

# RONALD E. ROBERTSON

## Employment

2023 -	Research Scientist	Stanford Internet Observatory
2021 - 2023	Postdoctoral Fellow	Stanford Internet Observatory
2019	Research Intern	Microsoft Research NYC
2016 - 2021	PhD Fellow	Northeastern University
2015 - 2016	Associate Director	American Institute for Behavioral Research and Technology
2012 - 2015	Assistant Director	American Institute for Behavioral Research and Technology

## Education

2016 - 2021	Network Science PhD	Northeastern University Advisors: Christo Wilson (Comp. Sci.) & David Lazer (Pol. Sci.) Dissertation: An Interdisciplinary Examination of Partisanship in Web Search
2010 - 2012	Psychology BA	University of California San Diego Graduated cum laude; Sociology minor
2008 - 2010	Psychology AA	Saddleback College; graduated cum laude

## Publications

### Journal Articles

**Robertson, R. E.**, Green, J., Ruck, D. J., Ognyanova, K., Wilson, C., & Lazer, D. (2023). Users choose to engage with more partisan news than they are exposed to on Google Search. *Nature*. DOI:10.1038/s41586-023-06078-5

**Robertson, R. E.**, Dunphy, A., Grossman, S., DiResta, R., & Thiel, D. (2023). Identifying search directives on social media. *Journal of Online Trust and Safety*, 2(1). DOI:10.54501/jots.v2i1.133

Chen, A. Y., Nyhan, B., Reifler, J., **Robertson, R. E.**, & Wilson, C. (2023). Subscriptions and external links help drive resentful users to alternative and extremist YouTube channels. *Science Advances*. DOI: 10.1126/sciadv.add8080

Mejova, Y., Gracyk, T., & **Robertson, R. E.** (2022). Googling for abortion: Search engine mediation of abortion accessibility in the United States. *Journal of Quantitative Description: Digital Media*, 2. DOI:10.51685/jqd.2022.007

Ognyanova, K., Lazer, D., **Robertson, R. E.**, & Wilson, C. (2020). Misinformation in action: Fake news exposure is linked to lower trust in media, higher trust in government when your side is in power. *Harvard Kennedy School Misinformation Review*. DOI: 10.37016/mr-2020-024

**Robertson, R. E.**, Tran, F. W., Lewark, L. N., & Epstein, R. (2018). Estimates of non-heterosexual prevalence: The roles of anonymity and privacy in survey methodology. *Archives of Sexual Behavior*, 47 (4), 1069-1084. DOI: 10.1007/s10508-017-1044-z

Epstein, R., Ho, M., Hyun, S., Le, C., **Robertson, R. E.**, & Stout, D. (2017). A DSM-5-based online mental health referral inventory: A large-scale validation study. *Journal of Technology in Human Services*, 35 (3), 231-246. DOI: 10.1080/15228835.2017.1356800

Epstein, R., Mejia, J., & **Robertson, R. E.** (2017). The frequency profile: An informative method for graphing the behavior of individuals post-hoc or in real time. *Behavior Analysis: Research and Practice*, 17 (1), 55-73. DOI: 10.1037/bar0000052

Epstein, R., **Robertson, R. E.**, Smith, R., Vasconcellos, T., & Lao, M. (2016). Which relationship skills count most? A large-scale follow-up study. *Journal of Couple and Relationship Therapy*, 15 (4), 341-356. DOI: 10.1080/15332691.2016.1141136

Epstein, R. & **Robertson, R. E.** (2015). The search engine manipulation effect and its possible impact on the outcomes of elections. *Proceedings of the National Academy of Sciences*, 112 (33), E4512-E4521. DOI: 10.1073/pnas.1419828112

Epstein, R., & **Robertson, R. E.** (2014). How to measure sexual orientation range, and why it's worth measuring. *Journal of Bisexuality*, 14, 392-404. DOI: 10.1080/15299716.2014.933378

