ORGANIZATION ROLE

Policy Researcher

PROJECT ROLE / FOCUS AREAS

Consequence analysis

Risk analysis

Cost benefit analysis

Decision making under deep uncertainty

EDUCATION

Postdoc Biomedical Ethics Unit, McGill University, Present

Ph.D., Behavioral Decision Research, Carnegie Mellon University, 2017

MS, Behavioral Decision Research, Carnegie Mellon University, 2014

BS, Decision Science & Philosophy, Carnegie Mellon University, 2012

PROFESSIONAL MEMBERSHIP

Decision Making Under Deep Uncertainty Society

PATRICK BODILLY KANE, PH.D.

Policy Researcher

Patrick Bodilly Kane, Ph.D., is a policy researcher on The Water Institute's Planning and Policy Research team, where he focuses on robust decision making, risk perception, and policy development. Prior to working at the Institute, Patrick's research has examined how risk perceptions impact decisions on topics ranging from climate change to COVID-19. Since coming to the Institute, Patrick's research has focused on quantifying the impacts of policy, including developing consequence modeling in support of flood risk analysis and benefit-cost analysis for green infrastructure. Patrick also focuses on robust decision-making analysis, a model-based approach for understanding uncertain systems, which he has applied in the domain of emissions reduction, stormwater management and the management of the Mississippi River.

PROFESSIONAL EXPERIENCE

2021–Present: Research Scientist 2, The Water Institute

2018–2021: Post-doctoral Research Fellow, Biomedical Ethics Unit, McGill University

SELECTED PROJECTS

Barrier Island Sediment Management. *The Water Institute. (Ongoing)* Policy Researcher. Developing a Robust Decision Making Framework to evaluate the effectiveness of sediment management strategies for barrier islands across the Louisiana coastline.

2029 Louisiana Coastal Master Plan. *Coastal Protection and Restoration Authority. (Ongoing).* Policy Researcher. Updating the consequence methodology used in the 2023 Coastal Master Plan to account for the different kinds of flooding in compound flood zones and the disparate impacts of flood damage based on socioeconomic factors.

Policy Research to Improve the Evaluation of Nature Based Solutions in U.S. Army Corps of Engineers Programs. *US Army Corps of Engineers. (2022–2023).* Policy Researcher. Updated existing cost benefit analysis for six selected USACE projects to incorporate newly monetized benefits for plans with nature-based solutions and the differential impacts of projects due to equity considerations.

SELECTED PUBLICATIONS

1. Kane, P. B., Tebyanian, N., Gilles, D., McMann, B., & Fischbach, J. R. (2024). Key drivers of vulnerability to rainfall flooding in New Orleans. *Frontiers in Climate*, *6*, 1303951.
2. Kane, P. B., & Kimmelman, J. (2021). Is preclinical research in cancer biology reproducible enough. *Elife*, *10*, e67527.
3. Kane, P. B., Bittlinger, M., & Kimmelman, J. (2021). Individualized therapy trials: navigating patient care, research goals and ethics. Nature medicine, 27(10), 1679-1686.
4. Broomell, S.B. & Kane, P.B. (2021). Perceiving a Pandemic: The Effect of Superspreading Events on Pandemic Risk Perception Decision.
5. Kane, P. B., Moyer, H., MacPherson, A., Papenburg, J., Ward, B. J., Broomell, S. B., & Kimmelman, J. (2020). Expert Forecasts of COVID-19 Vaccine Development Timelines. Journal of General Internal Medicine, 1–3.
6. Kane, P. B., Benjamin, D. M., Barker, R. A., Lang, A. E., Sherer, T., & Kimmelman, J. (2020). Comparison of Patient and Expert Perceptions of the Attainment of Research Milestones in Parkinson's Disease. Movement Disorders.
7. Kane, P. B., & Broomell, S. B. (2020). Applications of the bias–variance decomposition to human forecasting. Journal of Mathematical Psychology, 98, 102417.
8. Kane, P. B., Benjamin, D. M., Barker, R. A., Lang, A. E., Sherer, T., & Kimmelman, J. (2020). Forecasts for the Attainment of Major Research Milestones in Parkinson's Disease. Journal of Parkinson's Disease, (Preprint), 1–9.
9. Kane, P. B., Kim, S. Y., & Kimmelman, J. (2020). What Research Ethics (Often) Gets Wrong about Minimal Risk. The American Journal of Bioethics, 20(1), 42–44.
10. Golman, R., Bhatia, S., & Kane, P. B. (2019). The dual accumulator model of strategic deliberation and decision making. Psychological Review.
11. Broomell, S. B., Winkles, J. F., & Kane, P. B. (2017). The Perception of Daily Temperatures as Evidence of Global Warming. Weather, Climate, and Society.
12. Broomell, S. B. & Kane, P. B. (2017). Public Perception and Communication of Scientific Uncertainty. Journal of Experimental Psychology: General, 146(2), 286–304.
13. Kane, P., & Zollman, KJS (2015). An Evolutionary Comparison of the Handicap Principle and Hybrid Equilibrium Theories of Signaling. PLoS ONE, 10(9), e0137271.