Crowdsourcing Research: Mendeley's Role in the Open Science Infrastructure

Dr. Victor Henning
Co-Founder & CEO
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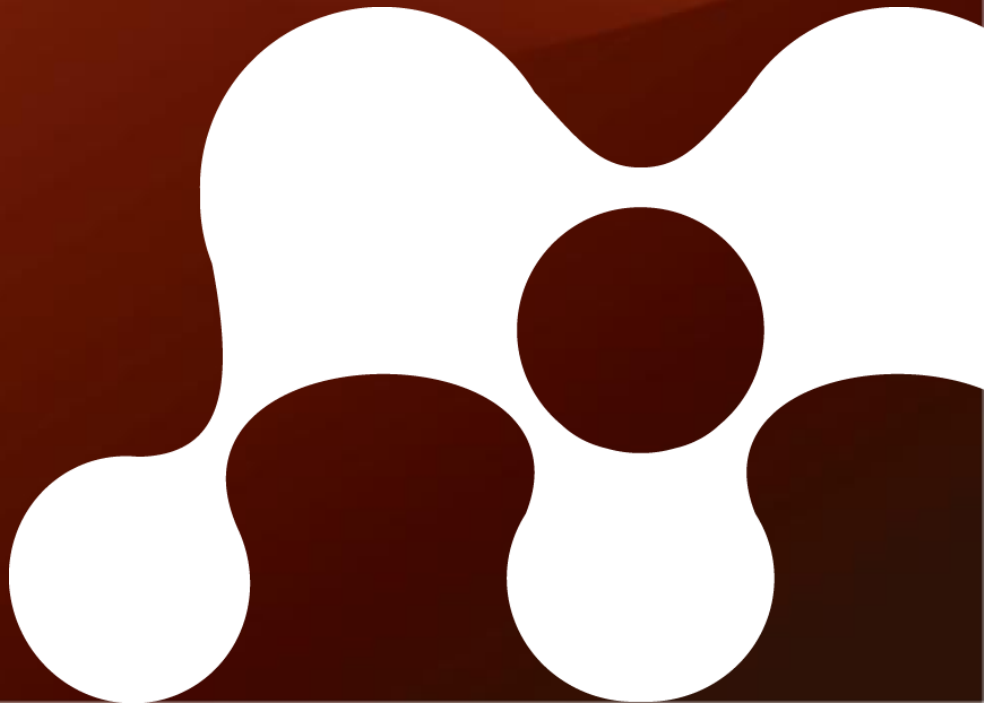

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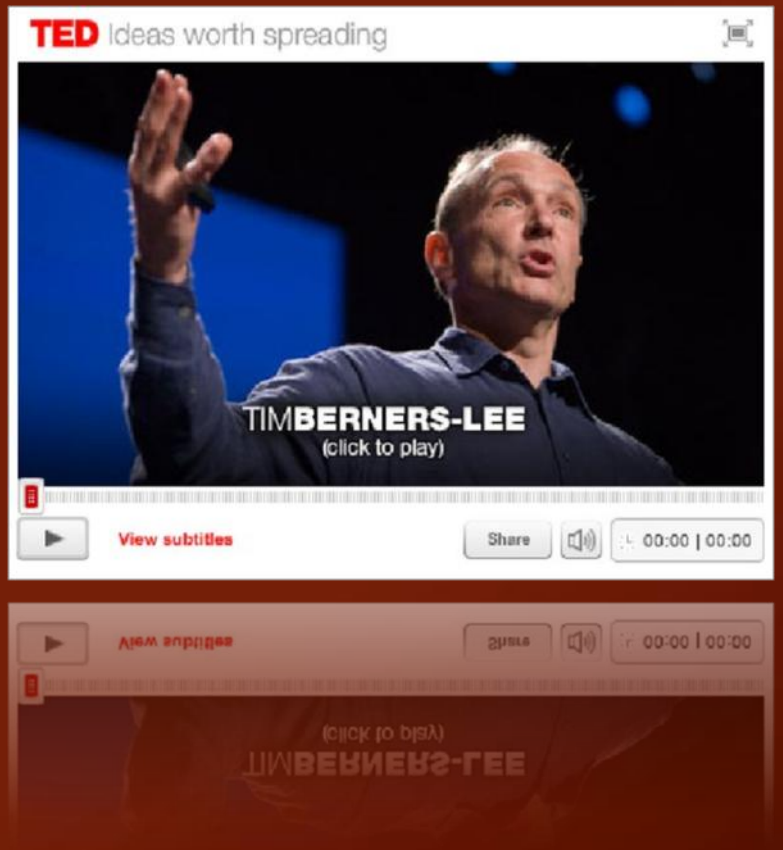
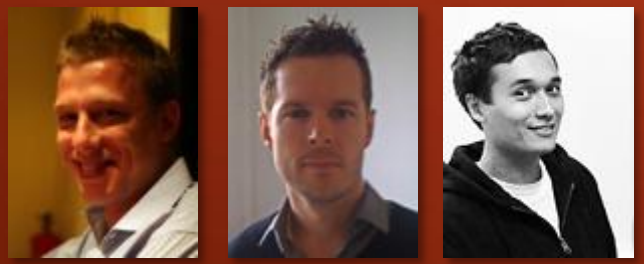


"All the time we are very conscious of the huge challenges that human society has now – curing cancer, understanding the brain for Alzheimer's.

But a lot of the state of knowledge of the human race is sitting in the scientists' computers, and is currently not shared We need to get it unlocked so we can tackle those huge problems."

Back in 2008:

Jan *Paul* *Victor*



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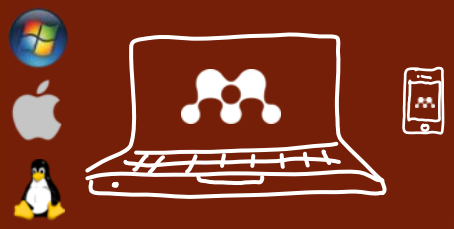

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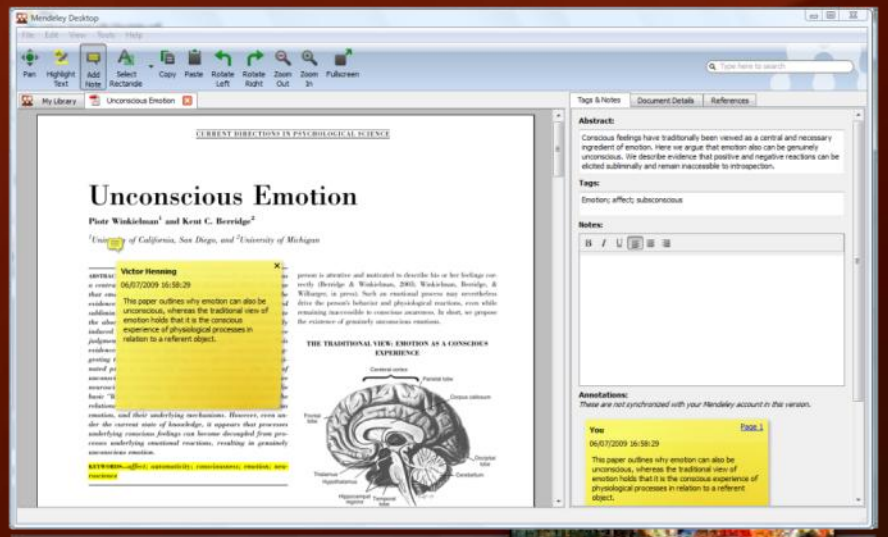
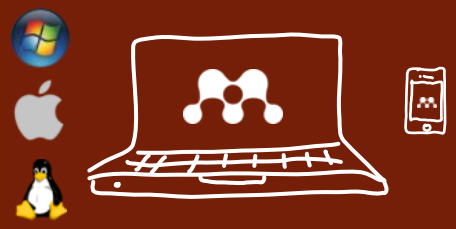


..and aggregates research data in the cloud



Mendeley extracts research data..

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Latest: Video interview with The Guardian - I'll be speaking at the Activate Summit in New York in April!... 18th March Share

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Overlapping Experiment Infrastructure : Why run experiments ?

Overlapping Experiment Infrastructure : More , Better , Faster Experimentation Categories and Subject Descriptors

5th April - comment - like

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Kris Jack added documents to this group

Bayesian Online Learning for Multi-label and Multi-variate Performance Measures

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TrueSkillTM: A Bayesian skill rating system

28th March - comment - like

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24th March - comment - like

Robert Knight added a document to this group

Bed -Tree : An All-Purpose Index Structure for String Similarity Search Based on Edit Distance Categories and Subject Descriptors

13th February - like

Robert Knight This is the paper that the previously added paper by Behm et. al. spends some time bashing.

13th February

Comment

Robert Knight added a document to this group

Answering Approximate String Queries on Large Data Sets Using External Memory

13th February - like

Robert Knight This paper uses q-gram inverted indexes for approximate searches in the 10M-entry database of MedLine titles - possibly of interest in relation to https://office.mendeley.internal/trac/wiki/DataminingSearchBasedTitleLookup.

13th February

Robert Knight There is a related web-page with Academic-BSD licensed code at http://flamingo.ics.uci.edu/

13th February

James Hammerton Thanks for this, I'll have a look at it in due

66 new messages

Recommended articles

Based on the contents of your Library, Mendeley recommends:

Neural correlates of behavioral preference for culturally familiar drinks.

Samuel M McClure, Jian Li, Damon Tomlin, Kim S Cypert, Latané M Montague, P Read Montague in *Neuron (2004)*

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Incorporating contextual information in recommender systems using a multidimensional approach

Gediminas Adomavicius, Ramesh Sankaranarayanan, Shahana Sen, Alexander Tuzhilin in *ACM Transactions on Information Systems (2005)*

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Constructive Consumer Choice Processes

James R Bettman, Mary Frances Luce, John W Payne in *Journal of Consumer Research (1998)*

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More Recommended Articles

Neural correlates of behavioral preference for culturally familiar drinks.

by Samuel M McClure, Jian Li, Damon Tomlin, Kim S Cypert, Latané M Montague, P Read Montague

Neuron (2004)
Volume: 44, Issue: 2, Publisher: Elsevier, Pages: 379-387

PubMed ID: 15473974

Abstract

Coca-Cola (Coke) and Pepsi are nearly identical in chemical composition, yet humans routinely display strong subjective preferences for one or the other. This simple observation raises the important question of how cultural messages combine with content to shape our perceptions; even to the point of modifying behavioral preferences for a primary reward like a sugared drink. We delivered Coke and Pepsi to human subjects in behavioral taste tests and also in passive experiments carried out during functional magnetic resonance imaging (fMRI). Two conditions were examined: (1) anonymous delivery of Coke and Pepsi and (2) brand-cued delivery of Coke and Pepsi. For the anonymous task, we report a consistent neural response in the ventromedial prefrontal cortex that correlated with subjects' behavioral preferences for these beverages. In the brand-cued experiment, brand knowledge for one of the drinks had a dramatic influence on expressed behavioral preferences and on the measured brain responses.

