

# 2018 APS Janet Taylor Spence Awards for Transformative Early Career Contributions

April 27, 2018



Six psychological scientists have been recognized with the 2018 APS Janet Taylor Spence Awards for Transformative Early Career Contributions for their cutting-edge research on fields varying from the development of decision-making skills to mathematical models of happiness and how we rationalize disturbing realities. The award, named for APS's first elected president, honors the most creative and promising researchers who embody the future of psychological science.

This year's recipients shared their experiences and ongoing research with the *Observer*. The awards will be presented at the 2018 APS Annual Convention, May 24–27, in San Francisco, California.

[Elliot Berkman](#)

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## Elliot Berkman

*University of Oregon*

[Website](#)

**Observer:** Please describe your research interests.

**Berkman:** I study the psychological and neural processes that support goal pursuit. Much of my work focuses on health goals, such as smoking cessation and dietary change, and uses theories from social-personality psychology and methods from neuroscience to develop and refine interventions to improve health outcomes.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Berkman:** There was no one event or path that I can point to. What my most interesting research ideas share is that they all started by tossing around goofball counterfactuals with people who are smarter than me. “What if brain data were the independent variable instead of the dependent variable?” with Emily Falk. “What if self-control is just choice?” with Mickey Inzlicht. And “What happens if we focus on the ‘self’ instead of the ‘regulation’ in self-regulation?” with Jordan Livingston and Lauren Kahn. These conversations go in the most interesting directions when my colleagues and I have been coming at the same problem from different angles, so our approaches combine in a “useful adjacency.”

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Berkman:** I'm most proud of the recent paper from my lab called "Finding the self in self-regulation: The Identity-Value Model." The paper presents the idea that identity (or self-concept) can contribute to self-regulation by increasing the subjective value of goal-relevant behaviors. I'm proud of it because it brings together two longstanding research traditions in social psychology — self and identity on the one hand and goals and motivation on the other — that have not been connected in a way that points to intervention strategies. I attribute the innovative features of the Identity-Value Model to the open and creative community of scholars in my lab, which continually seeks new perspectives and attracts bright people with unconventional ideas.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Berkman:** I feel incredibly privileged to have worked with outstanding mentors at each stage of my career. James Gross welcomed me into his lab when I was an undergraduate and ignited my passion for research on self-regulation. In graduate school, I learned how to think about social psychology from Matt Lieberman and about motivation from Shelly Gable. Naomi Eisenberger, Traci Mann, Eydie London, and Shelley Taylor showed me how well social and personality psychology can speak to important societal issues such as health behavior and addiction. My colleague Phil Fisher has been a tireless mentor, advocate, and role model since I started at the University of Oregon (UO). Phil can take credit for turning me into an intervention researcher and leading me to embrace the "RCT-as-experiment" model that is at the core of the Center for Translational Neuroscience that we founded at UO. And I wouldn't be at the UO at all if it weren't for the brilliant Jenn Pfeifer, who encouraged me to submit my one and only job application there well before I felt I was ready for the market. Jenn has been an amazingly supportive friend, confidant, and lab co-parent since before I arrived.

**Observer:** What questions do you hope to tackle in the future?

**Berkman:** The big question that drives much of the work in the lab right now is how to boost people's motivation to engage in behavior change. We have projects targeting a wide variety of behaviors related to health and well-being, such as dietary change and positive parenting, but the common underlying process is motivation. We're drawing inspiration from experimental paradigms used by behavioral economists, such as willingness to pay, though our ideas about how to increase motivation go well beyond just monetary incentives. Some of the most exciting questions revolve around how identity can be used as a source of motivation for behavior change, which in turn have led us to carefully reconsider how identity and self are characterized by psychological scientists. As a field, we focus quite a bit on identity stability but have only nibbled around the edges of how and why identity changes during adulthood and whether that change can be intentional. That set of questions feels like a ripe direction for self-regulation research right now.

**Observer:** What does winning this award mean to you both personally and professionally?

**Berkman:** On a personal level, winning this award is compelling evidence that Imposter Syndrome exists at every career stage. It is humbling to be among the deeply impressive group of past and current

winners. I do not feel I belong on the list! Professionally, I am glad that the type of work I do at the interface of social neuroscience and health and clinical psychology is appreciated by the wider field. I hope to use the award as an opportunity to draw attention to the innovative and impactful science that is happening in translational neuroscience. We think of the Center for Translational Neuroscience as only the most recent incarnation of a long tradition of creative integration between neuroscience and psychology at the UO led by people such as Jerry Patterson, Mike Posner, Steve Keele, Mary Rothbart, Helen Neville, and Don Tucker.



