

Critical Perspectives in Quantitative Methods: *Introduction, Historical Origins and Future Possibilities*

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White Logic, White Methods: Historical Examples of Quantitative Weapons that Wound

White supremacist notions of objectivity, impartiality, and truth continue to permeate teaching and application of statistics in social sciences, thereby making it difficult to introduce critical theories within quantitative methods.

Quantitative criticalists must continually recognize and move towards dismantling the historical remnants and current harm that white supremacy has perpetuated through statistics.



“Criticality” in Quantitative Research in Education



Volume 2013, Issue 158

Special Issue: New Scholarship in Critical Quantitative Research—Part 1: Studying Institutions and People in Context

Pages: 1-107

2014

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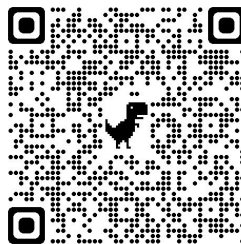
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Critical Quantitative Inquiry in Context

Frances K. Stage, Ryan S. Wells



Race Ethnicity and Education

 Routledge
Taylor & Francis Group

ISSN: 1361-3324 (Print) 1470-109X (Online) Journal homepage: <http://www.tandfonline.com/loi/cree20>

QuantCrit: rectifying quantitative methods through critical race theory

Nichole M. Garcia, Nancy López & Verónica N. Vélez

To cite this article: Nichole M. Garcia, Nancy López & Verónica N. Vélez (2017): QuantCrit: rectifying quantitative methods through critical race theory, *Race Ethnicity and Education*, DOI: [10.1080/13613324.2017.1377675](https://doi.org/10.1080/13613324.2017.1377675)

To link to this article: <http://dx.doi.org/10.1080/13613324.2017.1377675>



Published online: 27 Sep 2017.



What in the “the notion of ‘criticality’” are we talking about?

Quantitative Criticalism

- Combines an understanding and use of both methods and epistemologies
- Examine phenomena rooted in positionality and subjectivity while also advocating for social justice and dismantling systems of oppression (Carter & Hurtado, 2007)
- Challenge existing policies, theories, and measures and reexamine traditional questions for populations marginalized in academia (Wells & Stage, 2015)
- Recognizes students holistically and within systems rather than as individuals with deficits (Sablan, 2019)
- Numbers are not neutral, analyses must account for systemic oppression, and descriptive statistics can unearth counterstories of students and their trajectories through education (Garcia et al., 2018; Gillborn, Warmington, & Demack, 2018)

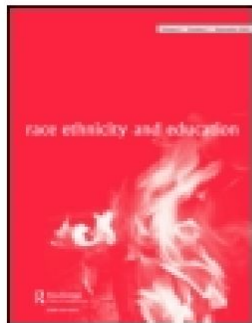
QuantCrit (Gillborn, Warmington, and Demack, 2018)

- The centrality of racism as a complex and deeply rooted aspect of society that is not readily amenable to quantification
- The acknowledgement that numbers are not neutral and they should be interrogated for their role in promoting deficit analyses that serve white racial interests
- The reality that categories are neither ‘natural’ nor given and so the units and forms of analysis must be critically evaluated
- The recognition that voice and insight are vital; data cannot ‘speak for itself’ and critical analyses should be informed by the experiential knowledge of marginalized groups
- The understanding that statistical analyses have no inherent value, but they can play a role in struggle for social justice

Tensions & Contradictions

- Can quantitative methods stand alone?
- What are the challenges of operating at the intersection of critical theories and quantitative approaches?
- How do we address methodological tensions of generalizability, operationalizing social identities, and creating latent constructs related to oppression/power/privilege?

Application



Race Ethnicity and Education

ISSN: 1361-3324 (Print) 1470-109X (Online) Journal homepage: <http://www.tandfonline.com/loi/cree20>

More than 'papelitos:' a QuantCrit counterstory to critique Latina/o degree value and occupational prestige

Lindsay Pérez Huber, Verónica N. Vélez & Daniel Solórzano

To cite this article: Lindsay Pérez Huber, Verónica N. Vélez & Daniel Solórzano (2017): More than 'papelitos:' a QuantCrit counterstory to critique Latina/o degree value and occupational prestige, *Race Ethnicity and Education*, DOI: [10.1080/13613324.2017.1377416](https://doi.org/10.1080/13613324.2017.1377416)

