Elisa C. Baek, Ph.D.

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APPOINTMENTS

National Science Foundation SBE Postdoctoral Research Fellow   2019 - Present
Department of Psychology, UCLA
Sponsoring Scientists: Carolyn Parkinson, Mason Porter, Matthew Lieberman

EDUCATION

Ph.D., Communication   August 2019
Annenberg School for Communication, University of Pennsylvania

> Communication Neuroscience Lab
> Certificate in Social, Cognitive, and Affective Neuroscience (SCAN)
> Dissertation title: *The Role of Mentalizing in Information Propagation*
> Dissertation Committee: Emily Falk (advisor), Joseph N. Cappella, Robert Hornik

M.A., Communication   May 2016
Annenberg School for Communication, University of Pennsylvania

B.A., Communication and Cognitive Neuroscience   May 2012
University of Pennsylvania

> Honors Thesis: An Examination of African Americans in Time and Newsweek Advertisements
> Advisor: John Jackson

RESEARCH AND TEACHING INTERESTS

• Social neuroscience, communication neuroscience, health communication, information propagation, persuasion, social influence, social network analysis, social connection/disconnection

GRANTS & FELLOWSHIPS

National Science Foundation SBE Postdoctoral Fellowship - $165,000   2019-2022
Wharton Risk Center Russell Ackoff Doctoral Student Fellowship - $2,744   2018-2019

PUBLICATIONS

* denotes equal author contributions

Baek, E.C., O'Donnell, M.B., Scholz, C., Pei, R., Garcia, J.O., Vettel, J.M., & Falk, E.B. (2021). Activity in the brain's valuation and mentalizing networks is associated with propagation of online recommendations. Scientific Reports, *11*(1), 11196.

Chang, H.Y., Scholz, C., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.C. (2021). Being the gatekeeper: How thinking about sharing affects neural encoding of information. Cerebral Cortex, bhab060. https://doi.org/10.1093/cercor/bhab060

Baek, E.C., Porter, M.A., & Parkinson, C. (2020). Social network analysis for social neuroscientists. Social Cognitive and Affective Neuroscience, nasaa069. https://doi.org/10.1093/scan/nsaa069

Baek, E.C., Scholz, C., & Falk, E.B. (2020). The neuroscience of persuasion and information propagation: Key role of the mentalizing system. In K. Floyd & R. Weber (Eds.), *Handbook of Communication Science and Biology*. Routledge.

Doré, B.P., Scholz, C., **Baek, E.C.,** & Falk, E.B. (2020). Population sharing of health news information is reflected in a distributed neural index of value. Social Cognitive and Affective Neuroscience, *15*(10), 1111-1119. https://doi.org/10.1093/scan/nsaa129

Scholz, C., Jovanova, M., **Baek, E.C.,** & Falk, E.B. (2020). Media-content sharing as a value-based decision. Current Opinion in Psychology, *31,* 83-88. https://doi.org/10.1016/j.copsyc.2019.08.004

Scholz, C., **Baek, E.C.,** O'Donnell, M. B., & Falk, E. B. (2020). Decision-making about broad- and narrowcasting: a neuroscientific perspective, Media Psychology. *23*(1), 131-155. https://doi.org/10.1080/15213269.2019.1572522

Doré, B.P., Scholz, C., **Baek, E.C.,** Garcia, J.O., O'Donnell, M.B., Bassett, D.S., Vettel, J.M., & Falk, E.B. (2019). Brain activity predicts population information sharing by capturing consensus judgments of value. Cerebral Cortex, *29*(7). https://doi.org/10.1093/cercor/bhy176

Baek, E.C. & Falk, E.B. (2018). Persuasion and Influence: What makes a successful persuader? Current Opinion in Psychology, *24*, 53-57. https://doi.org/10.1016/j.copsyc.2018.05.004

***Baek, E.C.,** *Scholz, C., O'Donnell M.B., & Falk, E.B. (2017). Neural correlates of selecting and sharing information. Psychological Science, *28*(7), 851-861. https://doi.org/10.1177/0956797617695073

*Scholz, C., ***Baek, E.C.,** O'Donnell M.B., Kim, H.S., Cappella, J.N., & Falk, E.B. (2017). A neural model of valuation and information virality. Proceedings of the National Academy of Sciences, *114*(11), 2881-2886. http://doi.org/10.1073/pnas.1615259114

PAPERS UNDER REVIEW, PREPRINTS, AND WORKING PAPERS

Baek, E.C., Hyon, R., López, K., Finn, E.S., Porter, M.A., & Parkinson, C. (preprint). Popularity is linked to neural coordination: Neural evidence for an Anna Karenina principle in social networks. https://psyarxiv.com/6fj2p/

Baek, E.C., Tamir, D.I., & Falk, E.B. (preprint). Considering others' mental states causally increases feelings of social bonding and information sharing. https://psyarxiv.com/nw43x/

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (in prep). Convergence across subjects in neural responses during spontaneous viewing predicts sharing of naturalistic stimuli.

