big shoulders in scholarly communication:

data archiving + altmetrics

Heather Piwowar @researchremix
DataONE postdoc with NESCent and Dryad, at UBC

(cc) BY
some photos NC, SA

HighWire 2012



http://www.metmuseum.org/toah/ho/09/euwf/ho_24.45.1.htm



http://www.flickr.com/photos/jsmjr/62443357/



http://www.flickr.com/photos/camilleharrington/3587294608/



http://www.flickr.com/photos/rkuhnau/3318245976/



http://www.flickr.com/photos/conformpdx/1796399674/



http://www.flickr.com/photos/rkuhnau/3317418699/



http://www.flickr.com/photos/zemlinki/261617721/

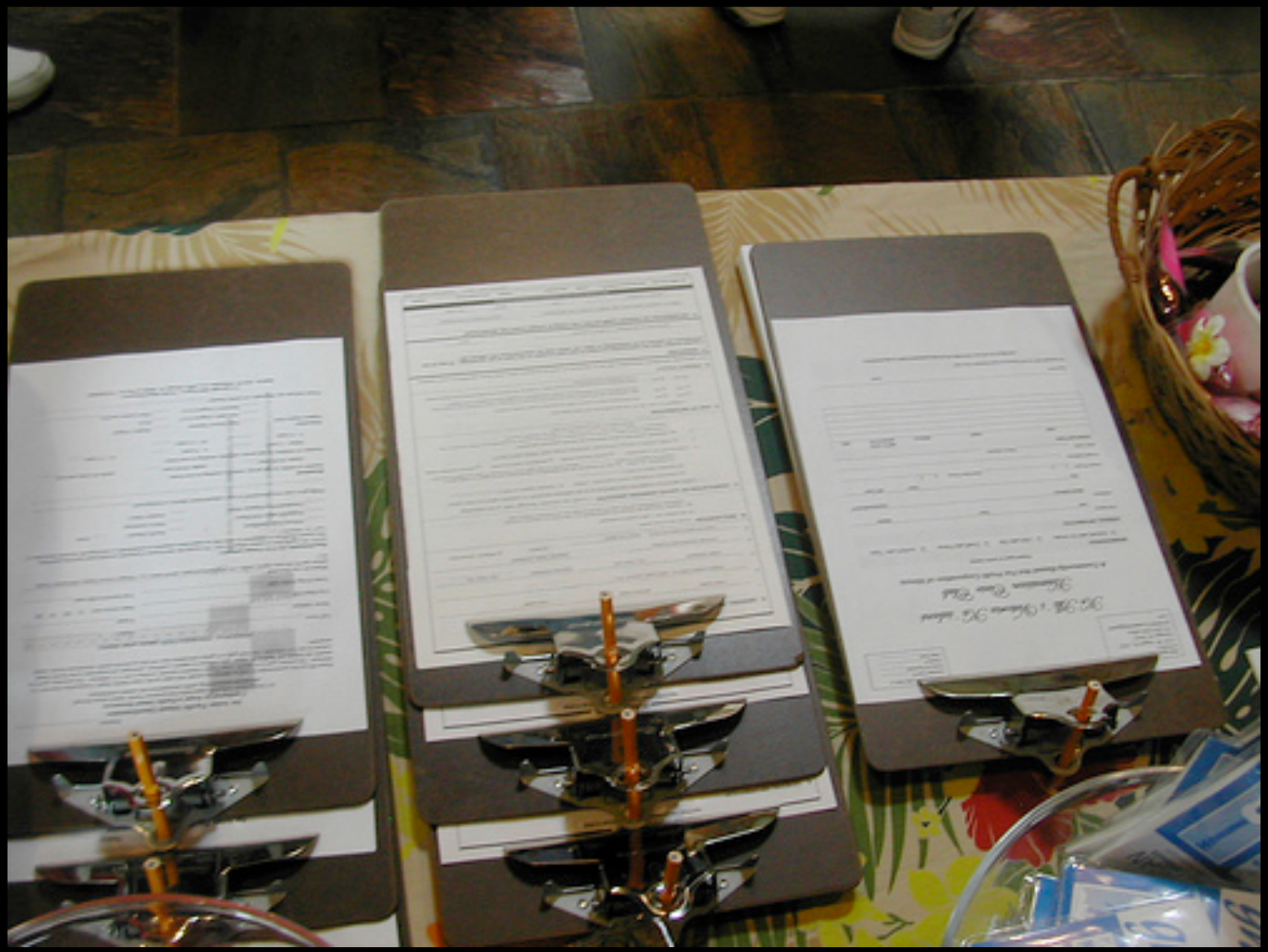


http://www.flickr.com/photos/tracenmatt/3020786491/



http://www.flickr.com/photos/the-o/2078239333/

in addition to a nice story,
we have evidence.



Zimmerman, Tenopir, etc.

