
MICHAEL R. RIP

Michael R. Rip, PhD MSc(Med)
Founding Director, Program in Healthcare Management
(Eli Broad College of Business)
and
Formerly: Founding Director, Program in Public Health
(College of Human Medicine)
Adjunct Assist. Professor, Intelligence Program, School of Criminal
Justice (College of Social Sciences)
Member: Conflict, Terrorism, & Development Collaboratory
Michigan State University
East Lansing, Michigan 48824, USA
and
Founding Director, MindLeap LLC
Founding Director, MindLeap First Responder LLC
E-Mail: rip@msu.edu

**Professional Experience**

Michael Rip is the Founding Director of the Program in Healthcare Administration (Broad College of Business), and previously the Founding Director of the Program in Public Health (College of Human Medicine). Dr. Rip was on the faculty of the Department of Community Health at the University of Cape Town Medical School, South Africa, for seven years. After obtaining his Ph.D. in spatial epidemiology and medical geography at Michigan State University (MSU) in 1991, he spent 16 years on the faculty of the Department of Epidemiology (MSU). There he developed graduate and undergraduate degree programs and courses in public health and epidemiology, most notably EPI-390 – *Disease in Society: An Introduction to Public Health and Epidemiology*, and the Specialization in Global Public Health and Epidemiology. He also assisted in the creation of the Department of Epidemiology in the early 1990s and was the Director of the Graduate Program until 2007. Dr. Rip’s undergraduate and postgraduate teaching interests include: critical thinking and innovation, population health, and epidemiology. Counterfeit pharmaceuticals, intelligence analysis and food fraud, bringing strategic intelligence analysis to the healthcare industry (e.g., healthcare fraud), the regionalization of healthcare programs, and achieving High Reliability in Organizations (HRO) by leveraging critical reasoning and systems thinking to minimize error/reduce harm, are some of his research interests.

Education

Ph.D., Michigan State University, USA: Geography (Geographical Epidemiology), 1991
MSc.(Med), University of Cape Town, South Africa: Community Health, 1984
BSc.(Honors), University of Cape Town, South Africa: Geography (Satellite Remote Sensing), 1979
BSc., University of Cape Town, South Africa: Geography and Archaeology, 1978

Current Positions—Michigan State University

Founding Director: Program in Healthcare Management, Broad College of Business
Assistant Professor: Department of Management, Broad College of Business
Adjunct Assistant Professor: School of Criminal Justice, College of Social Sciences

Previous Positions—Michigan State University

Founding Director: Program in Public Health, College of Human Medicine
Director: Graduate Program, Department of Epidemiology, College of Human Medicine
Faculty member: Department of Epidemiology, College of Human Medicine
Adjunct Faculty member: James Madison College

Other Administrative Positions

Board of Directors, and Secretary for the Executive Committee, Michigan Public Health Institute (Okemos, Michigan)
Board Member, Ascension Michigan Market Board, Genesys Hospital (Grand Blanc, Michigan)
Committee member, Michigan Local Public Health Accreditation Commission, Michigan Department of Community Health (Lansing, Michigan)
Advisory Board member, Institute for International Health (IIH), College of Osteopathic Medicine, MSU

Recent Courses Taught

UGS-101: Critical Thinking and Innovation in Population Health
EPI-390: Disease in Society—Introduction to Public Health and Epidemiology
ISS-325: The Revolution in Military Affairs: The Role of Strategy, Tactics, and Technology
HM-874: Critical Thinking, Problem-Solving, and Decision-Making for Public Health Practitioners
CJ-839: Critical Thinking for Intelligence Analysts & Law Enforcement
PIM-891: Critical Thinking for Innovation
HCM-801L Critical Thinking and Innovation in Healthcare

Special Projects

- In 2006-07, Dr. Rip created and directed the Program in Public Health, that offered an online MPH degree, in the College of Human Medicine. In the first seven years of operation, the Program admitted 747 graduate students, and generated total revenue of \$15.3 million.
- Dr. Rip's vision and proposal to the C.S. Mott Foundation to bring MSU's Program in Public Health to the city of Flint, Michigan, was accepted and \$11 million was awarded to support this innovative initiative in 2014.
- In 2016, Dr. Rip proposed and is currently developing an online MS in Healthcare Management degree within the Eli Broad College of Business.

MindLeap LLC, and MindLeap First Responder LLC

Dr. Rip created two consulting companies for the expressed purpose of offering training courses in Critical Thinking to (Federal, State, Local, and Tribal) intelligence analysts, and corporate executives and managers, as well as first responders (fire service professionals, law enforcement officials, EMS personnel, emergency managers, and incident commanders).