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Neuron, Vol. 44, 379–387, October 14, 2004, Copyright ©2004 by Cell Press

Neural Correlates of Behavioral Preference for Culturally Familiar Drinks

Samuel M. McClure,[1,2] Jian Li,[1] Damon Tomlin, Kim S. Cypert, Latané M. Montague, and P. Read Montague*
Department of Neuroscience
Menninger Department of Psychiatry and Behavioral Sciences
Baylor College of Medicine
1 Baylor Plaza
Houston, Texas 77030

Summary

Coca-Cola® (Coke®) and Pepsi® are nearly identical in chemical composition, yet humans routinely display strong subjective preferences for one or the other. This simple observation raises the important question of how cultural messages combine with content to shape our perceptions; even to the point of modifying behavioral preferences for a primary reward like a sugared drink. We delivered Coke and Pepsi to human subjects in behavioral taste tests and also in passive experiments carried out during functional magnetic resonance imaging (fMRI). Two conditions were examined: (1) anonymous delivery of Coke and Pepsi and (2) brand-cued delivery of Coke and Pepsi. For the anonymous task, we report a consistent neural response in the ventromedial prefrontal cortex that correlated with subjects' behavioral preferences for these beverages. In the brand-cued experiment, brand knowledge for one of the drinks had a dramatic influence on expressed behavioral preferences and on the measured brain responses.

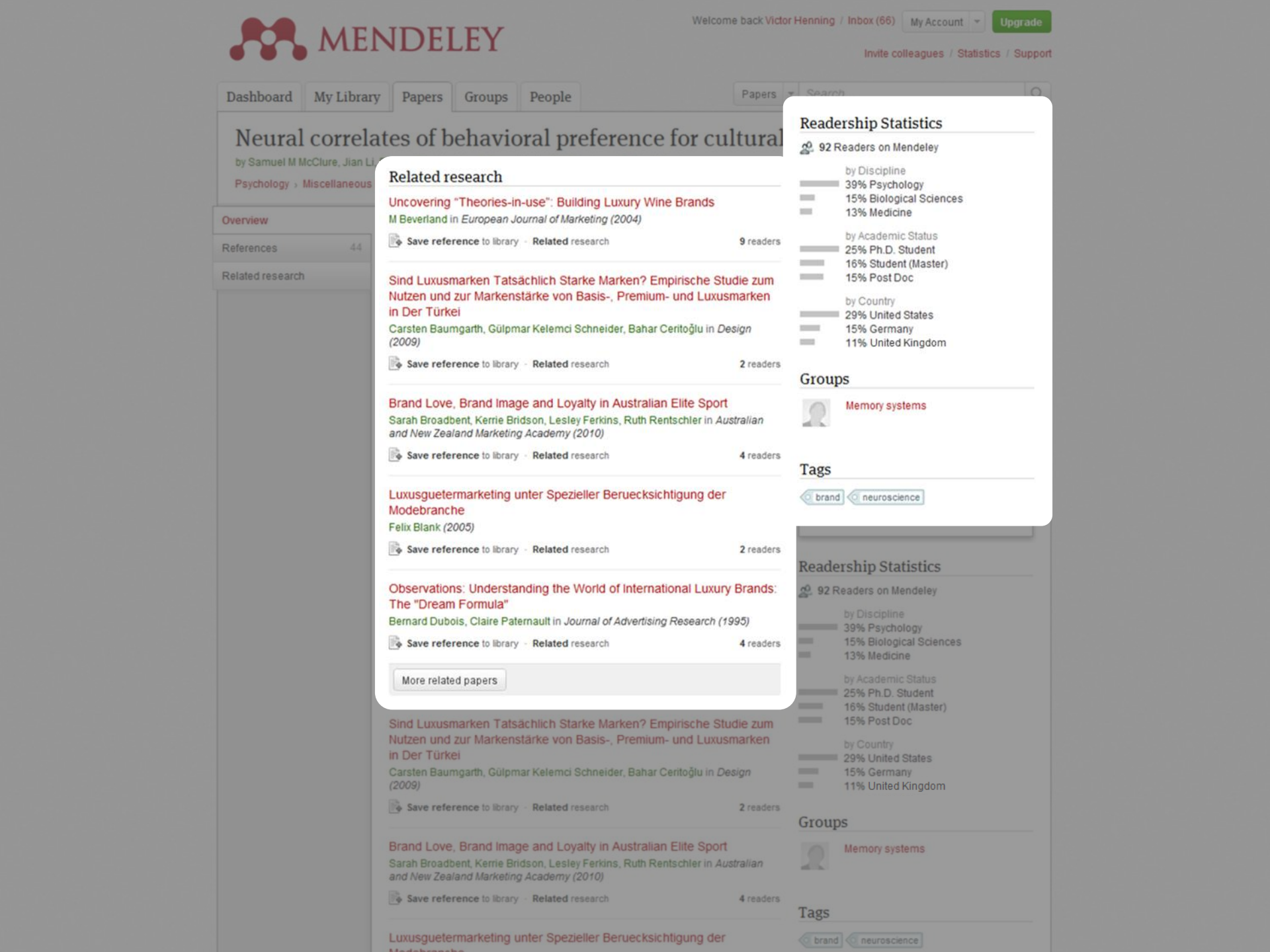
Introduction

Perceptual constructs are generally multidimensional, integrating multiple physical and cognitive dimensions to generate coherent behavioral preferences. In sensory processing, the idea of multidimensional integration has long been used to frame a range of questions about cross-modal interactions in physiological and behavioral responses (Stein et al., 1996; 1999; Wallace and Stein, 1997; Armony and Dolan, 2001; Dolan et al., 2001; Laurienti et al., 2002, 2003). This same multidimensional perspective has also been developed for olfactory and gustatory processing, where the detection, discrimination, and perceived intensity of stimuli are not only functions of the primary physical properties (odors, flavors) but are also modulated "cross-modally" by visual input (Gottfried and Dolan, 2003), auditory input, and current neural responses, and the modulation of both by nonodor or nonflavor stimuli—that is, the sensory problem. Ultimately, such sensory discriminations and the variables that influence them serve to influence expressed behavioral preferences. Hence, there is another large piece of the problem to understand. For modern humans, behavioral preferences for food and beverages are potentially modulated by an enormous number of sensory variables, hedonic states, expectations, semantic priming, and social context. This assertion can be illustrated with a quote from Anderson and Sobel (2003) profiling the work of Small et al. (2003) on taste intensity and pleasantness processing:

> "A salad of perfectly grilled woodsy-flavored calamari paired with subtly bitter pale green leaves of curly endive and succulent petals of tomato flesh in a deep, rich balsamic dressing. Delicate slices of pan-roasted duck breast saturated with an assertive, tart-sweet tamarind-infused marinade."

The text goes on further, but note that the sheer lushness of the description adds somehow to the appeal of the food described. Also notice one implicit point of the description: many levels of social, cognitive, and cultural influences combine to produce behavioral preferences for food and drink. The above description likely would not appeal to a strict vegan or an owner of a pet duck. Anderson and Sobel point out that the preferences indexed by their prose originated from the economic demands on our early forebears and were unlikely to have been strictly about aesthetic responses to food and drink.

However, the modern problem is different. Cultural influences on our behavioral preferences for food and drink are now intertwined with the biological expediency that shaped the early version of the underlying preference mechanisms. In many cases, cultural influences dominate what we eat and drink. Behavioral evidence suggests that cultural messages can insinuate themselves into the decision-making processes that yield preferences for one consumable or another. Consequently, the appeal or repulsion of culturally relevant sights, sounds, and their associated memories all contribute to the modern construction of food and drink preferences. The neural substrates underlying food and drink preferences and their influence by cultural images have not been explored. As alluded to above, the majority of work on olfaction and gustation has focused on sensory processing. In this paper, we combine simple taste tests and event-related functional magnetic resonance imaging (fMRI) to probe the neural responses that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Tag summary

Motivation is the driving force by which we achieve our goals, and is said to be intrinsic or extrinsic. The term is generally used to describe human behavior, but can refer to the causes of animal behavior as well. According to various theories, motivation may be rooted in a basic need to minimize physical pain and maximize pleasure, or it may include specific needs such as eating and resting, or a desired object, goal, state of being, ideal, or it may be attributed to less-apparent reasons such as altruism, selfishness, morality, or avoiding mortality. The most well-known theories of motivation include Maslow's hierarchy of needs, Herzberg's Motivation-Hygiene theory, Alderfer's ERG theory, Deci and Ryan's self-determination theory, and Vroom's expectancy theory.

Edit description

Related tags

achievement · motor skills · emotion · discrimination learning · group processes · thematic apperception test · hypnosis · reaction time · anxiety · problem solving

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behavior · behavioral science · captology · hci · motivation · persuasive technology

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Popular papers

How to build a motivated research group.

Uri Alon in *Molecular Cell (2010)*

> Motivated group members experience a full sense of choice: of doing what one wants. Such behavior shows high performance, is enjoyable, and enhances innovation. This essay describes principles of building a motivated research group.

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Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being.

R M Ryan, E L Deci in *American Psychologist (2000)*

> Human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of the social conditions in which they develop and function. Accordingly, research guided by self-determination theory has focused on the...

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A Theory of Human Motivation

A H Maslow in *Psychological Review (1943)*

> This paper develops a theory of social norms: what they are, how they form, and how they change. The theory also makes predictions about group formation, categorization, and discrimination, and it can be extended to model leadership and fairness....

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Persuasive Technology

Group newsfeed

kristina Curtis

is anyone familiar with the work of Jakob Nielsen? How does he compare to BJ Fogg? Apparently we should not be put off by the website..

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kristina Curtis has joined this group

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Frank Mathmann is now following this group

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Ray Sullivan is now following this group

1st April

Lisa Lahr is now following this group

12th March

Lennart Olsen

About this group

In this group we gather information about the field of persuasive technology (aka. captology), and discuss our findings. The term 'captology' was coined by BJ Fogg, and the field is well described in his article "Persuasive computers: perspectives and research directions," Proceedings of the SIGCHI conference on Human factors in computing systems - CHI '98, 1998, pp. 225-232. The majority of the articles should be from the HCI perspective.