http://www.flickr.com/photos/jima/606588905/



http://www.flickr.com/photos/quinnanya/2055471833

$$10 * 100 = 1000$$

Gene Expression Omnibus

ARRAYEXPRESS

RCSB PDB
PROTEIN DATA BANK

PANGAEA®

Data Publisher for Earth & Environmental Science

Journal of Money Credit and Banking

***JMCB* Index and Data Archive**

Journal of Peace Research
Replication Data

INTERNATIONAL STUDIES QUARTERLY

Data Archive

BMRB

Biological Magnetic Resonance Data Bank

ICPSR | INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH

Publication-Related Archive

TreeBASE
A Database of Phylogenetic Knowledge

GEOROC
Geochemistry of Rocks of the Oceans and Continents

IQSS Dataverse Network

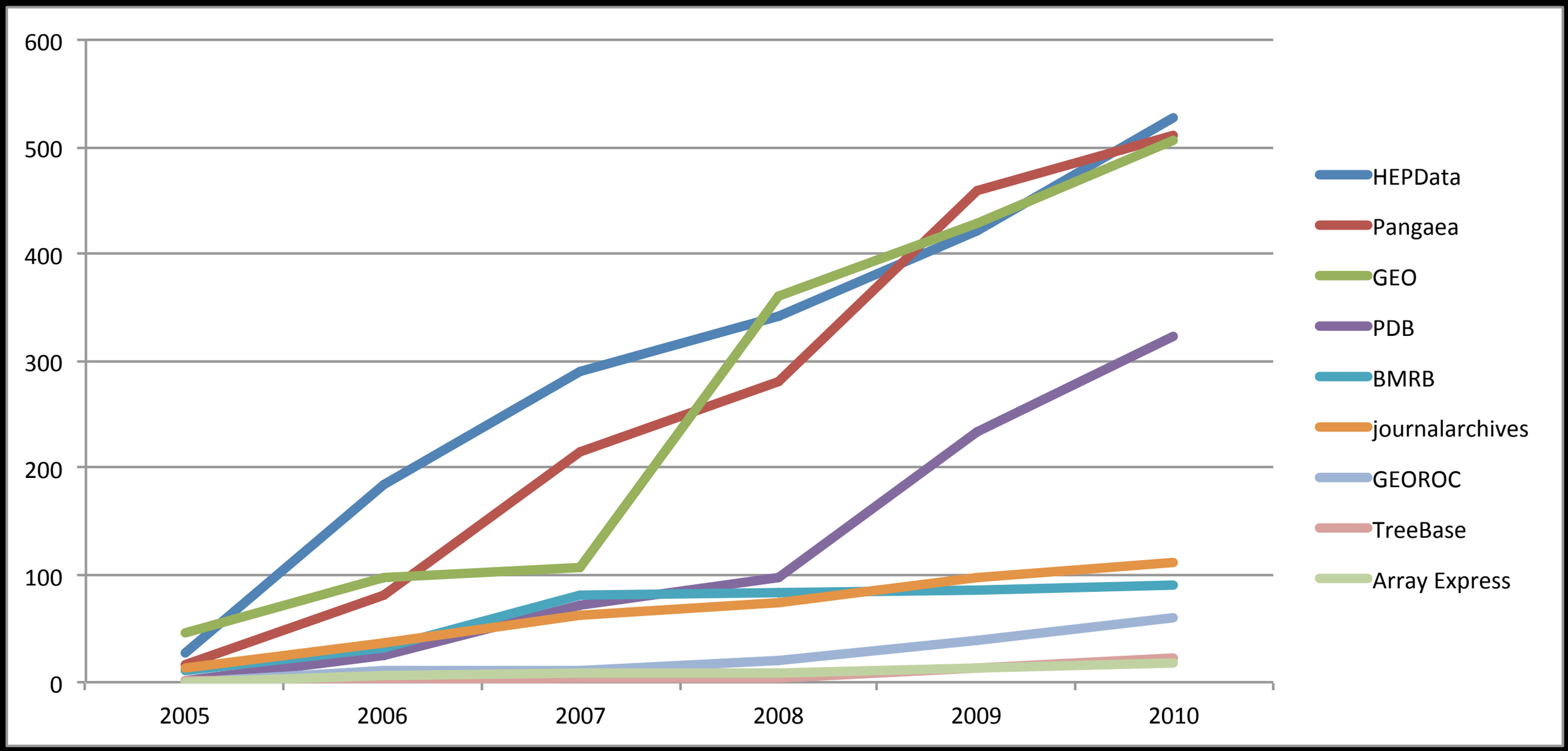
Journal Replication Archive

E-AFMX-12.. E-CAGE-21.. E-CAGE-52.. E-CAGE-54.. E-CAGE-56.. E-CBIL-3.. E-FPMI-6.. E-MARS-2.. E-MARS-4.. E-MAXD-5.. E-MEXP-116.. E-MEXP-17.. E-MEXP-182.. E-MEXP-191.. E-MEXP-199.. E-MEXP-218.. E-MEXP-230.. E-MEXP-233.. E-MEXP-234.. E-MEXP-237.. E-MEXP-246.. E-MEXP-250.. E-MEXP-251.. E-MEXP-257.. E-MEXP-258.. E-MEXP-268.. E-MEXP-269.. E-MEXP-273.. E-MEXP-277.. E-MEXP-283.. E-MEXP-284.. E-MEXP-288.. E-MEXP-294.. E-MEXP-297.. E-MEXP-300.. E-MEXP-301.. E-MEXP-305.. E-MEXP-306.. E-MEXP-307.. E-MEXP-309.. E-MEXP-310.. E-MEXP-314.. E-MEXP-318.. E-MEXP-321.. E-MEXP-322.. E-MEXP-324.. E-MEXP-334.. E-MEXP-338.. E-MEXP-350.. E-MEXP-355.. E-MEXP-359.. E-MEXP-360.. E-MEXP-362.. E-MEXP-364.. E-MEXP-369.. E-MEXP-370.. E-MEXP-373.. E-MEXP-375.. E-MEXP-378.. E-MEXP-381.. E-MEXP-382.. E-MEXP-384.. E-MEXP-386.. E-MEXP-388.. E-MEXP-390.. E-MEXP-393.. E-MEXP-394.. E-MEXP-399.. E-MEXP-405.. E-MEXP-410.. E-MEXP-411.. E-MEXP-412.. E-MEXP-414.. E-MEXP-415.. E-MEXP-416.. E-MEXP-417.. E-MEXP-418.. E-MEXP-422.. E-MEXP-423.. E-MEXP-427.. E-MEXP-429.. E-MEXP-432.. E-MEXP-437.. E-MEXP-438.. E-MEXP-439.. E-MEXP-442.. E-MEXP-443.. E-MEXP-449.. E-MEXP-451.. E-MEXP-459.. E-MEXP-465.. E-MEXP-468.. E-MEXP-469.. E-MEXP-470.. E-MEXP-474.. E-MEXP-482.. E-MEXP-483.. E-MEXP-484.. E-MEXP-486.. E-MEXP-489.. E-MEXP-491.. E-MEXP-498.. E-MEXP-504.. E-MEXP-508.. E-MEXP-513.. E-MEXP-515.. E-MEXP-517.. E-MEXP-88.. E-MIMR-42.. E-MIMR-43.. E-MNIA-66.. E-MNIA-67.. E-MNIA-69.. E-MNIA-73.. E-NASC-45.. E-NASC-49.. E-NASC-55.. E-RZPD-11.. E-RZPD-14.. E-RZPD-18.. E-RZPD-21.. E-TABM-11.. E-TABM-14.. E-TABM-24.. E-TABM-27.. E-TABM-29.. E-TABM-3.. E-TABM-30.. E-TABM-37.. E-TABM-40.. E-TABM-42.. E-TABM-44.. E-TABM-51.. E-TABM-56.. E-TABM-61.. E-TABM-64.. E-TABM-65.. E-TABM-67.. E-TIGR-121.. E-TIGR-122.. E-TIGR-128.. E-TOXM-11.. E-TOXM-16.. E-TOXM-17.. E-TOXM-20.. E-UMCU-11.. E-UMCU-15.. E-UMCU-18.. E-UMCU-20.. E-UMCU-21.. BMRB.. 6453.. 6454.. 6455.. 6457.. 6458.. 6460.. 6467.. 6468.. 6469.. 6470.. 6473.. 6475.. 6476.. 6478.. 6480.. 6481.. 6483.. 6484.. 6489.. 6503.. 6505.. 6506.. 6517.. 6518.. 6519.. 6520.. 6527.. 6531.. 6532.. 6536.. 6538.. 6546.. 6553.. 6555.. 6563.. 6570.. 6571.. 6575.. 6577.. 6579.. 6581.. 6583.. 6587.. 6588.. 6589.. 6590.. 6594.. 6596.. 6597.. 6600.. 6609.. 6610.. 6612.. 6624.. 6626.. 6642.. 6645.. 6648.. 6649.. 6655.. 6679.. 6680.. 6687.. 6688.. 6689.. 6693.. 6699.. 6705.. 6709.. 6712.. 6715.. 6721.. 6724.. 6727.. 6730.. 6738.. 6739.. 6740.. 6746.. 6747.. 6753.. 6754.. 6769.. 6771.. 6779.. 6783.. 6786.. 6788.. 6805.. 6806.. 6808.. 6816.. 6821.. 6824.. 6826.. 6833.. 6834.. 6840.. 6841.. 6850.. 6851.. 6854.. 6865.. 6866.. 6868.. 6869.. 6877.. 6883.. 6893.. 6900.. 6902.. 6908.. 6913.. 6916.. 6918.. 6920.. 6926.. 6927.. 6928.. GEO.. GSE1165.. GSE1173.. GSE1174.. GSE1175.. GSE1191.. GSE1205.. GSE1220.. GSE1236.. GSE1241.. GSE1243.. GSE1244.. GSE1255.. GSE1397.. GSE1434.. GSE1455.. GSE1557.. GSE1610.. GSE1656.. GSE1707.. GSE1772.. GSE1782.. GSE1818.. GSE1843.. GSE1849.. GSE1862.. GSE1875.. GSE1876.. GSE1914.. GSE1920.. GSE1957.. GSE2014.. GSE2058.. GSE2095.. GSE2104.. GSE2122.. GSE2132.. GSE2133.. GSE2144.. GSE2151.. GSE2191.. GSE2208.. GSE2239.. GSE2259.. GSE2266.. GSE2273.. GSE2289.. GSE2349.. GSE2350.. GSE2378.. GSE2418.. GSE2434.. GSE2464.. GSE2472.. GSE2499.. GSE2512.. GSE2520.. GSE2552.. GSE2578.. GSE2603.. GSE2617.. GSE2620.. GSE2626.. GSE2641.. GSE2657.. GSE2672.. GSE2689.. GSE2701.. GSE2719.. GSE2772.. GSE2781.. GSE2787.. GSE2855.. GSE2868.. GSE2880.. GSE2890.. GSE2896.. GSE2899.. GSE2953.. GSE2956.. GSE2978.. GSE3013.. GSE3053.. GSE3060.. GSE3065.. GSE3137.. GSE3138.. GSE3184.. GSE3214.. GSE3224.. GSE3236.. GSE3238.. GSE3271.. GSE3292.. GSE3321.. GSE3358.. GSE3398.. GSE3411.. GSE3462.. GSE3525.. GSE3551.. GSE3554.. GSE3564.. GSE3570.. GSE3594.. GSE3658.. GSE3663.. GSE3677.. GSE3739.. GSE3755.. GSE3771.. GSE3777.. GSE3791.. GSE3857.. GSE3862.. GSE3878.. GSE3889.. GSE3904.. GSE3913.. GSE3922.. GSE3933.. GSE3956.. GSE988.. GEOROC.. 7176.. 7177.. 7178.. 7180.. 7241.. 7252.. 7306.. 7402.. 7403.. 7505.. 7507.. 7508.. 7509.. 7510.. 7517.. 7521.. 7526.. 7527.. 7529.. 7568.. 7702.. 7703.. 7713.. 7767.. 7768.. 7770.. 7792.. 7862.. 7863.. 7865.. 7866.. 7878.. 7966.. 7978.. 8035.. 8036.. 8074.. 8183.. 8185.. 8186.. 8312.. 8491.. 8493.. 8495.. 8496.. 8497.. 8498.. 8501.. 8504.. 8505.. 8512.. 8513.. 8514.. 8515.. 8517.. 8518.. 8520.. 8521.. 8528.. 8529.. 8530.. 8531.. 8651.. 8657.. 8659.. 8662.. 8663.. 8669.. 8692.. 8701.. 8704.. 8741.. 8743.. 8786.. 8809.. 8879.. 8880.. 8899.. 8900.. 9022.. 9027.. 9165.. 9582.. 9709.. 9871.. 10002.. 10056.. 10589.. 10592.. 10596.. 10597.. 10705.. 10892.. 10915.. 11143.. 11231.. 11357.. 11404.. 11417.. 11636.. 11637.. 11918.. 11959.. 11985.. 11987.. 12041.. 12195.. 12196.. 12641.. 12982.. 13131.. 13163.. 13690.. 13762.. 14015.. 14097.. 14234.. 14418.. 14632.. HEPData.. p1.. p1039.. p1047.. p1113.. p1115.. p1116.. p1118.. p1120.. p1121.. p1122.. p1123.. p1308.. p1333.. p1336.. p1337.. p1338.. p1341.. p1342.. p1343.. p1344.. p1345.. p1346.. p1347.. p1348.. p1350.. p1351.. p1355.. p1931.. p3095.. p3096.. p3097.. p3098.. p3099.. p3100.. p336.. p366.. p368.. p369.. p376.. p377.. p378.. p379.. p38.. p380.. p381.. p4266.. p4310.. p4640.. p4641.. p4642.. p4643.. p5113.. p5128.. p5129.. p5880.. p5881.. p628.. p6847.. p6855.. p6856.. p6862.. p6866.. p727.. p728.. p730.. p731.. p732.. p733.. p734.. p735.. p736.. p737.. p738.. p739.. p741.. p75.. p7594.. p76.. p7654.. p7663.. p7948.. p7977.. p7998.. p7999.. p8011.. p8012.. p8027.. p990.. p991.. p992.. p993.. ICPSR.. 1306.. 1307.. 1308.. 1309.. 1310.. 1311.. 1312.. 1313.. 1314.. 1315.. 1317.. 1319.. 1320.. 1321.. IQSS.. hdl:1902.1/10043.. hdl:1902.1/10045.. hdl:1902.1/10046.. hdl:1902.1/10047.. hdl:1902.1/10048.. hdl:1902.1/10052.. hdl:1902.1/10053.. hdl:1902.1/10054.. hdl:1902.1/10098.. hdl:1902.1/15500.. JournalArchive.. . . . .. Kevin Dobbin and Richard Simon.. Rickey E. Carter, Stuart R. Li.. Xiangqin Cui, J. T. Gene Hwang.. Sin-Ho Jung, Heejung Bang, and.. Michael P. Fay. Random margina.. Ina Hoeschele and Hua Li. A no.. Binbing Yu and Joseph L. Gastw.. Brenda F. Kurland and Patrick .. Sonia Hernández, David O. Sieg.. Ola Hössjer. Conditional likel.. Anne-Mette K. Hein, Sylvia Ric.. M. Fiocco, H. Putter, and J. C.. Lars Ängquist and Ola Hössjer... R. Mcnamee. Optimal design and.. K. Alec Chrystal and Paul Mize.. Glenn D. Rudebusch. Assessing .. Mikael Apel, Richard Friberg, .. Dogan Tirtiroglu, Kenneth N. D.. Lucio Sarno, Daniel L. Thornto.. Michael W. McCracken and Steph.. Jan J.J. Groen. Exchange Rate.. Ray Yeutien Chou . Forecasting.. Ellen E. Meade and D. Nathan S.. Alan C. Hess and Avraham Kamar.. Huw Lloyd-Ellis, Shiqiang Zhan.. Michael M. Hutchison and Ilan .. Ali Anari, James Kolari, and J.. Alan S. Blinder and John Morga.. Ming Chien Lo and Jeremy Piger.. David E. Rapach and Mark E. Wo.. Katherine S. Neiss and Edward .. A. P. Vogler, A. Cardoso, T. G.. Y.M. Yuan, S. Wolhauser, M. Mö.. K. G. McCracken and M. D. Sore.. R. C. Winkworeth, D. Bryant, P.. T. Sasaki, M. Nikaido, H. Hami.. "K. Roelants and F. Bossuyt.. . A".. JEROME C. REGIER, ULRICH PAUKS.. Matthew C. Brandley, Andreas S.. Peng Zhang, Hui Zhou, Yue-Qin .. "Ziheng Yang and Bruce Rannala.. ".. Robert V. Hill. Integration of.. Matt Lavin, Patrick S. Herende.. Martyn Kennedy, Barbara R. Hol.. Regina L. Cunha, Rita Castilho.. Dennis V. Lavrov and B. Franz .. Alexandra H. Wortley, Paula J.... Tine Huyse and Filip A. M. Vol.. Céline Poux, Ole Madsen, Elisa.. Henner Brinkmann, Mark van der.. David W. Weisrock, Luke J. Har.. John J. Wiens, James W. Fetzne.. Fengrong Ren, Hiroshi Tanaka, .. Philippe Gaubert, W. Chris Woz.. Casey W. Dunn, Philip R. Pugh,.. Louise A. Lewis and Paul O. Le.. Bart Cockx and Muriel Dejemepp.. Robert Sollis. Evidence on Pur.. Jeffrey M. Wooldridge. Simple .. Fabio Canova. The Transmission.. Vasco M. Carvalho and Andrew C.. D. Harding and A. R. Pagan. A .. Chang-Jin Kim, James Morley, a.. Gert Peersman. What caused the.. Smets, F. and R. Wouters. Comp.. . . Journal of Applied Econome.. Christopher R. Bollinger and M.. Sanghamitra Das, Charles F. Ma.. X. Gong, A. van Soest, and P. .. Joachim Grammig, Reinhard Huje.. Krishna