
CHARLES JONATHAN GOMEZ

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School of Sociology
The University of Arizona
Tucson, AZ 85721-0027

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ACADEMIC APPOINTMENTS

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| 2022–Present | The University of Arizona
Associate Professor
School of Sociology, College of Social and Behavioral Sciences
Affiliated Faculty with the College of Information Science, Applied Mathematics Graduate Interdisciplinary Program (GIDP), and the Center for East Asian Studies
2022-2024 — Assistant Professor |
| 2017–2022 | Queens College, City University of New York
Assistant Professor
Department of Sociology, School of Social Sciences
2021-2022 — Director, Data Analytics and Applied Social Research Master's Program |
| 2016–2017 | University of California, Berkeley
Data Science Postdoctoral Researcher and MIDS Instructor
School of Information |

EDUCATION

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|-----------|---|
| July 2016 | Stanford University
Ph.D. in Sociology and International Comparative Education
Ph.D. Minors in Sociology and Political Science |
| May 2010 | Harvard University
M.P.P. in International and Global Affairs |
| May 2006 | Columbia University
M.S. in Applied Physics |
| May 2005 | Duke University
B.Sc.Eng. in Electrical Engineering, Physics, and Philosophy |

PUBLICATIONS

Submitted Manuscripts (**Bold and underline** denotes lead or co-lead author.)

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| 2nd R&R | <u>Gomez, Charles J.</u> The Growing Concentration of National Influence in Global Science and its Impact on Future Research.
2nd Revise and Resubmit at <i>Nature Human Behaviour</i>
Preprint: https://doi.org/10.31219/osf.io/5yt4r |
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Peer-Reviewed Journal Articles (**Bold and underline** denotes lead or co-lead author.)

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| 2024 | <u>Gomez, Charles J.</u> , Antonio D. Sirianni, and Launy Schweiger*. 2024. Attachment Preferences in Diverse Collective Problem-Solving Networks and Systemic Performance. <u><i>Journal of Mathematical Sociology.</i></u> [Impact Factor 2022: 1.48]
https://doi.org/10.1080/0022250X.2024.2428641 |
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*Graduate student

- 2024 **Gomez, Charles J.**, Dahlia Lieberman[†], and Elina Mäkinen. 2024. Hedgehogs, Foxes, and Global Science Ecosystems: *Decoding Universities Research Profiles across Fields with Nested Ecological Networks*. **Research Policy**. [Impact Factor 2022: 7.2]
<https://doi.org/10.1016/j.respol.2024.105040>
- 2022 **Gomez, Charles J.**, Andrew C. Herman[§], and Paolo Parigi. 2022. Leading Countries in Global Science Increasingly Receive More Citations than Other Countries Despite Doing Similar Research. **Nature Human Behaviour**. [Impact Factor 2021: 13.66]
<https://doi.org/10.1038/s41562-022-01351-5>
Media: [The Economist](#), [Times Higher Education](#), [PNAS News](#), [Physics World](#), [Nature Asia](#), [Phys.org Physics](#), [United Academics Magazine](#), [Deutschlandfunk \(German NPR\)](#)
- 2020 **Gomez, Charles J.**, Andrew C. Herman[§], and Paolo Parigi. 2020. Moving More, but Closer: *Mapping the Growing Regionalization of Global Scientific Mobility Using ORCID*. **Journal of Informetrics**. [Impact Factor 2018: 3.879]
<https://doi.org/10.1016/j.joi.2020.101044>
- 2019 **Gomez, Charles J.**[‡] and David Lazer. 2019. Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network. **Nature Communications**. [Impact Factor 2018: 12.03]
<https://doi.org/10.1038/s41467-019-12650-3>
- 2019 Alperin, Juan, Charles J. Gomez, and Stefanie Haustein. 2019. Identifying Diffusion Patterns of Research Articles on Twitter: A Case Study of Online Engagement with Open Access Articles. **Public Understanding of Science**. [Impact Factor 2019: 2.754]
<https://doi.org/10.1177/0963662518761733>
- 2019 Vesselinov, Elena, Sebastian Villamizar-Santamaria[§], Charles J. Gomez, and Eva Fernandez. 2019. A Global Community or a Global Waste of Time? Content Analysis of the Facebook Site “Humans of New York.” **Journal of Urban Affairs**. [Impact Factor 2017: 1.53]
<https://doi.org/10.1080/07352166.2019.1697184>
- 2018 Horowitz, Adam and **Gomez, Charles J.**[‡]. 2018. Identity Override: Why Sexual Orientation Reduces the Rigidity of Racial Boundaries. **Sociological Science**. [Impact Factor 2018: 2.18]
<https://doi.org/10.15195/v5.a28>
- 2016 Evans, Eliza, **Gomez, Charles J.**[‡], and Daniel A. McFarland. 2016. Measuring Paradigmaticness of Disciplines Using Text. **Sociological Science**. [Impact Factor 2018: 2.18]
<https://doi.org/10.15195/v3.a32>
- 2015 **Gomez, Charles J.**[‡] and Paolo Parigi. 2015. Regionalization of Intergovernmental Organization Networks: A Non-Linear Process. **Social Networks**. [Impact Factor 2015: 3.928]
<https://doi.org/10.1016/j.socnet.2015.03.007>
- 2015 Kizilcec, Rene F., Jeremy Bailenson, and Charles J. Gomez. 2015. The Instructor’s Face in Video Instruction: Evidence from Two Large-Scale Field Studies. **Journal of Educational Psychology**. [Impact Factor 2015: 4.83]
<https://doi.org/10.1037/edu0000013>
- 2012 Bustos, Sebastian, Charles J. Gomez, Ricardo Hausmann, and Cesar Hidalgo. 2012. The Conservation of Nestedness Predicts the Location of Future Industries. **PLOS One**. [Impact Factor: 2.777]
<https://doi.org/10.1371/journal.pone.0049393>

