Beyond Misinformation: Educating Our Campuses about the Misrepresentation and Misappropriation of Research

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Beyond Misinformation:
Educating Our Campuses about the Misrepresentation and Misappropriation of Research

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NNLM Misinformation Symposium
April 6, 2023
Some Points of Clarification

• Presentation is about a workshop on misappropriation and misrepresentation of research
• Not unique to health-related professions
  – Problem facing researchers in multiple fields
• Workshop is multidisciplinary in scope
  – Includes examples from other sciences, as well as social sciences and humanities
• Misappropriation and misrepresentation of health-related research will not be the sole focus of this presentation
Definitions

- **Misinformation**
  - False information that an individual or group may consume or share that the individual or group does not know is false

- **Disinformation**
  - False information that is created for the purpose of misleading others by an individual or group who know the information is false

- **Malinformation**
  - “[F]alse information that is shared with a distinct intent to cause harm, and in the case of racism, to maintain the status quo” (Cooke 2021)
Effects/Goals of Misinformation and Disinformation

- Increased distrust in or hostility toward authority and fellow citizens, possibly leading to social breakdown
- Suppression of active citizenship by encouraging defensive inaction
My Interest in Misinformation and Disinformation

• 2009 Iranian Election Protests
  – Protests against a perceived fraudulent re-election of Mahmoud Ahmadinejad
  – Violent crackdown on protesters
  – Muddied information about whether protests were legitimate or were traps

https://twitter.com/IranGreen/status/2321827297
https://twitter.com/longcourse/status/2252174539
Misunderstanding Research

• Akin to misinformation

• Individual comes to faulty conclusions about research on their own or adopts the faulty conclusions of an indirect source of information

• The misinformed individual can share faulty conclusions with others
Misrepresenting Research: Definition

• Misrepresentation or misleading selective representation of the conclusions of research, usually to support an ideological agenda or political actions

• Akin to misinformation or disinformation, depending on intent
Misrepresenting Research: Examples

• Scale of unauthorized immigration (Kahn 2021)
  – Omitting the fact that statistics on U.S. Customs and Border Patrol apprehensions of individuals do not account for whether the same individuals are apprehended multiple times

• Convalescent plasma and COVID-19 (McDonald 2020)
  – Overstating the benefits of convalescent plasma as a treatment for COVID-19
Misappropriating Research: Definition

- Reasonably accurate representation of research to support an ideological agenda or political actions that the researcher does not advocate for
- Akin to misinformation or disinformation, depending on intent
Misappropriating Research: Examples of Potential

- Detailed 2020 Census data and race and ethnicity (Bahrampour and Mellnik 2021)
  - 2020 Census showed a decrease in the number of people identifying as White Non-Hispanic from the 2010 Census

- Immunocompromised individuals and COVID-19 variants (Mandavilli 2021)
  - Research showing that mutations that generate new COVID-19 variants often occur in immunocompromised individuals

- High LGBTQ+ identification among Gen Z (Jones 2023)
  - Gallup survey showing that 19.7% of Gen Z adults identify as part of the LGBTQ+ community
Researchers Under Threat

• Bullying, harassment, and violence or threats of violence against researchers

• Akin to malinformation

• Hostility toward researchers
  – Indian Historian Romila Thapar (Masih 2021)
    ▪ Historian of ancient India targeted by Hindu Nationalists in India
  – Medieval Historian Dorothy Kim
    ▪ Medieval historian in the United States targeted and doxed by the Alt-Right (Kim 2018)
  – Multiple examples of public health professionals since the start of the COVID-19 pandemic
Not Happening in a Vacuum

• Larger context of decline in trust in authorities and institutions (Ellis et al. 2022)
  – Aided by modern information and communications technology, though not exclusively because of it
  – Also social/cultural, historical, economic, and political contexts
Historical Analogy: The Printing Press

• A factor behind the success of Reformation and the Enlightenment

• Helped replace the authorities and institutions of medieval and pre-modern Western Europe, especially the primacy of the Roman Catholic Church) with the authorities and institutions of the Enlightenment

• Today it is the authorities and institutions of the Enlightenment (including science) that are being challenged
Workshop: Background

  - First two iterations were entitled “The Public and Your Publications: Strategies for Handling the Misappropriation or Misrepresentation of Your Research”

- Part of Syracuse University Libraries Learn! at Syracuse University Libraries Workshop Series

- Six iterations so far: One in Spring 2021, one in Fall 2021, two in Spring 2022, two so far in Spring 2023
Workshop: Format

- Content is approximately 50-60 minutes in length
- Extra 15 minutes at the end for discussion
- Geared toward faculty and graduate students
  - Participants have graduate and undergraduate students and visiting scholars
Workshop: Content: Lead-In

• Content advisory

• Disclaimer

• Opening questions
  – What are some common misconceptions about your field of research?
  – What are some specific examples of research in your field getting misunderstood?