Pendakur. Semiparametr.. Mahmoud A. El-Gamal and Hulusi.. Cheng Hsiao, Yan Shen, and Hir.. Zacharias Psaradakis, Morten O.. Achim Zeileis and Christian Kl.. Dennis Fok, Dick van Dijk, and.. Libertad González. Nonparametr.. Gary Koop, Dale Poirier and Ju.. Juan M. Rodriguez-Poo, Stefan .. Troy Davig. Periodically Expan.. J. Fernandez-Villaverde and J... Fernando Fernández-Rodríguez, .. Peter R. Hansen and Asger Lund.. Shin-Ichi Nishiyama. The Cross.. "Andrew McLennan .. . The Expecte".. Joris Pinkse and Guofu Tan . T.. Steven G. Rivkin, Eric A. Hanu.. Ovidiu L. Calin, Yu Chen, Thom.. Kenneth A. Small, Clifford Win.. Peter Arcidiacono . Affirmativ.. David Card, and Dean R. Hyslop.. Dirk Bergemann and Stephen Mor.. Fernando Alvarez and Urban J. .. I-Hui Cheng and Howard J. Wall.. Ellen E. Meade . The FOMC: Pre.. Thomas A. Garrett and Russell .. Thomas A. Garrett, Rubén Herná.. Christopher H. Wheeler . Evide.. . . The Federal Reserve Bank o.. Hui Guo and Kevin L. Kliesen ... Christopher J. Neely . An Ana.. "Robert Shimer.. . The Cyclical B".. Abdul Abiad and Ashoka Mody. F.. "Tack Yun.. . Optimal Monetary Po".. Alan J. Auerbach and Maurice O.. John H. Cochrane and Monika Pi.. Òscar Jordà. Estimation and In.. Jeremy Greenwood, Ananth Sesha.. Daniel M. Bernhofen and John C.. José Wynne. Wealth as a Determ.. Bhagwan Chowdhry, Richard Roll.. Gary S. Becker, Tomas J. Phili.. Carolyn L. Evans and James Har.. Daniel Diermeier, Michael Kean.. Wolfram Schlenker, W. Michael .. Costas Meghir and Mårten Palme.. Refet S. Gürkaynak, Brian Sack.. Sandra E. Black, Paul J. Dever.. Peter Thompson and Melanie Fox.. "Eric Neumayer.. . Asylum Recogni".. Yoav Gortzak, Yoram Z. Haftel,.. Akan Malici. Discord and Colla.. Christian Davenport. Understan.. Mirjam E. Sørli, Nils Petter G.. Walter Enders and Todd Sandler.. "Quan Li.. . Does Democracy Promo".. Carlos Pestana Barros and Isab.. Patrick M. Regan and Daniel No.. "Gil Friedman.. . Commercial Paci".. Ahmer Tarar. Constituencies an.. Benjamin E. Goldsmith, Yusaku .. James D. Fearon. Primary Commo.. Macartan Humphreys. Natural Re.. Päivi Lujala, Nils Petter Gled.. Michael Horowitz, Rose McDermo.. Jaroslav Tir. Keeping the Peac.. Mary Caprioli and Peter F. Tru.. Uk Heo and Robert J. Eger III... Beth A. Simmons. Rules over Re.. Joseph Paul Vasquez III. Shoul.. Michael Koch and Scott Sigmund.. Eric Neumayer. Do Internationa.. Ron, James; Howard Ramos; and .. Neumayer, Eric (2005). Bogus R.. "Mullenbach, Mark J. (2005). .. ."... Starr, Harvey and G. Dale Thom.. Shadlen, Kenneth C.; Andrew Sc.. Fordham, Benjamin O. and Thoma.. Brooks, Sarah M. (2005). Inter.. Lai, Brian, and Dan Reiter (20.. Sobek, David (2005). Machiave.. Caprioli, Mary (2005). Primed .. Keller, Jonathan W. (2005). Le.. Greig, J. Michael and Paul F. .. Emilie M. Hafner-Burton. Right.. David H. Bearce & Sawa Omori ... Navin Bapat . Insurgency and t.. Lesley G. Terris & Zeev Maoz. .. Lotta Harbom & Peter Wallenste.. Atsushi Tago. Determinants of .. Jaroslav Tir. Dividing Countri.. Hyung Min Kim & David L. Rouss.. Marie L. Besançon. Relative Re.. Henrik Urdal. People vs. Malth.. Quan Li & Ming Wen. The Immedi.. Karen Rasler & William R. Thom.. James Meernik. Justice and Pea.. Christina Schatzman . Politica.. Jacob Shamir & Khalil Shikaki .. Douglas M. Gibler, Toby J. Rid.. Ron P. Smith & Ali Tasiran. Th.. Erik Melander . Political Gend.. J. Joseph Hewitt. A Crisis-Den.. Charles R. Boehmer & David Sob.. Karl R. DeRouen Jr & Shaun Gol.. Vally Koubi. War and Economic .. Yehudith Auerbach & Yaeli Bloc.. Eric Neumayer. Inequality and .. link to google search results.. imported to Mendeley?.. PDB.. 1OHO.. 1PK3.. 1RJC.. 1S7Y.. 1SB2.. 1SK0.. 1T2B.. 1T4R.. 1TB0.. 1TCU.. 1TI8.. 1TJR.. 1TL6.. 1TT9.. 1TTO.. 1TZ1.. 1U3H.. 1U6T.. 1U72.. 1U9Q.. 1UWA.. 1V9X.. 1VBJ.. 1VDN.. 1VGK.. 1VGP.. 1W6G.. 1W78.. 1W8U.. 1W9X.. 1WA9.. 1WBU.. 1WCY.. 1WEL.. 1WLM.. 1WNM.. 1WRY.. 1WV0.. 1WVL.. 1WY3.. 1WZ5.. 1WZL.. 1X32.. 1X37.. 1X5E.. 1X6B.. 1X7A.. 1X8C.. 1XKF.. 1XLN.. 1XO2.. 1XQQ.. 1XQX.. 1XRO.. 1XSF.. 1XSX.. 1XWR.. 1XY9.. 1XYR.. 1XYU.. 1XZ8.. 1Y0J.. 1Y1Q.. 1Y1U.. 1Y32.. 1Y3A.. 1Y3W.. 1Y4C.. 1Y8K.. 1YD6.. 1YF4.. 1YHG.. 1YIG.. 1YJI.. 1YJJ.. 1YKQ.. 1YLA.. 1YLR.. 1YN9.. 1YO8.. 1YOB.. 1YQ2.. 1YSH.. 1YSW.. 1YVI.. 1YXN.. 1YZE.. 1YZR.. 1YZS.. 1Z16.. 1Z4R.. 1Z73.. 1Z75.. 1Z92.. 1Z9G.. 1ZI9.. 1ZJ2.. 1ZKM.. 1ZL6.. 1ZND.. 1ZQ9.. 1ZR5.. 1ZRB.. 1ZRS.. 1ZWM.. 1ZX8.. 2A0J.. 2A1X.. 2A3L.. 2A4F.. 2A5D.. 2A77.. 2A78.. 2A8M.. 2A9M.. 2ACV.. 2ADJ.. 2AFT.. 2AV4.. 2AXY.. 2B0O.. 2B6A.. 2B7O.. 2BAK.. 2BE4.. 2BGY.. 2BH8.. 2BHM.. 2BLV.. 2BO7.. 2BRL.. 2BU1.. 2BUJ.. 2BV3.. 2BW2.. 2BYD.. 2BZ8.. 2C0X.. 2C1N.. 2C3D.. 2C3Q.. 2C43.. 2CR8.. 2CRL.. 2CVJ.. 2D2S.. 2ET4.. 2F8M.. 2FDS.. title.. article reference.. TreeBASE.. S1096.. S1153.. S1171.. S1191.. S1203.. S1212.. S1215.. S1223.. S1224.. S1225.. S1227.. S1228.. S1229.. S1230.. S1231.. S1232.. S1234.. S1235.. S1236.. S1237.. S1242.. S1243.. S1244.. S1247.. S1249.. S1250.. S1252.. S1253.. S1256.. S1257.. S1258.. S1260.. S1261.. S1262.. S1263.. S1265.. S1267.. S1268.. S1270.. S1271.. S1273.. S1274.. S1275.. S1276.. S1277.. S1278.. S1279.. S1281.. S1282.. S1284.. S1285.. S1290.. S1291.. S1292.. S1293.. S1294.. S1298.. S1301.. S1302.. S1303.. S1305.. S1306.. S1307.. S1309.. S1310.. S1311.. S1313.. S1314.. S1316.. S1319.. S1323.. S1324.. S1325.. S1326.. S1327.. S1330.. S1333.. S1334.. S1335.. S1336.. S1338.. S1339.. S1341.. S1343.. S1344.. S1347.. S1349.. S1350.. S1351.. S1352.. S1354.. S1355.. S1356.. S1358.. S1359.. S1360.. S1362.. S1363.. S1364.. S1368.. S1369.. S1372.. S1373.. S1375.. S1377.. S1378.. S1379.. S1381.. S1383.. S1384.. S1385.. S1386.. S1388.. S1389.. S1390.. S1392.. S1395.. S1400.. S1403.. S1413.. S1415.. S1416.. S1418.. S1419.. S1425.. S1430.. S1455.. S1458.. S1460.. S1463.. S1472.. S1485.. S1500.. S1512.. S1551.. S1567.. S1594.. S1601.. S1648.. S2116.. S2144.. (blank).. (blank).. Pangaea.. http://doi.pangaea.de/10.1594/PANGAEA.206394.. http://doi.pangaea.de/10.1594/PANGAEA.230042.. http://doi.pangaea.de/10.1594/PANGAEA.315658.. http://doi.pangaea.de/10.1594/PANGAEA.319950.. http://doi.pangaea.de/10.1594/PANGAEA.328911.. http://doi.pangaea.de/10.1594/PANGAEA.339110.. http://doi.pangaea.de/10.1594/PANGAEA.370797.. http://doi.pangaea.de/10.1594/PANGAEA.472208.. http://doi.pangaea.de/10.1594/PANGAEA.484677.. http://doi.pangaea.de/10.1594/PANGAEA.56129.. http://doi.pangaea.de/10.1594/PANGAEA.670929.. http://doi.pangaea.de/10.1594/PANGAEA.672035.. http://doi.pangaea.de/10.1594/PANGAEA.676688.. http://doi.pangaea.de/10.1594/PANGAEA.676892.. http://doi.pangaea.de/10.1594/PANGAEA.684703.. http://doi.pangaea.de/10.1594/PANGAEA.685594.. http://doi.pangaea.de/10.1594/PANGAEA.688263.. http://doi.pangaea.de/10.1594/PANGAEA.690658.. http://doi.pangaea.de/10.1594/PANGAEA.690848.. http://doi.pangaea.de/10.1594/PANGAEA.691304.. http://doi.pangaea.de/10.1594/PANGAEA.691478.. http://doi.pangaea.de/10.1594/PANGAEA.694086.. http://doi.pangaea.de/10.1594/PANGAEA.700959.. http://doi.pangaea.de/10.1594/PANGAEA.701279.. http://doi.pangaea.de/10.1594/PANGAEA.704257.. http://doi.pangaea.de/10.1594/PANGAEA.707898.. http://doi.pangaea.de/10.1594/PANGAEA.708249.. http://doi.pangaea.de/10.1594/PANGAEA.710774.. http://doi.pangaea.de/10.1594/PANGAEA.710788.. http://doi.pangaea.de/10.1594/PANGAEA.710795.. http://doi.pangaea.de/10.1594/PANGAEA.711337.. http://doi.pangaea.de/10.1594/PANGAEA.711520.. http://doi.pangaea.de/10.1594/PANGAEA.711534.. http://doi.pangaea.de/10.1594/PANGAEA.711655.. http://doi.pangaea.de/10.1594/PANGAEA.711656.. http://doi.pangaea.de/10.1594/PANGAEA.711985.. http://doi.pangaea.de/10.1594/PANGAEA.711998.. http://doi.pangaea.de/10.1594/PANGAEA.712921.. http://doi.pangaea.de/10.1594/PANGAEA.712938.. http://doi.pangaea.de/10.1594/PANGAEA.713701.. http://doi.pangaea.de/10.1594/PANGAEA.720961.. http://doi.pangaea.de/10.1594/PANGAEA.721804.. http://doi.pangaea.de/10.1594/PANGAEA.722600.. http://doi.pangaea.de/10.1594/PANGAEA.722622.. http://doi.pangaea.de/10.1594/PANGAEA.726861.. http://doi.pangaea.de/10.1594/PANGAEA.727523.. http://doi.pangaea.de/10.1594/PANGAEA.728138.. http://doi.pangaea.de/10.1594/PANGAEA.728219.. http://doi.pangaea.de/10.1594/PANGAEA.728220.. http://doi.pangaea.de/10.1594/PANGAEA.733691.. http://doi.pangaea.de/10.1594/PANGAEA.736818.. http://doi.pangaea.de/10.1594/PANGAEA.736977.. http://doi.pangaea.de/10.1594/PANGAEA.738239.. http://doi.pangaea.de/10.1594/PANGAEA.738240.. http://doi.pangaea.de/10.1594/PANGAEA.738241.. http://doi.pangaea.de/10.1594/PANGAEA.738242.. http://doi.pangaea.de/10.1594/PANGAEA.738246.. http://doi.pangaea.de/10.1594/PANGAEA.738255.. http://doi.pangaea.de/10.1594/PANGAEA.738263.. http://doi.pangaea.de/10.1594/PANGAEA.738265.. http://doi.pangaea.de/10.1594/PANGAEA.738279.. http://doi.pangaea.de/10.1594/PANGAEA.738282.. http://doi.pangaea.de/10.1594/PANGAEA.738377.. http://doi.pangaea.de/10.1594/PANGAEA.738441.. http://doi.pangaea.de/10.1594/PANGAEA.738561.. http://