## Conference Proceedings

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Hu, D., Gleason, J., Abu Bakar Aziz, M., Koeninger, A., Guggenberger, N., **Robertson, R. E.**, & Wilson, C. (2024). Market or markets? Investigating Google Search's market shares under vertical segmentation. In *Proceedings of the International AAAI Conference on Weblogs and Social Media (ICWSM 2024)*. DOI: [10.1609/icwsm.v18i1.31340](https://doi.org/10.1609/icwsm.v18i1.31340) [Best Paper: Honorable Mention]

Gleason, J., Koeninger, A., Hu, D., Teurn, J., Bart, Y., Knight, S., **Robertson, R. E.**, & Wilson, C. (2024). Search engine revenue from navigational and brand advertising. In *Proceedings of the International AAAI Conference on Weblogs and Social Media (ICWSM 2024)*. DOI: [10.1609/icwsm.v18i1.31329](https://doi.org/10.1609/icwsm.v18i1.31329)

Hu, D., **Robertson, R. E.**, Hannak, A., & Wilson, C. (2024). U. S. Users' exposure to YouTube videos on- and off-platform. In *Proceedings of the 16th ACM Web Science Conference (WebSci 2019)*. DOI: [10.1145/3614419.3644027](https://doi.org/10.1145/3614419.3644027)

Gleason, J., Ghosh, A., **Robertson, R. E.**, & Wilson, C. (2024). Perceptions in pixels: Analyzing perceived gender and skin tone in real-world image search results. In *Proceedings of the ACM on Web Conference 2024*. (WWW 2024). DOI: [10.1145/3589334.3645666](https://doi.org/10.1145/3589334.3645666)

Gleason, J., Hu, D., **Robertson, R. E.**, & Wilson, C. (2023). Google the gatekeeper: How search components affect clicks and attention. In *Proceedings of the International AAAI Conference on Weblogs and Social Media (ICWSM 2023)*. DOI: [10.1609/icwsm.v17i1.22142](https://doi.org/10.1609/icwsm.v17i1.22142) [Best Paper Award]

Chwe, H., Williams, A., & **Robertson, R. E.** (2023) "Hey Beautiful": Race and gender on Tinder. In *Proceedings of the 56th Hawaii International Conference on System Sciences (HICCS 2023)*. PDF

**Robertson, R. E.**, Olteanu, A., Diaz, F., Shokoui, M., & Bailey, P. (2021). "I can't reply with that": Characterizing problematic email reply suggestions. In *Proceedings of the 2021 ACM Conference on Human Factors in Computing Systems (CHI 2021)*. DOI: [10.1145/3411764.3445557](https://doi.org/10.1145/3411764.3445557)

**Robertson, R. E.** & Wilson, C. (2020). WebSearcher: Tools for auditing web search. *Proceedings of Computation + Journalism Symposium (C+J '20)*. PDF

**Robertson, R. E.**, Jiang, S., Lazer, D., & Wilson, C. (2019). Auditing autocomplete: Suggestion networks and recursive algorithm interrogation. In *Proceedings of the 11th ACM Conference on Web Science (WebSci 2019)*. DOI: [10.1145/3292522.3326047](https://doi.org/10.1145/3292522.3326047)

Jiang, S., **Robertson, R. E.**, & Wilson, C. (2019). Bias misperceived: The role of partisanship and misinformation in YouTube comment moderation. In *Proceedings of the International AAAI Conference on Weblogs and Social Media (ICWSM 2019)*. DOI: [10.1609/icwsm.v13i01.3229](https://doi.org/10.1609/icwsm.v13i01.3229) [Outstanding Analysis Award]

Hu, D., Jiang, S., **Robertson, R. E.**, & Wilson, C. (2019). Auditing the partisanship of Google Search snippets. In *Proceedings of the 2019 Web Conference*. (pp. 693-704). DOI: [10.1145/3308558.3313654](https://doi.org/10.1145/3308558.3313654)

Sapiezynski, P., Zeng, W., **Robertson, R. E.**, Mislove, A., & Wilson, C. (2019). Quantifying the impact of user attention on fair group representation in ranked lists. In *Companion Proceedings of the 2019 Web Conference*. DOI: [10.1145/3308560.3317595](https://doi.org/10.1145/3308560.3317595)