• The “Why” of the workshop
Workshop Content: Evaluating Dr. Fauci’s Congressional Testimony: Video

- Video of and discussion about exchange between Dr. Anthony Fauci and Sen. Rand Paul during a March 2021 Senate committee hearing (C-SPAN 2021)

Source: C-SPAN (2021).
Workshop Content: Evaluating Dr. Fauci’s Congressional Testimony: Discussion

• Discussion questions:
  – What were some techniques that Dr. Fauci used?
  – In what ways could Dr. Fauci have improved his messaging?

• Participant responses:
  – Participants generally identify the techniques I cover later in the workshop (and discuss later in this presentation)
  – Participants note that Dr. Fauci’s responses are heavy on jargon at times
Workshop Content: Suggested Strategies: Use the Classroom as a Trial Run

• Based on my own experience teaching political science at community colleges for six years

• Based on the assumption that most people in the general public will probably have, at most, the understanding of an undergraduate when it comes to research

• Take time to ask students in courses or sections one teaches about “what they have heard” about topics related to one’s research

• Can also serve as prebunking students in class
Workshop Content: Experimental Strategy: Chat GPT

- First discussed this suggestion at the most recent workshop iteration (March 22, 2023)
- A potential stand-in for the undergraduate classroom
- Asked Chat GPT to explain participants’ research and then modify explanation to for high school audience
- Drawing on the freely available content on the internet that the general public is drawing on
Workshop Content: Suggested Strategies: Keeping Current with Scholarly Communication

Monitoring One’s Field

• A plug for the library

• Using bibliometrics and alert features of different databases
  – Examples:
    ▪ Scopus
    ▪ Web of Science
    ▪ Google Scholar

Monitoring One’s Own Work

• Using the bibliometrics and alert features of different databases

• Using institutional repositories track citations and downloads

• Using individual research profiles to track citations and downloads
  – Available on some database platforms and through some institutions
Workshop Content: Suggested Strategies: Keeping Current With Public Discussions of One’s Field and One’s Research

• Following individuals and discussion threads on social media
  – Also can be done through PlumX Metrics and Altmetrics

• Setting up news alerts on platforms like Google News
Workshop Content: Suggested Strategies: Recommendations for Handling Situations

• Find a grain of truth in the falsehood and correcting the misunderstanding

• Example:
  – Vaccine hesitancy based on misunderstanding of information (Merchant 2021)
    ▪ mRNA vaccines
    ▪ Vaccine packaging tracking
Workshop Content: Suggested Strategies: Recommendations for Handling Situations

- If possible, show an original source of accurate information that also has objective research that has been accurately used to support their views

- Example:
  - Misrepresentation of statistics on contraception effectiveness
    - Facilitating trust of Guttmacher Institute data by showing how anti-abortion have used (misappropriated?) their data
Workshop Content: Suggested Strategies: Recommendations for Handling Situations

• Recognize what the debate is really about at the social/political level
  – Self-Education: Familiarize oneself with the belief system in which the misunderstanding or misrepresentation arises
  – Empathy: Respectfully articulate an understanding of the social/political context that informs their beliefs

• Examples:
  – What is really going on when incorrect statistics about contraception are used?
  – The debate over masks and vaccines for COVID-19 isn’t really about the masks or the vaccines
Workshop Content: Suggested Strategies: Recommendations for Handling Situations

• Put the larger debate in a historical or comparative cultural context

• Examples:
  – The historical analogy between the printing press and the internet
  – Comparisons of different countries’ mechanisms and policies for reviewing drug safety and efficacy
Workshop Content: Closing Caveats

• I emphasize to participants:
  – If they are being harassed or feel unsafe, they should let their supervisor or someone else in authority at their current or future institution know

• I underscore:
  – The success of any strategy is dependent on the interplay between the identity characteristics of the researcher and the audience in the situation
Sample Workshop Participant Feedback

• What participants learned that they identified as most valuable
  – Citation tracking
  – Familiarization with cultural and social context of people’s misconceptions

• What participants learned that they indicated will change how they do research
  – Incorporating consideration of public communications into how they do research
  – Utilizing the undergraduate classroom for trial runs of explaining their research in accessible terms
Takeaways

• Many of the participants have had a prior experience with family members who misunderstand their research

• Students want to have in-depth conversations about this topic in addition to having a workshop about strategies for preparing for and handling potential situations
Limitations: Still a Work in Progress

• Attendance
• Number of iterations
• Improving assessment
  – Mechanism for follow-up
• Limitations of my own perspective and lived experience
Future Directions

• Addressing this issue will require dialog and collaboration that includes a diverse array of perspectives and lived experiences.

• Again, I am cognizant of the limitations of my own perspective and lived experience.

• I am looking for potential collaborators who are also interested in defending research from misappropriation and misrepresentation and defending researchers from bullying and harassment.
Thank You.

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