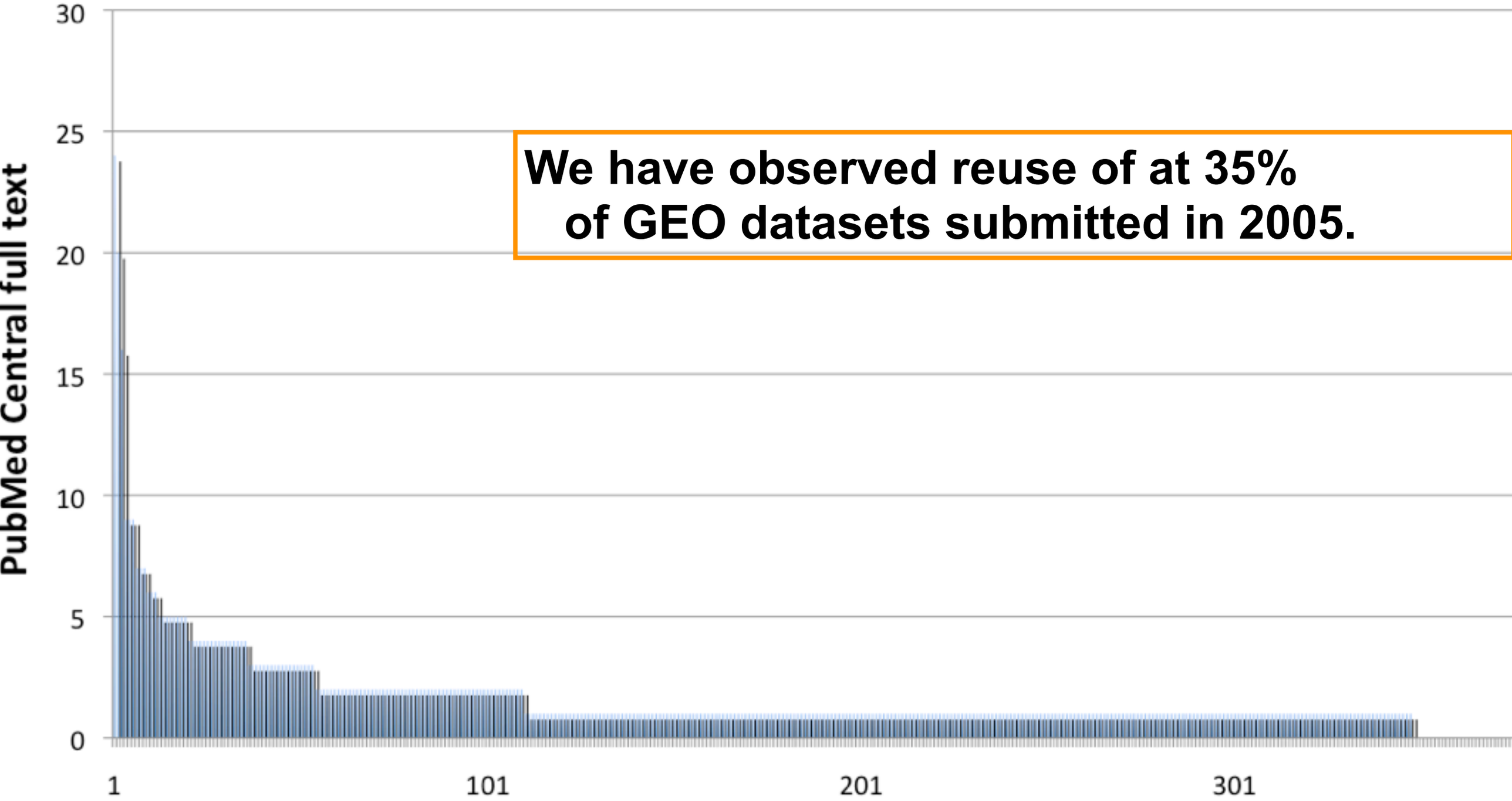

WEB OF KNOWLEDGE
Sign In
All Databases
Select a Database
Web of Science
Search
Author Finder
Cited Reference Search
Web of Science


