UNIVERSITY OF AMSTERDAM

UvA-DARE (Digital Academic Repository)

Reply to Nielsen et al.: Social mindfulness is associated with countries' environmental performance and individual environmental concern

Van Doesum, N.J.; Murphy, R.O.; Gallucci, M.; Aharonov-Majar, E.; Athenstaedt, U.; Au, W.T.; Bai, L.; Böhm, R.; Bovina, I.; Buchan, N.R.; Chen, X.-P.; Dumont, K.B.; Engelmann, J.B.; Eriksson, K.; Euh, H.; Fiedler, S.; Friesen, J.; Gächter, S.; Garcia, C.; González, R.; Graf, S.; Growiec, K.; Guimond, S.; Hřebíčková, M.; Immer-Bernold, E.; Joireman, J.; Karagonlar, G.; Kawakami, K.; Kiyonari, T.; Kou, Y.; Kyrtsis, A.-A.; Lay, S.; Leonardelli, G.J.; Li, N.P.; Li, Y.; Maciejovsky, B.; Manesi, Z.; Mashuri, A.; Mok, A.; Moser, K.S.; Moták, L.; Netedu, A.; Platow, M.J.; Raczka-Winkler, K.; Reinders Folmer, C.P.; Reyna, C.; Romano, A.; Shalvi, S.; Simão, C.; Stivers, A.W.; Strimling, P.; Tsirbas, Y.; Utz, S.; van der Meij, L.; Waldzus, S.; Wang, Y.; Weber, B.; Weisel, O.; Wildschut, T.; Winter, F.; Wu, J.; Yong, J.C.; van Lange, P.A.M.

DOI
10.1073/pnas.2122077119

Publication date
2022

Document Version
Final published version

Published in
Proceedings of the National Academy of Sciences

License
CC BY-NC-ND

Link to publication

Citation for published version (APA):
Van Doesum, N. J., Murphy, R. O., Gallucci, M., Aharonov-Majar, E., Athenstaedt, U., Au, W. T., Bai, L., Böhm, R., Bovina, I., Buchan, N. R., Chen, X.-P., Dumont, K. B., Engelmann, J. B., Eriksson, K., Euh, H., Fiedler, S., Friesen, J., Gächter, S., Garcia, C., ... van Lange, P. A. M. (2022). Reply to Nielsen et al.: Social mindfulness is associated with countries' environmental performance and individual environmental concern. *Proceedings of the National Academy of Sciences*, *119*(9), Article e2122077119. https://doi.org/10.1073/pnas.2122077119

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

UvA-DARE is a service provided by the library of the University of Amsterdam (https://dare.uva.nl)

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.

Download date:11 Oct 2026

LETTER

REPLY TO NIELSEN ET AL.:

Social mindfulness is associated with countries' environmental performance and individual environmental concern

Niels J. Van Doesum[a,b,1,2], Ryan O. Murphy[c,d,2], Marcello Gallucci[e,2], Efrat Aharonov-Majar[f], Ursula Athenstaedt[g], Wing Tung Au[h], Liying Bai[i], Robert Böhm[j,k,l], Inna Bovina[m], Nancy R. Buchan[n], Xiao-Ping Chen[o], Kitty B. Dumont[p], Jan B. Engelmann[q,r], Kimmo Eriksson[s], Hyun Euh[t], Susann Fiedler[u], Justin Friesen[v], Simon Gächter[w], Camilo Garcia[x], Roberto González[y], Sylvie Graf[z], Katarzyna Growiec[aa], Serge Guimond[bb], Martina Hřebíčková[z], Elizabeth Immer-Bernold[cc], Jeff Joireman[dd], Gokhan Karagonlar[ee], Kerry Kawakami[ff], Toko Kiyonari[gg], Yu Kou[hh], Alexandros-Andreas Kyrtsis[ii], Siugmin Lay[jj], Geoffrey J. Leonardelli[kk,ll], Norman P. Li[mm], Yang Li[nn], Boris Maciejovsky[oo], Zoi Manesi[pp], Ali Mashuri[qq,rr], Aurelia Mok[ss], Karin S. Moser[tt,uu], Ladislav Moták[vv], Adrian Netedu[ww], Michael J. Platow[xx], Karolina Raczka-Winkler[yy], Christopher P. Reinders Folmer[zz,aaa], Cecilia Reyna[bbb], Angelo Romano[a], Shaul Shalvi[q], Cláudia Simão[ccc], Adam W. Stivers[ddd], Pontus Strimling[eee], Yannis Tsirbas[ii], Sonja Utz[fff,ggg], Leander van der Meij[hhh], Sven Waldzus[iii], Yiwen Wang[jjj], Bernd Weber[yy], Ori Weisel[kkk], Tim Wildschut[lll], Fabian Winter[mmm], Junhui Wu[nnn,ooo], Jose C. Yong[ppp], and Paul A. M. Van Lange[pp,2]

