

References

Aktuell

DEVILLE 2016

Pierre Deville, Chaoming Song, Nathan Eagle, Vincent D. Blondel, Albert-László Barabási & Dashun Wang, *Scaling identity connects human mobility and social interactions*. [PNAS 113 \(2016\), 7047–7052](#).

Massive datasets that capture human movements and social interactions have catalyzed rapid advances in our quantitative understanding of human behavior during the past years. One important aspect affecting both areas is the critical role space plays. Indeed, growing evidence suggests both our movements and communication patterns are associated with spatial costs that follow reproducible scaling laws, each characterized by its specific critical exponents. Although human mobility and social networks develop concomitantly as two prolific yet largely separated fields, we lack any known relationships between the critical exponents explored by them, despite the fact that they often study the same datasets. Here, by exploiting three different mobile phone datasets that capture simultaneously these two aspects, we discovered a new scaling relationship, mediated by a universal flux distribution, which links the critical exponents characterizing the spatial dependencies in human mobility and social networks. Therefore, the widely studied scaling laws uncovered in these two areas are not independent but connected through a deeper underlying reality.

Keywords: human mobility | social interactions | mobile phone data | social networks | spatial networks

Significance: Both our mobility and communication patterns obey spatial constraints: Most of the time, our trips or communications occur over a short distance, and occasionally, we take longer trips or call a friend who lives far away. These spatial dependencies, best described as power laws, play a consequential role in broad areas ranging from how an epidemic spreads to diffusion of ideas and information. Here we established the first formal link, to our knowledge, between mobility and communication patterns by deriving a scaling relationship connecting them. The uncovered scaling theory not only allows us to derive human movements from communication volumes, or vice versa, but it also documents a new degree of regularity that helps deepen our quantitative understanding of human behavior.

GERBER 2016

Alan S. Gerber, Gregory A. Huber, Daniel R. Biggers & David J. Hendry, *A field experiment shows that subtle linguistic cues might not affect voter behavior*. [PNAS 113 \(2016\), 7112–7117](#).

One of the most important recent developments in social psychology is the discovery of minor interventions that have large and enduring effects on behavior. A leading example of this class of results is in the work by Bryan et al. [Bryan CJ, Walton GM, Rogers T, Dweck CS (2011) *Proc Natl Acad Sci USA* 108(31):12653–12656], which shows that administering a set of survey items worded so that subjects think of themselves as voters (noun treatment) rather than as voting (verb treatment) substantially increases political participation (voter turnout) among subjects. We revisit these experiments by replicating and extending their research

design in a large-scale field experiment. In contrast to the 11 to 14% point greater turnout among those exposed to the noun rather than the verb treatment reported in the work by Bryan et al., we find no statistically significant difference in turnout between the noun and verb treatments (the point estimate of the difference is approximately zero). Furthermore, when we benchmark these treatments against a standard get out the vote message, we estimate that both are less effective at increasing turnout than a much shorter basic mobilization message. In our conclusion, we detail how our study differs from the work by Bryan et al. and discuss how our results might be interpreted.

Keywords: psychology | political science | intervention | field experiment | voter turnout

Significance: An important development in social psychology is the discovery of minor interventions that have large behavioral effects. A leading example is a recent PNAS paper showing that a modest intervention inspired by psychological theory—wording survey items to encourage subjects to think of themselves as voters (noun treatment) rather than as voting (verb treatment)—has a large positive effect on political participation (voter turnout). We replicate and extend these experiments. In a large-scale field experiment, we find that encouraging subjects to think of themselves as voters rather than as voting has no effect on turnout and we estimate that both are less effective than a standard get out the vote mobilization message.

KHANOLKAR 2016

Amal R. Khanolkar, Rickard Ljung, Mats Talbäck, Hannah L. Brooke, So. a. Carlsson, Tiit Mathiesen & Maria Feychting, *Socioeconomic position and the risk of brain tumour, A Swedish national population-based cohort study*. [Journal of Epidemiology and Community Health \(2016\), preprint, 1–7. DOI:10.1136/jech-2015-207002.](#)

Background The aim was to investigate associations between different measures of socioeconomic position (SEP) and incidence of brain tumours (glioma, meningioma and acoustic neuroma) in a nationwide population-based cohort.