Google
scholar

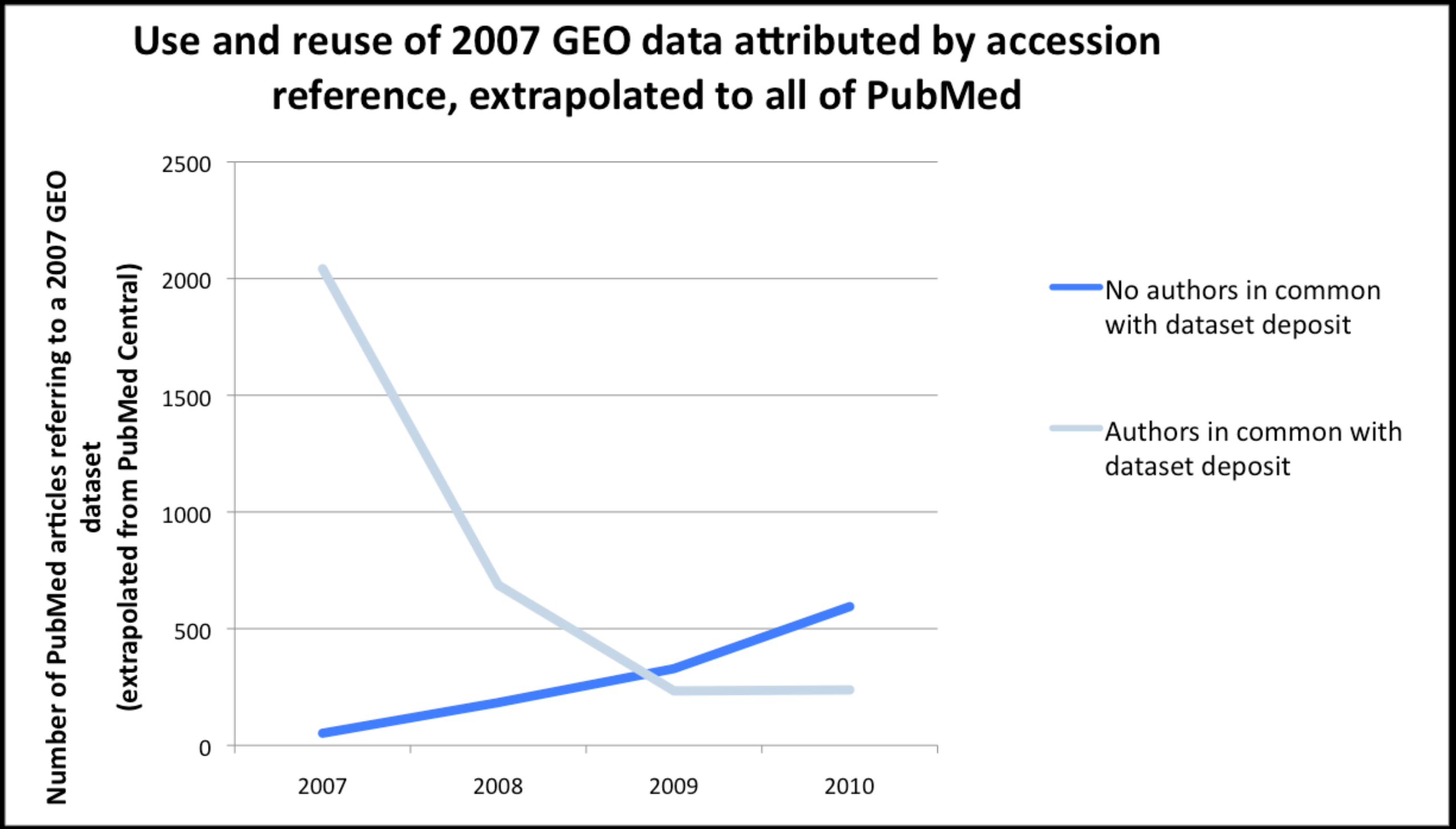
cumulative use of 100 datasets, by repo



Number of times a 2007 GEO accession was mentioned in PMC, 2007-2010, excluding mentions by original authors



1) a new lease on life



2) more impact per funding dollar

Traditional research funding:

$400k = 16 papers

At Dryad cost levels,
at similar levels of reuse to GEO,
$400k would facilitate 1000 reuse papers

A stellar Scientific ROI is in easy reach.

Piwowar, Vision, Whitlock (2011)
Data archiving is a good investment.
Nature 473, 285

Research Remix

May 19, 2011

Full Text And Details For Nature Letter "Data Archiving Is A Good Investment"

Filed under: Uncategorized — Heather Piwowar @ 12:24 pm

I'm happy to say that we've just had a Letter to the Editor published in *Nature*:

Piwowar, HA, Vision, TJ, & Whitlock, MC (2011). Data archiving is a good investment *Nature, 473* (7347), 285-285 DOI: 10.1038/473285a

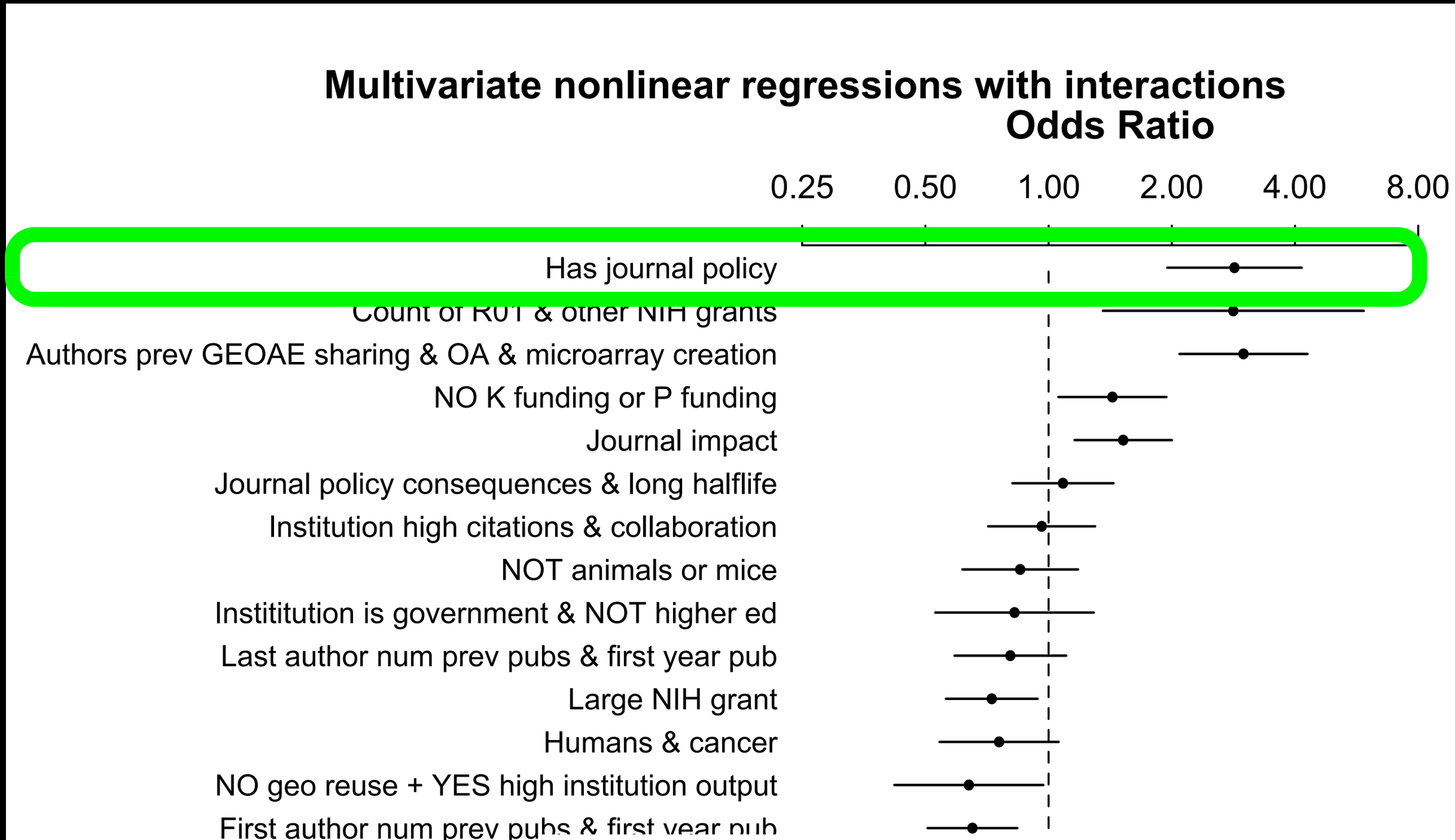
http://researchremix.wordpress.com/2011/05/19/nature-letter/



http://www.flickr.com/photos/davemurr/4592014327/



http://www.flickr.com/photos/wwarby/5109443065/



OPEN ACCESS Freely available online

PLoS one

Who Shares? Who Doesn't? Factors Associated with Openly Archiving Raw Research Data

Heather A. Piwowar*¤

why should journals care?

drive views and visibility
might boost your citations!