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (in prep). Lonely individuals process the world in idiosyncratic ways.

Baek, E.C., Kim, H., Chey, J., Youm, Y., & Parkinson, C. (in prep). Individuals who occupy central positions in a real-life social network show increased sensitivity to social exclusion.

Scholz, C., **Baek, E.C.,** & Falk, E.B. (in prep). Using neuroscience to causally increase the spread of information.

Scholz, C., Doré, B.P., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (in prep). A neural propagation system: Neurocognitive and preference synchrony in information sharers and their receivers.

Cascio, C.N., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (in prep). Social influence: A functional connectivity approach to conformity.

INVITED TALKS

Invited Talk (2021, June). CogniTalks hosted by the Cognito Student Union at the Department of Brain & Cognitive Sciences at the University of Amsterdam.

Invited Talk (2021, April). Innovators in Cognitive Neuroscience.

Invited Talk (2021, April). Seminar on Cognitive Processing and Development hosted by Neuro-COGNiMATH at the Department of Psychology at the Benemérita Universidad Autónoma de Puebla, Mexico.

Invited Talk (2019, November). UCLA Networks Meeting.

Invited Talk (2019, October). UCLA Social Psychology Colloquium.

Invited Talk (2019, April). Princeton University Neuroscience and Social Decision Making talk series.

Invited Talk (2018, November). Wharton Neuroscience Initiative Student Society (WINSS) Undergraduate Meeting.

Invited Talk (2018, February), 4th Annual SCAN Retreat, Center for Neuroscience and Society, University of Pennsylvania.

Invited Talk (2017, November), Guest Lunch Series, Center for Neuroscience and Society, University of Pennsylvania.

CONFERENCE PRESENTATIONS

* denotes equal author contributions

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, May). Convergence across subjects in neural responses during spontaneous viewing predicts sharing of naturalistic stimuli. Presented at the annual meeting of the International Communication Association (virtual presentation due to COVID-19).

Chan, H.Y., Scholz, C., **Baek, E.C.**, O'Donnell, M.B., & Falk, E.B. (2021, May). Share versus read: Delineating share-forward and click-through of news information on social media. Presented at the annual meeting of the International Communication Association (virtual presentation due to COVID-19). ****Promising Student Papers of Information Systems****

Chan, H.Y., Scholz, C., **Baek, E.C.**, O'Donnell, M.B., & Falk, E.B. (2021, May). Being the gatekeeper: How neural encoding of information is affected during sharing decisions. Presented at the annual meeting of the International Communication Association (virtual presentation due to COVID-19).

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, April). Lonely individuals process the world in idiosyncratic ways. Presented at the annual meeting of the Social and Affective Neuroscience Society (virtual due to COVID-19).

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, April). Lonely individuals process the world in idiosyncratic ways. Presented at the annual meeting of the Society for Affective Science (virtual due to COVID-19). ****Highly-ranked abstract (top 20%) selected for publication in *Affective Science*****

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, February). Popular people in a social network exhibit synchronized neural responses to naturalistic stimuli, and unpopular people exhibit idiosyncratic neural responses. Presented at the Social Cognition Preconference (data blitz) at the annual meeting of the Society for Personality and Social Psychology (virtual due to COVID-19).

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, February). Convergence in neural responses during spontaneous viewing predicts sharing. Presented at the annual meeting of the Society for Personality and Social Psychology (virtual due to COVID-19).

Baek, E.C., Hyon, R., López, K., Porter, M.A., & Parkinson, C. (2021, February). Popular people in a social network exhibit synchronized neural responses to naturalistic stimuli, and unpopular people exhibit idiosyncratic neural responses. Presented at the annual meeting of the Society for Social Neuroscience (virtual due to COVID-19).

Baek, E.C., Kim, H., Chey, J., Youm, Y., & Parkinson, C. (2020). Individuals who occupy central positions in a real-life social network show increased sensitivity to social exclusion. Accepted at the annual meeting of the Social and Affective Neuroscience Society (postponed due to COVID-19).

Baek, E.C., Scholz, C., O'Donnell, M.B., Parkinson, C., & Falk, E.B. (2020). Density of real-life social networks is associated with brain activity during social decisions. Accepted at the annual meeting of the Social and Affective Neuroscience Society (postponed due to COVID-19).