Owned by **Lennart Olsen**
Computer and Information Science

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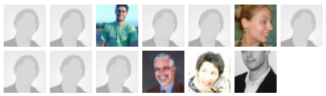

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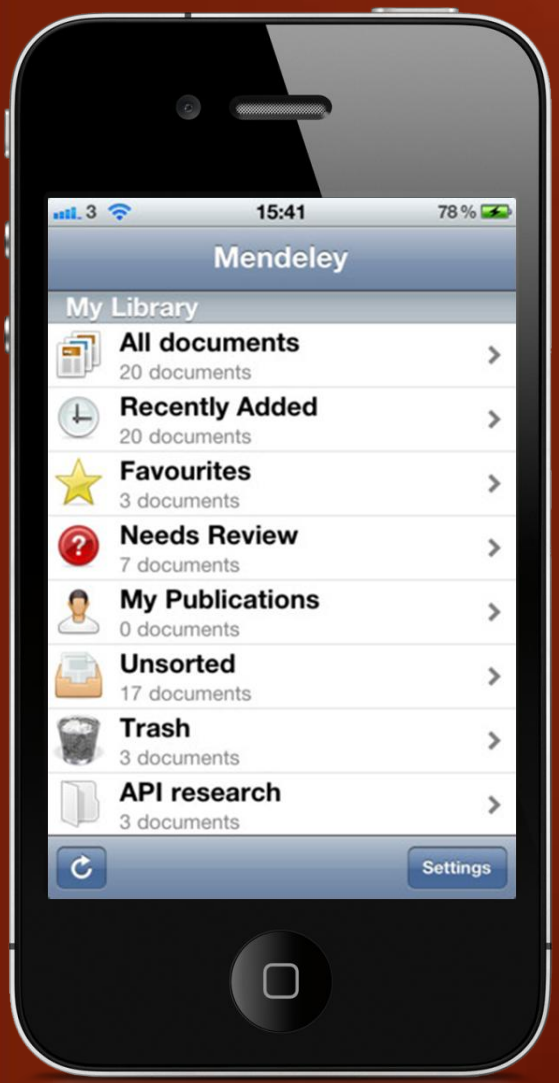
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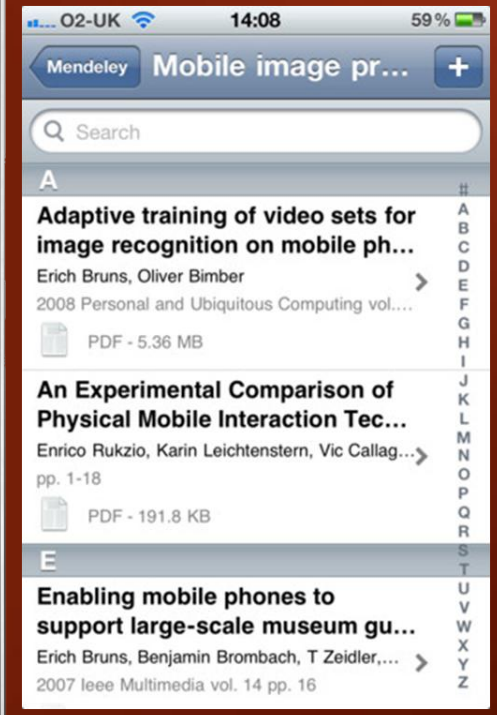
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Erich Bruns, Benjamin Brombach, T Zeidler,...
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Paul Foeckler, et al.
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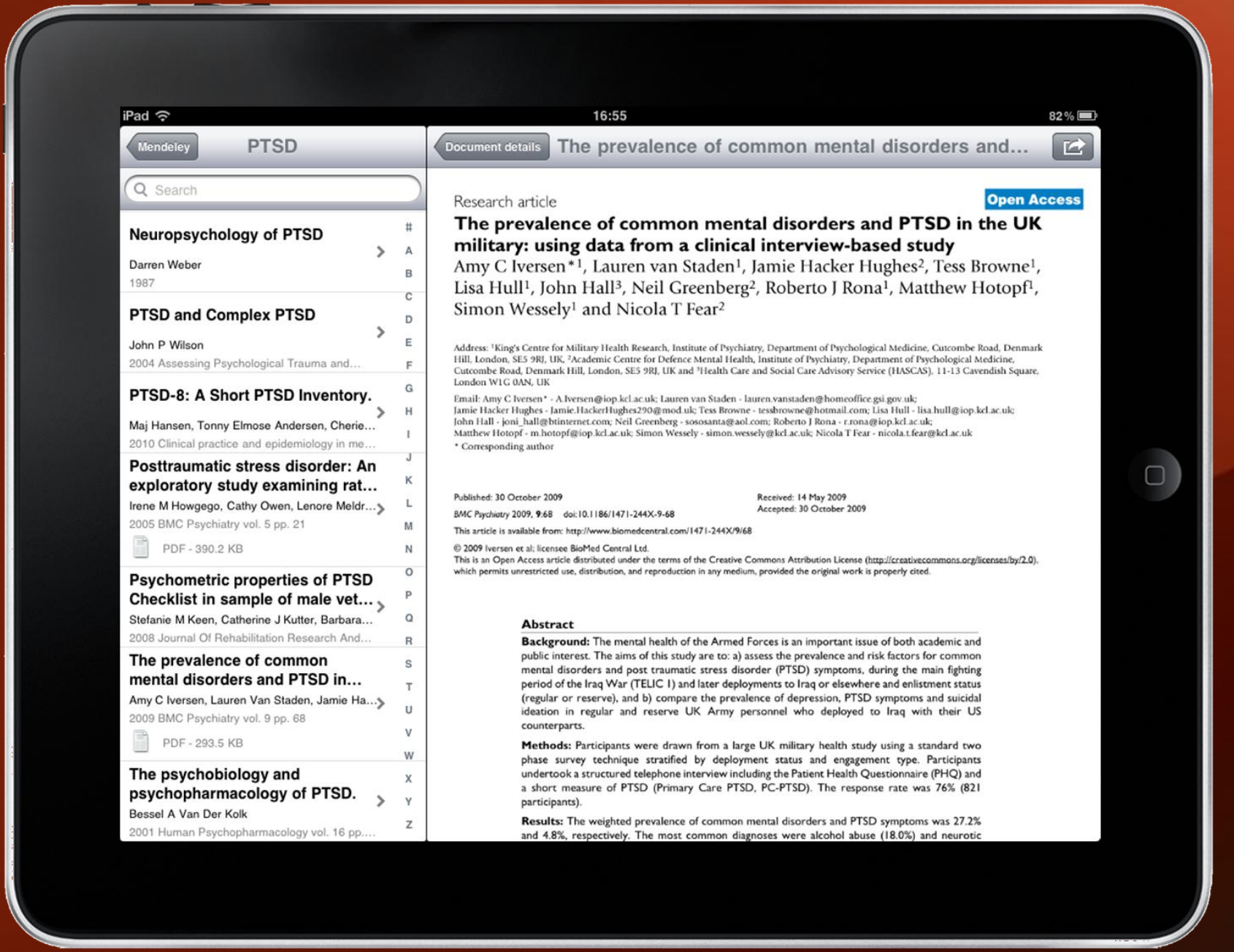
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2010 Clinical practice and epidemiology in me...
Posttraumatic stress disorder: An exploratory study examining rat...
Irene M Howgego, Cathy Owen, Lenore Meldr...
2005 BMC Psychiatry vol. 5 pp. 21
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Psychometric properties of PTSD Checklist in sample of male vet...
Stefanie M Keen, Catherine J Kutter, Barbara...
2008 Journal Of Rehabilitation Research And...
The prevalence of common mental disorders and PTSD in...
Amy C Iversen, Lauren Van Staden, Jamie Ha...
2009 BMC Psychiatry vol. 9 pp. 68
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The psychobiology and psychopharmacology of PTSD.
Bessel A Van Der Kolk
2001 Human Psychopharmacology vol. 16 pp....
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Document details
The prevalence of common mental disorders and...
Research article
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The prevalence of common mental disorders and PTSD in the UK military: using data from a clinical interview-based study
Amy C Iversen*[1], Lauren van Staden[1], Jamie Hacker Hughes[2], Tess Browne[1], Lisa Hull[1], John Hall[3], Neil Greenberg[2], Roberto J Rona[1], Matthew Hotopf[1], Simon Wessely[1] and Nicola T Fear[2]
Address: [1]King's Centre for Military Health Research, Institute of Psychiatry, Department of Psychological Medicine, Cutcombe Road, Denmark Hill, London, SE5 9RJ, UK, [2]Academic Centre for Defence Mental Health, Institute of Psychiatry, Department of Psychological Medicine, Cutcombe Road, Denmark Hill, London, SE5 9RJ, UK and [3]Health Care and Social Care Advisory Service (HASCAS), 11-13 Cavendish Square, London W1G 0AN, UK
Email: Amy C Iversen* - A.Iversen@iop.kcl.ac.uk; Lauren van Staden - lauren.vanstaden@homeoffice.gsi.gov.uk; Jamie Hacker Hughes - Jamie.HackerHughes290@mod.uk; Tess Browne - tessbrowne@hotmail.com; Lisa Hull - lisa.hull@iop.kcl.ac.uk; John Hall - joni_hall@btinternet.com; Neil Greenberg - sososanta@aol.com; Roberto J Rona - r.rona@iop.kcl.ac.uk; Matthew Hotopf - m.hotopf@iop.kcl.ac.uk; Simon Wessely - simon.wessely@kcl.ac.uk; Nicola T Fear - nicola.t.fear@kcl.ac.uk
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Received: 14 May 2009
Accepted: 30 October 2009
This article is available from: http://www.biomedcentral.com/1471-244X/9/68
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Abstract
Background: The mental health of the Armed Forces is an important issue of both academic and public interest. The aims of this study are to: a) assess the prevalence and risk factors for common mental disorders and post traumatic stress disorder (PTSD) symptoms, during the main fighting period of the Iraq War (TELIC 1) and later deployments to Iraq or elsewhere and enlistment status (regular or reserve), and b) compare the prevalence of depression, PTSD symptoms and suicidal ideation in regular and reserve UK Army personnel who deployed to Iraq with their US counterparts.
Methods: Participants were drawn from a large UK military health study using a standard two phase survey technique stratified by deployment status and engagement type. Participants undertook a structured telephone interview including the Patient Health Questionnaire (PHQ) and a short measure of PTSD (Primary Care PTSD, PC-PTSD). The response rate was 76% (821 participants).
Results: The weighted prevalence of common mental disorders and PTSD symptoms was 27.2% and 4.8%, respectively. The most common diagnoses were alcohol abuse (18.0%) and neurotic

