

**William J. Burns, Ph.D.**  
**Decision Research**  
**California State University San Marcos**  
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**Degrees Held**

**University of Oregon**, Eugene, Oregon, 1990, Ph.D., Decision Science (with a minor in Marketing)

**Oregon State University**, Corvallis, Oregon, 1986, M.S., Statistics (with a minor in Economics)

**Southern Oregon University**, Ashland, Oregon, 1987, M.S., Interdisciplinary Studies: Psychology and Sociology

**Southern Oregon University**, Ashland, Oregon, 1980, B.S., Psychology (*summa cum laude*)

**Professional and Teaching Experience**

**Faculty Fellow, U. S. Department of Homeland Security, scientific advisor**, June 2013–August 2013; June 2014–August 2014, June 2015–November 2015

**Decision Research Institute, Eugene, Oregon**, 2007 to present, **senior research scientist**

**National Center for Risk and Economic Analysis for Terrorism Events (USC)-Department of Homeland Security (CREATE)**, 2006-2019, **research scientist** (coordinator of the risk perception and risk communication group), **Center for Risk and Economic Analysis of Threats and Emergencies** 2020-present, **external senior research fellow**

**California State University, San Marcos**, 1999 to present, **adjunct professor**, Statistics, Decision Models, Marketing

**University of California, Davis** 1997–1998, **visiting professor**, Full-time and Executive MBA Marketing and Statistics students

**University of Iowa** 1990–1996, **assistant professor**, Undergraduate, MBA, and Doctoral Marketing and Statistics students

**Professional Focus: Public Response to Crisis and Security Policy**

*Public Response to Pandemics*

Currently coordinating a team to investigate public response to the Covid 19 pandemic and its impact on our healthcare system and economy. This research is sponsored by the National Science Foundation as part of their RAPID funding response. The project is entitled “*Investigating the Causal Propositions of the Affect Heuristic During an Ongoing Pandemic*”, 2020/2021.

### *Counterterrorism with focus on Commercial Aviation Risk*

Coordinated a team to investigate the impact of different types of attacks on the nation's transportation systems. This was a research project sponsored by the Transportation Security Administration (TSA) through the National Center for Economic Analysis of Terrorism Events (CREATE). It looked at attack scenarios of particular relevance to the TSA's mission and included not only public response to these attacks but a rigorous economic analysis of the impact of two attacks on commercial aviation. It also estimated the economic value of risk communication as a mitigation tool. The report was submitted to the TSA June 2013 and is entitled "*Public Risk Perception Surveys: Risk Perception, Public Confidence and Economic Impacts of Risk Amplification Following a Terrorism Event*".

Coordinated a team to compare the utility of current commercial aviation security practices implemented by the TSA with a proposed future innovation referred to as the Dynamic Aviation Risk Management Solution (DARMS). This project was sponsored by the TSA through the National Center for Economic Analysis of Terrorism Events (CREATE) as a proof of concept study. A multi-attribute utility model was developed that described seven fundamental objectives with twenty-four performance metrics and permitted a comparison of the two approaches. This report was submitted to the TSA May 2015 and is entitled "*Dynamic Risk Management Solution (DARMS): A Proof of Concept Study Examining the Role of Multi-Attribute Utility*".

Coordinated a team that modeled the probability and consequences of the catastrophic loss of a commercial aircraft. This work contributed significantly to another team building a game theory model of passenger screening. The project offered policy recommendations to optimally protect the nation's commercial aircraft and airports. This study is sponsored by the TSA through the National Center for Economic Analysis of Terrorism Events (CREATE) and involves interviewing subject matter experts throughout the TSA to structure this problem and elicit needed probabilities. This project draws heavily from data and research connected to the TSA Mission Risk Knowledge Center (MRKC). This report was submitted to the TSA March 2016 and is entitled "*Dynamic Risk Management Solution (DARMS): A Proof of Concept Study (Part 2)*".

### *Counterterrorism with focus on Deterrence and Community Resilience*

Communication with colleagues at the National Counterterrorism Center (NCTC) to explore how research the risk perception and risk communication team at CREATE has conducted can help with the training of local community leaders to combat radicalization and increase community resilience. This dialog has focused on our team's research on deterrence and inoculating risk communication as well as possible training materials to be used in their outreach to community leaders (2014, 2015). The Department of Homeland Security through CREATE has sponsored a research project (2015-16) to explore an innovative new approach to deterring terrorist attackers and mitigating radicalization. Scheduled to conference with colleagues at the DHS CVE Task Force October 2016.

Invited in December 2013 and June 2014 to meet with colleagues at the Office of the Chairman of the Joint Chiefs of Staff (OCJCS)-Pentagon to discuss public risk perception

and how best to communicate with the American public about risks worldwide. These discussions focused on the importance of understanding risk context and proximity to hazards.