**Marc Berman**

*The University of Chicago*

[Website](#)

**Observer:** Please briefly describe your research interests.

**Berman:** I focus on understanding the interaction between individual psychological processing and environmental factors that give rise to human behavior. My research has two main lines. In one line of research I study how external environments, such as the physical environment and the social environment, affect human behavior. For example, I'm currently studying how interacting with different environments, such as natural ones, can improve cognitive functioning, as well as how sustained exposure to more natural spaces can positively impact physical and mental health.

In my second line of research, the focus is on assessing individual cognitive, affective, and neural processing, which I term the "internal environment." For example, we've found that individuals who have better self-control have brain networks that act more efficiently when performing challenging cognitive tasks. We are also finding that when the brain is in more fractal states (as measured with nonlinear dynamics measures) it is exerting less effort. We now want to examine whether interacting

with nature pushes the brain into these more restful states. In both lines of research I employ multivariate statistics, computational modeling, neuroimaging, and behavioral experimentation.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Berman:** I became interested in the field of psychological science and the study of the human mind because of my grandparents' lives and experiences. My grandparents on my father's side are Holocaust survivors, and I grapple with how humans can do so much harm to other humans. I believe that there is no field of inquiry more important than the study of human behavior and the human mind. It is also amazing to me how my grandparents, who survived such horrific experiences, continued to be loving and open-minded people. You would never know what they went through upon meeting them. It speaks to how resilient they were and, again, how incredibly complex and unique the human mind is. My maternal grandmother also has been an inspiration to me through her quiet morality, strength, and resilience in raising four children on her own after the much-too-early passing of my maternal grandfather. My grandparents and their experiences have inspired me to study the mind and it is my hope that, with a better understanding and quantification of the interactions between individual psychological processing and the environment, we will make huge strides in improving society and overall human well-being.

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Berman:** Recently we have begun to examine how perceiving low-level features of the environment (such as curved lines of a tree branch or disorderly edges of graffiti) can have downstream consequences on broader psychological behaviors, such as affecting self-control, but also on thoughts about spirituality. The work highlights the complexity of perception and the deep interplay among perception, action, and cognition; it also could have implications for how one might design the physical environment to elicit specific behaviors. The line of inquiry came about from lengthy conversations with my graduate students Omid Kardan, Hiroki (Hiro) Kotabe, and Kathryn (Kate) Schertz, who creatively applied novel theories and methods to tackle these questions. We have a very open environment in our lab, where it is easy to discuss half-baked ideas, and I think this openness helped develop much of this research.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Berman:** I've had so many mentors/scientific influences who have helped me along the way. I'll start in chronological order. Yili Liu at the University of Michigan sought me out, identified my scientific passions, helped me get on a research path, and was my co-advisor throughout graduate school. Doug Noll, Luis Hernandez-Garcia, and Scott Peltier first introduced me to fMRI, which I find to be incredible technology as it allows one to see thought in action in the brain. As Doug once told me, it's about as close to science fiction as you can get. Doug helped to get me in touch with John Jonides, who would become my co-advisor in graduate school. John taught me the nuts and bolts of what it takes to be a psychological scientist, and his enthusiasm for science still inspires me to this day. I owe John so much and still continue to bother him to this day. It shows that mentorship has no timeline — sorry, John.

Steve Kaplan got me interested in simple solutions to complex problems and, in particular, how interacting with nature could be beneficial to human psychological functioning. Steve taught me to see outside the box and to be true to myself—to see that I did not need to fit a specific mold. Ethan Kross helped to get me involved in many exciting and unique projects, and I'll always value all of our conversations both about science and other subjects. Rick Lewis, Bernadine Cimprich, Patti Reuter-Lorenz, Yuichi Shoda, Patty Deldin, and Rich Gonzalez all have had significant impacts on my career. I could not have asked for a better postdoc advisor than Randy McIntosh. Randy gave me the freedom to work on problems that interested me, and I learned so many new computational tools from working in his lab. I also learned a great deal from Stephen Strother and Tomas Paus. Bratislav Misic and Nathan Churchill continue to be great collaborators. The University of Chicago, both inside the Psychology Department and outside of it, has been an extremely rich intellectual environment and also has been incredibly supportive. The Psychology Department as a whole has just been incredible to me, and I owe them so much. Howard Nusbaum, Sian Beilock, Susan Levine, Susan Goldin-Meadow, and Amanda Woodward all have provided me with so much mentorship and guidance since I arrived—including some off-hour phone calls. You all would do well to change your cell phone numbers.