[†]Graduate student

[‡]Denotes co-lead author

Projects and Manuscripts in Preparation

1. **Project Prometheus**

Collecting in-depth interviews from over 230 researchers from around the world across several domains of study, including artificial intelligence, genetics, astronomy, and sociology, this project explores how researchers situate themselves in the wider currents of globalization and politics. The project deploys both traditional qualitative data analysis and natural language processing in its analysis. The project is a collaboration across several universities and includes doctoral students, master's students, and undergraduates. It will produce several papers and a book proposal. This project is supported by an NSF CAREER grant.

Collaborators — Elina Mäkinen (Tampere University), Peter Ore (CUNY-Queens College), Jeffrey Shen[§], Charlie Pollard[§], Lilith Green[§], Kaiea Orr[¶].

2. **Project Peitho**

These projects utilize natural language processing and social networks to analyze scientific publication metadata and examine international influence. This project consists of several streams of work. It develops measures of international influence to explore which countries are influencing scientific research around the world across fields using temporal measures of isomorphism. This project is supported by a grant from the U.S. Army. It will produce several papers and a white paper.

Collaborators — Jessica Dawson (West Point), Jeffrey Shen[§], Yaeun Kwon[§], Sarah Stueve[§], Harshvardhan Singh[§].

3. **Project Zeus**

This project applies natural language processing and social network analysis techniques to scientific publication metadata and U.S. faculty hiring data across fields to relate the paradigmatic cohesion of the field and how the stratified networks of hiring and citations are. Fields with strong paradigms where research is evaluated based on a mostly agreed-upon framework ought to be less stratified in their hiring and not rely on prestige signifiers compared to weaker paradigm fields, like the social sciences.

Collaborators — Silvan Baier[§] (Harvard Business School) and Zheng Fu[§].

4. **Project Minerva**

We deploy various surveys to researchers and laypeople alike to analyze how they assess scientific research. This work is supported by an NSF CAREER grant.

Collaborators — Jina Lee (UIUC), Minjae Seo (UPenn), and Yiwen Zeng[§].

5. **Project Helios**

In a synergistic and interpretive review essay, we argue for the development of global and political sociological frameworks to study science and knowledge, ones that interrogate the intersecting dynamics of power, inequality, and epistemic hegemony in the creation and dissemination of knowledge across the globe.

Collaborators — Jeffrey Shen[§], Dong Chen[§], and Lilith Green[§].

6. **Humility in Inquiry**

This work is supported by a grant from the John Templeton Foundation. This grant supports research into "humility in inquiry." The project applies natural language processing to scientific texts to identify instances of humble language (e.g., tempered, fallible, considering alternative views, open-ness, etc.) and how it relates to a variety of social features and forces, like gender, country of origin, and discipline.

[§]Graduate student

[¶]Undergraduate student

Collaborators — Led by Erin Leahey (PI) in collaboration with Sara Bratt (Co-PI), Jina Lee (UIUC), Yaeun Kwon[§], and Charlie Lassiter (Gonzaga).

7. Disenchantment with Big Data Analytics: *When Knowledge Mediators Fail (led by Elina Mäkinen)*.
8. A Tower of Babel or a Scientific Esperanto? *Uncovering the Geography of Scientific Communities*.