#### *Counterterrorism and collaboration with National Labs*

Coordinated a project in conjunction with Pacific Northwest National Lab (PNNL) entitled “*Understanding Terrorism Risk Perception and Improving Risk Communication*”. This project involved 5 research teams from different universities and produced over 30 academic papers and presentations.

Worked with a CREATE team and Pacific Northwest National Lab (PNNL) to investigate public response to an anthrax attack (hypothetical) on the city of Seattle. Created a realistic video depiction of how events would unfold over a two-year period and queried the public through focus groups and citywide surveys. Used findings to create causal loop and influence diagrams to model the decision process of Seattle citizens’ following a crisis. Combined these findings with an economic analysis of this event.

#### *Guest Editor of Special Issue in Risk Analysis*

Edited a special issue in Risk Analysis entitled “*Risk Perception and Risk-Related Behaviors: Anticipating and Responding to Crisis*”. Eleven academic articles were published across a wide range of topics pertaining to risk perception and communication to economic impact of disasters.

#### *Academic Forums (its own conference with at least thirty scholars per event)*

Organized academic forum entitled “*Public Response to Threat: Cross-Disciplinary Contributions and Collaboration*”. Twenty researchers from psychology, sociology, decision analysis, policy, system dynamics modeling and communication met for two days at the University of Oregon in Eugene, OR to discuss how best to advance the field of risk perception research-August 2009.

Organized academic forum entitled “*Risk Perception and Risk-Related Behaviors: Anticipating and Responding to Crisis*”. Thirty researchers from economics, psychology, engineering, sociology, decision analysis, public policy, system dynamics modeling, communication and emergency preparedness met for two days at the University of Southern California in Los Angeles to discuss how best to anticipate and respond to the crises of the future-March 2010.

Organized (with Richard John, Heather Rosoff and Bruce Schneier) an academic forum entitled “*Security and Human Behavior*”. Fifty researchers from philosophy, psychology, engineering, sociology, decision analysis, public policy, system dynamics modeling, communication and computer science met for two days at the University of Southern California in Los Angeles to discuss public response to cyber threats-June 2013.

Organizing with Robin Dillon-Merrill a CREATE-TSA sponsored symposium entitled “*Risks to Transportation Security*” that brings together leading researchers and members of the security community. TSA administrator is a keynote speaker. Panels topics are 1) Terrorist threat: understanding the dynamics; 2) Adaptive adversary: challenges for modeling and predicting extreme behavior; 3) Insider threat: challenges for detection and

mitigation; 4) Deterrence: theory, measurement, modeling and implementation; 5) Resilience: public response, economic consequences and risk communication and 6) Cyber security and threats to transportation. Georgetown University June 13-14 2016.

*Academic Symposium Panels (panel within a conference with about four scholars)*

Organized or participated in six risk perception and risk communication panels at the Society of Risk Annual Conference-December 2009-2014.

Organized a panel entitled “*Risk Perception and Communication: The Art and Science of Social Behavior Impact Analysis/Social Media and Maritime Risk Indication and Warning*” as part of a Maritime Risk Symposium hosted by CREATE at the University of Southern California to address risk assessment and management of threats in a maritime environment-November 2014.

*U.S. Department of Homeland University (DHS) Faculty Fellowships*

University Faculty Fellowship. Spent two months at the Transportation Security Administration (TSA) sponsored by CREATE attending regular meetings, bringing academic researchers to the TSA, delivering five academic presentations and six small group briefings to the DHS community-June-August 2013. Offered policy recommendations regarding the potential impact of the increased use of “expedited” passenger screening.

University Faculty Fellowship. Spent two months at the Transportation Security Administration (TSA) sponsored by CREATE attending regular meetings, bringing academic researchers to the TSA, delivering two academic presentations and three small group briefings to the DHS community and providing academic consultation on the Dynamic Aviation Risk Management Solution (DARMS) project-June-August 2014. Recommended the use of a game theoretic approach to modeling the behavior of an adaptive adversary. This approach has direct policy implications regarding passenger screening.

University Faculty Fellowship. Spent six months at Transportation Security Administration (TSA) sponsored by CREATE attending regular meetings, bringing academic researchers to the TSA, delivering academic presentation at the “*CREATE/TSA Symposium on Aviation Security*”, small group briefings to the DHS community and providing academic research on the Dynamic Aviation Risk Management Solution (DARMS) project-June-April 2016. Identified important vulnerabilities in the way airline passengers are screened and policies to address these vulnerabilities.

*Academic and Professional Reviews*

Regularly have reviewed projects funded by the U.S. Department of Homeland Security through CREATE. These projects have primarily involved public response to terrorism but have also included risk assessment, risk management and economic impact analysis.

Regularly have reviewed scientific proposals submitted to the National Science Foundation (NSF) that cover a wide range of topics relevant to the assessment and management of risk.