Hyon, R., Lopéz, K., **Baek, E.C.,** Porter, M.A., Parkinson, C. (2020). Inter-subject similarity in multi-voxel response pattern trajectories reflects similarities in preferences and personality. Accepted at the annual meeting of the Social and Affective Neuroscience Society (postponed due to COVID-19).

Scholz, C., **Baek, E.C.,** & Falk, E.B. (2020, May). Using neuroscience to causally manipulate information sharing. Presented at the annual meeting of the International Communication Association (virtual presentation due to COVID-19).

Doré, B.P., Scholz, C., **Baek, E.C.,** & Falk, E.B. (2020, October). Population news sharing is reflected in distributed reward-related brain activity. Presented at the annual meeting of the Association for Consumer Research (virtual presentation due to COVID-19).

Baek, E.C., Scholz, C., & Falk, E.B. (2019, April). Narcissists show different psychological and neural motivations for interpersonal sharing. Presented at the annual meeting of the Social and Affective Neuroscience Society, Miami, FL.

Doré, B.P., Cooper, N., Tompson, S., Scholz, C.S., **Baek., E.C.** & Falk, E.B. (2019, May). Population-level stimulus effects are reflected in distributed neural representations of affect and value. Presented at the annual meeting of the Social and Affective Neuroscience Society, Miami, FL. ****Top Poster Award****

Garcia, J.O., Bansal, K., Rungratsameetaweemana, N., **Baek, E.C.,** Wasylyshyn, N., Roy, H., Lauharatanahirun, N., Johnson, T., Fernandez, R., O'Donnell, M.B., Falk, E.B., Metcalfe, J., & Vettel, J.M. (2019, March). Brain network communities between driver-

passenger dyads capture successful communication while driving. Presented at the International IEEE EMBS Conference on Neural Engineering, San Francisco, CA.

Dore, B.P., Scholz, C., **Baek, E.C.,** & Falk, E.B. (2019, May). Information virality is reflected in a distributed neural representation of value. Presented at the annual meeting of the International Communication Association, Washington D.C. ****Top Paper Award in Communication Science & Biology****

*Cascio, C.N., ***Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2018, May). Social influence: A functional connectivity approach to conformity. Presented at the annual meeting of the International Communication Association, Prague, Czech Republic.

Parelman, J.M., Dore, B.P., **Baek, E.C.,** Scholz, C., O'Donnell, M.B., & Falk, E.B. (2018, May). MVPA reveals decisions to consume or share news involve distributed processing in medial prefrontal cortex. Presented at the annual meeting of the Social and Affective Neuroscience Society, Brooklyn, NY.

*Cascio, C.N., ***Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2018, May). Social influence: A functional connectivity approach to conformity. Presented at the annual meeting of the Social and Affective Neuroscience Society, Brooklyn, NY.

Baek, E.C., Scholz, C., O'Donnell, M.B., & Falk, E.B. (2017, May). Negativity spreads socially: Negativity bias in opinion change is associated with activity in the brain's mentalizing system. Presented at the annual meeting of the International Communication Association, San Diego, CA.

Scholz, C., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2017, May). A neural propagation system: Neurocognitive and preference synchrony in information sharers and their receivers. Presented at the annual meeting of the International Communication Association, San Diego, CA.

Dore, B.P., Scholz, C., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2017, May). Neural prediction of population sharing behavior relates to domain familiarity. Presented at the annual meeting of the International Communication Association, San Diego, CA.

Baek, E.C., Scholz, C., O'Donnell, M.B., & Falk, E.B. (2017, March). Negativity spreads socially: Negativity bias in opinion change is associated with activity in the brain's mentalizing system. Presented at the annual meeting of the Social and Affective Neuroscience Society, Los Angeles, CA.

Scholz, C., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2017, March). A neural propagation system: Neurocognitive and preference synchrony in information sharers and their receivers. Presented at the annual meeting of the Social and Affective Neuroscience Society, Los Angeles, CA. ****Top Poster Award****

Dore, B.P., Scholz, C., **Baek, E.C.**, O'Donnell, M.B., & Falk, E.B. (2017, March). Neural prediction of population sharing behavior relates to domain familiarity. Presented at the annual meeting of the Social and Affective Neuroscience Society, Los Angeles, CA.

*Baek, E.C., *Scholz, C., O'Donnell M.B., & Falk, E.B. (2016, June). Neural correlates of selecting and sharing information. Presented at the annual meeting of the International Communication Association, Fukuoka, Japan. ****Best Papers in Information Systems Award****

*Scholz, C., ***Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2016, June). The value of sharing: A neural model of self-related and social processing in value-based virality. Presented at the annual meeting of the International Communication Association, Fukuoka, Japan. ****Top Paper in Mass Communication Award****

Scholz, C., **Baek, E.C.,** O'Donnell, M.B., & Falk, E.B. (2016, June). Sharing for the (social) self and others: An fMRI study of the neural mechanisms driving broad- and narrowcasting. Presented at the annual meeting of the International Communication Association, Fukuoka, Japan.