Other Publications

1. Gomez, Charles J. 2023. Science Wars. Contexts 22(2):6668.
<https://doi.org/10.1177/15365042231172474>.

GRANTS

Awarded and In-progress

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| 2024-2026 | \$251,131. Principal Investigator (PI). The United States Army Research Office. W911NF-20-S-0008. <i>Assessing Influence Research in Global Science and International Influence in Academic Scientific Research</i> . |
| 2024-2029 | \$484,009. Principal Investigator (PI). National Science Foundation (NSF). <i>Faculty Early Development Career Program (CAREER)</i> . NSF 20-525. <i>How Collaboration and Competition in the Emerging Field of Artificial Intelligence</i> . |
| 2023-2025 | \$205,214. Co-principal Investigator (Co-PI). John Templeton Foundation. Humility in Inquiry: Foundations and New Directions. <i>Developing a Text-based Measure of Humility in Inquiry and Examining Contextual Effects</i> . |
| 2023-2026 | \$499,985. Co-principal Investigator (Co-PI). National Science Foundation (NSF). PD 20-595, Innovations in Graduate Education (IGE). <i>Integrating Data Science into the Applied Mathematics Ph.D.: Generalized Skills for Non-Academic Careers</i> . |

Completed

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| 2020-2023 | \$253,897. Principal Investigator (PI). National Science Foundation (NSF). PD 19-125Y, Science of Science: Discovery, Communication, and Impact (SoS:DCI). <i>Inequality in Global Scientific Research: Implications for Novelty and Innovation</i> . |
| 2019-2020 | \$5,900. PSC-CUNY Research Award (Cycle 50). |
| 2018-2019 | \$5,900. PSC-CUNY Research Award (Cycle 49). |
| 2017-2018 | \$8,000. Mellon Foundation Diversity Grant, Queens College, CUNY. |
| 2016 | \$49,900. Stanford University Freeman Spogli Institute (FSI) Global Development Exploratory Seed Grant, Co-P.I. with Daniel McFarland, Stanford University. |
| 2013 | \$2,000. Center for Philanthropy and Civil Society (PACS) Research Grant, Stanford University. |
| 2011-2015 | \$800. National Science Foundation's Political Networks Travel Grants, University of Michigan - Ann Arbor, 2011; The University of Colorado-Boulder, 2012; Indiana University - Bloomington 2013; Reed College and Portland State University 2015. |
| 2010 | \$8,000. The Minerva Project Cybersecurity Summer Grant. |

FELLOWSHIPS AND AWARDS

2024	Inaugural Early Career Research Award, University of Arizona College of Social and Behavioral Sciences (SBS).
2024	National Science Foundation (NSF) Faculty Early Career Development Program (CA-REER) Award.
2017-2022	Mellon Fellow, Queens College, CUNY.
2015	Axiom Diversity Scholarship Winner (\$5,000), Axiom, Inc.
2013-2014	Computational Social Science Fellow - Quarter Tuition and Stipend, Institute for Research in the Social Science (IRiSS) Center for Computational Social Science, Stanford University.
2013	Nominated for Stanford GSE Outstanding Graduate Teaching Award.
2010-2011	The Fred Zannon Graduate Fellowship Full Tuition, Stanford University.
2009	Belfer Summer Internship Fund Summer Stipend, Harvard University.
2008-2010	Belfer International and Global Affairs Fellow Stipend, Harvard University.
2008-2010	Harvard Public Service Fellowship Full Tuition, Harvard University.
2008-2010	GEM/Deloitte Fellowship Full Tuition and Stipend (Declined).
2005-2006	APAM Department Doctoral Fellowship Full Tuition and Stipend, Columbia University.
2001	Intel Science Talent Search Semifinalist.

CONFERENCE PRESENTATIONS

2025	“The Centralization of Global Research Focus Is Associated with Declining Disruption in Fields.” Presented at the International Conference on Science of Science and Innovation (ICSSI), June 17, Copenhagen, Denmark.
2023	“Scientific Paradigms and Organizational Hierarchies.” Presented at the International Conference on Science of Science and Innovation (ICSSI), June 23, Chicago, Illinois.
2023	“Scientific Paradigms and Organizational Hierarchies.” Presented at the INSNA: The International Conference on Social Network Analysis (Sunbelt), June 25, Portland, Oregon.
2021	“Global Scientific Fields Are Less Novel as Concentrated International Influence Dictates Research Trends.” Presented at the Networks 2021, July, Virtual.
2020	“Global Scientific Fields Are Less Novel as Concentrated International Influence Dictates Research Trends.” Presented at the International Conference on Computational Social Science (IC ² S ²), July, Virtual.
2019	“A Tower of Babel or a Scientific Esperanto? Uncovering the Geography of Scientific Communities Using International Networks of Citations, Topic Similarity, and Mobility.” Presented at the American Sociological Association Annual Meeting, August, New York City, New York.
2019	“Global Scientific Fields Are Less Novel as Concentrated International Influence Dictates Research Trends.” Presented at The Society for the Social Study of Science (4S) Annual Meeting, September, New Orleans, Louisiana.
2018	“Regionalization of Intergovernmental Organization Networks: A Non-Linear Process.” Presented at the International Conference on Computational Social Science (IC ² S ²), July, Chicago, Illinois.
2018	“A Tower of Babel or a Scientific Esperanto? Uncovering the Geography of Scientific Communities Using International Networks of Citations, Topic Similarity, and Mobility.”