*Business Emergency Preparedness Planning*

Member of Advisory Board to set curriculum at CSUSM for the training of business owners and professionals to prepare, cope and recover from disasters. Advise on matters of public response and risk communication.

## Teaching and Educational Outreach

The application of quantitative methods, especially decision modeling, to a wide variety of business and research problems. Especially interested in the application of systems thinking to policy analysis. Very interested in sharing research with stakeholders from private and government sectors, at local, state and national levels.

## University Courses

Well over 180 semester or quarter-length classes in total. These include doctoral seminars in multivariate statistical analysis, MBA courses in statistics, decision analysis, research methods, business analytics and marketing research and undergraduate statistics, decision models, project management, and marketing.

**Student Consulting Projects.** Supervised 80 consulting projects with local San Diego companies ranging from small start-up companies to large corporations like QUALCOMM. Firms include for-profit as well not-for-profit organizations. Sectors span the financial, manufacturing and military contracting industries.

***Independent Studies and Honors Projects.*** Supervised numerous projects.

## Community Outreach

Regularly have given presentations to local business leaders and first responders on the topic of disaster planning and risk communication. Gave a series of talks on public response to the financial crisis at the invitation of the San Diego Regional Economic Development Corporation. Invited to present research on National Public Radio (NPR) and research has been described several times in the Wall Street Journal (WSJ).

## Research Interests

Policies that facilitate deterrence against extremist violence and most recently response to a pandemic. Pre-crisis risk communication to facilitate resilience in communities, risk perception, modeling public response to hazards, epidemics and economic analysis of terrorism events.

## Publications, Papers Under Review, Technical Reports, Working Papers

John, R., Dillon, R., **Burns, W.J.** & Scurich, N. (under review, 2023). Partitioning the Expected Value of Countermeasures with an Application to Terrorism, *Decision Analysis*. Status: Provisional acceptance following suggested revisions.

Baucum, M., John, R. S., **Burns, W.**, Portney, K., & Mumpower, J. (2020). Modeling affective and cognitive responses to soft-target terrorism over time. *Environment, Systems, and Decisions*, DOI: 10.1007/s10669-020-09789-6

Mayorga, M. W., Helsel, E. B., Hester, E., Ivanov, B., Sellnow, T. L., Slovic, P., **Burns, W. J.**, & Frakes, D. (2020). Enhancing public resistance to “fake news”: A review of the

- problem and strategic solutions. In H. D. O'Hair & M. J. O'Hair (Eds.), *Handbook of applied communication research*. New York: Wiley.
- Baucum, M., Rosoff, H., Richard, J., **Burns, W. J.**, & Slovic, P. (2018). Modeling public responses to soft-target transportation terror. *Environment Systems and Decisions*, *38*, 239–249. doi: 10.1007/s10669-018-9676-7
- Dillon, R. L., **Burns, W. J.**, & John, R. S. (2018). Insights for critical alarm-based warning systems from a risk analysis of commercial aviation passenger screening. *Decision Analysis*, *15*, 154–173. doi: 10.1287/deca.2018.0369
- Ivanov, B., Sellnow, T., Getchell, M., & **Burns, W. J.** (2018). The potential for inoculation messages and post-inoculation talk to minimize the social impact of politically-motivated acts of violence. *Journal of Contingencies and Crisis Management*, *26*, 414–424. doi: 10.1111/1468-5973.12213
- Rose, A., Avetisyan, M., Rosoff, H., **Burns, W. J.**, Slovic, P., & Chan, O. (2017). The role of behavioral responses in the total economic consequences of terrorist attacks on U.S. air travel targets. *Risk Analysis*, *37*, 1403–1418. doi: 10.1111/risa.12727
- Burns, W. J.**, Dillion-Merrill, R., John, R., & Scurich, N. (2016). *Dynamic Aviation Risk Management Solution (DARMS): A proof of concept study examining passenger screening policy*. Report submitted to the Transportation Security Agency April 2016.
- Ivanov, B., **Burns, W. J.**, Sellnow, T. L., Petrun Sayers, E. L., Veil, S. R., & Mayorga, M. W. (2016). Using an inoculation message approach to promote public confidence in protective agencies. *Journal of Applied Communication Research*, *44*, 381–398. doi: 10.1080/00909882.2016.1225165
- Vastfjall, D., Slovic, P., **Burns, W. J.**, Erlandsson, A., Koppel, A., & Tinghog, G. (2016). The arithmetic of emotion: Integration of incidental and integral affect in judgments and decisions. *Frontiers in Psychology*, *7*, 325.  
<http://journal.frontiersin.org/article/10.3389/fpsyg.2016.00325/full>
- Burns, W. J.**, Dillion-Merrill, R., & John, R. (2015). *Dynamic aviation risk management solution (DARMS): A proof of concept study examining the role of multi-attribute utility*. Report submitted to the Transportation Security Agency May 27 2015.
- Giesecke, J., **Burns, W. J.**, Rose, A., Barrett, A., & Griffith, M. (2015). Regional dynamics under adverse physical and behavioral shocks: The economic consequences of a chlorine terrorist attack in the Los Angeles financial district. In P. Nijkamp, A. Rose & K. Kourtit (Eds.), *Regional science matters: Studies dedicated to Walter Isard* (pp. 319–350). Berlin: Springer.
- Dillon, R. L., Tinsley, C. H., & **Burns, W. J.** (2014). Evolving risk perceptions about near-miss terrorist events. *Decision Analysis*, *11*, 27–42. doi: 10.1287/deca.2013.0286

