**Elisa C. Baek, Ph.D.**

Department of Psychology  
University of California, Los Angeles  
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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) May 2012

Dissertation title: *The Role of Mentalizing in Information Propagation*

Dissertation Committee: Emily Falk (advisor), Joseph N. Cappella, Robert Hornik

**M.A., Communication** May2016

**Annenberg School for Communication, University of Pennsylvania**  May 2012

**B.A., Communication and Cognitive Neuroscience** May2012

**University of Pennsylvania**  May 2012

Honors Thesis: *An Examination of African Americans in Time and Newsweek Advertisements*

Advisor: John L. Jackson, Jr. Fall 2010

**RESEARCH AND TEACHING INTERESTS**

• Social neuroscience, cognitive neuroscience, computational neuroscience, social connection/disconnection, social-network analysis, information sharing, persuasion, social influence, health communication

**FELLOWSHIPS, HONORS & AWARDS**

National Science Foundation SBE Postdoctoral Fellowship - $165,0002019-2022  
UCLA Brain Research Institute/Semel Institute Neuroscience Postdoctoral Travel Award 2021

Highly-ranked abstract (top 20%) for Society for Affective Science 2021

Kavli Summer Institute in Cognitive Neuroscience Fellow, UC Santa Barbara2019

Summer School in Social Neuroscience and Neuroeconomics, Duke University2019

Wharton Risk Center Russell Ackoff Doctoral Student Fellowship - $2,7442018-2019

Best Papers in Information Systems, International Communication Association2016

Top Paper in Mass Communication, International Communication Association2016

Top Paper in Mass Communication, Social and Affective Neuroscience Society2016

**PUBLICATIONS**

\* denotes equal author contributions

**Baek, E.C.,** Hyon, R., López, K., Finn, E.S., Porter, M.A., & Parkinson, C. (accepted in principle at   
 *Nature Communications*). Popular individuals process the world in particularly   
 normative ways. <https://psyarxiv.com/6fj2p/>

**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. ﻿ <https://doi.org/10.1038/s41598-021-90420-2>

**Baek, E.C.,** Porter, M.A., & Parkinson, C. (2021). Social network analysis for social   
 neuroscientists. *Social Cognitive and Affective Neuroscience*, *16*(8), 883-901.  
 <https://doi.org/10.1093/scan/nsaa069>

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.,** 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., Porter, M.A., & Parkinson, C. (preprint; under review). Lonely   
 individuals process the world in idiosyncratic ways. <https://psyarxiv.com/yt872>

**Baek, E. C.** & Parkinson, C. (invited & in prep). Computational Social Neuroscience. In J.   
 Chiao (Ed.), *The Oxford Handbook of Social and Affective Neuroscience,* New York:   
 Oxford University Press.

**Baek, E. C.** & Parkinson, C. (invited & in prep). Shared understanding and social connection: Integrating approaches from social psychology, social network analysis, and neuroscience. *Social and Personality Psychology Compass.*

**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.,** 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.

Kim, H., Kwak, S., **Baek, E.C.**, Baldina, E., Youm, Y., & Chey, J. (in prep). Brain connectivity   
 during social exclusion differs depending on intimacy with rejecters among older adults   
 living in a village.

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, hosted by the Center for   
 Cognitive Neuroscience at Dartmouth College in collaboration with University of   
 Pennsylvania, Yale University, Massachusetts Institute of Technology, Princeton   
 University, Harvard University, Colombia University, and Gallaudet University

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. (2022, February). Perceived social   
 norms shape neural responses to naturalistic depictions of risky alcohol use. To be presented   
 at the annual meeting of the Society for Personality and Social Psychology, San Francisco, CA.

**Baek, E.C.,** Hyon, R., López, K., Porter, M.A., Parkinson, C., & Reavis, E.A. (2021, November).   
 Neural coordination between participants during naturalistic perception: Towards a   
 marker of social dysfunction in schizophrenia. Presented at the Annual UCLA Brain Research   
 Institute’s Neuroscience Poster Session, Los Angeles, CA.

**Baek, E.C.,** Hyon, R., López, K., Porter, M.A., Parkinson, C., & Reavis, E.A. (2021, November).   
 Neural coordination between participants during naturalistic perception: Towards a   
 marker of social dysfunction in schizophrenia. Presented at Neuroscience 2021, the   
 annual meeting of the Society for Neuroscience (virtual presentation due to COVID-19). **\*\*   
 UCLA Brain Research Institute/Semel Institute Neuroscience Postdoctoral   
 Travel Award\*\***

**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 reflect 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.

Doré, 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., Doré, 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.

Doré, 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\*\***

Doré, 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

**Annual Faculty Workshop on Best Equitable Practices in Teaching**, UCLA Fall 2021

**Supervision of Research Assistants** 2017-2019

**Mentor**, Graduate/Undergraduate Mentorship Program, University of Pennsylvania 2014-2019

**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**

Opinion Science podcast episode 50 (November 8, 2021). “To persuade is human?”

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 Reviewing (Funding Agencies)**

National Science Foundation

**Ad Hoc Reviewing (Journals)**

Cerebral Cortex

Cognitive, Affective, and Behavioral Neuroscience

Current Psychology

Journal of Experimental Psychology: General

NeuroImage

Science Advances

Scientific Reports

Social Cognitive and Affective Neuroscience

Social Neuroscience

**Ad Hoc Reviewing (Conferences)**

International Communication Association

Communication Science and Biology Division

Information Systems Division

Health Communication Division

Professional Development and Wellness Committee, Annenberg School, UPenn 2015-2016

**OUTREACH**

**Baek, E.C.,** Hyon, R., Porter, M.A., & Parkinson, C. (in press). How do our brains support our   
 friendships? *Frontiers for Young Minds*. \*\*Note: this article was written to introduce new   
 scientific ideas to young audiences (pre-teens and teens).\*\*

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

**SKILLS & ADDITIONAL TECHNICAL TRAINING**

Data Sciences in the Social and Behavioral Sciences Workshop (Virtual) 2020

NeuroHackademy (Virtual) 2020

**Programs**: R, Python**,** fMRIPrep, Matlab

**Language Skills:** Korean (fluent)

**PROFESSIONAL AFFILIATIONS**

International Communication Association (ICA)

Social and Affective Neuroscience Society (SANS)

Society for Personality and Social Psychology (SPSP)

Society for Neuroscience (SfN)

Society for Social Neuroscience (S4SN)

Society for Affective Science (SAS)

**OTHER PROFESSIONAL EXPERIENCE**

**Account Manager, Digital Media Solutions**, Conshohocken, PA2013-2014

• 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, PA2012-2013

• 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, CA2011

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

**Social Media Fellow, Institute of Cultural Inquiry**, Los Angeles, CA2010, 2011

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