OPEN ACCESS Freely available online

PLoS one

Sharing Detailed Research Data Is Associated with Increased Citation Rate

Heather A. Piwowar*, Roger S. Day, Douglas B. Fridsma

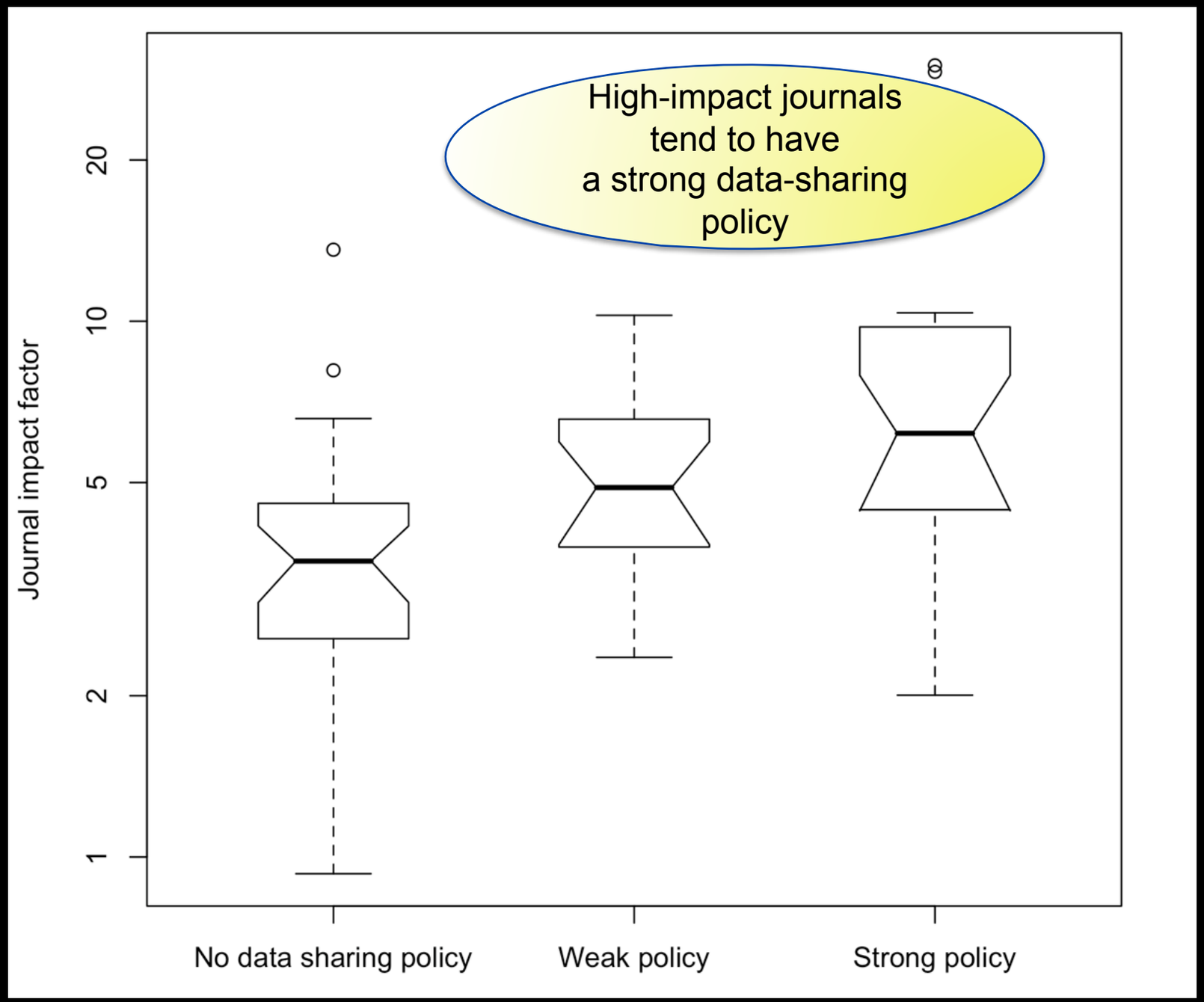
Department of Biomedical Informatics, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, United States of America

puts you in good company



"An inherent principle of publication is that others should be able to replicate and build upon the authors' published claims. Therefore, **a condition of publication in a Nature journal** is that authors are required to make materials, data and associated protocols available in a publicly accessible database …"

http://www.nature.com/authors/editorial_policies/availability.html
http://www.nature.com/nature/journal/v453/n7197/index.html


High-impact journals
tend to have
a strong data-sharing
policy
Journal impact factor
1
2
5
10
20
No data sharing policy
Weak policy
Strong policy

signals that you are serious about quality of research

clarify peer review

standardize costs for supplementary information while embracing best practices

- preservation
- citation
- discovery
- …



right now: leading edge
later: lagging edge

not sure? try it.

how can journals start?

Education

Part of the social contract of publication
Data linked to the publication
Upon request doesn’t work
Journals are probably not the host for data

Written policies

for authors
for reviews
for copyeditors

for data archiving AND data citation.

Strong Written policies

Joint Data Archiving Policy = JDAP

This Journal requires, as a condition for publication, that data supporting the results in the paper should be archived in an appropriate public archive, such as << list of recommended archives here >>.

Data are important products of the scientific enterprise, and they should be preserved and usable for decades in the future. Authors may elect to have the data publicly available at time of publication, or, if the technology of the archive allows, may opt to embargo access to the data for a period up to a year after publication. Exceptions may be granted at the discretion of the editor, especially for sensitive information such as human subject data or the location of endangered species.

Make it fun

an award?
an editorial?
an issue on replication?

“Data as topic”

more info?

- Joint Data Archiving Policy (JDAP)

- Dryad Digital Repository (Biology+Medicine)

- Nature's Instr. to Authors on data availability

- ICPSR's "Guide to Social Science Data Preparation and Archiving"

- UK AHRC - Arts & Humanities Research Council requirement for deposit of datasets

- Data repositories: http://datacite.org/repolist



http://www.flickr.com/photos/sunrise/35819369/

Data highlights an issue that is true
for all research dissemination.

Many uses aren’t reflected in citations.

A network of ideas: bibliometrics.

In 1961, Garfield creates the Science Citation Index.

- replaces expert judges with crowdsourced judgements
- based on existing patterns of use: mining, not asking.
- And that's awesome!

slide by Jason Priem: http://bit.ly/x2aSI9

But only part of the picture

1. Only one type of **`person`**: academics.

2. Only one kind of **`resource`**: scholarly articles.

3. Only one kind of ***`use:`*** using to support a scholarly article.

slide by Jason Priem: http://bit.ly/x2aSI9

Web promises new tools for conversation.

reference managers



blogs



social bookmarking



social networks

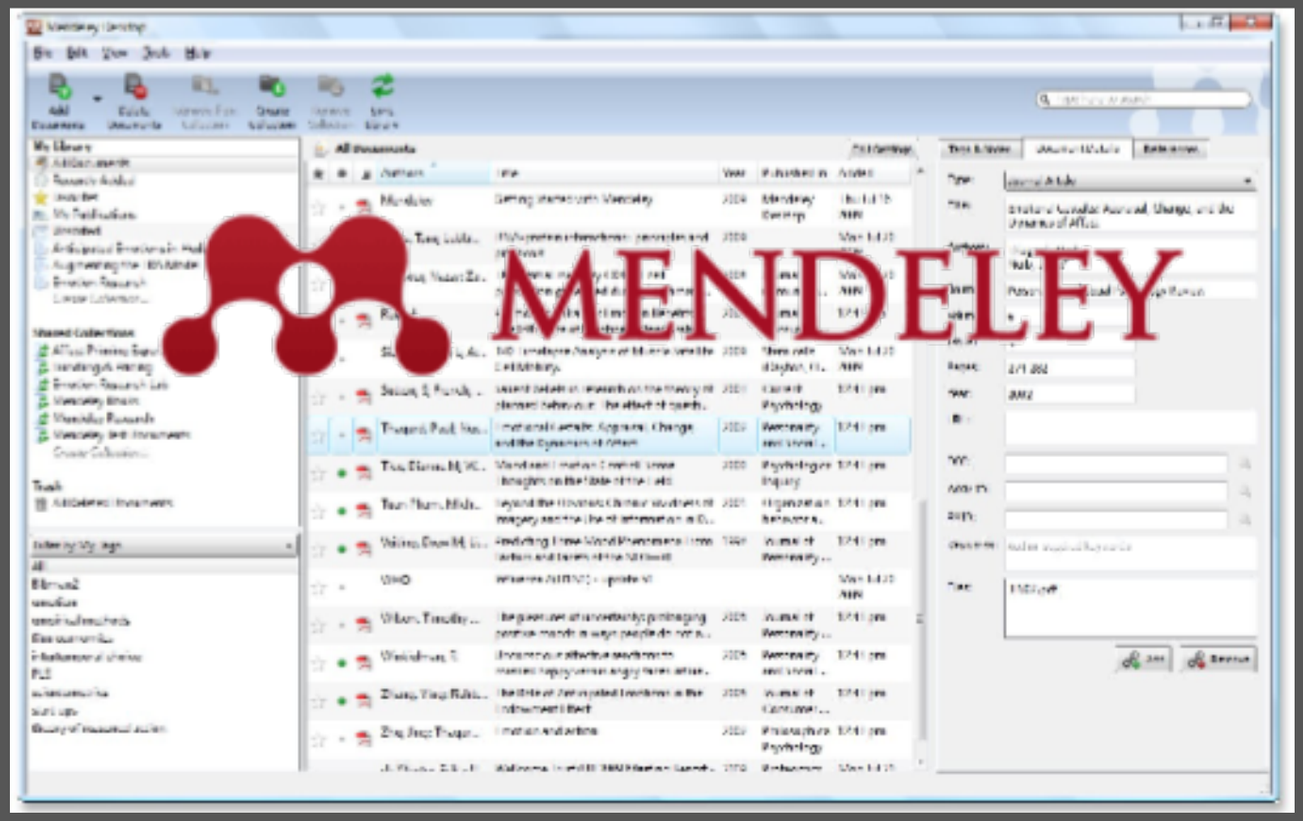


slide by Jason Priem: http://bit.ly/x2aSI9

Examples: Mendeley

1.6 million user libraries

160 million papers (MEDLINE has 18 million...)



slide by Jason Priem: http://bit.ly/x2aSI9

Examples: Twitter

In one month, over 58k citations from Twitter to scholarly articles (citwaitions?)

It is like having a jury preselect what will probably interest you…. Occasionally there will be something that people will link to, and it will change what I think, or what I'm doing, or what I'm interested in.