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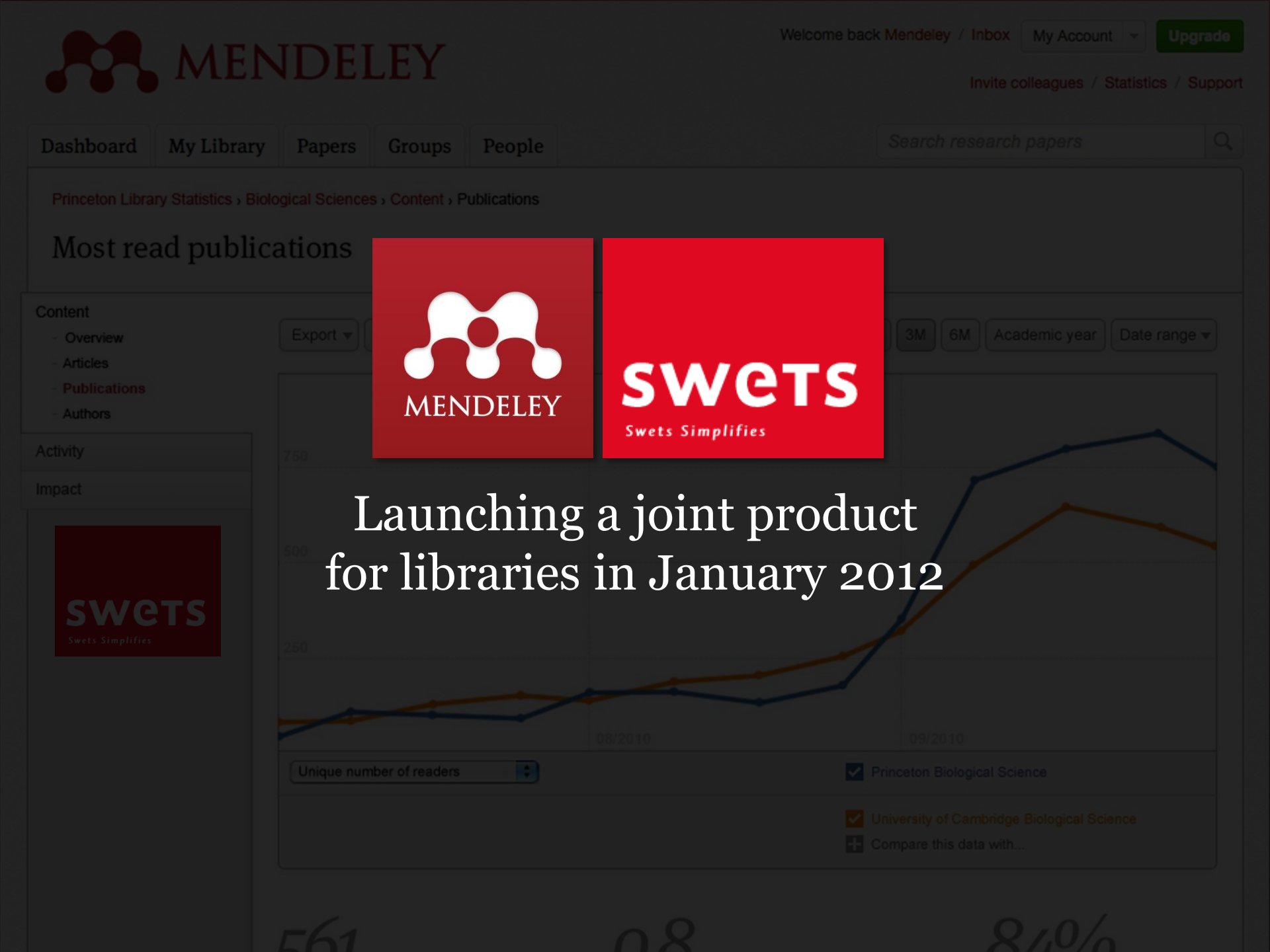
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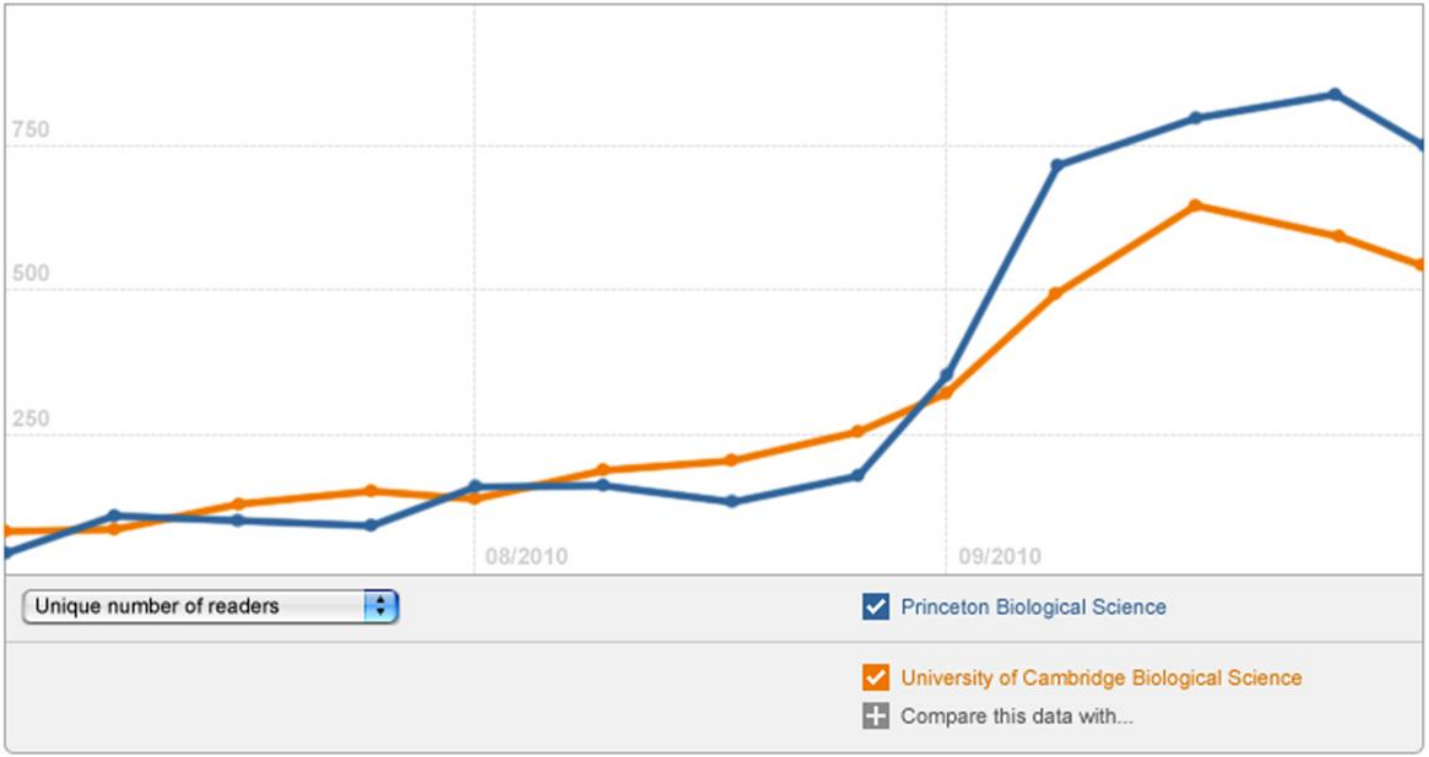

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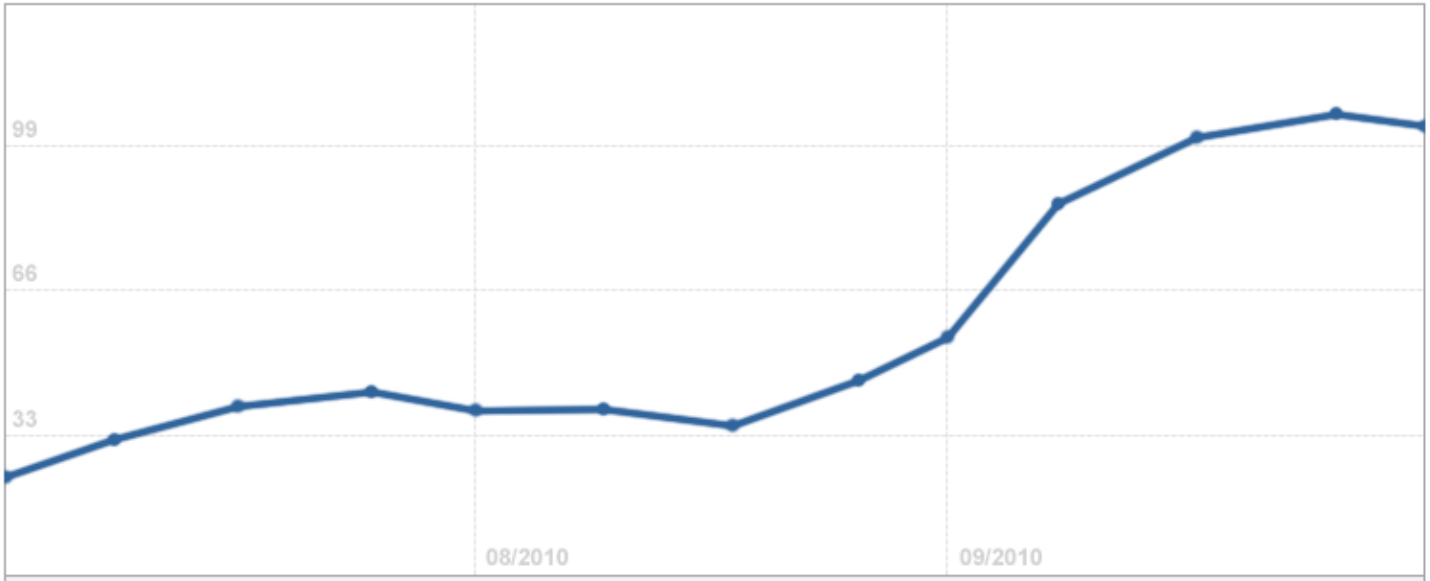

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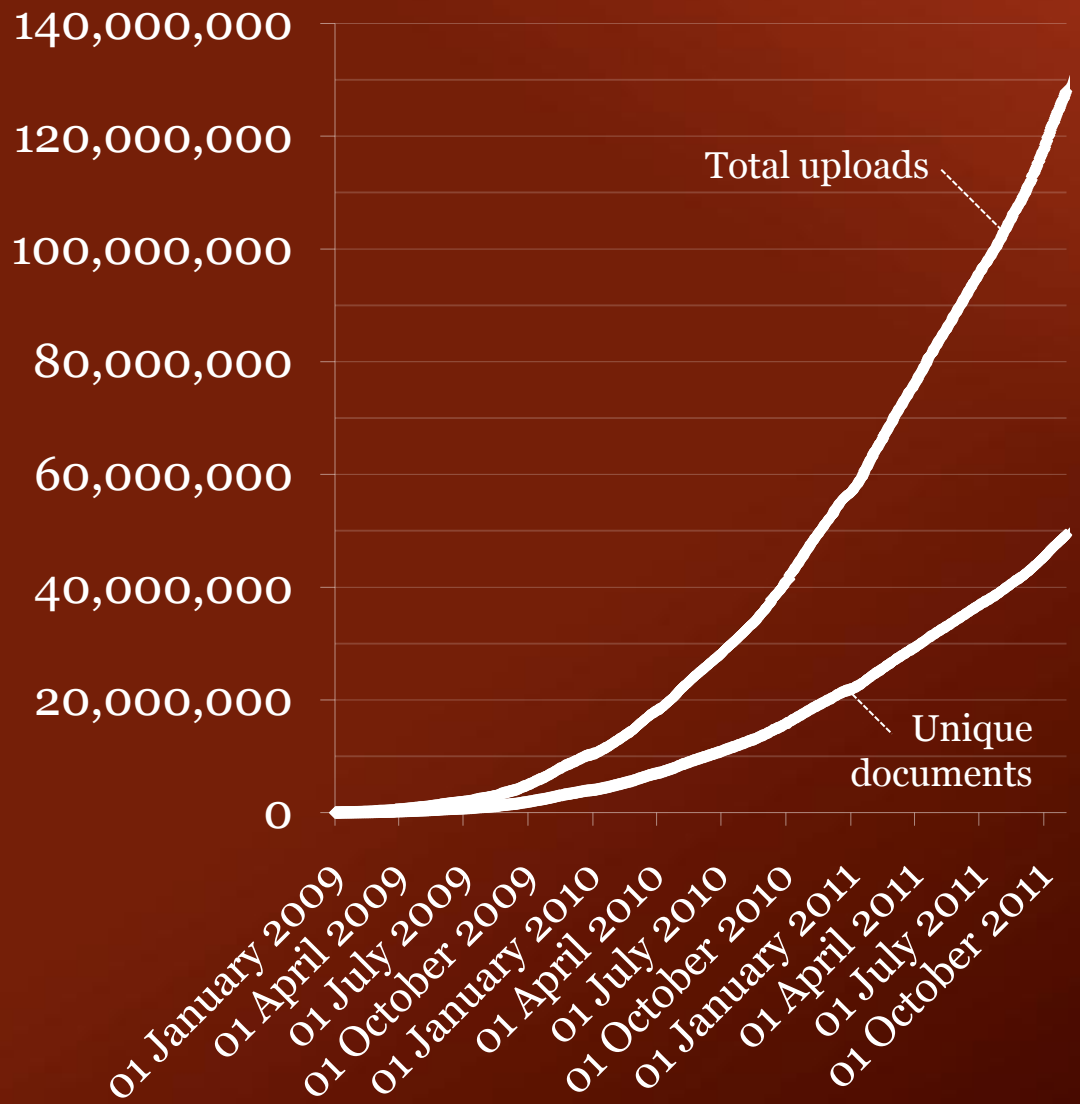