**Robertson, R. E.**, Jiang, S., Joseph, K., Friedland, L., Lazer, D., & Wilson, C. (2018). Auditing partisan audience bias within Google Search. In *Proceedings of the ACM: Human-Computer Interaction, 1(2)*, Article 148. DOI: [10.1145/3274417](https://doi.org/10.1145/3274417) [Best Paper: Honorable Mention]

**Robertson, R. E.**, Lazer, D., & Wilson, C. (2018). Auditing the personalization and composition of politically-related search engine results pages. In *Proceedings of the 2018 Web Conference* (pp. 955-965). DOI: [10.1145/3178876.3186143](https://doi.org/10.1145/3178876.3186143)

Epstein, R., **Robertson, R. E.**, Lazer, D., & Wilson, C. (2017). Suppressing the search engine manipulation effect (SEME). In *Proceedings of the ACM: Human-Computer Interaction, 1(2)*, Article 42. DOI: [10.1145/3134677](https://doi.org/10.1145/3134677)

## Books

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Metaxa, D., Park, J. S., **Robertson, R. E.**, Karahalios, K., Wilson, C., Hancock, J., & Sandvig, C. (2021). Auditing algorithms: Understanding algorithmic systems from the outside in. *Foundations and Trends in Human-Computer Interaction, 14(4)*, 272-344. DOI: [10.1561/11000000083](https://doi.org/10.1561/11000000083)

## Commentary

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Lewandowsky, S., **Robertson, R. E.**, & DiResta, R. (2023). Challenges in understanding human-algorithm entanglement during online information consumption. *Perspectives on Psychological Science*. DOI: [10.1177/17456916231180809](https://doi.org/10.1177/17456916231180809)

**Robertson, R. E.** (2022). Uncommon yet consequential online harms. *Journal of Online Trust and Safety*, 1(3). DOI: [10.54501/jots.v1i3.87](https://doi.org/10.54501/jots.v1i3.87)

Pasquetto, I., Swire-Thompson, B., Amazeen, M.A., Benevenuto, F., Brashier, N.M., Bond, R.M., Bozarth, L.C., Budak, C., Ecker, U.K.H., Fazio, L.K., Ferrara, E., Flanagin, A.J., Flammini, A., Freelon, D., Grinberg, N., Hertwig, R., Jamieson, K.H., Joseph, K., Jones, J.J., Garrett, K., Kreiss, D., McGregor, S., McNealy, J., Margolin, D., Marwick, A., Menczer, F., Metzger, M.J., Nah, S., Lewandowsky, S., Lorenz-Spreen, P., Ortellado, P., Pennycook, G., Porter, E., Rand, D.G., **Robertson, R. E.**, Tripodi, F., Vosoughi, S., Vargo, C., Varol, O., Weeks, B.E., Wihbey, J., Wood, T.J., & Yang, K.C. (2020). Tackling misinformation: What researchers could do with social media data. *Harvard Kennedy School Misinformation Review*. DOI: [10.37016/mr-2020-49](https://doi.org/10.37016/mr-2020-49)

## Reports

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Cryst, E., Schechter, N., **Robertson, R. E.**, & Thiel, D. (2021). Maduro's menagerie: Twitter client usage in a Venezuelan Twitter operation. Stanford Internet Observatory. [Report PDF](#)

Chen, A. Y., Nyhan, B., Reifler, J., **Robertson, R. E.**, & Wilson, C. (2021). Exposure to alternative & extremist content on YouTube. Anti-Defamation League. [Report PDF](#)

Lewandowsky, S., Smillie, L., Garcia, D., Hertwig, R., Weatherall, J., Egidy, S., **Robertson, R. E.**, O'Connor, C., Kozyreva, A., Lorenz-Spreen, P., Blaschke, Y., & Leiser, M. (2020) Technology and democracy: Understanding the influence of online technologies on political behaviour and decision-making. European Commission: Joint Research Centre. DOI: [10.2760/709177](https://doi.org/10.2760/709177)