Methods We included 4 305 265 individuals born in Sweden during 1911–1961, and residing in Sweden in 1991. Cohort members were followed from 1993 to 2010 for a first primary diagnosis of brain tumour identified from the National Cancer Register. Poisson regression was used to compute incidence rate ratios (IRR) by highest education achieved, family income, occupational group and marital status, with adjustment for age, healthcare region of residence, and time period.

Results We identified 5735 brain tumours among men and 7101 among women during the study period. Highly educated men (=3 years university education) had increased risk of glioma (IRR 1.22, 95% CI 1.08 to 1.37) compared to men with primary education. High income was associated with higher incidence of glioma in men (1.14, 1.01 to 1.27). Women with =3 years university education had increased risk of glioma (1.23, 1.08 to 1.40) and meningioma (1.16, 1.04 to 1.29) compared to those with primary education. Men and women in intermediate and higher non-manual occupations had increased risk of glioma compared to low manual groups. Compared to those married/ cohabiting, being single or previously married/cohabiting was associated with decreased risk of glioma in men. Men in non-manual occupations had ≈50% increased risk of acoustic neuroma compared to men in low manual occupations.

Conclusions We observed consistent associations between higher SEP and higher risk of glioma. Completeness of cancer registration and detection bias are potential explanations for the findings.

What is already known on this subject?

Indicators of socioeconomic position like higher education, income and occupational group are associated with increased risk of brain tumour (low-grade glioma, meningioma and acoustic neuroma). Results from previous studies are conflicting and might be biased due to study design.

What this study adds

Using a large population-based cohort, this study found consistent associations between indicators of higher socioeconomic position and increased risk of glioma in both sexes, and to a much lesser extent in meningioma and acoustic neuroma. Completeness of cancer registration and detection bias are potential explanations for the observed differences by socioeconomic position.

MITTEROECKER 2016

Philipp Mitteroecker & Barbara Fischer, *Adult pelvic shape change is an evolutionary side effect*. [PNAS 113 \(2016\), E3596](#).

PONCE DE LEON 2016

Marcia S. Ponce de León, Alik Huseynov & Christoph P. E. Zollikofer, *Developmental solutions to the obstetrical dilemma are not Gouldian spandrels, Reply to Mitteroecker and Fischer*. [PNAS 113 \(2016\), E3597–E3598](#).

Archäologie

BEN-TOR 1990

AMNON BEN-TOR (Hrsg.), *The archaeology of ancient Israel*. (New Haven 1992). **מבוא לארכאולוגיה של ארץ-ישראל בתקופת המקרא** 1990.

In this illustrated book, some of Israel's foremost archaeologists present a survey of early life in the land of the Bible, from the Neolithic era (eighth millennium BC) to the fall of Jerusalem and the destruction of the First Temple in 586 BC. Each chapter covers a particular era and includes a bibliography. The illustrations include photographs of artifacts; line drawings of sites and reconstructed buildings, ceramics and other objects; and maps. Together with the text they demonstrate developments in religious practices, architecture, technology, customs and art, depicting the earliest ceramic pots and idols, the layouts of villages and cemeteries and figurines and jewellery. This is a resource for anyone who wants to know more about the religious, scientific or historical background of the region.

For over one hundred years archaeologists have explored the land of Israel, investigating such fascinating topics as the migrations of the patriarchs, the Israelites' conquest of Canaan, and the establishment of the monarchy by David and Solomon. In this book some of Israel's foremost archaeologists present a thorough and up-to-date survey of this research, providing an accessible introduction to early life in the land of the Bible. The authors discuss the history of ancient Israel from the Neolithic era (eighth millennium B.C.E.) to the fall of Jerusalem and the destruction of the First Temple in 586 B.C.E. Each chapter describes a different era as seen through relevant archaeological discoveries. The reader is introduced to the first permanent settlements in the land of Israel, the crystallization of the political system of city-states, the nature of Canaanite culture, the Israelite patterns of settlement, and the division of the country into the kingdoms of Judah and Israel. The lavishly illustrated text explores and demonstrates developments in religious practices, architecture, technology, customs, arts and crafts, warfare, writing, cult practices, and trade. The book will be a delightful and informative resource for

anyone who has ever wanted to know more about the religious, scientific, or historical background to the events described in the Bible, or to current developments in the Middle East.

Bibel

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ZEUGEN 1990

Zeugen Jehovas, *Einsichten über die Heilige Schrift*. (Selters 1990). Lexikon in zwei Bänden.