For comparison:

40m: Thomson Reuters *Web of Knowledge*; Elsevier *SciVerse / Scopus*

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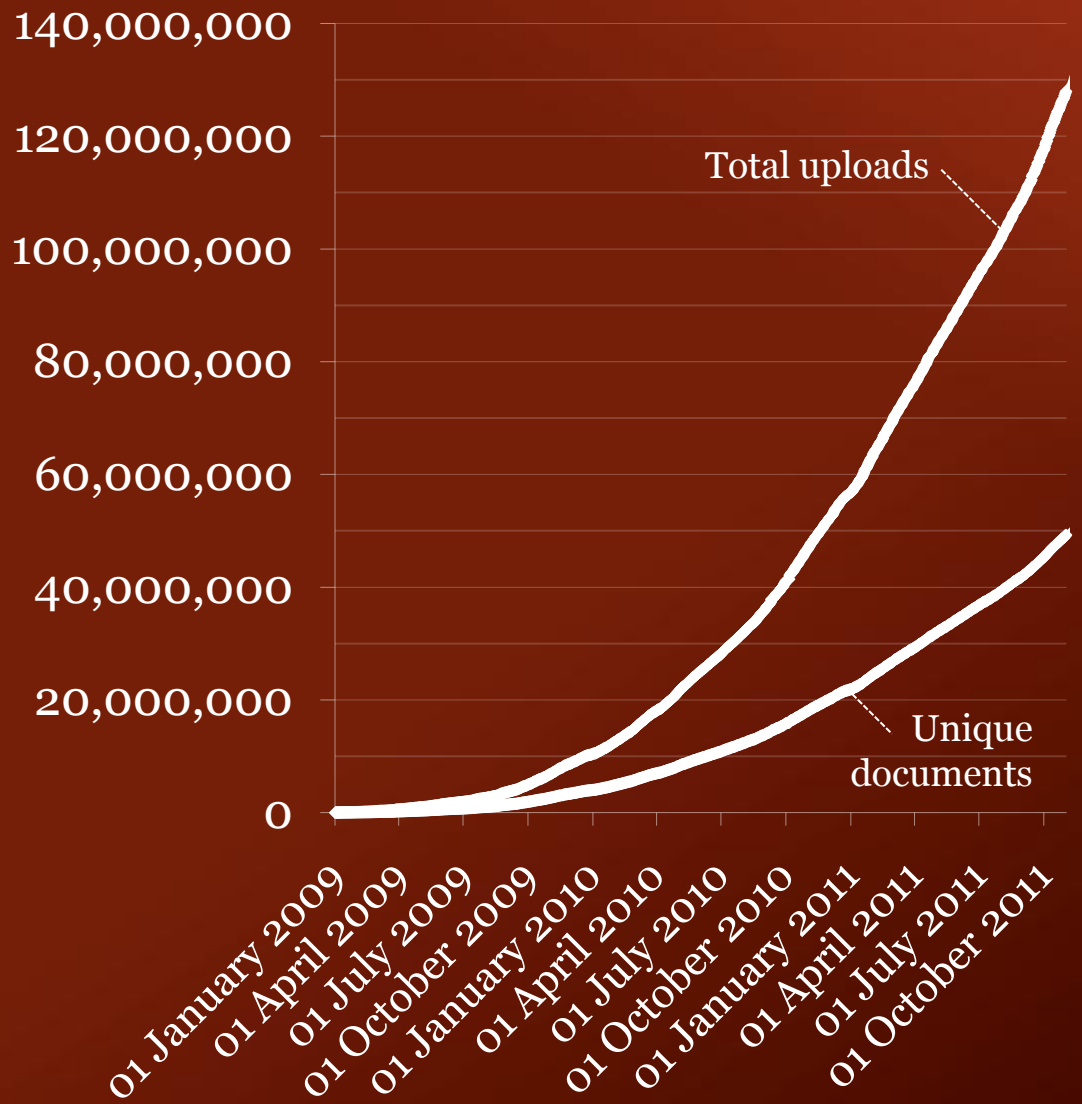
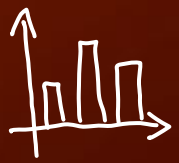