## Popular Media

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**Robertson, R. E.**, Jiang, S., Joseph, K., Friedland, L., Lazer, D., & Wilson (2018, November 6). [Is it the Algorithms or Us? Medium](#)

**Robertson, R. E.** (2018, June 4). [When will Google defend democracy?. The Conversation](#)

**Robertson, R. E.** (2018, January 15). [The 21st century Skinner box. Behavioral Scientist](#)

## Work in Progress

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Van Meter, A., Wheaton, M. G., Cosgrove, V. E., Andreadis, K., & **Robertson, R. E.** (in press). The Goldilocks Zone: Finding the right balance of user and institutional risk for suicide-related generative AI queries. *PLOS Digital Health*

**Robertson, R. E.**, Williams, E. M., Carley, K. M., Thiel, D. (in progress). Data voids and warning banners: Evaluating content moderation on Google Search.

**Robertson, R. E.**, Goldstein, J. A., DiResta, R. (in progress). From search engines to answer engines.

DiResta, R., **Robertson, R. E.**, Sojitra, R. B., Klyman, K., & Willner, D. S. (in progress). Large Language Model (LLM) slips: Methods for tracking the use of LLMs on social media platforms.

Hagan, M., Al Haider, N., & **Robertson, R. E.** (in progress). Does Google tell me my rights?: An audit of eviction right to counsel searches on Google.

Guo, Z., Wan, A., Yang, K., **Robertson, R. E.**, Ozturan, B., Lazer, D. (in progress). Google Search results for politicians' names are dominated by a few nonpartisan sources.

**Robertson, R. E.**, Mejova, Y., Gimbrone, C. A., McKetta S. (in progress). Abortion-related ads on Google Search after Dobbs v. Jackson.

Teaching	Role	Course	University	Date
	Lead Instructor/ Organizer	Summer Institutes in Computational Social Science	Stanford University	July 2025 (planned)
	Lead Instructor	Data Science - Social Science Practicum	Northeastern University	Spring 2021
	Guest Lecturer	Fundamentals of Cybersecurity - Disentangling User Choice and Algorithmic Curation in Online Systems	Middlebury Institute	Fall 2024
	Guest Lecturer	Special Topics in Computer Science - Algorithm Audits	Northeastern University	Winter 2022
	Guest Lecturer	Algorithms that Affect Our Lives - Ranking and Moderating Online Political Information	Northeastern University	Spring 2020 & Fall 2020

Grants	Role	Award	Institutions	Date
	PI	NULab Seedling Grant: The Impact of Race and Gender in Online Dating ( <a href="#">Link</a> )	Northeastern University	Mar 2020 - Mar 2021
	Contributor	Volkswagen Foundation. Artificial Intelligence and the Society of the Future - Reclaiming individual autonomy and democratic discourse online ( <a href="#">Link</a> )	Max Planck Institute for Human Development, Northeastern University, University of Bristol	Nov 2020 - Nov 2024
	Contributor	NSF CHS: Small: Auditing Critical Dependencies Between Online Media Platforms ( <a href="#">ID:1910064</a> )	Northeastern University	Aug 2019 - Jul 2023

Organizing	Type	Name	Location	Date
	Research Session	The Impact of LLMs on the Evolution of Web Search ( <a href="#">Link</a> )	Stanford, CA	Sep 2024
	Workshop	ICWSM 2024 Data Challenge: Research Data in a Post-API, Decentralized, and Walled Garden Web ( <a href="#">Link</a> )	Buffalo, NY	Jun 2024
	Research Session	Trust & Safety in Search ( <a href="#">Link</a> )	Stanford, CA	Sep 2023
	Symposium	Uncommon yet Consequential Online Harms ( <a href="#">Link</a> )	Stanford, CA	Sep 2022