**Observer:** What questions do you hope to tackle in the future?

**Berman:** Moving forward, I want to develop better and more predictive models for how individual factors interact with the environment (both physical and social) that gives rise to behavior. To improve our models and our understanding, I'd like to incorporate genetic and epigenetic information. Genetic information can inform us about how receptive certain individuals may be to different environments; epigenetic mechanisms alter how current and future environments are processed based on prior experience. These epigenetic modifications are stable and affect patterns of gene expression, which then alters cell functioning, brain network activity, and behavior. In addition, I'd like to utilize Bayesian modeling approaches as an overall framework to model these interactions and to make unique predictions. The goal is to make more quantitative assessments about how the environment affects us that could then be used to help inform public policy decisions. This work will involve many collaborations, including those with Sarah London, Dan Yurovsky, and Luis Bettencourt.

**Observer:** What does winning this award mean to you both personally and professionally?

**Berman:** It is a great honor to win this award, and it means a lot to me. Academia and science is a tough business, filled with trials, tribulations, and of course lots of rejection. It is important to savor these positive moments. To be considered amongst these great psychological scientists is very humbling. I couldn't have won this award without the help of my mentors and all of my terrific students and collaborators, and I share it with all of them. I also owe a lot to my supportive parents, my wife Katie, my three daughters, and all of my family and friends. I love what I do and I feel very fortunate to be a psychological scientist.



**Catherine Hartley**

*New York University*

[Website](#)

**Observer:** Please briefly describe your research interests.

**Hartley:** Research in my lab focuses on characterizing the diverse learning and decision-making processes that support adaptive motivated behavior. Specifically, I focus on understanding how we learn to evaluate potential behavioral responses in the face of environmental challenges (e.g., goals, threats), how these learning and decision-making processes change over development, and what factors facilitate or constrain these processes for a given individual. I examine these questions at the computational, cognitive, and neural levels using an array of methodological techniques including neuroimaging, psychophysiology, computational modeling, and genetics, coupled with experimental paradigms that draw upon animal learning and economic decision theories.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Hartley:** For as long as I can remember, I've been interested in understanding how our experiences shape our actions and choices. The specific approaches that I use to do this are very much a compilation of the various perspectives and methods that I happened to pick up along the way. I can think of a few "Aha!" moments and key experiences. In a high school AP Psychology class, I read Oliver Sacks' *The Man Who Mistook His Wife for a Hat*, which first sparked my interest in understanding the relationship between our brains and our behavior. After pursuing this interest in my undergraduate studies, I worked for an artificial intelligence (AI) research company that sought to build a strong AI system capable of flexible and complex behavior. This work clearly informed my interest in understanding how the

multiple systems for learning in the human brain interact, as well as how our experiences over the course of development wire these systems together.

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Hartley:** In graduate school, I was inspired by a body of research in animal models suggesting that the ability to exercise control over important outcomes facilitates the use of proactive, versus reactive, behaviors in the face of later challenges. In the ensuing years, we've begun to translate these findings into human models, recently publishing a paper showing that exercising control over a threat engages prefrontal-striatal circuitry and decreases reactive responses to subsequent threats, even when they are no longer controllable. We are currently taking this research in many new directions, exploring whether control over reward has similar effects and whether there may be sensitive periods during development in which the controllability of important outcomes has especially robust effects. This line of research has been a longstanding interest and has presented many methodological challenges, so it is particularly exciting to see it take shape. And this progress is largely attributable to the creativity, shared enthusiasm, and tireless efforts of the students and collaborators with whom I've worked on these studies.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Hartley:** Throughout my career, I've worked with many brilliant scientists whose mentorship, perspectives, and expertise have influenced my research direction. As an undergraduate at Stanford, I worked in John Gabrieli's lab, which was at the forefront of the burgeoning field of cognitive neuroscience. There, I worked with Noam Sobel, whose exceptional creativity and passion for science set an inspiring example. My graduate advisor at New York University (NYU), Liz Phelps, allowed me a tremendous amount of flexibility in exploring and defining my interests. Through her influence and the incredibly stimulating and supportive environment in her lab, my focus on understanding individual differences in affective learning began to take shape. Other mentors at NYU, including Nathaniel Daw, Paul Glimcher, and Joe LeDoux, helped cultivate my use of computational and behavioral economic methodological approaches and facilitated the close dialogue between my work in humans and animal research on learning and decision-making. My postdoctoral advisor, BJ Casey, helped me understand that my interest in the mechanisms underlying individual differences was fundamentally a question about a developmental process. This insight inspired my transition into developmental cognitive neuroscience research. The ongoing intellectual dialogues with my colleagues at NYU, my scientific peers, and my collaborators — there are too many to name — are a constant source of innovation and inspiration for my work. And I learn every day from the wonderful students and postdocs in my lab, whose curiosity and insights lead us in new and exciting directions.