- Presented at the American Sociological Association Annual Meeting, August, Philadelphia, Pennsylvania.
- 2017 “On Shadow Libraries: Comparing Download and Citation Patterns in Sci-Hub and Web of Science.” (with Sebastian Muñoz-Najar) Presented at the Science of Team Science Annual Conference, June, Tampa, Florida.
- 2017 “Identity Override: Why Sexual Orientation Reduces the Rigidity of Racial Boundaries.” (with Adam Horowitz) Presented at the American Sociological Association Annual Meeting, August, Montreal, Quebec.
- 2016 “Measuring Paradigmaticity Using Text.” Presented at the American Sociological Association Annual Meeting, August, Seattle, Washington.
- 2015 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at the American Sociological Association Annual Meeting, Chicago, Illinois.
- 2015 “Global Knowledge Structures: International Patterns of Language Adoption in Political Science.” Presented at the American Sociological Association Annual Meeting, Chicago, Illinois.
- 2014 “Global Knowledge Structures: International Patterns of Language Adoption in Political Science.” Presented at the Political Networks 2014, Montreal, Quebec, Canada.
- 2014 “Global Knowledge Structures: International Patterns of Language Adoption in Political Science.” Presented at the American Sociological Association Annual Meeting, San Francisco, California.
- 2014 “A Post-Pax American Scientia?” in SocInfo, 6th Annual Conference. Barcelona.
- 2013 “Global Knowledge Structures: International Patterns of Language Adoption in Political Science.” Presented at the American Educational Research Association Annual Meeting, San Francisco, California.
- 2013 “Regionalization of Intergovernmental Organization Networks: A Non-Linear Process.” Presented at the American Political Science Association Annual Meeting, August, Chicago, Illinois.
- 2013 “Regionalization of Intergovernmental Organization Networks: A Non-Linear Process.” Presented at the American Sociological Association Annual Meeting, August, New York, New York.
- 2012 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at Academy of Management Annual Meeting. Boston, Massachusetts.
- 2012 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at the American Sociological Association Annual Meeting, Denver, Colorado.
- 2012 “Regionalization of Intergovernmental Organization Networks: A Non-Linear Process.” Presented at the Fifth Annual Political Networks Conference and Workshop, University of Colorado, Boulder.
- 2011 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at the Workshop on Information in Networks, New York, New York.
- 2011 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at the Political Networks, Ann Arbor, Michigan.

- 2011 “Clustering Knowledge and Dispersing Abilities Enhance Collective Problem Solving in a Network.” Presented at the INSNA: The International Conference on Social Network Analysis (Sunbelt), Saint Petersburg, Florida.

TEACHING

The University of Arizona

- 2022-Present Computational Social Science (Graduate).
 2023-Present Introduction to Sociology (Undergraduate).
 2023-Present Sociological Theory (Graduate).

Queens College, City University of New York

- 2018-2020 Introduction to Computational Social Science (Graduate).
 2018-2020 Social Theory for Quantitative Researchers and Data Scientists (Graduate).
 2018 Data and Society (Undergraduate).
 2017 Sociology of Knowledge (Advanced Undergraduate and Graduate).

The University of California, Berkeley

- 2016-2017 Research Design and Applications for Data and Analysis (Graduate).
 2016-2017 Social Theory and Organizational Analysis (Advanced Undergraduate and Graduate).

SERVICE

Service to the School of Sociology, University of Arizona

- 2024-Present *Coordinator*, School of Sociology Colloquium.
 2022-2024 *Committee Member*, Graduate Studies Committee.
 2022-Present *Committee Member*, Executive Committee.

Service to the College of Social and Behavioral Sciences, University of Arizona

- 2022-Present *Committee Member*, Advisory Committee on Computational Social Science.