Documents

Interdisciplinary user demographics

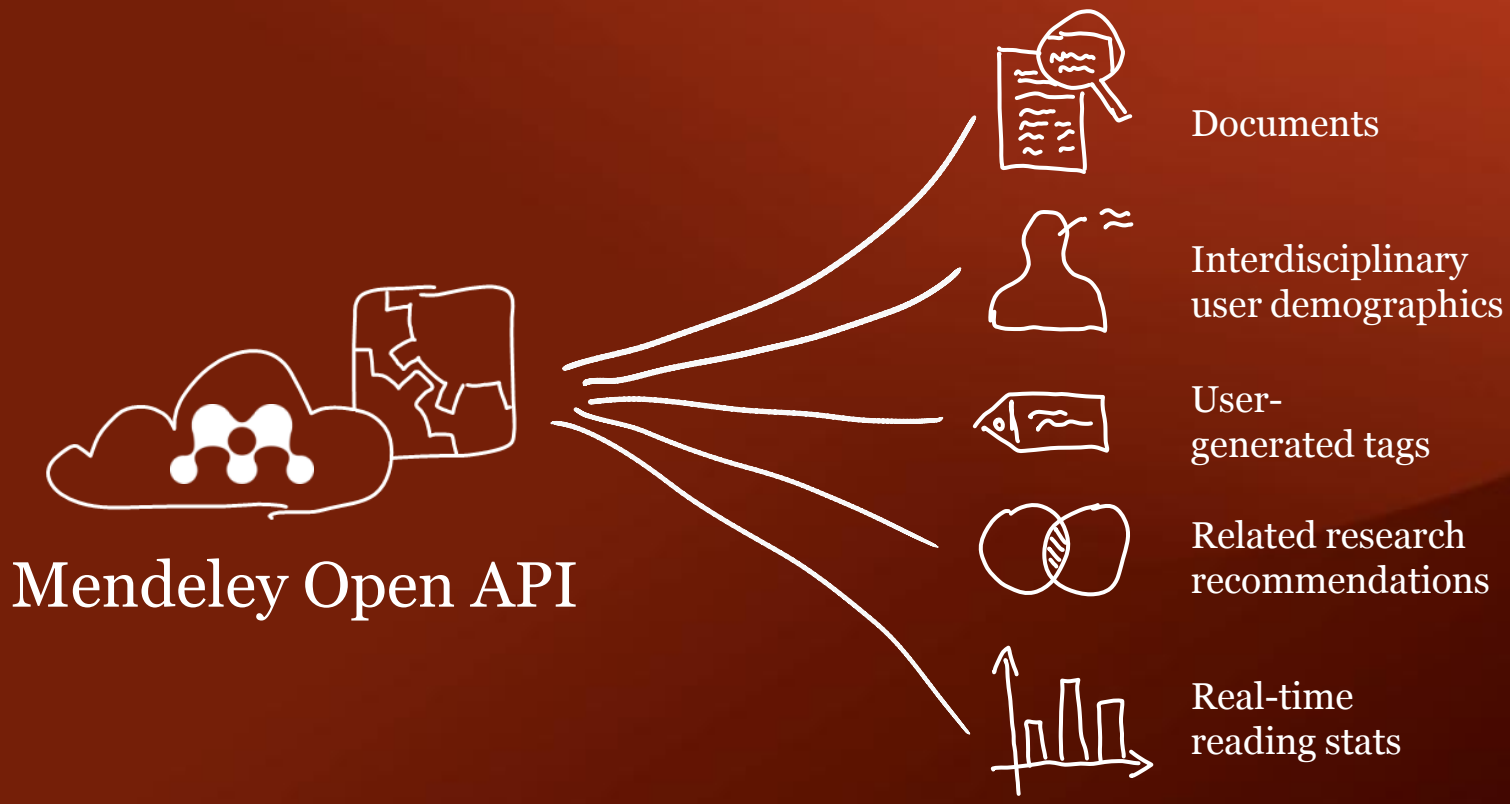
User-generated tags

Related research recommendations



Real-time reading stats

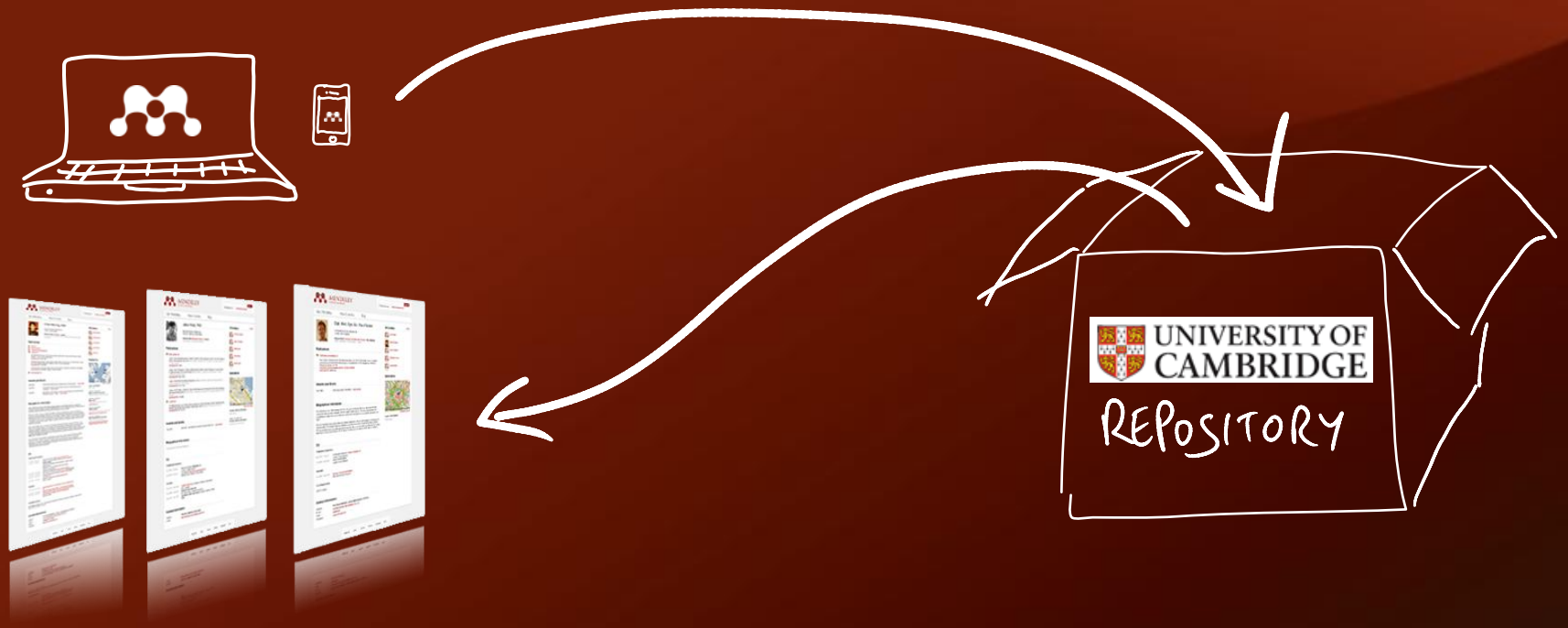
http://dev.mendeley.com



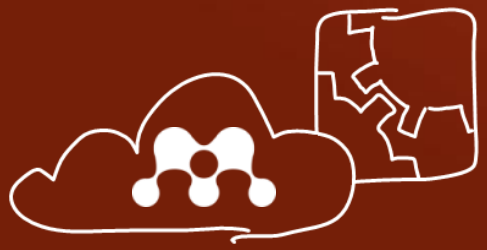
JISC DURA Project

http://jisc-dura.blogspot.com

Direct User Repository Access



Mendeley/PLoS Binary Battle



Mendeley Open API

PLoS API

$10,001 for the best app

$5,000 for the runner-up

$1,000 for the best mashup

amazon web services™

Tim O'Reilly

Werner Vogels

James Powell

John Wilbanks

Juan Enriquez

Duncan J Watts

H_R-Index: 20

G_R-Index: 31

Most read publication: 183

Total number of publications: 90

Total bookmarks: 1185

[what's this?]

Permalinks

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JSON: http://readermeter.org/Watts.Duncan_J/json

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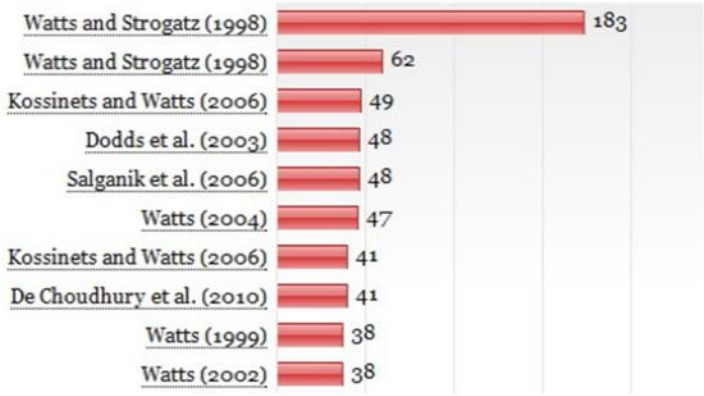
Top 10 publications by readership (?)



[show all]

Duncan J Watts's coauthors

Luis A N AMARAL, Albert-Laszlo BARABASI, Munmun De CHOUDHURY, FrÃ©dÃ©ric DALSACE, Coralie DAMAY, Munmun DE CHOUDHURY, Ap DIJKSTERHUIS, Peter S DODDS, Peter Sheridan DODDS, Peter DODDS, David DUBOIS, Robert G ECCLES, Karen FRASER, Rashi GLAZER, Sharad GOEL, Nobuyuki HANAKI, Steve HASKER, Jake M HOFMAN, Yoshito HORI, Harry HUTSON, Yoko ISHIKURA, Gueorgi KOSSINETS, G KOSSINETS, Phillip LONGMAN, R Dean MALMGREN, Michael C MANKINS, Winter A MASON, Winter MASON, Daniel C MEDINA, Roby MUHAMAD, M E J NEWMAN, Mark NEWMAN, Mark E J NEWMAN, David M PENNOCK, Barbara PERRY, Alexander PETERHANSL, Daniel M REEVES, Economic RESEARCH, Charles F SABEL, Matthew J SALGANIK, Michael SCHRAGE, Linda STONE, Steven H STROGATZ, Steven H. STROGATZ, S H STROGATZ, Siddharth SURI, Eric VON HIPPEL, Liv WATSON, Geoffrey B WEST, Mike WILLIS

Duncan J Watts's alternate spellings

Duncan J. WATTS

Search

Duncan J Watts

183 Collective dynamics of 'small-world' networks.

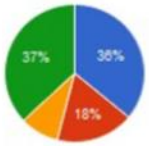
Duncan J WATTS Steven H STROGATZ

Nature (393) Nature Publishing Group, 1998

PMID: 9623998 ISBN: 9780691113579 DOI: 10.1038/30918

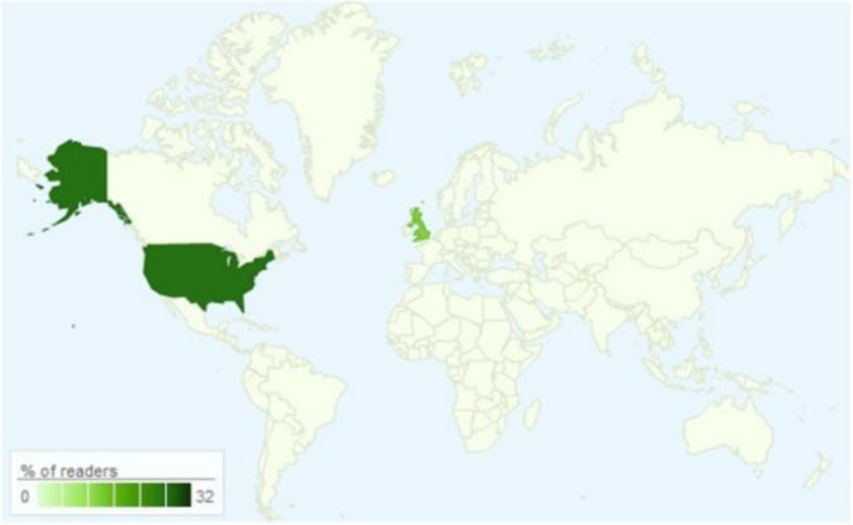
Networks of coupled dynamical systems have been used to model biological oscillators, Josephson junction arrays, excitable media, neural networks, spatial games, genetic control networks and many other self-organizing systems. Ordinarily, the connection topology is assumed to be either completely regular or completely random. But many biological, technological and social networks lie somewhere between these two extremes. Here we explore simple models of networks that can be tuned through this middle ground: regular networks 'rewired' to introduce increasing amounts of disorder. We find that these systems can be highly clustered, like regular lattices, yet have small characteristic path lengths, like random graphs. We call them 'small-world' networks, by analogy with the small-world phenomenon (popularly known as six degrees of separation. The neural network of the worm Caenorhabditis elegans, the power grid of the western United States, and the collaboration graph of film actors are shown to be small-world networks. Models of dynamical systems with small-world coupling display enhanced signal-propagation speed, computational power, and synchronizability. In particular, infectious diseases spread more easily in small-world networks than in regular lattices.