Consulting Instructor

Dr. Rip has been a regular consultant instructor for the Intelligence and Analysis Training Unit at the Federal Bureau of Investigation (FBI) Academy, Quantico, Virginia, where he taught a 4-day (32-hour) '*Critical Thinking for Intelligence Analysts*' from 2009 through 2013. Participants were drawn from all branches of the Intelligence Community. In addition, he has been a guest lecturer for the National Academy (NA) at Quantico, Virginia, where he instructed state, local, tribal law enforcement officers/executives and their equal international partners (2011-13: 24 classes during 12 NA sessions). Dr. Rip now delivers 2-day (16-hour) '*Critical Thinking*' training courses to intelligence analysts and law enforcement officers at State-level intelligence Fusion Centers on behalf of Argonne National Laboratory (Department of Energy) in Chicago, IL. This training activity was previously funded by the Office of Intelligence & Analysis, Department of Homeland Security, Bureau of Justice Assistance (BJA)/Department of Justice (2012-2016). FEMA (Federal Emergency Management Agency), the BATF (Bureau of Alcohol, Tobacco and Firearms and Explosives), the DEA (Drug Enforcement Administration), and Amtrak, are four other federal agencies that Dr. Rip has supported with training. In addition, Dr. Rip offers '*Critical Thinking*' and '*Innovation Thinking*' training courses and workshops for major corporations and government, such as Microsoft Global Security, General Dynamics Corp., Parker-Hannifin, Amway, Blue Cross Blue Shield of Michigan (BCBSM), MESSA (Michigan Education Special Services Association), Michigan Public Health Institute (MPHI), Michigan Quality of Life Agencies (Michigan Department of Environmental Quality (MDEQ), Michigan Department of Agriculture & Rural Development (MDARD), and Michigan Department of Natural Resources (MDNR)), Hurley Hospital, Clark Construction Company, Casper Police Department (WY), Farm Bureau Insurance, Florida Intelligence Unit (FIU), Four Winds Casino (MI), Wisconsin High Intensity Drug Trafficking Area (HIDTA, Milwaukee, WI), Consumers

Energy (MI), London Police Service (Ontario, Canada), and the Florida Law Enforcement Analyst Academy (FLEAA, Tampa, FL). These courses integrate prevention science with critical thinking for improved leadership, problem-solving, decision-making, and creativity/innovation.

Membership

Dr. Rip is a member of the International Association for Intelligence Education (IAFIE) <<http://www.iafie.org/>>

Awards

Recipient of the 2019 Public Health Innovator award, Division of Public Health, College of Human Medicine, Michigan State University for being the Founding Director of the Program in Public Health in 2007.

Recipient of The David M. Little Prize 2003 (The U.S. Anesthesia History Association awarded the David M. Little Prize to *Cholera, Chloroform, and the Science of Medicine: A Life of John Snow*, for the best work about anesthesia history published in 2003 in English).

Excellence in Interdisciplinary Scholarship Award, The Honor Society of Phi Kappa Phi, Michigan State University, Chapter 041, East Lansing, Michigan (April 1999).

Phi Beta Delta, Alpha Alpha Chapter, Honor Society for International Scholars. (Governing Board: 1989-1990; Member: 1988-present).

Phi Kappa Phi, Academic Honor Society (1988-present).

Alpha Epsilon Delta, National Health Professional Honor Society (2014-present).

Countries Visited

South Africa, Namibia, Swaziland, Malawi, Zimbabwe, Mozambique, Lesotho, Kenya, Tanzania, Ghana, Seychelles, Mauritius, England, Scotland, France, Belgium, Holland, Luxembourg, Monaco, Spain, Portugal, Germany, Italy, Switzerland, Israel, Canada, United States, Costa Rica, United Arab Emirates (Dubai, Abu Dhabi, and Sharjah), Bahrain, Sudan, Egypt, Brazil, Australia, Grand Cayman, Jamaica, Hispaniola, Mexico, US Virgin Islands, New Zealand, and India.

Books Published

Rip M and Hasik J, *The Precision Revolution: GPS and the Future of Aerial Warfare*. Naval Institute Press. 2002.

Vinten-Johansen P, Brody H, Paneth N, Rachman S, and Rip M. *Cholera, Chloroform, and the Science of Medicine: A Life of John Snow*. Oxford University Press. 2003.

See "The John Snow Companion Web Site at MSU" at <http://johnsnow.matrix.msu.edu/index.php>

TV Documentary

The Documentary Group (based in New York City) produced a one-hour documentary on Dr. Rip's book, *The Precision Revolution*. Titled, *The First Space War*, the documentary is Episode 6 (of 10) and is the first episode of Season 2 of *The Age of Aerospace*. It premiered on the Science Channel on September 8, 2017, and on the Discovery Channel on September 9, 2017.