-study participant

slide by Jason Priem: http://bit.ly/x2aSI9



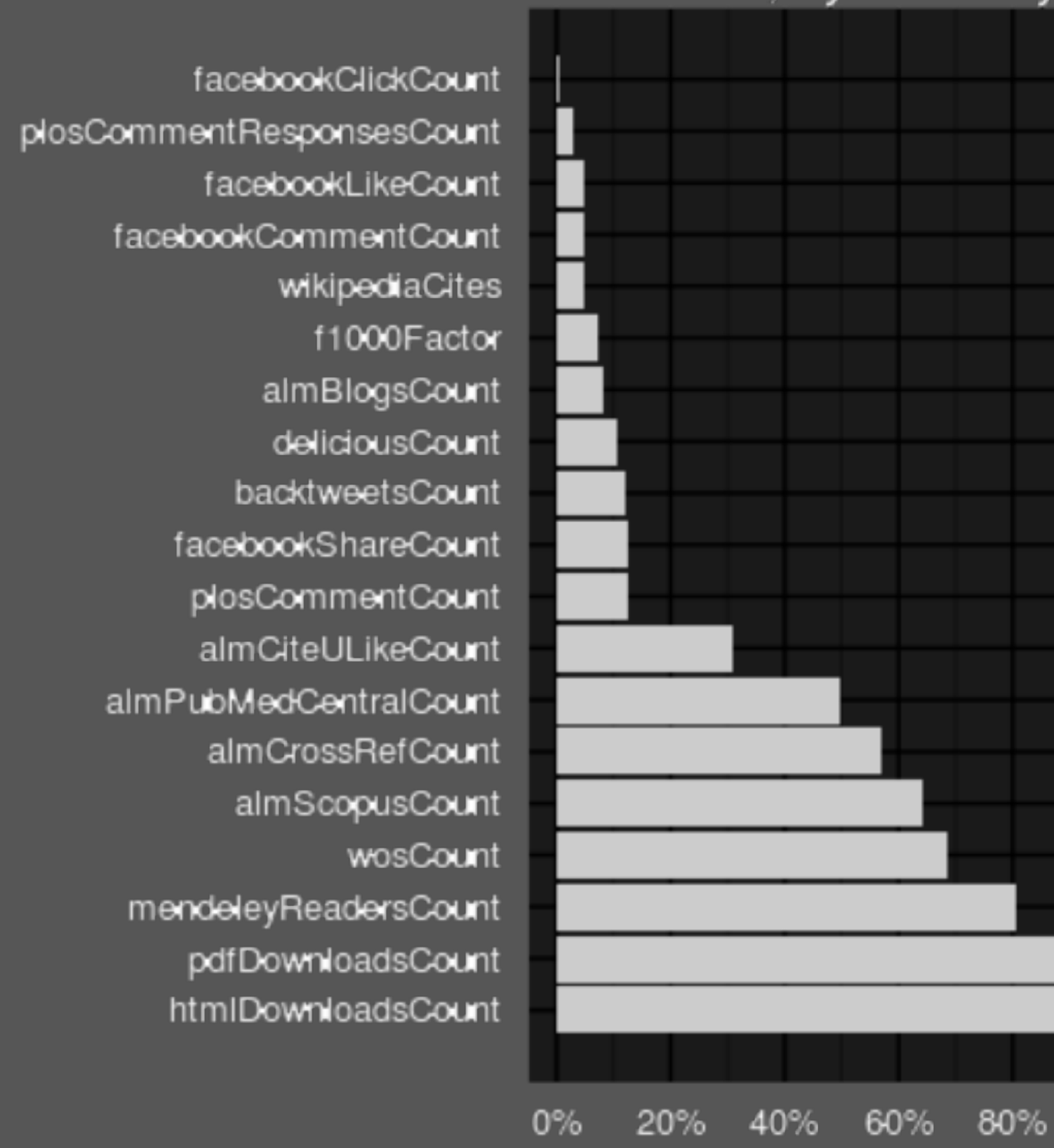
http://www.flickr.com/photos/pixscapes/4331070047

Bibliometrics mined impact on the first scholarly Web.

altmetrics mines impact on the next one.

slide by Jason Priem: http://bit.ly/x2aSI9

There's lots of altmetrics data out there already.



slide by Jason Priem: http://bit.ly/x2aSI9

altmetrics.org/tools

total-impact
altmetric.com
citedIn
Reader Meter
PLoS article-level metrics
Science Card

total Impact

twitter about

Uncover the invisible impact of research.

Create a collection of research objects you want to track. We'll provide you a report of the total impact of this collection.
You can peruse a sample report or check out the most recently shared reports.

Collect research objects > **Create report**

Paste object IDs,

Add one DOI, PubMed ID, URL, or other supported identifier per line:

```
10.1371/journal.pcbi.1000361
20334632
2BAK
GSE2109
10.5061/dryad.1295
http://www.carlboettiger.info/research/lab-notebook
http://www.slideshare.net/phylogenomics/eisenall-hands
```

Add to collection

...or pull object IDs from existing collections.

- Mendeley profiles
- Mendeley groups
- Slideshare accounts
- Dryad dataset authors
- PubMed grants
- GitHub users
- GitHub organizations

Something missing on import?
See a list of current limitations.

Name your collection:

my collection

get my metrics!

… or fetch a quick collection based on your Mendeley contacts and public groups »

http://total-impact.org

total·Impact

twitter about

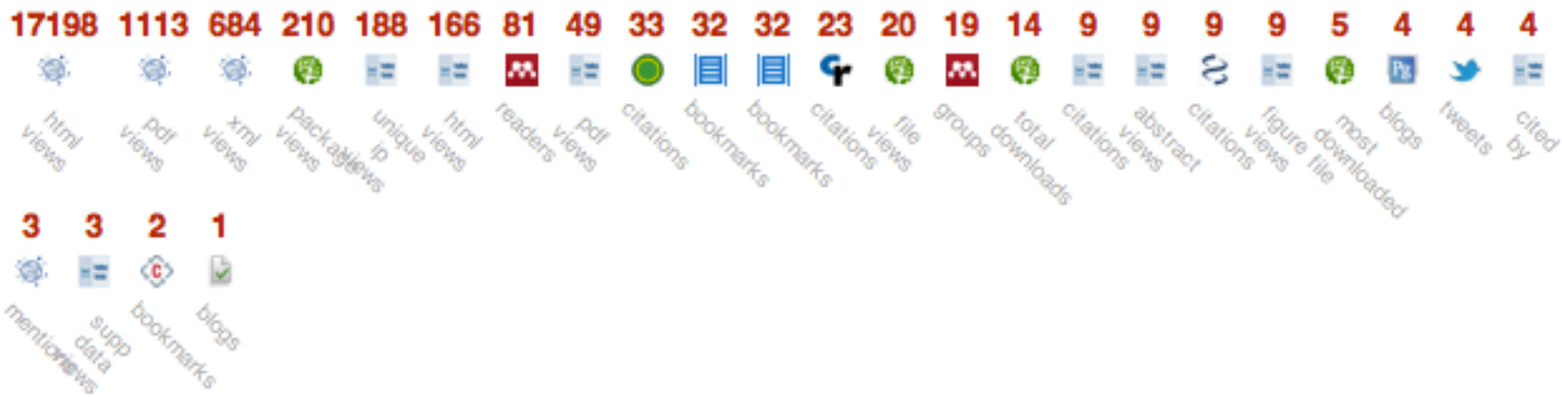
Heather Piwowar

run update | download data | 54 artifacts; updated 5 Dec, 2011

Permalink: http://total-impact.org/collection/sURpEg copy Tweet 2

article

05f22f70-6d0b-11df-afb8-0026b95d30b2
Piwowar, Day, Fridsma (2007) Sharing Detailed Research Data Is Associated with Increased Citation Rate *PLoS ONE.*
Piwowar HA, Day RS, Fridsma DB Data from: Sharing detailed research data is associated with increased citation rate. *Dryad Data Repository.*



10.1038/npre.2008.1701.1
Piwowar, Chapman (2008) Prevalence and Patterns of Microarray Data Sharing *Nature Precedings.*



10.1016/j.joi.2009.11.010
Piwowar, Chapman (2010) Public sharing of research datasets: A pilot study of associations *Journal of Informetrics.*
Piwowar HA, Chapman WW Data from: Public sharing of research datasets: a pilot study of associations. *Dryad Data Repository.*



10.1525/bio.2011.61.8.8
McDade, Maddison, Guralnick, Piwowar, Jameson, Helgen, Herendeen, Hill, Vis (2011) Biology Needs a Modern Assessment System for Professional Productivity *BioScience.*



http://total-impact.org

dataset

10.5061/dryad.j1fd7

Piwowar, Vision, Whitlock (0) Data from: Data archiving is a good use of research funds . Piwowar HA, Vision TJ, Whitlock MC Data from: Data archiving is a good investment. *Dryad Data Repository.*



10.5061/dryad.j2c4g

Piwowar HA, Day RS, Fridsma DB Data from: Sharing detailed research data is associated with increased citation rate. *Dryad Data Repository.*



10.5061/dryad.mf1sd

Piwowar HA Data from: Who shares? Who doesn't? Factors associated with openly archiving raw research data. *Dryad Data Repository.*



10.5061/dryad.3td2f

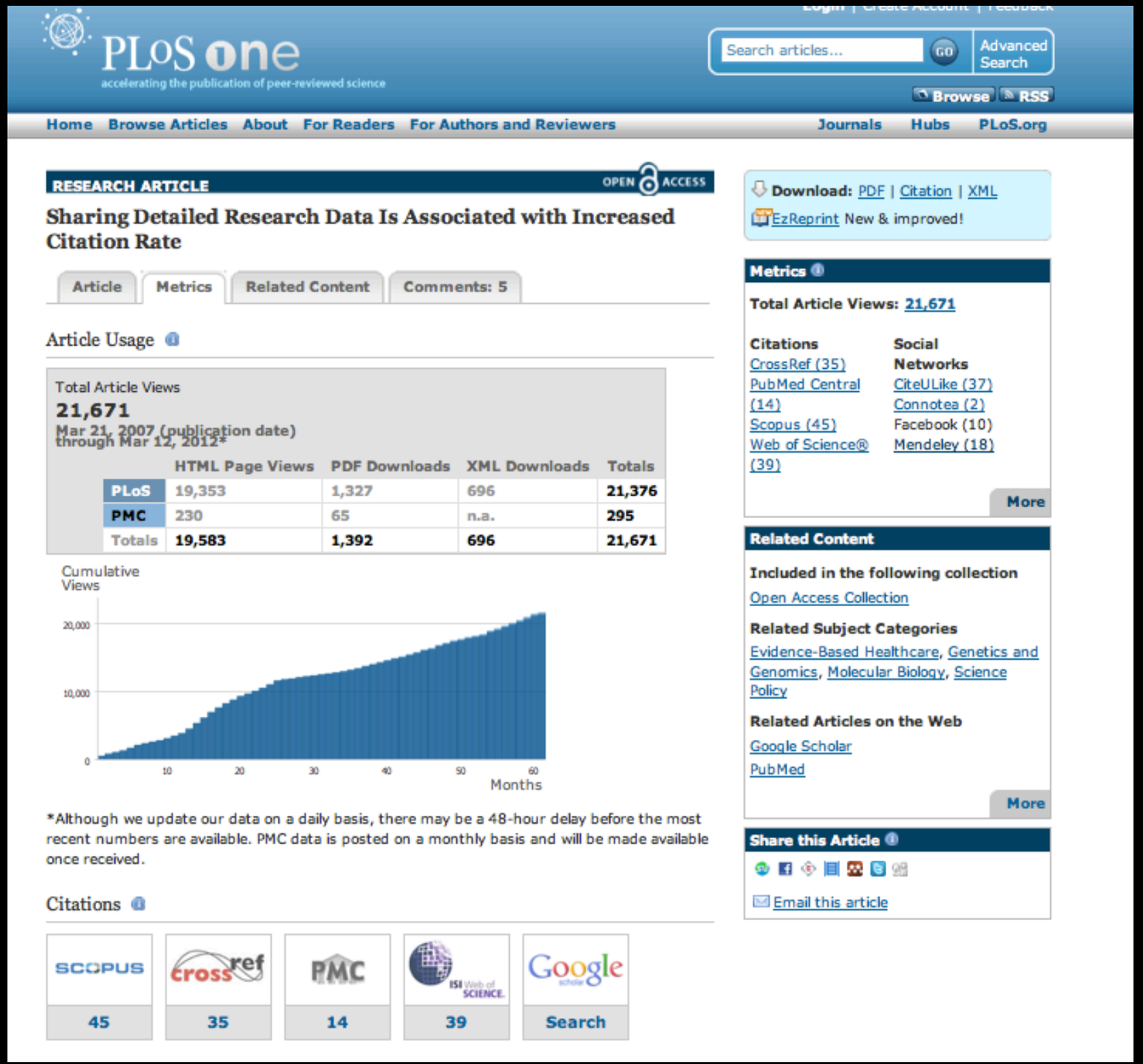
Piwowar HA, Chapman WW Data from: Public sharing of research datasets: a pilot study of associations. *Dryad Data Repository.*



http://total-impact.org

why should journals care?