Nielsen et al. (1) argue that Van Doesum et al. (2) need to consider three points for their interpretation of a positive association between individual-level social mindfulness (SoMi) and environmental performance (EPI) at the country level (3). The association is weaker when 1) it is controlled for GDP and 2) when the data of three countries are removed; also, 3) the data do not address the association between SoMi and individual-level environmental concern. We discuss these points in turn.

First, as we noted in a previous reply (4), there is a strong association between GDP and EPI (the Pearson correlation is 0.64 for raw GDP and 0.78 for log-transformed GDP). This should not be surprising, because, as the name reflects, EPI addresses "performance" which is linked to both motivation and the ability to do so. Ability is clearly associated with a country's resources to have an impact. Thus, the observed correlation is a valid result, on average across countries, and it should not be a surprise that GDP accounts for some of the shared variance between SoMi and EPI. Furthermore, we should note that EPI also accounts for shared variance between SoMi and GDP, and we see no strong reason to suggest that GDP should be considered a more proximal predictor of SoMi than EPI.

Second, our cross-national study included 31 countries (2). We agree that the sample is not very large. But leaving out the data of three countries for no special reason, other than that they are influential, is not convincing. In our view, it is good scientific practice to consider each data point as valuable and informative. Moreover, one could also arbitrarily remove three other countries and, in doing so, strengthen the association in the remaining data.

Third, Nielsen et al. (1) conducted a study to complement our data by examining the association between SoMi and four indicators of environmental concern. This study yielded associations that were small in magnitude, yet three of four correlations were statistically significant. Recall that SoMi is focused on dyads and uses a choice-related methodology with less reliance on language. Methodological differences may attenuate associations.

We regard Nielsen et al.'s (1) finding that an inherently dyadic measure predicts broader environmental concerns relevant to society's future as

Author contributions: N.J.V.D., R.O.M., M.G., and P.A.M.V.L. wrote the paper; and E.A.-M., U.A., W.T.A., L.B., R.B., I.B., N.R.B., X.-P.C., K.B.D., J.B.E., K.E., H.E., S.F., J.F., S. Gächter, C.G., R.G., S.G., K.G., S. Guimond, M.H., E.I.-B., J.J., G.K., K.K., T.K., Y.K., A.-A.K., S.L., G.J.L., N.P.L., Y.L., B.M., Z.M., A. Mashuri, A. Mok, K.S.M., L.M., A.N., M.J.P., K.R.-W., C.P.R.F., C.R., A.R., S.S., C.S., A.W.S., P.S., Y.T., S.U., L.v.d.M., S.W., Y.W., B.W., O.W., T.W., F.W., J.W., J.C.Y. revised the paper.

The authors declare no competing interest.

This article is distributed under Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 (CC BY-NC-ND).

[1]To whom correspondence may be addressed. Email: n.j.van.doesum@fsw.leidenuniv.nl.

[2]N.J.V.D., R.O.M., M.G., and P.A.M.V.L. contributed equally to this work.

Published February 25, 2022.

Downloaded from https://www.pnas.org by Universiteit van Amsterdam on July 25, 2022 from IP address 146.50.148.41.

promising—and consistent with the broader idea that SoMi, as a case of kindness to another person, is connected to the presence and development of social capital. They also found associations between another dyadic measure of prosociality (social value orientation) and environmental concerns. These findings complement a recent finding that SoMi is associated with global sustainability, especially ecological footprint of consumption (5). It is important to recognize that there are myriad ingredients to building sustainable societies. Being socially mindful is likely to be one of them.

