohammad
Bob Stine   Winnie Cheng   David Stillwell   Molly Ireland
Evan Weingarten   Jonah Berger
Dean Foster

UNIVERSITY OF CAMBRIDGE

NORTHWESTERN UNIVERSITY
FEINBERG SCHOOL OF MEDICINE

MICHIGAN STATE UNIVERSITY

HARVARD UNIVERSITY

LYMBA the power to answer

Wharton UNIVERSITY of PENNSYLVANIA

Perelman School of Medicine UNIVERSITY of PENNSYLVANIA

PENN SOCIAL MEDIA AND HEALTH INNOVATION LAB

Method

Lyle H Ungar, University of Pennsylvania

Predict and understand well-being

◆ **Individual personality and well-being**

- 70,000 Facebook users posts

- age, sex, personality questionnaire results

◆ **Community well-being**

- Billions of tweets, mapped to county

- County-level happiness and disease rates

Males

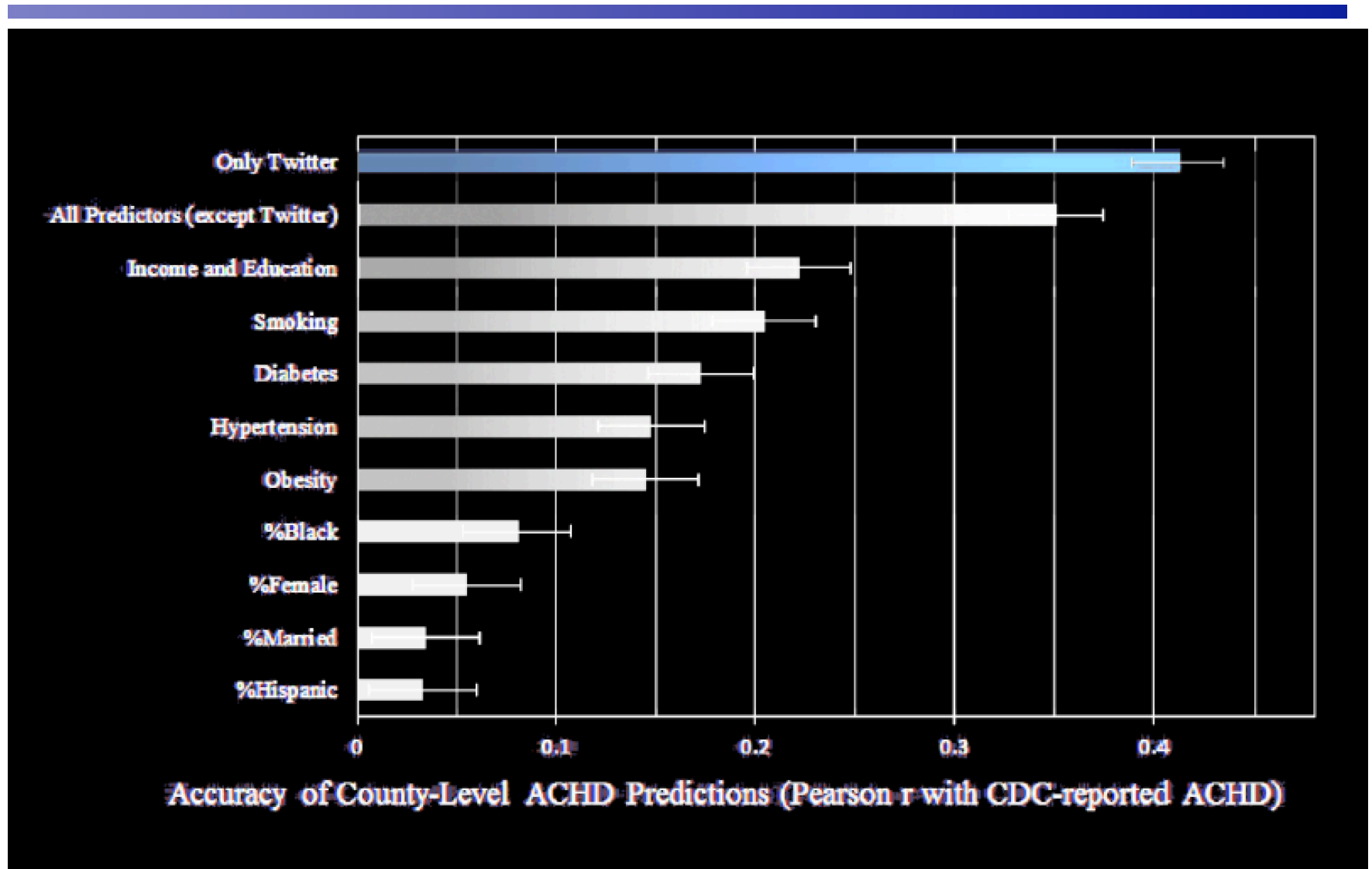Lyle H Ungar, University of Pennsylvania

Females