> competitive advantage for authors



> not just winners and losers

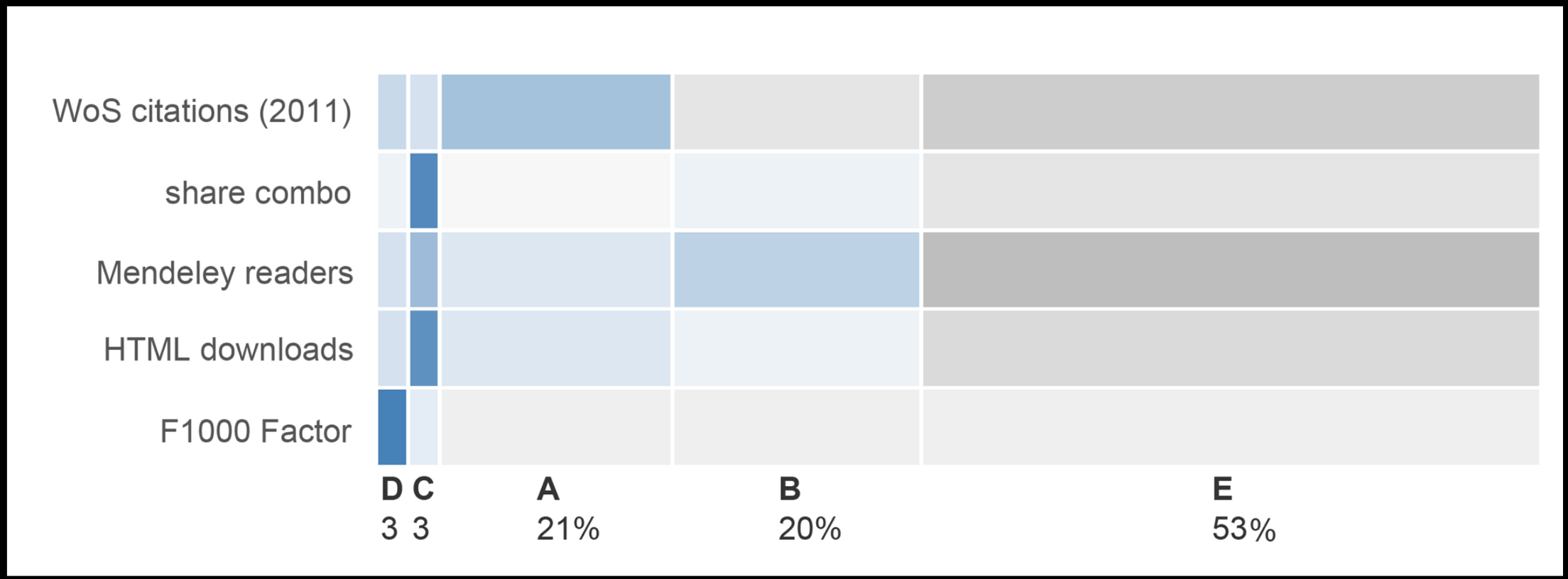
journal impact factor:



altmetrics? ice cream flavors!



CC-BY-NC by maniacyak on flickr
http://www.flickr.com/photos/maniacyak/3432589472



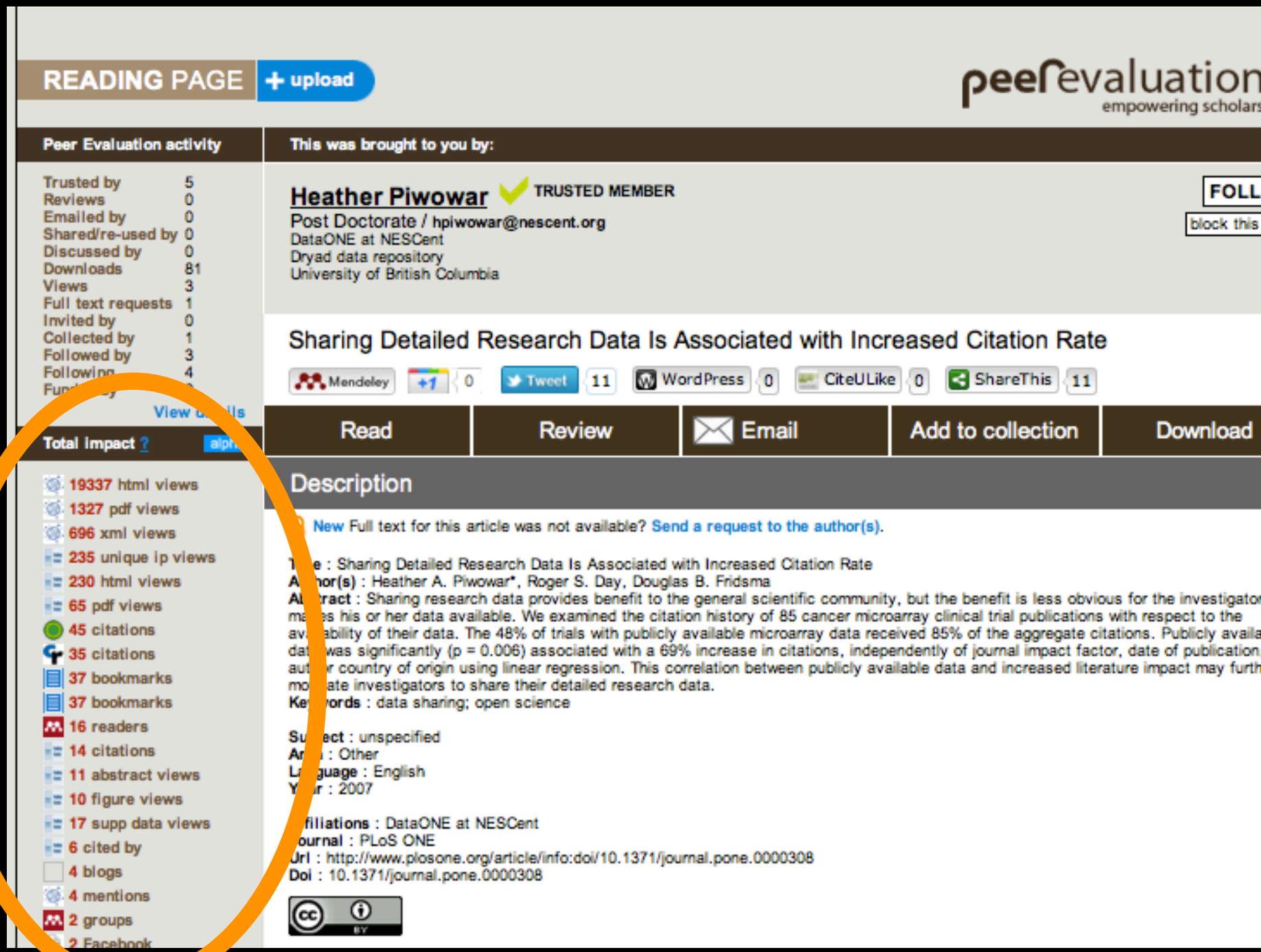
http://researchremix.wordpress.com/2012/01/31/31-flavours/

> aligns incentives.
more visibility is good for authors, journals, society.

how can journals start?

display downloads

display more than downloads: total-impact



start experimenting with altmetrics on your site for filtering, sorting, recommending

You searched for: cats Search again

Advanced Search | Help

3,517 Results

Cat Dilemma: Too Protected To Escape Trophy Hunting?

Lucille Palazy, Christophe Bonenfant, Jean-Michel Gaillard, Franck Courchamp

*Ecology Science Policy **Cat** Dilemma: Too Protected ... **Cat** Dilemma: Too Protected Escape Trophy Hunting? ... this period. Caracal (Caracal caracal), African wild **cat***

PLoS ONE: Research Article, published 27 Jul 2011

10.1371/journal.pone.0022424

Views: 1236 Citations: Yes Bookmarks: None

Expression and Activity of a Novel Cathelicidin from Domestic Cats

Brian C. Leonard, Hiutung Chu, Jennifer L. Johns, Richard L. Gallo, Peter F. Moore, Stanley L. Marks, Charles L. Bevins

*and Activity of a Novel Cathelicidin from Domestic **Cats** ... Expression and Activity of a Novel Cathelicidin from Domestic **Cats** ... cathelicidin in domestic **cats** (Felis catus Expression*

PLoS ONE: Research Article, published 12 Apr 2011

10.1371/journal.pone.0018756

Views: 621 Citations: Yes Bookmarks: Yes

make your usage data openly available for researchers to study what these things mean.

more info?

- video: Jason Priem Purdue Talk

- "Scholars Seek Better Ways to Track Impact Online" *The Chronicle of Higher Education* Jan2012

- Google: "Article-Level Metrics"

- Twitter: #altmetrics

- PLoS ONE altmetrics research Collection



http://www.flickr.com/photos/huzzahvintage/4577075021/



http://www.flickr.com/photos/supersam5/216868485/

DataONE
NESCent
National Evolutionary Synthesis Center
DRYAD
the BIODIVERSITY RESEARCH CENTRE
OPEN SOCIETY FOUNDATIONS
NSF

thank you

Todd Vision: PI of Dryad

Jason Priem: co-PI of total-impact

Also: Mike Whitlock, Jonathan Carlson, Estephanie Sta Maria
The open science online community and those who release their articles, datasets and photos openly.

blog: ResearchRemix.wordpress.com
@researchremix