- Dillon, R. L., Tinsley, C. H., & **Burns, W. J.** (2014). Near-misses and future disaster preparedness. *Risk Analysis*, 34, 1907–1922. doi: 10.1111/risa.12209
- Burns, W. J.**, Slovic, P., John, R., Rosoff, H., Rose, A., Misak, A., Chan, O. & Sellnow, T. (2013). *Public risk perception surveys: Risk perception, public confidence, and economic impacts of risk amplification following a terrorist event*. Report submitted to the Transportation Security Agency June 30, 2013.
- Rosoff, H., Siko, R., John, R., & **Burns, W. J.** (2013). Should I stay or should I go?: An experimental study of health and economic government policies following a severe biological agent release. *Environment, Systems and Decisions*, 33, 121–137. doi: 10.1007/s10669-012-9431-4
- Weller, J. A., Dieckmann, N. F., Tusler, M., Mertz, C. K., **Burns, W. J.**, & Peters, E. (2013). Development and testing of an abbreviated numeracy scale: A Rasch analysis approach. *Journal of Behavioral Decision Making*, 26, 198–212. doi: 10.1002/bdm.1751
- Burns, W. J.**, Peters, E., & Slovic, P. (2012). Risk perception and the economic crisis: A longitudinal study of the trajectory of perceived risk. *Risk Analysis*, 32(4), 659–677.
- Burns, W. J.**, & Slovic, P. (2012). Guest editors for a Special Issue in Risk Analysis entitled “Risk Perception and Behaviors: Anticipating and Responding to Crises.” This issue includes 11 papers on the topics of public response to disasters and recommended policy.
- Burns, W. J.**, & Slovic, P. (2012). Risk perception and behaviors: Anticipating and responding to crises. *Risk Analysis*, 32(4), 579–582.
- Giesecke, J. A., **Burns, W. J.**, Barrett, A., Bayrak, E., Rose, A., Slovic, P., & Suher, M. (2012). Assessment of the regional economic impacts of catastrophic events: CGE analysis of resource loss and behavioral effects of a RDD attack scenario. *Risk Analysis*, 32(4), 583–600.
- Rosoff, H., John, R., **Burns, W. J.**, & Siko, R. (2012). Structuring uncertainty and conflicting objectives for life or death decisions following an urban biological catastrophe. *Journal of Integrated Disaster Risk Management*, 1, 1–21.  
[http://idrimjournal.com/index.php/idrim/article/viewFile/35/pdf\\_9](http://idrimjournal.com/index.php/idrim/article/viewFile/35/pdf_9)
- Burns, W. J.**, Reilly, C., & Slovic, P. (2011). The attack on Flight 253, the Haiti earthquake, and the Japanese disaster: A longitudinal look at emotional reactions, risk-related behaviors, and support for policy measures. *The CIP Report*, 10(6), 22–24, 34.
- Rosoff, H., John, R., **Burns, W. J.**, & Maya, I. (2011). Scenario simulation group reactions to the aftermath of the Great Shakeout magnitude 7.8 earthquake. *Earthquake Spectra*, 27, 597–614.
- Burns, W. J.** (2010). Communicating about threat: Toward a resilient response to terrorism. In B. H. Friedman, J. Harper & C. A. Preble (Eds.), *Terrorizing ourselves: Why the U.S.*