Reviewing	Journals	Conferences
	<i>AI Communications</i>	Computer-Human Interaction (CHI)
	<i>Big Data &amp; Society</i>	Computer Supported Cooperative Work (CSCW)
	<i>EPJ Data Science</i>	European Conference on Information Systems (ECIS)
	<i>Humanities and Social Sciences Communications</i>	Fairness, Accountability, and Transparency (FAccT)
	<i>Information, Communication and Society</i>	International Communication Association (ICA)
	<i>Journal of Online Trust and Safety</i>	International Conference on Computational Social Science (IC2S2)
	<i>Nature</i>	International Conference on Web and Social Media (ICWSM)
	<i>Nature Communications</i>	International Conference on Web Search and Data Mining (WSDM)
	<i>Nature Human Behavior</i>	Special Interest Group on Information Retrieval (SIGIR)
	<i>Nature Machine Intelligence</i>	The Web Conference (WWW)
	<i>PNAS Nexus</i>	
	<i>Psychological Science</i>	
	<i>Scientific Reports</i>	
	<i>The Information Society</i>	

Repository	Description	Languages	Stars	Forks	Updated
<a href="#">WebSearcher</a>	Tools for geolocating, collecting, and parsing web search results.	Python	35	14	Nov 2024
<a href="#">suggests</a>	Tools for auditing autocomplete suggestions on Google and Bing. Used in Robertson et al. (2019).	Python	23	7	Nov 2024
<a href="#">domains</a>	Repository of data on web domains. Compiles partisanship scores (e.g. Robertson et al. 2018) and news-related classifications from prior work.	Python	16	9	May 2023
<a href="#">webusage</a>	Browser extension and server code for collecting exposure and engagement data. Used in Robertson et al. (2023) and Chen et al. (2023).	Javascript, Python, SQL	3	0	May 2023
<a href="#">exposure-engagement</a>	Replication code and data for Robertson et al. (2023).	Python	2	0	May 2023
<a href="#">IPtoCountry</a>	Tools for converting IP addresses to country names or full location details with geoplotting visualizations. [ <a href="#">IP2Location 2016 Programming Contest Winner</a> ; <a href="#">link</a> ]	R	6	4	Aug 2019
<a href="#">dtables</a>	Tools for generating descriptive frequency tables. Archived in 2020; 16K downloads on CRAN between May 2016 to Jan 2020.	R	9	2	Mar 2017

A full list of public code and data repositories is available at: <https://github.com/gitronald>

### Invited Talks

**Robertson, R. E.** (2024, July). Disentangling user choice and algorithmic curation in online systems. Invited talk at the Max Planck Institute for Human Development. Berlin, Germany.

**Robertson, R. E.** (2024, April). Disentangling user choice and algorithmic curation in online systems. Invited talk at the Stanford Cyber Policy Center Spring Seminar Series. Stanford, CA.

**Robertson, R. E.** (2023, June). The impact of online systems. Invited talk for the University of Pennsylvania Chief Learning Officer (Ed.D) program. Stanford, CA.

**Robertson, R. E.** (2023, June). Measuring echo chambers, filter bubbles, and rabbit holes: Towards accurate assessments of users' interactions with online platforms. Invited talk with researchers at Meta. Virtual.

**Robertson, R. E.** (2022, November). Engagement outweighs exposure to partisan and unreliable news within Google Search. Invited paper presentation at the Stanford Cyber Policy Center Fall Seminar Series. Stanford, CA.

**Robertson, R. E.** (2021, March). Northeastern WebUsage Browser Extension. Invited talk at Mozilla's Internet Scale Social Science Workshop. Virtual.

**Robertson, R. E.** (2019, June). Invited speaker and panel member at the workshop on Complex Systems Perspectives on Algorithmic Bias at the International Conference on Web and Social Media Web (ICWSM 2019). Munich, Germany.

**Robertson, R. E.** (2019, May). Auditing autocomplete: Suggestion networks and recursive algorithm interrogation. Invited talk at the MIT Media Lab. Boston, MA.

**Robertson, R. E.** (2019, April). Attention biases and agency in information processing. Invited talk for the Workshop on AI-Assisted Information Architectures at the Max-Planck Institute for Human Development. Berlin, Germany.