**Observer:** What questions do you hope to tackle in the future?

**Hartley:** Adaptive control of our behavior requires a flexible balance among multiple learning systems that support different types of behavioral responses (e.g., Pavlovian reactions, goal-directed actions, habits), each of which has strengths and shortcomings. An ongoing goal of my research is to better understand the typical development of these systems and how environmental and contextual factors might bias their recruitment and interaction. Ultimately, we are interested in understanding how



variation in real-world experience (e.g., abundance, volatility, or controllability of positive or negative reinforcers) might optimize these behavioral control systems to an individual's unique environment and how this "tuning" might confer psychological vulnerability or resilience.

**Observer:** What does winning this award mean to you both personally and professionally?

**Hartley:** feel very lucky that I get to ask interesting questions for a living and to work with curious and creative scientists to try to answer them. The process of coming up with the answers often feels slow and incremental, so it is humbling and encouraging to have my work to date recognized by my colleagues. Receiving an award in the honor of such a tenacious and influential woman and psychological scientist is especially meaningful.



**Kristin Laurin**

*University of British Columbia, Canada*

[Website](#)

**Observer:** Please briefly describe your research interests.

**Laurin:** My research covers a range of topics, all loosely connected by my fascination with goals and motivation on the one hand and "big ideas" — politics, religion, morality — on the other. In all my work, I am particularly interested in people's tendency to rationalize aspects of the world that they find disturbing — how they adjust their attitudes and beliefs to feel better about these disturbing realities. Intersecting with this interest in rationalization, I have explored both the causes and consequences of inequality.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Laurin:** I am interested in two somewhat opposing concepts: first, abstract theoretical ideas about humans' social and cognitive functioning, probably shaped by my lifelong admiration of the beauty of logic and math and things that make perfect sense. Second, real-world issues threatening to derail civil society as we know it, probably shaped by my various mentors and advisors as well as by my relationships with humans from a wide range of social classes. My work tries to merge these two interests, which can be difficult because real-world issues often appear to make little sense at all, let alone perfect sense.

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Laurin:** It's hard to separate pride in the work for its own sake and pride in the work for what it represents for my students. Mentoring graduate students and helping them produce their best work has been one of the greatest and most unexpected pleasures of my career; on that front, I am the most proud of the student-led papers I have published in top outlets. What has led to those successes, aside from a fair bit of luck, has been a commitment to prioritizing quality over quantity and to taking as much time as we needed to come up with the best designs to test our ideas. Of course, those are commitments that I learned to hold through my training as a graduate student at the University of Waterloo.

I am the most proud of two papers that have yet to be published. One, which is currently in the revision cycle, synthesizes a whole slew of existing work on the reproduction of inequality over time and across generations; the other, which we submitted shortly before I wrote this, focuses on how we judge the fairness of different strategies that people use to try to advance through social hierarchies.

I am also proud of how our lab has evolved in terms of open science. We have already begun publishing papers that include preregistered studies, and we're using that tool more and more. I believe this has strengthened the robustness of our results, and pushed us to better research designs.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Laurin:** So many. In terms of people who have had a personal influence on me, I of course have to begin with my primary advisors in graduate school — Aaron Kay and Grainne Fitzsimons, and also Richard Eibach. But I would also put everyone on the Social Psychology faculty at the University of Waterloo during my time there on the list. Also, I include Dale Miller from my time at Stanford University (and beyond!), as well as all my senior colleagues at the University of British Columbia. In addition to helping shape my thinking and approach to research, all of those people also have helped me navigate my career as a more pragmatic entity. Taking a step back, Lee Ross and Dick Nisbett (as filtered through John Lydon and Mark Baldwin) are the two reasons I fell in love with psychological science during my undergraduate degree. The work of John Jost has been incredibly and directly influential to my thinking throughout my work. And I have always felt inspired by the elegant theorizing of scholars such as Tory Higgins and Arie Kruglanski. I'm sure there are so many others I'm forgetting.