- counterterrorism policy is failing and how to fix it* (pp. 231–253). Washington, D.C: CATO Institute.
- Burns, W. J.** (2010). *Understanding terrorism risk perception and improving risk communication: Final report*. Submitted to The U.S. Department of Homeland Security and the Pacific Northwest National Lab on October, 25, 2010.
- Burns, W. J., & Slovic, P.** (2010). Predicting and modelling public response to a terrorist strike. In P. Slovic (Ed.), *The feeling of risk: New perspectives on risk perception* (pp. 285–306). London: Earthscan.
- Burns, W. J.** (2009, January 5). The path well taken: Making the right decisions about risks from terrorism. *Cato Unbound*. <http://www.cato-unbound.org/2009/01/05/william-burns/the-path-well-taken-making-the-right-decisions-about-risks-from-terrorism/>
- Burns, W. J., & Slovic, P.** (2007). The diffusion of fear: Modeling community response to a terrorist strike. *JDMS: The Journal of Defense Modeling and Simulation: Applications, Methodology, Technology*, 4, 298–317.
- Burns, W. J., & Slovic, P.** (2006). *Predicting public response to a terrorist strike*. Winner of the “Best Paper Award” for the Society for Risk Analysis 2005 Conference.
- Hampson, S. E., Severson, H. H., **Burns, W. J.**, Slovic, P., & Fisher, K. J. (2001). Risk perception, personality factors and alcohol use among adolescents. *Personality and Individual Differences*, 30, 167–181.
- Mittelstaedt, J. D., Riesz, P. C., & **Burns, W. J.** (2000). Why are endorsements effective? Sorting among theories of product and endorser effects. *Journal of Current Issues & Research in Advertising*, 22(1), 55–65.
- Burns, W. J., & Clemen, R.** (1993). Covariance structure models and influence diagrams. *Management Science*, 39(7), 816–834.
- Burns, W. J., Hampson, S. E., Severson, H. H., & Slovic, P.** (1993). Alcohol-related risk taking among teenagers: An investigation of contributing factors and discussion of how marketing principles can help. In L. McAlister & M. L. Rothchild (Eds.), *Advances in consumer research* (Vol. 20). Provo, UT: Association for Consumer Research.
- Burns, W. J., Slovic, P., Kasperson, R.E., Kasperson, J. X., Renn, O., & Emani, S. (1993). Incorporating structural models into research on the social application of risk: Implications for theory construction and decision making. *Risk Analysis*, 13(6), 611–623.
- Flynn, J., **Burns, W. J.**, Mertz, C. K., & Slovic, P. (1992). Trust as a determinant of opposition to a high-level radioactive waste repository: Analysis of a structural model. *Risk Analysis*, 12(3) 417–429.
- O’Brien, R. M., & **Burns, W. J.** (1992). The effects of sampling on measures of association between variables based on sample means. *Quality and Quantity*, 26, 409–425.



Renn, O., **Burns, W. J.**, Kasperson, J. X., Kasperson, R. E., & Slovic, P. (1992). The social amplification of risk: Theoretical foundations and empirical applications. *Journal of Social Issues*, 48(4), 137–160.

### **Conference Proceedings and Dissertation**

**Burns, W. J.** (2000) “Customer Economic Profit: Forecasting Growth and Rates of Return,” In *NCDM (Direct Marketing Association) Conference Proceedings*, 25, Las Vegas, NV.

**Burns, W. J.** (December, 1999) “Tracking the Economic Profit of a Customer,” In *NCDM (Direct Marketing Association) Conference Proceedings*, 24, Michaela Shank and Angela Eastin, eds., Stamford, Conn.

**Burns, W. J.** (1991) “Introducing Structural Models and Influence Diagrams into Risk Perception Research: Their Value for Prediction, Theory Construction and Decision Making,” *Dissertation Abstracts International*, The University of Oregon, Eugene, 51:12.

Flynn, J., **Burns, W. J.**, Slovic, P., & Mertz, C. K. (1991) “Development of a Structural Model to Analyze Public Opinion on a High-Level Waste Facility,” In *Proceedings of the 1991 International High-Level Radioactive Waste Management Conference*, Las Vegas, NV.

### **Conference Presentations**

**Burns, W. J.** (2020). “How the Affect Heuristic Contributes to the Social Amplification and Attenuation of Risk Perception”, Society for Risk Analysis Annual Conference, December 16, 2020.

**Burns, W. J.** (2020). “How the Affect Heuristic Contributes to Attenuation of Risk Perception”, Annual Compassion Week Conference, August 6, 2020.

**Burns, W. J.** (2019). “What Buddhism Can Teach Us About Compassion”, Annual Compassion Week Conference, July 31, 2019.

**Burns, W. J.** (2019). “Deterrence”, CAO-E-TSA Symposium: Innovations Transportation in Security, June 25-26, 2019.

**Burns, W. J.** (2017). “Applying Psychology and Pre-Crisis Communication to Deter Terrorist Attacks and Mitigate Their Impacts”, **Keynote address at International Crisis and Risk Communication Conference**, University of Central Florida, Orlando, FL, March 13-15, 2017.

**Burns, W. J.** (2016). “Deterrence: Exploiting the Connection between Affect, Risk Perception and Self-Efficacy to Demotivate an Adversary”, Society for Risk Analysis Annual Conference, December 11-14, 2016.

**Burns, W. J.** (2016). “The Psychology of Deterrence: Demotivating Terrorists”, CREATE-TSA Symposium: Risks to Transportation Security, June 13-14, 2016.