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The Duncan Index

- Measure of occupation prestige developed in 1947 and later refined in 1961 by the National Opinion Research Center (NORC)
- Reflects the correlation between education, income, and occupation
- The following list assembled by NORC in 1989 still holds as the most popular index of measure of occupational prestige today

The Duncan Index: Occupational Prestige

- | | |
|--|--------------------------------|
| 1. CEO or General Administrator | 11. Geologist |
| 2. Manager, Medicine & Health | 12. Physical Scientist (other) |
| 3. Architect | 13. Biologist / Life Scientist |
| 4. Aerospace Engineer | 14. Physicians / Surgeons |
| 5. Chemical Engineer | 15. Professor |
| 6. Civil Engineer | 16. Teacher |
| 7. Engineer (other) | 17. Psychologist |
| 8. Computer Systems Analyst or Scientist | 18. Clergy |
| 9. Physicist / Astronomer | 19. Lawyer |
| 10. Chemist | 20. Judge |

Toward a Critical Race Occupational Index

First Step: Exploratory Factor Analysis

WHITE

1. Manager
2. Registered Nurse
3. Lawyer / Judge
4. Accountant / Auditor
5. Postsecondary Teacher
6. CEO
7. Physician / Surgeon
8. First-line Supervisors
9. Financial Managers
10. Software Developers

LATINX

1. P-12 Teacher
2. Manager
3. Registered Nurse
4. Accountants / Auditor
5. Social Worker
6. Lawyer / Judge
7. First-line Supervisor
8. Retail Supervisor
9. Secretary / Administrative Assistant
10. Postsecondary Teacher

BLACK

1. P-12 Teacher
2. Registered Nurse
3. Manager
4. Social Worker
5. Counselor
6. Accountants / Auditor
7. Educational Admin
8. Secretary / Administrative Assistant
9. Postsecondary Teacher
10. Lawyer / Judge

Toward a Critical Race Occupational Index

Second Step: (Re)defining Occupational Categories

- Community and Social Service Occupations
- Lawyers, Judges, and other Judicial Workers
- Postsecondary Teachers
- PS – 12 Teachers
- Registered Nurses
- Physicians / Surgeons / Dentists / Other Doctors
- Counseling and other Health Services

*Rather than Income
Measure Commitment
to Profession*

Questions

Anticipatory Slides



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Methodological Troubles with Gender and Sex in Higher
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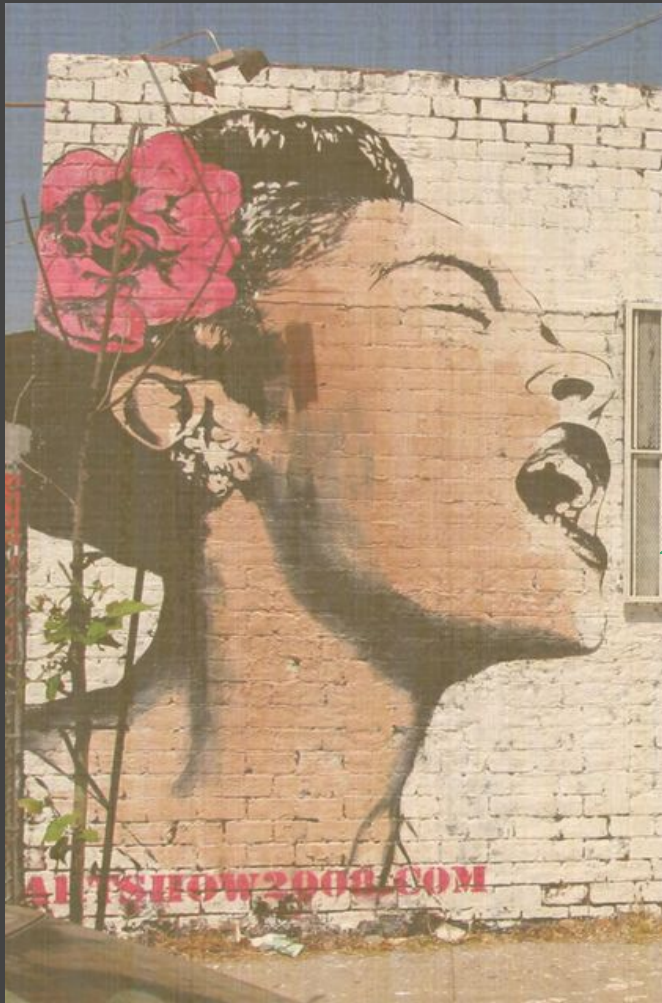
Jason C. Garvey, Jeni Hart, Amy Scott Metcalfe, Jennifer Fellabaum-Toston