**Observer:** What questions do you hope to tackle in the future?

**Laurin:** Right now most of my projects involve at least one of the two following topics: rationalization

— the way we reassure ourselves that everything is and will continue to be alright — and social class. In terms of the former, I'm interested in figuring out what its functional basis might be, as well as what its implications for psychological well-being might be in both the short and long term. In terms of the latter, I'm interested in understanding what goes into people's perceptions of their own social standing, how that influences their motivations and goals in various domains, and how one's social standing feeds into a self-reinforcing cycle, making it difficult to change over time.

**Observer:** What does winning this award mean to you both personally and professionally?

**Laurin:** I am incredibly flattered to join this group of distinguished scholars — the social psychological scientists who have won this award over the years are people whose work I think so highly of and whom I respect so much as people. So personally, it certainly makes me feel as though I'm working toward my ideal self! Professionally, I think the best outcome would be if it helped raise the profile of my lab and of UBC's already well-regarded grad program so that we can continue attracting the strongest prospective students!



**Robb Rutledge**

*University College London, United Kingdom*

[Website](#)

**Observer:** Please briefly describe your research interests.

**Rutledge:** Feelings of happiness and sadness are a big part of our subjective conscious experience, but we still don't know exactly what causes these feelings and how they relate to the decisions we make. Using a combination of neuroimaging, pharmacology, and large-scale smartphone-based data collection, my lab builds mathematical models that predict how subjective feelings change from moment to

moment. The results of our experiments will tell us more about how emotions work and may explain some of the symptoms of major depression and bipolar disorder.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Rutledge:** My PhD research with Paul Glimcher at New York University showed that dopamine-related brain activity represents “reward prediction errors” — the difference between what you get and what you expected to get — and that boosting dopamine increased learning from rewards. We know a lot about the neural mechanisms underlying reinforcement learning; however, we don’t know how these mathematical models relate to emotional experience. I noticed that my participants would often be in very good or bad moods at the end of my experiment, but it didn’t seem to have much to do with their earnings. A classic finding from economics is that happiness does not rise with Gross Domestic Product, but I was surprised that money can’t even buy happiness in an hour-long experiment. At the same time, expectations and rewards are clearly relevant to our happiness. My PhD advisor was a pioneer in the field of neuroeconomics, and his example taught me how to pursue interdisciplinary research. When I started my postdoctoral research at University College London with Ray Dolan and Peter Dayan, the first thing I wanted to do was use mathematical models to describe the links between rewards, expectations, and feelings.

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Rutledge:** Happiness depends not on how well people are doing but on whether they are doing better than they expected. Using the equations that I developed, we can predict precisely what people will report at any moment based on their history of decisions and outcomes. In my experiments, brain activity in the striatum predicted changes in happiness, and boosting dopamine increased the happiness that people felt after small rewards, making all rewards feel like big rewards. I extended my model into the social domain to explain how inequality reduces happiness. I also helped build a free smartphone app, [The Great Brain Experiment](#), and found that my equations worked for thousands of anonymous and unpaid volunteers and hundreds of people with depression. I’m thankful for the support of my postdoctoral advisors, Ray Dolan and Peter Dayan, who encouraged this new research direction from the start. I was lucky to have great students, including Nikolina Skandali and Archy de Berker, who trained me as much as I trained them, and great colleagues to collaborate with and bounce ideas off of. These include Ilan Dinstein, Anne Takesian, Sach Sokol, Stephanie Lazzaro, Mark Dean, Eric DeWitt, Peter Smittenaar, Peter Zeidman, Molly Crockett, Geert-Jan Will, Mona Garvert, Zeb Kurth-Nelson, and all of the artists I worked with at the Roundhouse.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Rutledge:** I have been lucky to have had inspirational mentors starting from my time as an undergraduate at Caltech, including Pietro Perona, Colin Camerer, Christof Koch, Nancy Kanwisher, Rebecca Saxe, Laurie Santos, Russell Gray, Gavin Hunt, Paul Phillips, and Eero Simoncelli. One thing they have in common is an unusual talent for identifying important problems and solving them in creative ways, and I am grateful for their support over the years. I am also grateful to the Thomas J.