[a]Social, Economic and Organisational Psychology, Institute of Psychology, Leiden University 2300 RB Leiden, The Netherlands; [b]Knowledge Centre for Psychology and Economic Behaviour, Leiden University 2312 HS Leiden, The Netherlands; [c]Department of Economics, University of Zürich 8006 Zürich, Switzerland; [d]Morningstar Investment Management, Chicago, IL 60602; [e]Faculty of Psychology, University of Milano-Bicocca 20126 Milano, Italy; [f]Department of Psychology, Ben Gurion University of the Negev, Beer-Sheva 8410501, Israel; [g]Department of Social Psychology, Institute of Psychology, University of Graz 8010 Graz, Austria; [h]Department of Psychology, The Chinese University of Hong Kong, Shatin, Hong Kong, China; [i]Department of Applied Psychology, School of Humanities and Social Sciences, Fuzhou University, Fuzhou 350108, China; [j]Department of Psychology, University of Copenhagen 1353 Copenhagen K, Denmark; [k]Department of Economics, University of Copenhagen 1353 Copenhagen K, Denmark; [l]Copenhagen Center for Social Data Science, University of Copenhagen 1353 Copenhagen K, Denmark; [m]Department of Clinical and Legal Psychology, Moscow State University of Psychology and Education, Moscow 127051, Russia; [n]Sonoco International Business Department, Darla Moore School of Business, University of South Carolina, Columbia, SC 29208; [o]Department of Management and Organization, Michael G. Foster School of Business, University of Washington, Seattle, WA 98195; [p]School of Social Sciences, Department of Psychology, University of South Africa 0003 Pretoria, South Africa; [q]Center for Research in Experimental Economics and Political Decision Making, Amsterdam School of Economics, University of Amsterdam, Amsterdam 1001 NJ, The Netherlands; [r]Behavioral and Experimental Economics, The Tinbergen Institute 1082 MS Amsterdam, The Netherlands; [s]Center for Cultural Evolution, Stockholm University 114 18 Stockholm, Sweden; [t]Department of Psychology, University of Minnesota, Minneapolis, MN 55455; [u]Department of Strategy & Innovation, Institute of Cognition & Behavior, Vienna University of Economics and Business 1020 Vienna, Austria; [v]Department of Psychology, University of Winnipeg, Winnipeg, MB R3N 0G1, Canada; [w]Centre for Decision Research and Experimental Economics, School of Economics, University of Nottingham, Nottingham NG7 2RD, United Kingdom; [x]Laboratory of Social Interaction, Psychology Department, Universidad Veracruzana, Veracruz 91095, Mexico; [y]Escuela de Psicología, Pontificia Universidad Católica de Chile, Santiago 7820436, Chile; [z]Department of Personality and Social Psychology, Institute of Psychology, Czech Academy of Sciences 602 00 Brno, The Czech Republic; [aa]Department of Social and Personality Psychology, Institute of Psychology, SWPS University of Social Sciences and Humanities 03-815 Warsaw, Poland; [bb]Laboratoire de Psychologie Sociale et Cognitive, Université Clermont Auvergne, CNRS, Laboratoire de Psychologie Sociale et Cognitive F-63000 Clermont-Ferrand, France; [cc]Sherpany Product Department, Agilentia AG 8001 Zürich, Switzerland; [dd]Department of Marketing and International Business, Carson College of Business, Washington State University, Pullman, WA 99164-4730; [ee]Department of Business, School of Business, Dokuz Eylül University 35390 Izmir, Turkey; [ff]Department of Psychology, York University, Toronto, ON M3J 1P3, Canada; [gg]School of Social Informatics, Aoyama Gakuin University, Kanagawa 252-5258, Japan; [hh]Institute of Developmental Psychology, Beijing Normal University 100875 Beijing, China; [ii]Department of Political Science and Public Administration, National and Kapodistrian University of Athens 10678 Athens, Greece; [jj]Centro de Medición Mide UC, Escuela de Psicología, Pontificia Universidad Católica de Chile 7820436, Santiago, Chile; [kk]Rotman School of Management, University of Toronto, Toronto, ON M5S 3E6, Canada; [ll]Department of Psychology, University of Toronto, Toronto, ON M5S 3E6, Canada; [mm]School of Social Sciences, Singapore