But is it really “just” science?: Engaging Critical Race Theory to Unpack Racial Oppression with Implications for Black Student Science Engagement

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Striving for Racial Justice in Academic Biology – SABER Seminar Series

Presenter: Terrell R. Morton, Ph.D.
@DrTRMorton | mortontr@missouri.edu

1. Who Am I?
   a. Educational Pedigree
      i. North Carolina A&T State University (B.S. Chemistry, 2011)
      ii. University of Miami (M.S. Neuroscience, 2013)
   b. Identities
      i. Scientists, Advocate - Activist, Speaker, Civil Servant

2. Positionality
   a. Shaped by my identities, privileges exposures, commitments, and actions.
      i. Identities: Social identities (e.g., race, gender, religion) and socialization processes.
      ii. Privileges: Educational pedigree
      iii. Exposure: Experiences as a Black man, exposure to others, readings and conversations through graduate school and beyond.
      iv. Commitment: Goals related to racial justice, desire to enact transformative change,
      v. Action: Decision to research Black women in STEM, decision to conduct research that honors, empowers, and promulgates participants from asset-based perspectives.
   b. Reference texts:

3. Defining Culture
   a. Two dominating perspectives
i. Anthropology & Sociology – Structures and processes defined by societies.
ii. Psychology – Individual perspectives and applications.
b. Reflected in Ideology (Science of Ides)
   i. Ontology (Reality), Epistemology (Knowledge), and Axiology (Ethics)
c. Reflected in Methodology (Processes to determine what is and what is not).
d. Reflected in Praxis (Accepted and implemented customs or practices).
e. Reference texts:

4. The Social-Political-Historical Culture of Science
   a. Ideology
      i. J. Blumenbach and “Scientific” racial classifications.
      ii. Thomas Jefferson and “Innate inferiority of Blacks.”
      iii. S. Morton and skull sizes as evidence for racial stratification.
      iv. Social Darwinism and racism as “scientific and natural.”
   b. Methodology
      i. Anarcha’s torment – enslaved woman who J. Marion Simms used to perfect his technique. (Gynecology)
      ii. Eugenics Movement (Evolutionary Biology/ Genetics)
      iii. Tuskegee Syphilis Experiment (Epidemiology)
      iv. Henrietta Lacks stolen cells (Cancer Biology)
   c. Praxis
      i. Positivism – universal truth determined through experimental design.
         1. Objectivity, Individualism, Competition
   d. Reference texts:
      i. PBS Timeline on Race
         https://doi.org/10.1080/03057269608560077
      vi. Mutegi, J. W. (2013). “Life’s first need is for us to be realistic” and other reasons for examining the sociocultural construction of race in the science performance of
5. Critical Race Theory
   a. Tenets
      i. Interest Convergence: white interest will only invest in Black progress when there is something for white interests to gain from the investment.
      ii. Racial Realism (Permeance of Racism): Racism is endemic, systemic, and integral to all U.S. social institutions.
      iii. Whiteness as Property: Legalized enslavement and extermination of the Indigenous created a system in which whiteness became commodified into physical property to possess and expend.
      iv. Critique of Liberalism: Belief in individualism and “bootstrap mentality” communicated through U.S. laws and social norms is false given systemic nature of racism.
      v. Intersectionality: Identities and experiences cannot be examined from single axes as individuals’ identities are multiplicative and systems of oppression operate at intersectional axes.
      vi. Counter-Narrative/ Counter-Storytelling: The master narrative regarding the experiences of those minoritized is rooted in white supremacy and to determine the “truth” one must elevate, embrace, and empower the voices of those minoritized.
   b. Reference texts:

6. CRT Perspective of Science Culture
   a. Racial Realism: ideology, methodology, and praxis of science centered around “objectively proving” white racial dominance.
   b. Interest Convergence: targeted DEI efforts to increase numerical racial diversity in STEM absent from transforming undergirding structures that require power redistribution.
   c. Whiteness as Property: standardization of practices under the perspectives of objectivity and color-blindness that privileges whiteness.
d. Intersectionality: failed attempts of existing DEI endeavors to redress oppression given the multiplicative nature of identity.
e. Counter-story: need for accurate “truths” about what is science through a lens that names systems of oppression while centering minoritized voices.
f. Reference texts:

7. Implications for Black Student Experiences
   a. Structural: systemic oppression
      i. Tokenism
      ii. Essentialism
      iii. Mirror-tocracy
   b. Sociocultural: racialized experiences
      i. Norms that maintain stereotypes, privileging and favoring assimilation and enculturation.
      ii. Beliefs that purport western, Eurocentric perspectives regarding “what is science and science practice.”
      iii. Values that communicate need for resilience, grit, and tenacity.
      iv. Practices that foster alimentation and isolation.
   c. Psychological: Hypervisibility and invisibility
      i. Racial micro and macro-aggression.
      ii. Racialized metacognition.
      iii. Psychosocial well-being from constant resilience.
   d. Reference Texts:
      i. [https://tinyurl.com/TRMPubs](https://tinyurl.com/TRMPubs)
toward a Black x consciousness in STEM. *Journal of Negro Education, 88*(3), 327-342.


8. Take Dialogic Action!
   a. Embrace racial realism, examine your positionality, raise your critical consciousness, take dialogic action.
   b. Reference text