- Burns, W. J.** (2015). “Modeling the Uncertainty Associated with Commercial Airline Flight Risk”, Society for Risk Analysis Annual Conference, December 7-10, 2015.
- Burns, W.J.** (2015). “The Role of Deterrence: Commercial Aviation Security”, 8<sup>th</sup> Security and Human Behavior Conference, Georgetown University, Washington D.C., June 9, 2015.
- Burns, W. J.,** Ivanov, B., Sellnow, T., Veil, S., Slovic, P., & Petrun, E. (2014). “Commercial Airline Security: Public Perceptions and Communication Regarding TSA’s Expedited Screening Procedures ”, Society for Risk Analysis Annual Conference, December 7-10, 2014, Denver, Colorado.
- Burns, W. J.** (2014). “Perceived Risk, Fear and Avoidance Behavior: The Economic Value of Risk Communication ”, Informs Conference, November 10, 2014, San Francisco, CA.
- Burns, W. J.,** Ivanov, B., Sellnow, T., Veil, S., Slovic, P., & Petrun, E. (2013). “Public response to the Terrorist Attacks in Boston”, Society for Risk Analysis Annual Conference, December 8-11, 2013.
- Burns, W. J.** (2013, June 6). Public response to disasters: Current approaches to exploring perceived risk, economic impacts and the mitigating role of risk communication. **Keynote address at the IEEE Intelligence and Security Informatics Annual Conference**, Seattle, WA. <http://isiconference2013.org/pgs/speakers.php>
- Burns, W. J.** (2012). “Resilience in the Face of Terrorism: Risk Communication as Inoculation”, 5<sup>th</sup> Security and Human Behavior Conference, Google Campus, New York City, June 5, 2012.
- Burns, W. J.,** Ivanov, B., Sellnow, T., Veil, S., Slovic, P., & Petrun, E. (2012). “Public Response to Terrorism: Risk Communication as a Means of Preserving Confidence in Security Measures”, *Society for Risk Analysis Annual Conference*, December 10-12, 2012.
- Burns, W. J.,** Slovic, P., Sellnow, T., & Veil, S. (2012). “The Psychology of Risk: Implications for Managing the Impact from Disasters”, a brown bag presentation at *The Department of Homeland Security* on May 30, 2012
- Burns, W. J.** (2011). Chairperson for symposium entitled “How the Public Responds to Different Disasters Over Time: The Role of Perceived Risk, Emotion and Risk Communication”, *Society for Risk Analysis Annual Conference*, December 5-7, 2011.
- Burns, W. J.** (2011). Public Response in the U.S. to the Japanese Crisis: Reactions to the Earthquake and Tsunami Versus the Nuclear Accident, *Society for Risk Analysis Annual Conference*, December 5-7, 2011.
- Burns, W. J.** (2011). “Public Response to Recent Crises: A Longitudinal Look at Fear, Risk-Related Behaviors and Support for Different Security Measures, 23<sup>rd</sup> Subjective probability, Utility, and Decision Making Biennial Conference, August 26-28, 2011.

- Burns, W. J.** (2011) “Public Response to Recent Terrorist Attempts in the United States: A Longitudinal Look at Fear, Risk-Related behaviors, and Support for Different Security Measures, Department of Homeland Security Annual Summit, April 1, 2011.
- Burns, W. J.** (2010). “Advancing Our Understanding of Risk-Related Behavior: The Role of System Dynamics and Longitudinal Modeling”, Risk Perception and Risk-Related Behaviors: Anticipating and Responding to Crisis, a workshop held at University of Southern California, March 5-6, 2010.
- Burns, W. J.** (2010). “Examining Public Response to Natural Disasters and Terrorism: The Role of Systems and Longitudinal Modeling”, Society for Risk Analysis, Salt Lake City, UT, December, 2010.
- Burns, W. J.** (2010). “Perceived Risk, Fear and Avoidance Behavior for Terrorism and Natural Disasters”, Informs Conference 2010, Austin, TX.
- Burns, W. J.** “Public Response to 3 Crises: A Longitudinal Look”, University of Cambridge, Cyber-security and Human Behaviors Conference, Cambridge, U.K., June, 28, 2010.
- Burns, W. J.** (2009), “Comparing Response to Three Disasters: Accounting for Fear, and Perceived Risk”, Society for Risk Analysis, Baltimore, MD, December 2009
- Burns, W. J.** (2009). “Community Response to Crisis: Modeling the Social Amplification of Risk”, Informs Conference 2009, San Diego, CA.
- Burns, W. J.** (2009). “Public Response to Crisis: Perceptions, Communication and Potential Impacts”, National Communication Association Annual Conference, Chicago, November, 11, 2009.
- Burns, W. J.** (2009). “Public Response to Crisis: Perceptions of Risk, Recovery and Economic Impacts”, College of Business, University of Iowa, Iowa City, Iowa, November 12, 2009.
- Burns, W. J.** “Responding to Terrorism: Risk Perception, Risk Communication and Societal Impacts”, Mathematical Methods in Counter-terrorism Conference, Washington D.C. March, 2009.
- Burns, W. J.** “Terrorism Risks: Fear, Dialog, and Resilience”, Shaping the Obama Administration’s Counterterrorism Strategy Conference CATO Institute, Washington D.C. January 13, 2009.
- Burns, W. J.,** Slovic, P., John, R., Brothers, A. & Maya, I. (2009). “Public Response to Threat: Cross-Disciplinary Contributions and Collaboration”, <http://www.decisionresearch.org/people/burns/threat.html>. A workshop held in Eugene, OR. August 10-11, 2009.
- Burns, W. J.** “Managing Fear: Business Models for Managing Disasters”. CSUSM Research Colloquium March 20, 2008. Presented NSF projects findings to date and their implications.