Twitter predicts SWL

z, H. A., Eichstaedt, J. C., Kern, M. L., Dziurzynski, L., Lucas, R. E., Agrawal, M., Park, G. J., Lakshmikanth, S. K., Jha, S., Seligman, M. E. gar, L. H. (2013). Characterizing Geographic Variation in Well-Being using Tweets. In *Proceedings of the Seventh International AAAI nce on Weblogs and Social Media (ICWSM)*. Boston, MA.
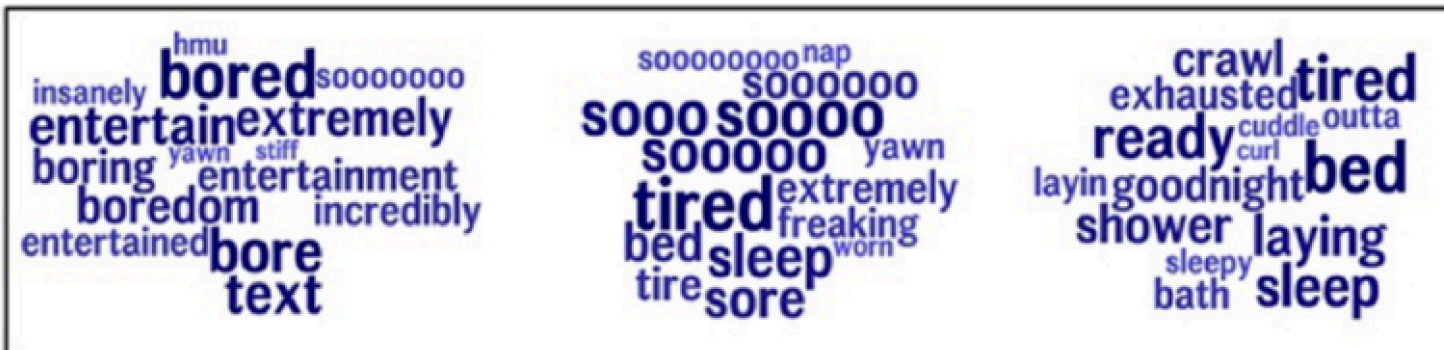
Twitter Predicts CVD

Lyle H Ungar, University of Pennsylvania

Predictors of CVD

Higher Status Occupations

Negative Relationships

Disengagement

Lyle H Ungar, University of Pennsylvania

Twitter predicts CVD

I25.1$0910
CDC/UCD

I25.1$0
predict

Lyle H Ungar, University of Pennsylvania
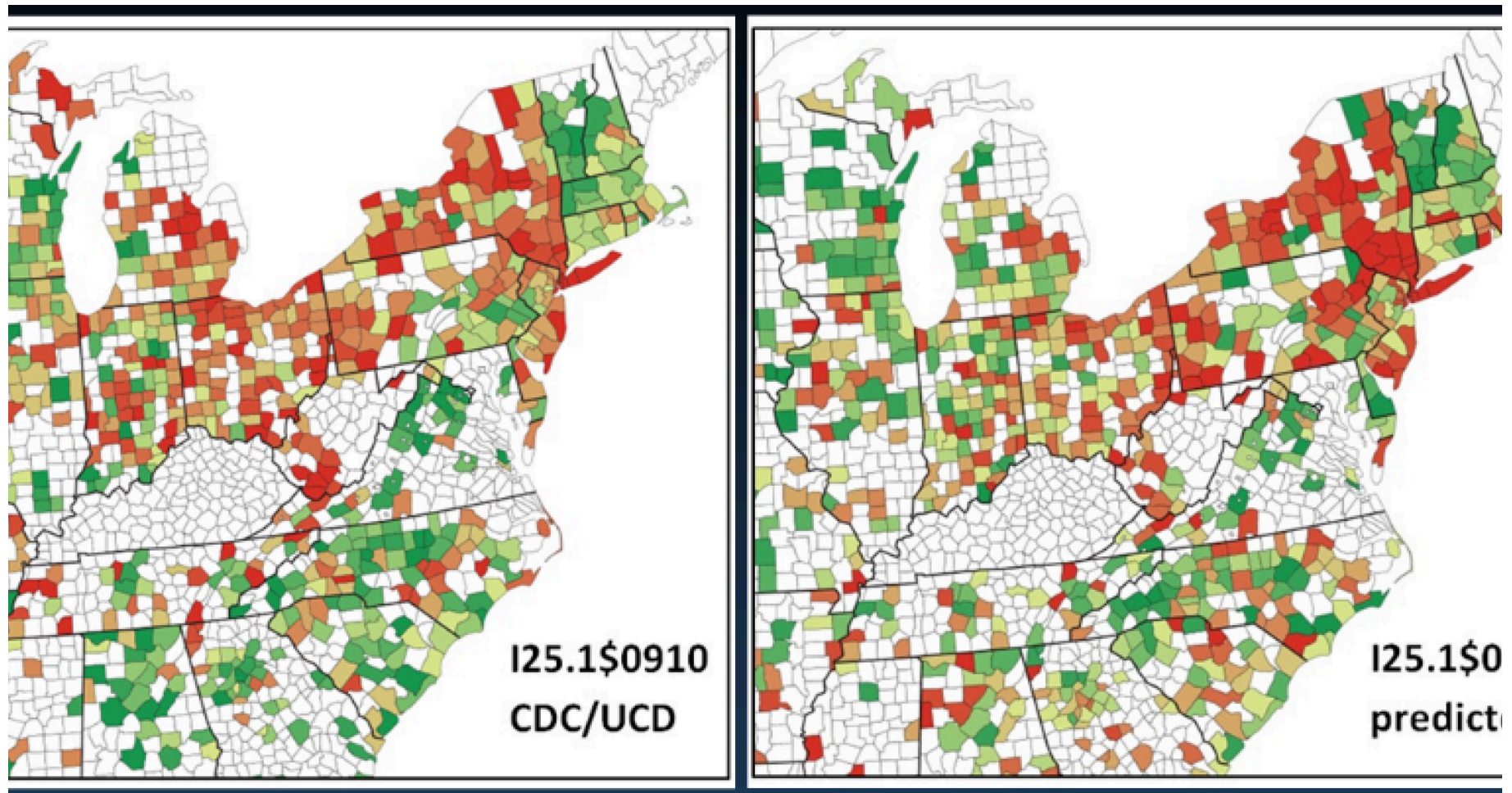
Thank you!!!   Questions?

extraversion

neuroticism

⚠ explicit language warning

More at wwbp.org