% of readers by discipline



% of readers by status

% of readers by location



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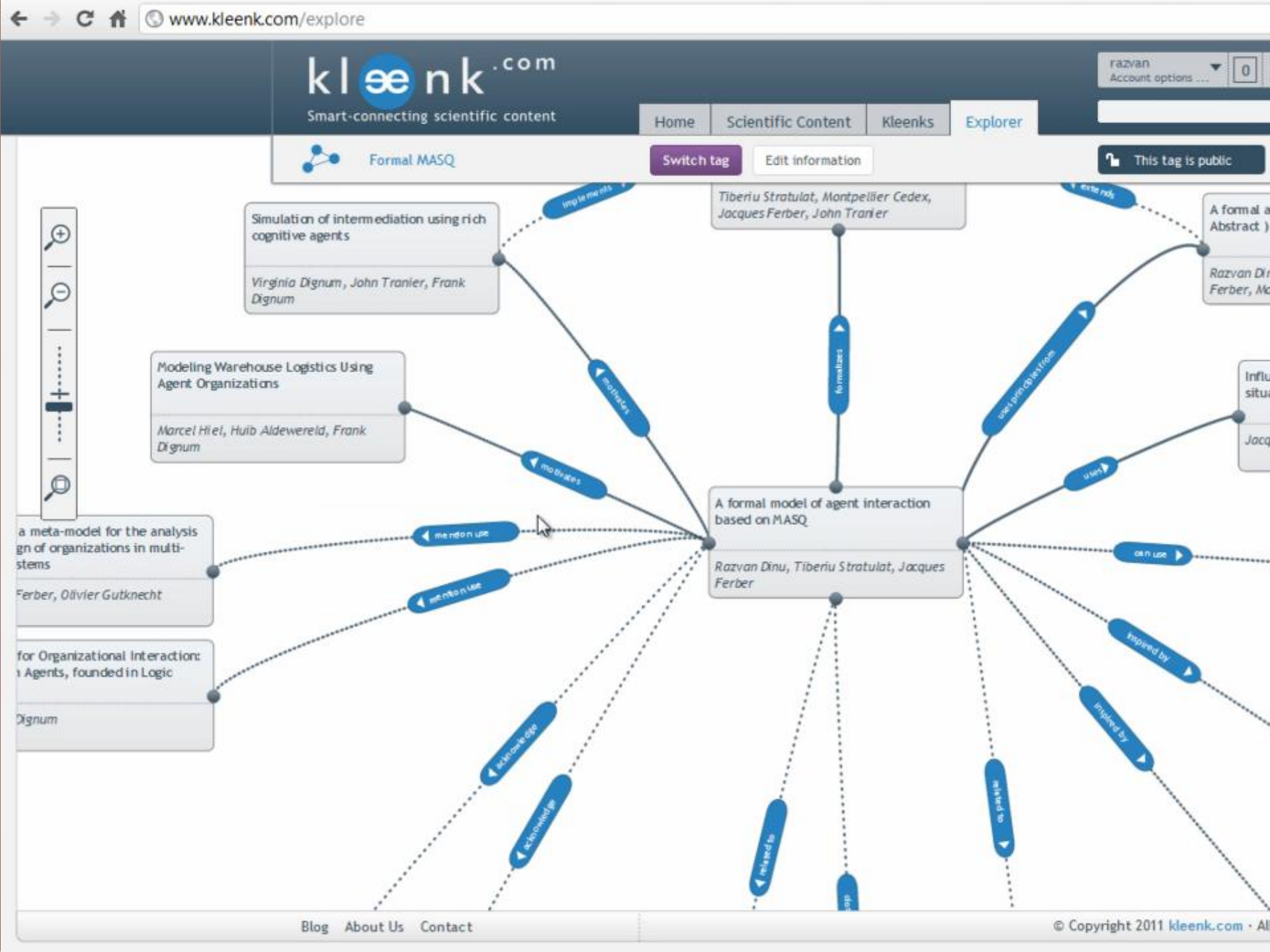
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Tiberiu Stratulat, Montpellier Cedex, Jacques Ferber, John Tranier
Modeling Warehouse Logistics Using Agent Organizations
Marcel Hiel, Huib Aldewereld, Frank Dignum
A formal model of agent interaction based on MASQ
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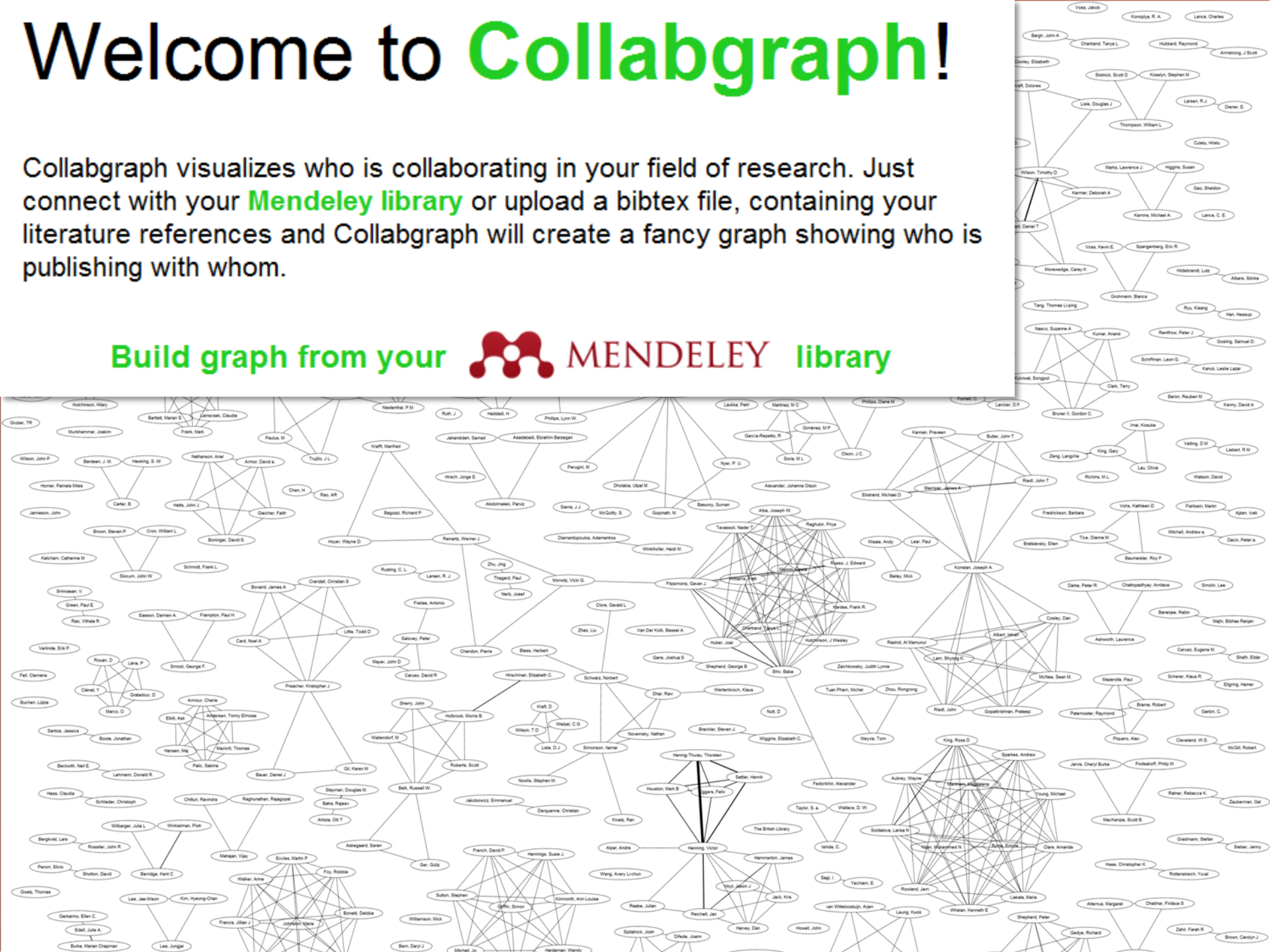

Measuring the evolutionary rate of protein-protein interaction.

by Wenfeng Qian, Xionglei He, Edwin Chan, Huailiang Xu, Jianzhi Zhang

published in Proceedings of the National Academy of Sciences of the United States of America (Volume: 108, Issue: 21, Pages: 8725-8730) in 2011

Abstract

Despite our extensive knowledge about the rate of protein sequence evolution for thousands of genes in hundreds of species, the corresponding rate of protein function evolution is virtually unknown, especially at the genomic scale. This lack of knowledge is primarily because of the huge diversity in protein function and the consequent difficulty in gauging and comparing rates of protein function evolution. Nevertheless, most proteins function through interacting with other proteins, and protein-protein interaction (PPI) can be tested by standard assays. Thus, the rate of protein function evolution may be measured by the rate of PPI evolution. Here, we experimentally examine 87 potential interactions between Kluyveromyces waltii proteins, whose one to one orthologs in the related budding yeast Saccharomyces cerevisiae have been reported to interact. Combining our results with available data from other eukaryotes, we estimate that the evolutionary rate of protein interaction is (2.6 1.6) 10(-10) per PPI per year, which is three orders of magnitude lower than the rate of protein sequence evolution measured by the number of amino acid substitutions per protein per year. The extremely slow evolution of protein molecular function may account for the remarkable conservation of life at molecular and cellular levels and allow for studying the mechanistic basis of human disease in much simpler organisms.

Reviews

should have discussed a whole genome duplication

by Giovanni Dall'Olio • 8 hours ago • Recommended: Yes • Difficulty level: Intermediate • Reviewer expertise: Intermediate

This paper provides an estimate of the rate of protein-protein interaction gain or loss between two species, S.cerevisiae and K.waltii.

The problem is that the authors did not discuss the fact that a genome-duplication event occurred between the separation of these two species. This may invalidate their conclusions about the overall PPI loss/gain rate of 2.6 1.6) 10(-10) per PPI per year. As the paper is written, a reader unaware of this genome-wide duplication would be inclined to think that this rate can be compared to other species.

Apart from this point, I liked the paper and I think it is a very good experiment. The authors did an impressive job in experimentally verifying all the interactions, and their results are valid for these two species.

References: ★★★★★ | Originality: ★★★★★ | Argumentation: ★★★★★ | Readability: ★★★★★

Mentions

RT @dalloliogm: my first publication review at @PaperCritic http://t.co/Gqfv93MG , about a paper on PPI evolution rate

by IanMulvany • 7 hours ago • Reply • Retweet • Favorite

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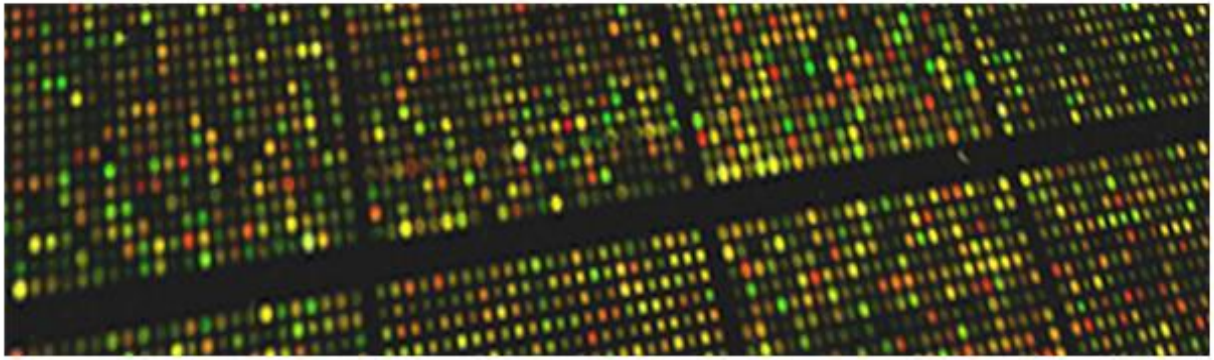

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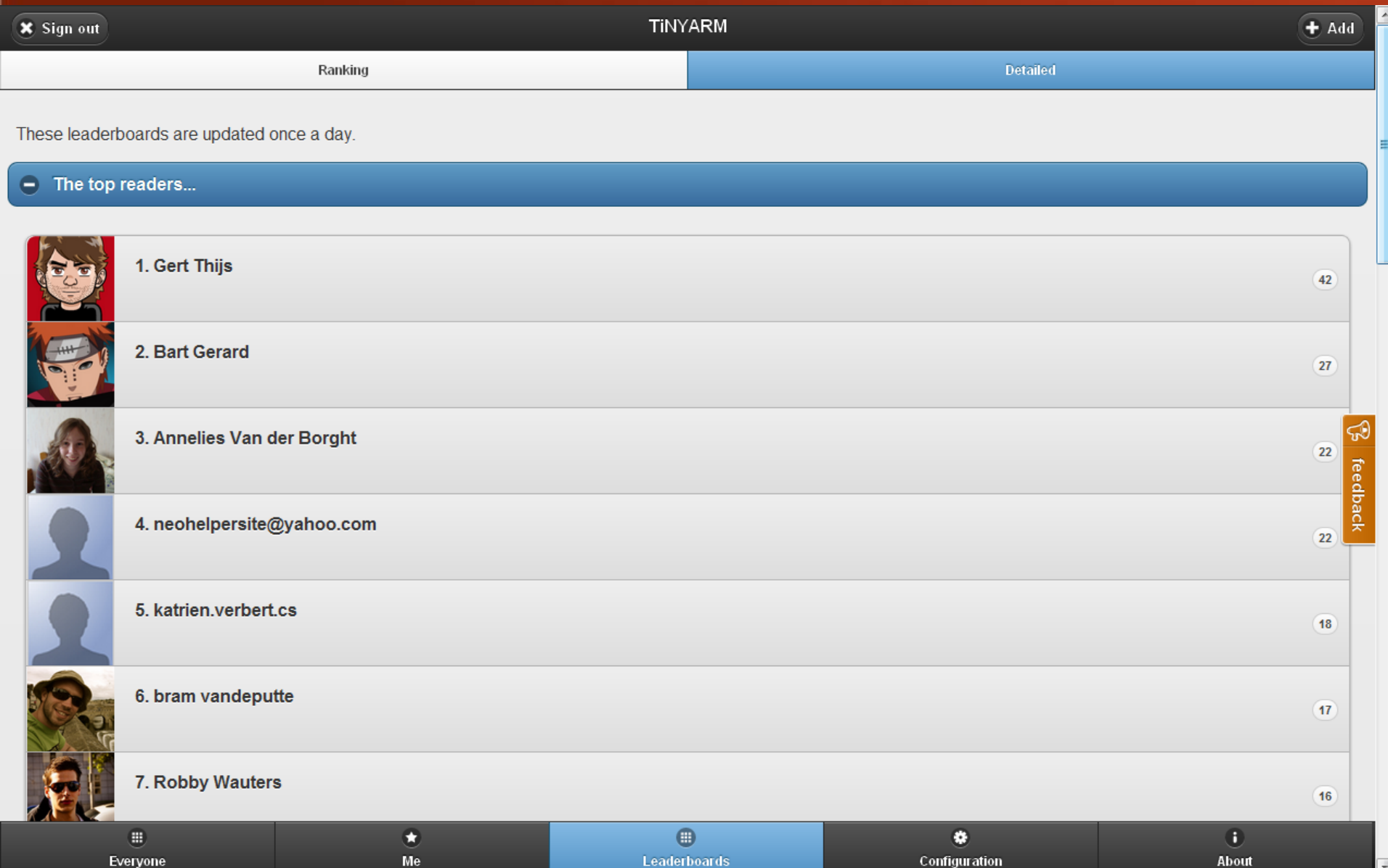