The documentary (So2E01) can be streamed via the Discovery Channel at <https://www.discovery.com/tv-shows/the-age-of-aerospace/>

Innovation of note

Dr. Rip was the first person to apply digital image processing techniques (developed primarily to process images from the Jet Propulsion Laboratory's unmanned planetary spacecraft) for the capture, storage, retrieval, and processing of prehistoric rock art. This approach significantly improves the archiving and decipherment of deteriorated prehistoric rock art.

See: Rip, M, Digital Recording and Image Processing of Rock Art by Computer. *South African Archaeological Bulletin* (1983), Vol. 38; pp. 77-79; and Rip, M, Colour Space Transformations for the Enhancement of Rock Art Images by Computer. *Rock Art Research* (1989), Vol. 6, No. 1, pp. 12-14.

Webinars

Critical Thinking: Laying the Cognitive Foundation for HROs. On behalf of the Great Lakes Partners for Patients (GLPP), High Reliability Organization (HRO) Webinar Series, under the auspices of the Joint Commission (Chicago) and the Michigan Hospital and Healthcare Association (12 December 2017).

Critical Thinking for HRO: Enhancing Patient Safety and Minimizing Harm. On behalf of the Midwest Alliance for Patient Safety, Illinois Health and Hospital Association (24 September 2019).

Peer-Reviewed Publications

Dr. Rip has authored some 50 publications spanning five disciplines.

Most Recent Peer-Reviewed Publications

Carter J and Rip MR, Homeland Security and Public Health: A Critical Integration. *Criminal Justice Policy Review* (2012) 24(5): 573-600.

Spink J, Moyer DC and Rip MR, 'Addressing the Risk of Product Fraud: A Case Study of the Nigerian Combating Counterfeiting and Sub-Standard Medicines Initiatives'. *Journal of Forensic Science & Criminology* (2016) 4(2).

Book Manuscript in Preparation

Rip, M, and Hasik, J. *Blunt Scalpel—The 1998 Cruise Missile Strike Against the El-Shifa Pharmaceutical Factory in Khartoum, Sudan: An Intelligence Analysis Perspective*.

Research Proposal under Review

Co-PI, *Exploring Coordination Challenges for Stakeholders in Maternal Healthcare Provision for Syrian Refugees in Turkey, Lebanon, & Jordan*. Proposal submitted to Enhancing Learning & Research for Humanitarian Assistance (ELRHA), July 2019.

Articles under Review

Arulappan N, Rip M, and Brooks K, Deliberate De-Medicalization: The Aerial Targeting of Healthcare Facilities as a Weapon in the Military Strategy of the Syrian Conflict. *European Journal of International Security* (2018).

Arulappan N and Rip M, Improving Population Health through a Health Diplomacy Model in a Conflict Zone: A Plausible Scenario for Syria. *Social Science and Medicine* (2019).

Articles in Preparation

Arulappan N and Rip M, Epic Failure in Afghanistan: The Destruction of the MSF Kunduz Trauma Center from the Air.

Rip M and Arulappan N. Blunt Scalpel: The destruction of the El-Shifa Pharmaceutical Factory in Khartoum, Sudan.

Recent Conference Presentations

Rip M and Vroman M, *Critical Thinking: Laying a Cognitive Foundation for Innovation and HROs*. 2018 Michigan Trauma Symposium, East Lansing, MI (April 19, 2018).

Rip M and Vroman M, *Leveraging Critical Thinking Skills for Improved Performance on the Fireground*. Fire-Rescue International • IAFC's (International Association of Fire Chief's) Conference, Dallas, TX (August 8-11, 2018).

Rip M and Vroman M, *Critical Thinking for High Reliability*. 2018 MHA Patient Safety and Quality Symposium, Ann Arbor, MI (September 18-19, 2018).

Rip M, *Critical Thinking for HRO (High Reliability Organizations)*. Risk Management Conference, Illinois Health & Hospital Association, Peoria, IL (September 27, 2018).

Rip M, *Foundations of Critical Thinking for High Reliability*. Patient Safety - Safe Table Workshop, Illinois Hospital Association (February 14, 2019).

Vroman M and Rip M, *Human Behavior in Fire*. International Fire Operations Conference, International Association of Fire Chiefs, Manama, Bahrain (February 26, 2019).

Rip M and Vroman M, *Leveraging Critical Thinking Skills for Improved Performance on the Fireground*. International Fire Operations Conference, International Association of Fire Chiefs, Manama, Bahrain (February 26, 2019).

Research in Development

Rip M, Roth G, and Vroman M, Achieving High Reliability Organizations (HROs) by leveraging critical thinking and systems theory.

Vroman M and Rip M, Maximizing Performance: Transforming the Meridian Township Fire Department (Michigan) into a High-Reliability Organization.

Vroman M and Rip M, Effectiveness of emergency responders in the Tri-County region of mid-Michigan and the treatment STEMI (ST waveform Elevated Myocardial Infarction).