Watson Foundation, which supported my unusual pre-PhD research in the South Pacific studying cultural evolution with computational methods and doing field work on tool use in New Caledonian crows. I have some of my best ideas while traveling to far parts of the world, where new environments challenge me to develop richer models of human behavior and emotions. These days, anything exciting about my research is due to the brilliant young researchers working with me, including Rachel Bedder, Bastien Blain, Benjamin Chew, Liam Mason, Akshay Nair, and Matilde Vaghi. Working with them is the best part of my job.

**Observer:** What questions do you hope to tackle in the future?

**Rutledge:** I am most excited about my lab's clinical collaborations, which aim to apply the new models we are building to explain happiness in relation to many factors including effort, learning, goal attainment, ambiguity, and future prospects. In one project, we are using our smartphone app to test previously depressed individuals who either switch to placebo or stay on antidepressant drugs for a year. We want to know which model parameters change before symptoms get worse. For example, we predict that parameters capturing the emotional impact of negative events will increase before depressive symptoms do. I think some of the key parameters for psychiatric disorders are ones that will link emotions with behavior, and understanding those requires building better behavioral models that incorporate emotions.

**Observer:** What does winning this award mean to you both personally and professionally?

**Rutledge:** Winning this award is a great honor. I appreciate this opportunity to acknowledge the people who helped me become the scientist I am today, including my mentors and colleagues, my parents David and Dale, my siblings Kate and Alan, and above all my wife Stephanie Lazzaro, who is also a cognitive neuroscientist, and our son Jack. My research draws not only from psychology and neuroscience, but also from computer science, economics, and psychiatry. I also see this award as recognizing the value of interdisciplinary research and the potential of mathematical models to explain emotions, making predictions that can help us better understand and treat psychiatric disorders. I am excited to see what we figure out next.



**Amrisha Vaish**

*University of Virginia*

[Website](#)

**Observer:** Please briefly describe your research interests.

**Vaish:** My research aims to understand human sociality and cooperation. The starting point for this work is the proposal that humans are tremendously cooperative beings and that our ultracooperative, moral nature is thought to account for our success as a species. I seek to understand the psychological attributes that allow humans to engage in cooperation from early in their development. In particular, my research focuses on the ontogenetic emergence of the moral emotions, cognitions, and behaviors that make children successful cooperators. This includes the emergence of social emotions such as sympathy, guilt, and gratitude, of moral evaluations of others' behavior and of one's own, and of moral behaviors such as prosocial behavior and the enforcement of moral norms. This work has revealed that by as early as 2 to 3 years of age, children are deeply motivated to enhance others' welfare, enforce norms on others, and repair damage to their relationships, thereby upholding and promoting cooperation. I have recently begun to explore the development of more uncooperative phenomena, such as cheating, in order to expand our understanding not only of when and why cooperation works but also of when and why it doesn't. I also have several related research interests such as children's understanding of others' desires, and the development of the negativity bias. All of these research directions together contribute to an understanding of the social child.

**Observer:** What was the seminal event, or series of events, that led you to an interest in your award-winning research?

**Vaish:** As far back as I can recall, I have been fascinated by questions of morality: What is right, what is wrong, and how can we know? These have always struck me as some of the most fundamental questions

that we need answers to. Reflecting on it now, I see that the realization that these were questions *I* could help answer, and indeed the building blocks of my research program on moral development, emerged while I was an undergraduate at the University of Virginia (UVA) (where I am fortuitously now faculty!). An introductory course on developmental psychology helped me see that studying children was an extremely promising way of understanding the nature and origins of morality — and indeed any other aspect of human nature. In a mind-blowing seminar on morality with Jon Haidt, I learned that not just cognition but also emotions are crucial to morality, and that the evolutionary lens is one fascinating way to understand where our morality fundamentally stems from. Pursuing an honors thesis under the guidance of Angel Lillard introduced me to the beauty and power of the scientific method for studying development. By the time I graduated, I was hooked — both on questions of development, particularly moral and emotional, as well as on pursuing these questions using experimental methods. Subsequently, I had the incredible fortune of working under the supervision of Amanda Woodward and then Mike Tomasello and Malinda Carpenter, who are all not only brilliant thinkers and experimentalists but also were infinitely supportive of my ideas while providing exactly the right amount of scaffolding. Under their guidance, I was able to foster and sharpen my ideas and trust that those ideas had the potential to create new and meaningful knowledge. So I think my interest in this research area has, in some vague form, been with me from the start, but I have only been able to make something of that interest because of the incredible guides and opportunities I have had along the way.