### **Peer Reviewed Conferences (Selected)**

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**Robertson, R. E.**, Williams, E. M., Carley, K. M., Thiel, D., DiResta, R., & Hancock, J. (2024, June). Data voids and warning banners: Evaluating content moderation on Google Search. Paper presented at the 18th annual International Conference on Web and Social Media (ICWSM). Buffalo, NY.

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**Robertson, R. E.**, Dunphy, A., Grossman, S., DiResta, R., & Thiel, D. (2023, August). Search directives in political communication. Paper presented at the 6th annual Politics and Computational Social Science (PaCSS) pre-conference. Los Angeles, CA.

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**Robertson, R. E.**, Dunphy, A., & Grossman, S. (2023, July). Identifying search directives on social media. Poster presented at the 9th International Conference on Computational Social Science (IC2S2). Copenhagen, Denmark.

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**Robertson, R. E.**, Olteanu, A., Diaz, F., Shokoui, M., & Bailey, P. (2021, May). “I can’t reply with that”: Characterizing problematic email reply suggestions. Paper presented at the annual meeting of the ACM Conference on Human Factors in Computing Systems (CHI 2021). Virtual.

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**Robertson, R. E.**, Wilson, C., & Lazer, D. (2020, September). Online information seeking during the 2018 U.S. congressional elections. Paper presented at the 116th annual meeting of the American Political Science Association (APSA 2020). Virtual.

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**Robertson, R. E.**, Wilson, C., & Lazer, D. (2019, July). Fake news and information seeking during the 2018 U.S. Congressional Elections. Paper presented at the 5th International Conference on Computational Social Science (IC2S2). Amsterdam, Netherlands.

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**Robertson, R. E.**, Jiang, S., Lazer, D., & Wilson, C. (2019, July). Auditing autocomplete: Suggestion networks and recursive algorithm interrogation. Paper presented at the annual ACM Conference on Web Science (WebSci 2019). Boston, MA.

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**Robertson, R. E.**, Jiang, S., Joseph, K., Friedland, L., Lazer, D., & Wilson, C. (2018, November). Auditing partisan bias within Google Search. Paper presented at the annual meeting of the association for Computer-Supported Cooperative Work (CSCW 2018). Jersey City, NJ.

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**Robertson, R. E.**, Lazer, D., & Wilson, C. (2018, April). Auditing the Personalization and Composition of Politically-Related Search Engine Results Pages. Paper presented at the 2018 World Wide Web Conference (WWW 2018). Lyon, France.

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**Robertson, R. E.**, Lazer, D., & Wilson, C. (2018, March). Modeling suggestion networks for algorithm auditing. Paper presented at CompleNet 2018. Boston, MA.

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Epstein, R., & **Robertson, R. E.** (2017, March) The Search Engine Manipulation Effect (SEME): Understanding its power to change opinions and votes. Paper presented at the 2nd biennial meeting of the International Convention of Psychological Science. Vienna, Austria.

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Epstein, R., & **Robertson, R. E.** (2016, April). A replication of the Search Engine Manipulation Effect (SEME), plus methods for suppressing the effect. Paper presented at the 96th annual meeting of the Western Psychological Association. Long Beach, CA.

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Epstein, R., & **Robertson, R. E.** (2015, April). The Search Engine Manipulation Effect (SEME): Large-scale replications in two countries. Paper presented at the 95th annual meeting of the Western Psychological Association. Las Vegas, NV.

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Epstein, R., & **Robertson, R. E.** (2014, April). Helping people preserve their privacy online: The surprising power of a click requirement. Paper presented at the 94th annual meeting of the Western Psychological Association. Portland, OR.

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**Robertson, R. E.** & Epstein, R. (2014, April). Are we underestimating non-heterosexual prevalence? The critical role of survey methodology. Paper presented at the 94th annual meeting of the Western Psychological Association. Portland, OR.

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Epstein, R., & **Robertson, R. E.** (2013, May). Democracy at risk: Search rankings can shift voter preferences substantially. Poster presented at the 25th annual meeting of the Association for Psychological Science. Washington, D.C.

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