*Baek, E.C., *Scholz, C., O'Donnell, M.B., & Falk, E.B. (2016, April). Neural correlates of selecting and sharing information. Presented at the annual meeting of the Social Affective Neuroscience Society, New York, NY.

*Scholz, C., ***Baek, E.C.,** O'Donnell, M.B., Kim, H.S., Cappella, J.N., & Falk, E.B. (2016, April). Value-based virality: A neurocognitive model of news retransmission. Presented at the annual meeting of the Social Affective Neuroscience Society, New York, NY. ****Top Poster Award****

Baek, E.C., Cascio, C.N., O'Donnell, M.B., Bayer, J., Tinney Jr., F.J., & Falk, E.B. (2016, January). Personal distress & neural mechanisms of social influence. Presented at the Society for Personality and Social Psychology, San Diego, CA.

TEACHING & MENTORSHIP EXPERIENCE

Mentoring Research Assistants and Graduate Students	2019 - Present
Supervision of Research Assistants, Communication Neuroscience Lab	2017-2019
Teaching Fellow, The Communication Experience (COMM 310)	Fall 2017
Guest Lecturer, Introduction to Communication Behavior (COMM 125)	Summer 2017
Training for Teaching Assistants, Penn Center for Teaching & Learning	Summer 2017

SAMPLE MEDIA COVERAGE

Canadian Broadcasting Company – 12 interviews across radio stations in Canada (February 28, 2017). "Why do some news stories go viral and others don't?"

Popular Science: http://www.popsci.com/viral-article-brain-imaging?dom=rss-default&src=syn

Psychological Science: http://www.psychologicalscience.org/publications/observer/obsonline/brain-activity-can-predict-which-articles-go-viral.html

Vice: https://tonic.vice.com/en_us/article/mris-say-were-all-needy-attention-seekers-on-facebook

Mashable: http://mashable.com/2017/02/27/why-stories-go-viral/#uyu4kTwSMOqW

Philly Voice: http://www.phillyvoice.com/will-story-go-viral-penn-researchers-use-mri-prove-you-subconsciously-know-answer/

ACADEMIC SERVICE

Ad Hoc Reviewer, Social Cognitive and Affective Neuroscience

Ad Hoc Reviewer, NeuroImage

Ad Hoc Reviewer, International Communication Association

     Communication Science and Biology Division

     Information Systems Division

     Health Communication Division

Committee Member, Professional Development and Wellness Committee   2015-2016

PROFESSIONAL AFFILIATIONS

International Communication Association (ICA)

Social and Affective Neuroscience Society (SANS)

Society for Personality and Social Psychology (SPSP)

Society for Social Neuroscience (S4SN)

Society for Affective Science (SAS)

ADDITIONAL TRAINING

Data Sciences in the Social and Behavioral Sciences Workshop (Virtual)	2020
NeuroHackademy (Virtual)	2020
Summer School in Social Neuroscience and Neuroeconomics, Duke University	2019
Kavli Summer Institute in Cognitive Neuroscience, UC Santa Barbara	2019

OUTREACH

Volunteer Research Consultant, Asian Mental Health Collective   2020-Present

Guest Speaker for AP Psychology Class, Lakeridge High School   2021

Guest Speaker for AP Psychology Class, Schroeder High School   2020

LA County Science & Engineering Fair, Special Awards Judge (virtual due to COVID-19)   2020

Presenter, Brain Awareness Week, UCLA Project Synapse (cancelled due to COVID-19)   2020

PROFESSIONAL EXPERIENCE

Account Manager, Digital Media Solutions, Conshohocken, PA   2013-2014

• Cultivated relationships with influential individuals on social media to increase engagement in advertising campaigns by 100% in two months, resulting in an overall revenue increase of 150%
• Quantitatively analyzed social media engagement trends to assess success of ad campaigns

Analyst (Client Consulting), The Nielsen Company, Bensalem, PA   2012-2013

 • Analyzed competitive landscape of drug products worth $7.8 billion in global sales through statistical forecasting; led team meetings to facilitate discussion with project directors

Marketing Intern, Promoting Group, Los Angeles, CA   2011

• Generated targeted content to increase market presence; maintained interaction with clients

Social Media Fellow, Institute of Cultural Inquiry, Los Angeles, CA   2010, 2011

• Implemented optimal tools to coordinate 2-month global arts interactive project

SKILLS

Programs: R, Python**,** fMRIPrep, Matlab
Language Skills: Korean (fluent)