**Observer:** Tell us about one of the accomplishments you are most proud of within this area of research. What factors led to your success?

**Vaish:** I am truly proud of individual studies that my colleagues and I have conducted in which we have shown the remarkably early emergence of prosocial behaviors and motivations as well as the developmental trajectories of these behaviors and motivations. But I think a broader, more encompassing accomplishment that I take pride in is the fact that we have developed effective, sensitive, and innovative ways of asking children about their moral stances. This is not always an easy feat, as toddlers and preschool-aged children aren't great at verbalizing their thoughts or introspecting! Investigating how they respond to the world, and especially *why* they respond the way they do (e.g., the underlying emotions or motivations), requires particularly creative and innovative methods that nonetheless allow sufficient experimental control. I think that my own research and that of many of my colleagues and peers has made enormous advances on this front. As a result, we know a great deal more about young children's morality than we did just a decade or two ago, but we also now have far better tools to ask far more — and far more probing — questions.

**Observer:** What contributions, or contributors, to psychological science do you feel have had a major impact on your career path?

**Vaish:** My broad thinking on questions of morality has been deeply impacted by Mike Tomasello's evolutionary and comparative approach to the study of human ontogeny. It was through working with Mike that I came to appreciate the power of posing developmental questions within an evolutionary framework. Understanding and adopting this approach in my work has been immensely clarifying and a tremendously rich source of ideas for my research. In addition, I gained invaluable lessons under Amanda Woodward's supervision. Amanda's unparalleled capacity to think about an idea — any idea — and follow it, push it further, connect it to other ideas, and consider all its implications has stayed with me as the gold standard for critical thinking. And of course both Mike and Amanda are masters of

getting inside infants' and children's heads and coming out with all sorts of astonishing answers. They were thus critical in training me in the bread and butter of my research: finding sensitive and child-friendly ways to explore what young, often preverbal children think and how they feel about their social and moral worlds.

In addition to my direct mentors, I have benefited from the brilliance and generosity of other leaders in the field who, despite having more than enough on their plates, make themselves available to listen to, take seriously, and provide guidance to junior researchers such as me. This extended "village" of mentors has been and continues to be a source of inspiration and support. I also had the privilege of fantastic peers in grad school, who were indispensable sources of support, inspiration, and humor, and because of whom the grad school and postdoc years were made infinitely more manageable and productive. My colleagues at UVA have been instrumental in providing a rich and intellectually stimulating environment and helping me build my research group and navigate the tasks of a new faculty member — all of which are essential to finding success on the career path. And my students at UVA have greatly influenced my work and thinking. I am so grateful for their enthusiasm, curiosity, growth mindset, and hard work — and generally for being so fantastic as individuals and as a team. Finally, my most sustained support comes from my family — my husband Tobias Grossmann (who is not just a wonderful partner and father but also an incredible collaborator and critic) and my two young children (who constantly inspire me and my work and whose social and moral development I hope not to mess up too terribly...).

**Observer:** What questions do you hope to tackle in the future?

**Vaish:** One direction I very much want to pursue is the development of positive psychology, particularly those emotions that help children flourish and promote their well-being, both in the present and in the long term. We have learned a great deal about positive psychology in adulthood, yet we know so little about it in children. What are the natures and developmental courses of positive emotions such as gratitude, pride, and awe? How can aversive emotions such as guilt or shame contribute to positive outcomes? How do we investigate complex emotions such as guilt and gratitude in young (preverbal) children? How do social contexts and social norms impact children's experiences and outcomes of these emotions? My research group is just beginning to take on these sorts of questions, and we hope to elucidate them far more in the future.

**Observer:** What does winning this award mean to you both personally and professionally?

**Vaish:** I am extremely grateful and honored to receive this award along with such a fabulous set of past and current winners. It is a source of validation for the work that my colleagues and I have done, a source of encouragement for continuing this body of work, and a source of courage to be bold and venture in new directions. The award is especially meaningful because of its namesake — a trailblazer who broke gender barriers in psychological science and laid the foundation for other women to do the same. Receiving this award has made me all the more committed to bolstering and promoting other young women in science.