Biologie

GASSER 2016

Constantine E. Gasser, Fiona K. Mensah, Melissa Russell, Sophie E. Dunn & Melissa Wake, *Confectionery consumption and overweight, obesity, and related outcomes in children and adolescents, A systematic review and meta-analysis*. [American Journal of Clinical Nutrition](#) **103** (2016), 1344–1356.

AmJClinNutr103-1344-Supplement.docx

Background: Many calorie-rich dietary components contribute to obesity. However, the contribution of confectionery to obesity in children and adolescents has not been well established.

Objective: In this systematic review and meta-analysis, we hypothesized that higher total, chocolate, and nonchocolate confectionery consumption would be associated with higher odds of overweight, obesity, and other obesity-related outcomes [body mass index (BMI), BMI z score, body composition, waist circumference, and percentage body fat] in children and adolescents.

Design: We searched Scopus, PubMed, and reference lists of pertinent reviews, supplemented by expert contact, for randomized controlled trials (RCTs) and observational studies published between 1990 and 31 March 2015, and we conducted separate meta-analyses for categorical and continuous ORs and for total, chocolate, and nonchocolate confectioneries with the use of a random-effects model.

Results: A total of 19 studies were included in the systematic review, and the cross-sectional results of 11 studies ($\approx 177,260$ participants) were included in the meta-analysis. In the meta-analysis, which examined the combined outcome of overweight and obesity, the odds of overweight or obesity were 18% lower (OR: 0.82; 95% CI: 0.69, 0.97) for subjects in the highest category of consumption than for a reference category of consumption. Thus, a 1-time/wk or a 1-U increase in consumption was associated with a 13% (OR: 0.87; 95% CI: 0.85, 0.88) decrease in the odds of overweight or obesity. Associations were similarly inverse for chocolate and nonchocolate confectioneries. In the longitudinal studies and the RCT included in the review, no associations were observed between confectionery consumption and overweight, obesity, or obesity-related outcomes.

Conclusions: Instead of overweight and obese children and adolescents having higher confectionery intakes, this review shows the reverse effect. This result might

reflect a true inverse association, reverse causality, or differential underreporting in heavier individuals. Interventions may need to focus on dietary elements other than confectionery to tackle obesity.

Keywords: adolescent | candy | child | obesity | overweight

Judentum

URBACH 1975

Efraim E. Urbach, *The sages, their concepts and beliefs*. (Cambridge 1987).

Klima

CHENG 2016

Hai Cheng et al., *The Asian monsoon over the past 640,000 years and ice age terminations*. [nature 534](#) (2016), 640–646.

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Hai Cheng, R. Lawrence Edwards, Ashish Sinha, christoph Spötl, Liang Yi, Shitao chen, Megan Kelly, Gayatri Kathayat, Xianfeng Wang, Xianglei Li, Xing-gong Kong, Yongjin Wang, Youfeng Ning & Haiwei Zhang

Oxygen isotope records from Chinese caves characterize changes in both the Asian monsoon and global climate. Here, using our new speleothem data, we extend the Chinese record to cover the full uranium/thorium dating range, that is, the past 640,000 years. The record’s length and temporal precision allow us to test the idea that insolation changes caused by the Earth’s precession drove the terminations of each of the last seven ice ages as well as the millennia-long intervals of reduced monsoon rainfall associated with each of the terminations. On the basis of our record’s timing, the terminations are separated by four or five precession cycles, supporting the idea that the ‘100,000-year’ ice age cycle is an average of discrete numbers of precession cycles. Furthermore, the suborbital component of monsoon rainfall variability exhibits power in both the precession and obliquity bands, and is nearly in anti-phase with summer boreal insolation. These observations indicate that insolation, in part, sets the pace of the occurrence of millennial-scale events, including those associated with terminations and ‘unfinished terminations’.

Story or Book

KAYE 2016

Blaize M. Kaye, *Revision Theory, Time to take stock*. [nature 534](#) (2016), 732.

The letter in the drawer had always read: “I don’t know anything about ‘counterfactual dampening’ but, yes, your machine works.”

SANDOVAL 2016

Kelly Sandoval, *Watering Silk Flowers, Left behind*. [nature 534](#) (2016), 584.

Susan doesn’t feel sad. Emotions are all chemicals and physical feedback. She doesn’t experience the world that way.