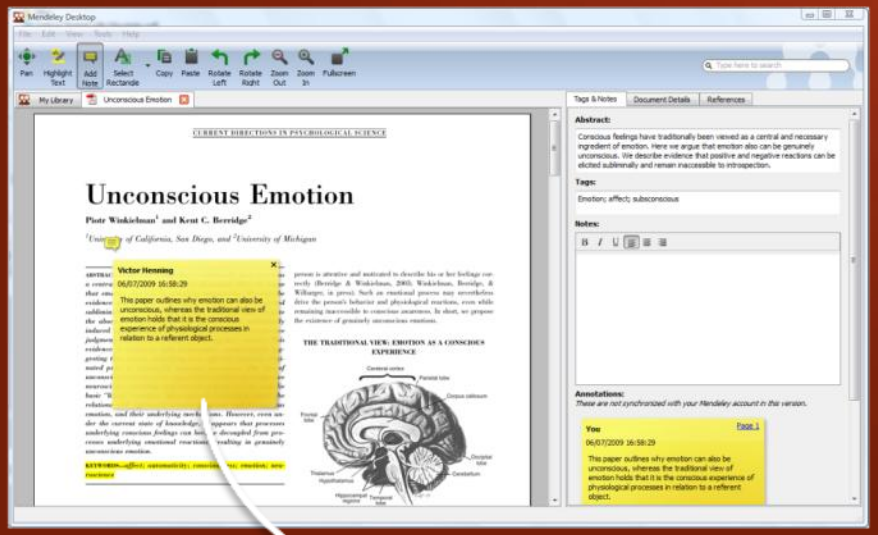

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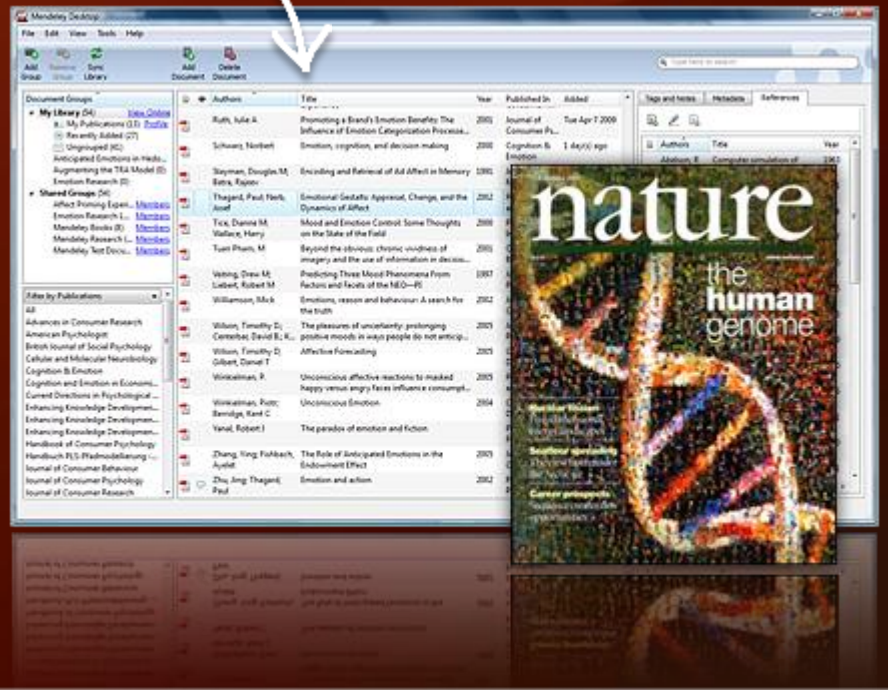
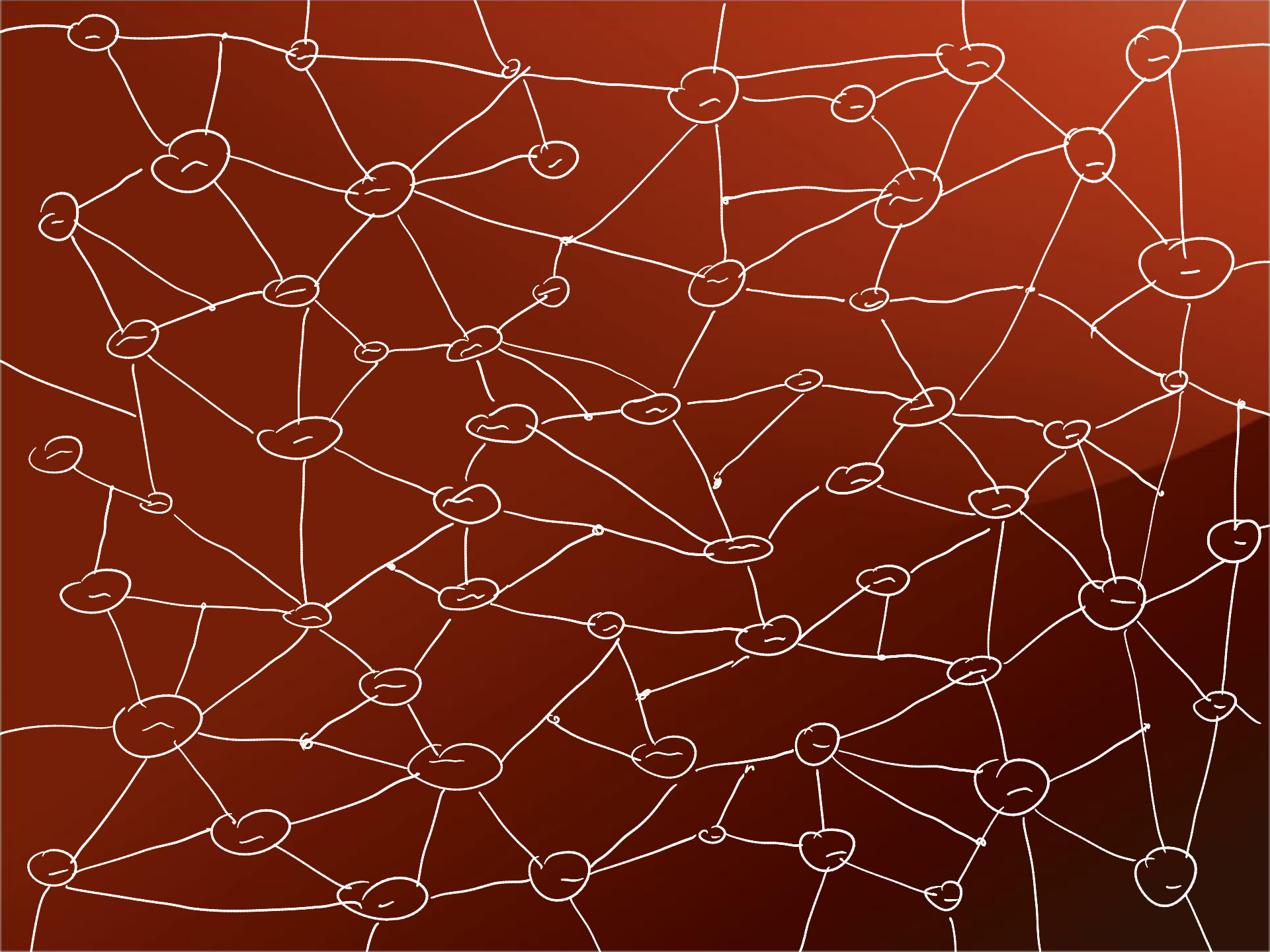
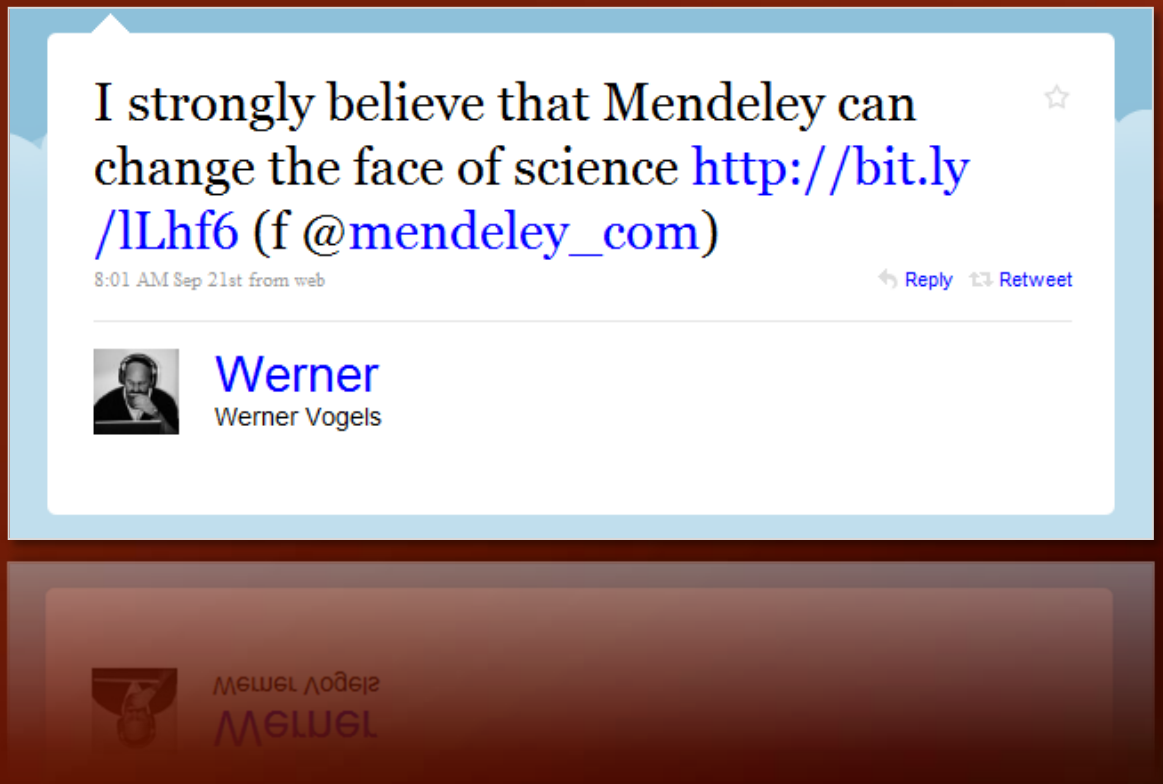




Dr. Werner Vogels,
CTO Amazon.com



THANK YOU !