

**CONSTANZA M. VIDAL BUSTAMANTE**

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**Education**

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- 2019- **Harvard University** | Cambridge, MA, United States  
Ph.D. candidate in Psychology (Supervisor: Randy Buckner, Ph.D.)
- 2012-2016 **Harvard University** | Cambridge, MA, United States  
A.B. in Psychology (Cognitive Neuroscience track)  
*Magna cum laude with highest honors in Psychology* | GPA: 3.84 / 4.0  
  
Thesis Committee: Prof. Leah Somerville, Juliet Davidow, Ph.D., Prof. Fiery Cushman.  
Thesis title: *Cognitive and biological underpinnings of reward-control interactions across development.*  
Thesis graded *summa cum laude*.
- 2009-2011 **United World College of South East Asia** | Singapore, Singapore  
International Baccalaureate Diploma: 42 / 45 points

**Awards & Honors**

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- 2020 Harvard Foundations of Human Behavior Initiative Grant (\$15,000)
- 2020 Harvard Stimson Grant (\$1,000)
- 2020 Poster selected for Poster Spotlight Session at Society for Affective Science Conference
- 2016 Bachelor of Arts Magna Cum Laude with Highest Honors in Psychology  
Harvard Psychology Faculty Prize  
Best Poster Award, Harvard Conte Center's Undergraduate Poster Session
- 2015 Herchel Smith-Harvard Undergraduate Science Research Summer Fellowship
- 2014 Harvard Weissman International Summer Fellowship
- 2012-2016 Harvard University United World College Davis Scholarship
- 2011 United World College Shelby Davis International Scholar Award  
Staff and Student Nominated UWCSEA Award  
UWCSEA Creativity, Action and Service Award

**Research Experience**

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- 2016-2019 **Affective Neuroscience and Development Lab**  
Harvard University | Cambridge, MA, United States  
*Research Manager, Human Connectome Project – Development (HCP-D)*  
Supervisor: Leah Somerville, Ph.D.  
  
The HCP-D is a NIH-funded multiyear collaboration between Harvard University and three other universities in the U.S. Together, these sites are acquiring and analyzing high quality brain imaging datasets and associated behavioral and biological measures on 1,350 children and young adults in the age range of 5 to 21 years.
- Lead and oversee the daily operations of the HCP-D at Harvard:

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- Train and supervise team of four research assistants
- Recruit subjects and conduct behavioral and brain imaging testing sessions
- Conduct regular audits on the project's overall performance and lead the discussion on recruitment goals and progress at weekly staff meetings
- Program scripts in R for data preprocessing, analysis and visualization
- Program computer-based experiments in Psychopy
- Present the goals and preliminary results of the project at multiple scientific conferences
- Run social media campaign and community outreach events for subject recruitment and the communication of the project's goals and results to the public
- Conduct independent data projects for other research studies:
  - Collected and analyzed data using emotion regulation task to investigate the linguistic underpinnings and strategies used by children, adolescents, and adults when reappraising the meaning of emotionally negative pictures. First-author manuscript published in *Emotion*.
  - In collaboration with the Stress and Development Lab at Harvard, (PI: Kate McLaughlin), I analyzed actigraphy and clinical symptom data from a year-long adolescent study to characterize the temporal dynamics and interrelationships of sleep, stress, and internalizing symptoms. First-author manuscript published in *Journal of Child Psychology and Psychiatry*.

2014-2016 **Affective Neuroscience and Development Lab**

Harvard University | Cambridge, MA, United States

*Undergraduate Research Assistant*

Supervisors: Leah Somerville, Ph.D.; Juliet Davidow, Ph.D.; Catherine Insel, M.A.

- Completed undergraduate honors thesis on fMRI study of reward processing and inhibitory control interactions across child and adolescent development
- Contributed to two fMRI studies, including subject recruitment; running of testing sessions; fMRI data quality assessment, preprocessing, and analysis; behavioral data analysis; and questionnaire scoring and analysis
- Tested subjects for behavioral study of cognitive control at Boston Museum of Science
- Collaborated with community outreach events

2014 **Developmental Group, Institute of Cognitive Neuroscience**

University College London | London, England

*Summer Research Assistant*

Supervisors: Sarah-Jayne Blakemore, Ph.D.; Lisa Knoll, Ph.D.

- Contributed to fMRI study of adolescent risk-taking, including subject recruitment, running of testing sessions, and questionnaire scoring

## Publications

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Rodman, A.M., **Vidal Bustamante, C.M.**, Flournoy, J.C., Coppersmith, D.D.L., Nook, E.C., Worthington, S., Mair, P., & McLaughlin, K.A. (*in press*) A year in the social life of a teenager: Within-person fluctuations in stress, phone communication, and anxiety and depression. *Clinical Psychological Science*.