- Burns, W. J.** “Modeling the Social Amplification of Risk following a Terrorist Strike: Methodological Challenges”. Working Paper presented at the Behavioral Economics Workshop hosted by CREATE at USC August 2008.
- Burns, W. J.** “Public Response to Terrorism: Connecting Links between Risk Perception and Economic Impacts”, Society for Risk Analysis Conference 2008, Boston, MA.
- Burns, W. J.** Scholarly presentations given at RAND (April, 2008), Czech Republic (May, 2008), and MIT (June, 2008) on the topic of Risk Communication and Community Response to Disasters. Outreach presentation given to San Diego Chambers of Commerce and first responders (April, 2008). Topics
- Burns, W. J.** “The Dynamics of Public Response to a Terrorist Strike: Recommendations for Data Collection, Analysis, and Modeling” 2007 Society for Risk Analysis Conference, San Antonio, Texas.
- Burns, W. J.** “Public Response to a Terrorist Strike: Shifting from a Static to a Dynamic Analysis of Risk-Related Behavior”, Risk Analysis for Homeland Security and Defense: Theory and Application, Risk Symposium 2007, Santa Fe, NM, March, 2007.
- Burns, W. J.** “RDD Scenario: Events and Communications of the First Seven Days” (July, 2007). Risk communication researchers (including scholars from several DHS centers) and officials from DHS participated in this exercise during a Department of Homeland sponsored Gordon workshop. The exercise demonstrated both the difficulty and utility of developing effective risk communication strategies.
- Burns, W. J.** “The Dynamics of Public Response to a Terrorist Strike: Recommendations for Data Collection, Analysis and Modeling”, Society for Risk Analysis, Baltimore, MD, December, 2006.
- Burns, W. J.** “Public Response to a Terrorist Strike: A System Dynamics Model and Empirical Results”, Risk Analysis for Homeland Security and Defense: Theory and Application, Risk Symposium 2006, Santa Fe, NM, March, 2006.
- Burns, W. J.** “Predicting Public Response to a Terrorist Strike”, Society for Risk Analysis, Orlando, FL, December, 2005.
- Burns, W. J.** “Response to a Terrorist Strike: A System Dynamics Model Simulates Demands on Community Health Care Facilities”, Society for Risk Analysis, Palm Springs, CA, December, 2004.
- Burns, W. J.** “Inoculating Adolescents Against Substance Abuse: An Investigation of the Effectiveness of Two-Sided Anti-Drinking Advertisements”, Society for Consumer Psychology Conference, Atlanta, GA, May, 1995.
- Burns, W. J.** “Investigating the Performance of a Covariance Structure Model Under Varying Conditions of Model, Variable Distribution, Estimation, and Sample Size: A Simulation Study, “TIMS Marketing Science Conference, Tucson, AZ, March 1994.

- Burns, W. J.** “Covariance Structure Modeling: What We Have Learned From Simulation Studies and a Review of How Covariance Structure Models Have Been Treated In the Marketing Literature,” TIMS Marketing Science Conference, St. Louis, March 1993.
- Burns, W. J.** “Alcohol-Related Risk Taking Among Teenagers: An Investigation of Contributing Factors and a Discussion of How Marketing Principles Can Help.” Association for Consumer Research Conference, Vancouver, Canada, October 1992.
- Burns, W. J.** “Interacting with Clinical Experts to Predict and Manage Violent Behavior. Contributions from Decision Analysis, ORSA/TIMS Conference, Nashville, TN, May 1991.
- Burns, W. J.** “Introducing Structural Modeling into Risk Perception Research: Its Value for Prediction and Theory Construction.” ORSA/TIMS Conference, New York, NY, October 1989.
- Burns, W. J.** “Social Amplification of Risk: Empirical Studies” (co-presented with Paul Slovic). Society for Risk Analysis, San Francisco, CA, November 1989.