Management University, Singapore 178903; [nn]Graduate School of Informatics, Nagoya University, Nagoya 4648610, Japan; [oo]School of Business, University of California, Riverside, CA 92521; [pp]Department of Experimental and Applied Psychology, Institute for Brain and Behavior Amsterdam, Vrije Universiteit Amsterdam 1018 HV Amsterdam, The Netherlands; [qq]Department of Psychology, University of Brawijaya, Malang 65145, Indonesia; [rr]Department of Social Sciences, University of Brawijaya, Malang 65145, Indonesia; [ss]Department of Management, City University of Hong Kong, Kowloon, Hong Kong, China; [tt]Business School, London South Bank University, London SE1 0AA, United Kingdom; [uu]School of Psychology, University of Queensland, Brisbane, QLD 4072, Australia; [vv]Centre de Recherche en Psychologie de la Cognition, du Langage et de l'Emotion, Maison de la Recherche, Aix-Marseille Université, Aix-en-Provence 13100, France; [ww]Department of Sociology and Social Work, Alexandru Ioan Cuza University of Iasi 700460 Iasi, Romania; [xx]Research School of Psychology, The Australian National University, Canberra, ACT 2601, Australia; [yy]Institute of Experimental Epileptology and Cognition Research, University of Bonn 53127 Bonn, Germany; [zz]Department of Developmental, Personality and Social Psychology, Faculty of Psychology and Educational Sciences, Ghent University 9000 Ghent, Belgium; [aaa]Center for Law and Behavior, Department of Jurisprudence, Amsterdam Law School, University of Amsterdam 1001 NA Amsterdam, The Netherlands; [bbb]Instituto de Investigaciones Psicológicas, Consejo Nacional de Investigaciones Científicas y Técnicas, Universidad Nacional de Córdoba 5000 Córdoba, Argentina; [ccc]Católica-Lisbon School of Business and Economics, Universidade Católica Portuguesa 1649-023 Lisbon, Portugal; [ddd]Psychology Department, Gonzaga University, Spokane, WA 99258; [eee]The Institute for Futures Studies, Stockholm 111 36, Sweden; [fff]Social Media Lab, Leibniz-Institut für Wissensmedien 72076 Tübingen, Germany; [ggg]Department of Psychology, University of Tübingen 72074 Tübingen, Germany; [hhh]Department of Industrial Engineering, Eindhoven University of Technology 5600 MB Eindhoven, The Netherlands; [iii]Centro de Investigação e Intervenção Social, Instituto Universitário de Lisboa 1649-026 Lisboa, Portugal; [jjj]Institute of Psychological and Cognitive Sciences, Fuzhou University, Fuzhou 350108, China; [kkk]Coller School of Management, Tel Aviv University, Tel Aviv, Israel 6997801; [lll]Center for Research on Self and Identity, School of Psychology, University of Southampton, Southampton SO17 1BJ, United Kingdom; [mmm]Mechanisms of Normative Change, Max-Planck-Institute for Research on Collective Goods 53115 Bonn, Germany; [nnn]Key Laboratory of Behavioral Science, Institute of Psychology, Chinese Academy of Sciences 100101 Beijing, China; [ooo]Department of Psychology, University of Chinese Academy of Sciences 100049 Beijing, China; and [ppp]School of Social Sciences, Nanyang Technological University, Singapore 639798

1 Y. A. Nielsen, K. A. Ścigała, L. Nockur, T. A. G. Venema, S. Pfattheicher, A cautious note on the relationship between social mindfulness and concern with environmental protection. *Proc. Natl. Acad. Sci. U.S.A.*, 10.1073/pnas.2120348119 (2022).
2 N. J. Van Doesum *et al.*, Social mindfulness and prosociality vary across the globe. *Proc. Natl. Acad. Sci. U.S.A.* **118**, e2023846118 (2021).
3 Environmental Performance Index, 2020 EPI Results. https://epi.yale.edu/epi-results/2020/component/epi. Accessed 22 October 2021.
4 N. J. Van Doesum *et al.*, Reply to Komatsu et al.: From local social mindfulness to global sustainability efforts? *Proc. Natl. Acad. Sci. U.S.A.*, 10.1073/pnas.2119303118 (2022).
5 H. Komatsu, J. Rappleye, I. Silova, Social mindfulness for global environmental sustainability? *Proc. Natl. Acad. Sci. U.S.A.*, 10.1073/pnas.2118710118 (2022).

Downloaded from https://www.pnas.org by Universiteit van Amsterdam on July 25, 2022 from IP address 146.50.148.41.