Meyer, K.N., Davidow, J.Y., Van Dijk, K.R.A., Santillana, R.M., Snyder, J., **Vidal Bustamante, C.M.**, Hollinshead, M., Buckner, R.L., Rosen, B.R., Somerville, L.H., & Sheridan, M.A. (2021). History of conditioned reward association disrupts inhibitory control: An examination of neural regions associated with inhibitory control over rewarded stimuli. *NeuroImage*, 227. <https://doi.org/10.1016/j.neuroimage.2020.117629>

**Vidal Bustamante, C.M.**, Rodman, A.M., Flournoy, J.C., Mair, P., & McLaughlin, K.A. (2020) Within-person fluctuations in stressful life events, sleep, and anxiety and depression symptoms during adolescence: A multi-wave prospective study. *Journal of Child Psychology and Psychiatry*, 61(10), 1116-1125. <https://doi.org/10.1111/jcpp.13234>

Rodriguez-Thompson A.M., Meyer K.M., Davidow J.Y., Van Dijk K.R., Santillana R.M., Snyder J, **Vidal Bustamante C.M.**, Hollinshead M.O., Rosen B.R., Somerville L.H., Sheridan M.A. (2020). Examining cognitive control and reward interactions in adolescent externalizing symptoms. *Developmental Cognitive Neuroscience*, 45. <https://doi.org/10.1016/j.dcn.2020.100813>

Siless, V., Davidow, J.Y., Nielsen, J., Fan, Q., Hedden, T., Hollinshead, M., Beam, E. **Vidal Bustamante, C.M.**, Garrad, M.C., Santillana, R., Smith, E.E., Hamadeh, A., Snyder, J., Drews, M.K., Van Dijk, K.R.R., Sheridan, M., Somerville, L.H., & Yendiki, A. (2020). Registration-free analysis of diffusion MRI tractography data across subjects through the human lifespan. *NeuroImage*, 214. <https://doi.org/10.1016/j.neuroimage.2020.116703>

Nook, E.C\*, **Vidal Bustamante, C.M.\***, Cho, H.Y., & Somerville, L. H. (2020). Use of linguistic distancing and cognitive reappraisal strategies during emotion regulation in children, adolescents, and young adults. *Emotion*, 20(4), 525–540. <http://dx.doi.org/10.1037/emo0000570> \*Equal contribution.

Davidow, J. Y., Sheridan, M. A., Van Dijk, K. R. A., Santillana, R. M., Snyder, J., **Vidal Bustamante, C. M.**, Rosen, B. R., & Somerville, L. H. (2019). Development of prefrontal cortical connectivity and the enduring effect of learned value on cognitive control. *Journal of Cognitive Neuroscience*, 31(1), 64-77. [https://doi.org/10.1162/jocn\\_a\\_01331](https://doi.org/10.1162/jocn_a_01331)

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## Research Presentations

**Vidal Bustamante C.M.**, Coombs, G., Rachimi-Eichi, H., Onnela, J.P., Baker, J.T., Buckner, R.L. (2020) A year in the life of a college freshman: Using deep digital phenotyping to characterize fluctuations in affect, sleep, academics and social behavior. *Poster at McLean Hospital's Technology in Psychiatry Summit* (held virtually).

**Vidal Bustamante C.M.**, Coppersmith D.D.L., McLaughlin K.A. (2020) Within-person associations between daily sleep and affect in adolescence: Evidence from actigraphy and ecological momentary assessments. *Poster at Society for Affective Science Conference* (held virtually).

**Vidal Bustamante C.M.**, Rodman A.M., Flournoy J.C., McLaughlin K.A. (2019) Within-person fluctuations in stressful life events, sleep, and anxiety and depression symptoms in a year-long adolescent study. *Poster at McLean Hospital's Technology in Psychiatry Summit* (Boston, MA).

**Vidal Bustamante C.M.** (2019). Conducting fMRI research with children and adolescents. *Talk for the Fall 2019 fMRI Visiting Fellowship workshop offered by the Athinoula A. Martinos Center for Biomedical Imaging at Massachusetts General Hospital* (Boston, MA).

**Vidal Bustamante C.M.**, Rodman, A.M., Flournoy, J.C., McLaughlin, K.A. (2019) Within-person fluctuations in stressful life events, sleep, and anxiety and depression symptoms in a year-long adolescent study. *Poster at Flux Developmental Neuroscience Society Conference* (New York, NY).