## **Grants, Fellowships, and Awards**

### **Grants**

National Science Foundation Award RAPID: “Investigating the Causal Propositions of the Affect Heuristic During an Ongoing Pandemic” (2020/2021) **\$199,997**

U.S. Department of Homeland Security Award: “Using Inoculating Communication to Increase Public Resistance to Fake News Based on Disinformation” (2017/2018) **\$150,000**

U.S. Department of Homeland Security Award: “Pseudoinefficacy, a New Approach to Deterrence: Exploiting the Connection Between Perceived Risk, Affect and Self-Efficacy” (2017) **\$40,00**

U.S. Department of Homeland Security Award (TSA): “Dynamic Aviation Risk Management System (DARMS): A Proof of Concept Study Probabilistic Risk Assessment” (2015/2016) **\$237,000**

U.S. Department of Homeland Security Award: “Pseudoinefficacy, a New Approach to Deterrence: Exploiting the Connection between Perceived Risk, Affect and Self-Efficacy” (2015) **\$50,000**

U.S. Department of Homeland Security Award (TSA): “Dynamic Aviation Risk Management System (DARMS): A Proof of Concept Study Incorporating Game Theory and Multi-Attribute Utility” (2014) **\$50,000**

U.S. Department of Homeland Security Award “Modeling the Dynamics of Risk Perception and Fear: Examining Amplifying Mechanisms and Their Consequences” (2014) **\$125,000.**

U.S. Department of Homeland Security Award “Modeling the Dynamics of Risk Perception and Fear: Examining Amplifying Mechanisms and Their Consequences” (2013) **\$100,000.**

U.S. Department of Homeland Security Award (TSA): “Public Risk Perception Surveys” (2012) **\$86, 527**

U.S. Department of Homeland Security Award “Modeling the Dynamics of Risk Perception and Fear: Examining Amplifying Mechanisms and Their Consequences” (2012) **\$100,000.**

U.S. Department of Homeland Security Award “Modeling the Comparative Impact of Two Different Types of Attacks on the Financial District of Los Angeles “ (2012) **\$33,000.**

U.S. Department of Homeland Security Award “Modeling the Dynamics of Risk Perception and Fear: Examining Amplifying Mechanisms and Their Consequences” (2011) **\$100,000.**

California State University, San Marcos Faculty Innovation Grant (2011) **\$5,000.**

U.S. Department of Homeland Security Award “Modeling the Dynamics of Risk Perception and Fear: Examining Amplifying Mechanisms and Their Consequences” (2010) **\$100,000.**

National Science Foundation Award “The Life You Can Save: Effective and Deliberative Processes Motivating Charitable Giving” (2010) **\$430,000.**

U.S. Department of Homeland Security Award “Response to a Large-Scale Anthrax Attack in Seattle: Public and Business Decisions to Stay or Leave” (2010) **\$57,967**

U.S. Department of Homeland Security INC Award “Understanding Terrorism Risk Perception: Improving Risk Communication” (2008) **\$168,766**

National Science Foundation Award “Public Response to the Financial Crisis: A Longitudinal Study” (2008) **\$169,000**

National Science Foundation Award “Modeling Community Response and Economic Impact of Risk Amplification to a Terrorist Strike” (2007) **\$749,996**

“Systems Thinking and Simulation Software.” California Lottery Grant, June, 2003, **\$4955**

“Inoculating Adolescents Against Substance Abuse: An Investigation of One-Sided Versus Two-Sided Ads Addressing the Risks Associated with Drinking.” Midwest Resources Grant, summer, 1994, **\$5000**

“Reducing Alcohol-Related Risk-taking among Teenagers: Applying Marketing Strategy and Risk Perception Research to Community-Wide Intervention Programs.” Old Gold summer Fellowship, summer, 1993, **\$5000**

“Improving Descriptive and Prescriptive Models to Help in the Management of Hazardous Technologies.” Old Gold Summer Fellowship, summer, 1991, **\$3,500**

“Exploratory and Confirmatory Methods in the Study of Risk Perception.” Co-investigator with Paul Slovic, National Science Foundation, March, 1990, **\$169,000**

“Enhancing a Data Set for Use in Structural Modeling of Risk Perception.” Co-investigator with Robert Clemen, National Science Foundation, August, 1989, **\$6,500**

### **Awards, Reviews, and Memberships**

“Predicting Public Response to a Terrorist Strike”. Winner of the “*Best Paper Award*” for the Society for Risk Analysis 2005 Conference.

Sixth Annual Decision Analysis Interest Group (ORSA/TIMS) Student Paper Competition, Second Place, 1991.

Graduate Teaching Fellow of the Year for the College of Business, University of Oregon, 1990.

Minnesota Mining and Manufacturing Scholarship (monetary award given yearly to the student of distinguished scholarship and service to the institution), Southern Oregon University, 1981.

Victor Mills Award (monetary award given to the outstanding male and female student) Southern Oregon University 1980.

Phi Kappa Phi Honor Society, 1980.

*Who's Who among Students in American University and Colleges, 1980.*

*Reviewer:* Decision Analysis, Risk Analysis, Journal of Defense Modeling and Simulation, National Science Foundation

*Member of the Society for Risk Analysis-current*