The Review of Higher Education, Volume 43, Number 1, Fall 2019, pp. 1-24
(Article)

Published by Johns Hopkins University Press

DOI: <https://doi.org/10.1353/rhe.2019.0088>





**“Numbers don’t speak
for themselves”**

(Covarrubias & Velez, 2013, p. 271)





The threat of unexamined secondary data: a critical race transformative convergent mixed methods

Nichole M. Garcia & Oscar J. Mayorga

To cite this article: Nichole M. Garcia & Oscar J. Mayorga (2017): The threat of unexamined secondary data: a critical race transformative convergent mixed methods, Race Ethnicity and Education, DOI: [10.1080/13613324.2017.1377415](https://doi.org/10.1080/13613324.2017.1377415)

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Published online: 27 Sep 2017.



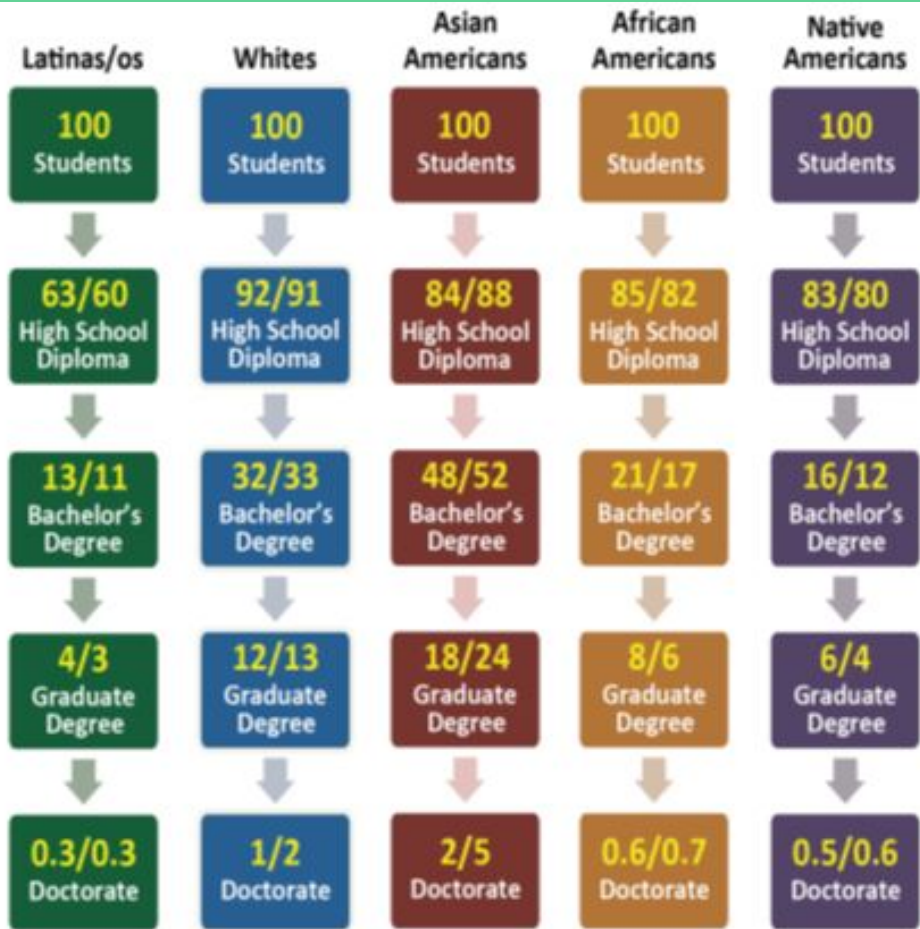
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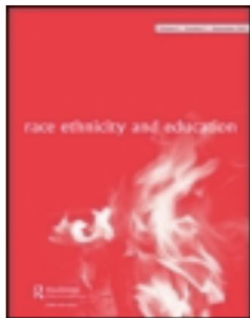


STILL FALLING THROUGH THE CRACKS

REVISITING THE LATINA/O EDUCATION PIPELINE

LINDSAY PÉREZ HUBER, MARIA C. MALAGÓN,
BRIANNA R. RAMIREZ, LORENA CAMARGO GONZALEZ,
ALBERTO JIMENEZ, AND VERÓNICA N. VÉLEZ





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