**Vidal Bustamante C.M.**, Barch D., Bookheimer S.Y., Buckner R.L., Burgess G. C., Dapretto M., Harms M.P., Hernke C., Kandala, S., Kastman E.K., Smith S.M., Thomas K.M., Van Essen D.C., Yacoub E., & Somerville L.H. (2019). The Human Connectome Project in Development: Task-fMRI Paradigms and Preliminary Data. *Poster at Human Connectome Project – Investigators Meeting* (Bethesda, MD).

**Vidal Bustamante C.M.**, Barch D., Bookheimer S.Y., Buckner R.L., Burgess G. C., Dapretto M., Harms M.P., Hernke C., Kandala, S., Kastman E.K., Smith S.M., Thomas K.M., Van Essen D.C., Yacoub E., & Somerville L.H. (2019). The Human Connectome Project in Development: Task-fMRI Paradigms and Preliminary Data. *Poster at Harvard's Annual Center for Brain Science Retreat* (Cambridge, MA).

**Vidal Bustamante C.M.** (2019). Conducting fMRI research with children and adolescents. *Talk for the Spring 2019 fMRI Visiting Fellowship workshop offered by the Athinoula A. Martinos Center for Biomedical Imaging at Massachusetts General Hospital* (Boston, MA).

**Vidal Bustamante C.M.**, Nook E.C., Cho H.Y., Kordyban L.E., Mayer M.D., & Somerville L.H. (2019). Use of linguistic distancing and cognitive reappraisal strategies during emotion regulation in children, adolescents, and young adults. *Poster at Society for Affective Science Conference* (Boston, MA).

**Vidal Bustamante C.M.** (2018). Conducting fMRI research with children and adolescents. *Talk for the fMRI Visiting Fellowship workshop offered by the Athinoula A. Martinos Center for Biomedical Imaging at Massachusetts General Hospital* (Boston, MA).

**Vidal Bustamante C.M.** (2018). Mapping the Human Brain. *Talk at Museum of Science's Health Fair: Explore the Brain!* (Boston, MA).

**Vidal Bustamante C.M.** (2018). Mapping Brain Development: Introducing the Human Connectome Project – Development. *Talk for faculty members in the Psychology and Biology Departments, Pontificia Universidad Católica de Chile* (Santiago, Chile).

**Vidal Bustamante C.M.**, Mayer M.D., Barch D.M., Bookheimer S.Y., Buckner R.L., Burgess G.C., Dapretto M., Harms M.P., Hodge C., Kandala S., Kastman E.K., Smith S.M., Thomas K.M., Van Essen D.C., Yacoub E., & Somerville L.H. (2018). Neuroimaging Components of the Human Connectome Project in Development: Modalities and Preliminary fMRI Data. *Poster at "Big Data, Little Brains", Flux Developmental Neuroscience Society Satellite Conference* (Chapel Hill, NC).

Mayer M.D., **Vidal Bustamante C.M.**, Barch D.M., Bookheimer S.Y., Buckner R.L., Burgess G.C., Dapretto M., Harms M.P., Hodge C., Kandala S., Kastman E.K., Smith S.M., Thomas K.M., Van Essen D.C., Yacoub E., & Somerville L.H. (2018). Introducing the Human Connectome Project in Development. *Poster at "Big Data, Little Brains", Flux Developmental Neuroscience Society Satellite Conference* (Chapel Hill, NC).

Braams B.R., **Vidal Bustamante C.M.**, Kibotyanski K.E., Davidow J.Y., & Somerville L.H. (2018) Information about others' choices differentially influences adolescent and young adult decision making. *Poster at Social and Affective Neuroscience Society Conference* (Brooklyn, NY).

Nook E.C., **Vidal Bustamante C.M.**, Cho H.Y., & Somerville L. H. (2018). Investigating emotion regulation and linguistic distancing across development. *Poster at Social and Affective Neuroscience Society Conference* (Brooklyn, NY).

**Vidal Bustamante C.M.**, Barch D., Bookheimer S.Y., Buckner R.L., Burgess G. C., Dapretto M., Harms M.P., Hernke C., Kandala, S., Kastman E.K., Smith S.M., Thomas K.M., Van Essen D.C., Yacoub E., & Somerville L.H. (2017). Introducing the Human Connectome Project - Development: Task-fMRI Paradigms. *Poster at Flux Developmental Neuroscience Society Conference* (Portland, OR).

## Skills

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Technical	MRI Certification by Harvard Center for Brain Science; R (proficient); Python (intermediate); Psychopy (proficient)
Quantitative	Data visualization (ggplot2, R Markdown); linear regression, cross-validation and bootstrapping, polynomial regression, smoothing splines, generalized additive models, principal components analysis, various clustering techniques, time series analyses
Language	Spanish (native fluency), English (fluent), Mandarin Chinese (beginner)