Service to Queens College

- 2021-2022 *Director*, Sociology Department Graduate Program on Data Analytics and Applied Social Research.
 2018-2022 *Committee Member and Chair*, Sociology Department Graduate Curriculum Committee.
 2017-2022 *Committee Member*, Sociology Department Seminar and Workshop Series Organizing Committee.
 2018-2021 *Committee Member*, Sociology Department Personnel and Budget (P&B) Committee (i.e., department’s governing body).
 2018-2019 *Committee Member*, Search Committee for Data Analytics Faculty Line.
 2018-2019 *Committee Member*, Working Committee on Establishing a School of Data Science.
 2018-2021 *Senator, College-at-Large Seat*, Queens College Senate.

Service to the Discipline and the Wider Academic Community

- 2025 *Chair*, American Sociological Association Section on Mathematical Sociology Committee on Outstanding Graduate Student Paper Award.

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| 2021-2024 | <i>Committee Member</i> , American Sociological Association Section on Communication, Information Technologies, and Media Sociology (CITAMS) Nominations Committee. |
| 2021-2024 | <i>Committee Member</i> , American Sociological Association's Section on Rationality and Society Nominations Committee. |
| 2020 | <i>Committee Member</i> , American Sociological Association's Section on Science, Knowledge and Technology (SKAT) Robert K. Merton Book Award. |

Service as an Academic Editor

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| 2025-Present | Senior Associate Editor, <i>ACM Transactions on Social Computing</i> |
| 2022-2024 | Associate Editor, <i>PLOS One</i> |

Service as an Ad-hoc Reviewer

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| Journals | <i>Proceedings of the National Academy of Sciences (PNAS)</i> ; <i>PNAS Nexus</i> ; <i>Nature Human Behaviour</i> ; <i>Science Advances</i> ; <i>American Sociological Review</i> ; <i>Research Policy</i> , <i>Sociology of Education</i> ; <i>Journal of Mathematical Sociology</i> ; <i>Journal of Web Science</i> ; <i>Public Understanding of Science</i> ; <i>Minerva</i> ; <i>Journal of Informetrics</i> ; <i>Scientometrics</i> , <i>Global Policy</i> , <i>Journal of Complex Networks</i> ; <i>Journal of Computational Social Science</i> , <i>PLOS One</i> ; <i>npg Complexity</i> |
| Conferences | The Web Conference—WWW; International Conference on Computational Social Science (IC ² S ²); Academy of Management |
| Book Proposals | Columbia University Press; SAGE |
| Grant Proposals | National Science Foundation. Science of Science: Discovery, Communication, and Innovation (SoS:DCI) |

SUPERVISION

PhD Students Currently Advising

Zheng Fu, Sociology
 Jeffrey Shen, Sociology
 Tara Prendergast, Sociology
 Sukhoon Park, Sociology
 Sarah Stueve, Information Science
 Alan Kang, Information Science
 Silvan Baier (Harvard Business School), Macro-organizational Behavior and Sociology

Dissertation Committee

aems emswiler 2025, Information Science
 Minyoung An 2025, Sociology
 William ("Bill") Fries 2023, Applied Math

Queens College, CUNY — M.A. in Data Analytics and Applied Social Research (MADASR) Thesis Advisor

Dahlia Lieberman **2021**, Joshua Megnauth **2021**, Rafael Arevalo **2020**, Jiawen ("Jessica") Duan **2020**, Sungji ("Peter") Shin **2020**, Joseph Vorbeck **2020**, Randy Cruz **2018**

PROFESSIONAL MEMBERSHIPS

American Sociological Association
Association for Information Science and Technology
International Network for Social Network Analysis
International Society for Informetrics and Scientometrics
Society for Social Studies of Science (4S)
Academy of Management (Occasional)

INDUSTRY & CONSULTING EXPERIENCE

Facebook, Inc.

Utility - Profile Team

June 2015 - September 2015

Ph.D. Research Intern

Menlo Park, CA

- Communicated findings to and collaborated with product managers, data engineers, and data scientists.

Stanford University

Statistical Software and Data Consulting

January 2013 - August 2016

Consultant

Stanford, CA

- Analyzed social science data and programming issues for the social science departments.
- Assisted students, faculty, and postdocs with technical and methodological issues related to R, Stata, and Unix.

Accenture, LLP

Accenture Information Management Services

October 2006 - 2008

Analyst

New York, NY

- Customized Accenture's Delivery Methodology for Custom Development (ADM-CD) for UPS's global I.T. platform and their organizational specifications.
- Developed database architecture, requirements, documentation, and internal and external presentations for Accenture's business intelligence platform for private businesses and state and local governments.