Exploring cultural capital, power, and legitimacy for frontline designers
Authors: Ysabel Yu, Bethany M. Gordon

Problem Statement

It is important for designers to be motivated in climate adaptation and community building efforts – cultural capital may be the key to increasing this motivation. Cultural capital refers to the knowledge and cultural resources that people have to navigate within society. Many mitigation efforts are based on merit, which ignores relevant contextual factors such as racial inequalities. From this, understanding cultural capital can help strengthen engagement between designers and communities that can facilitate the built environment design process. Therefore, this research seeks to determine whether cultural capital affects the perceived merit of a community that is in need of climate adaptation resources.

Cultural Capital, Power, and Legitimacy

"Citizens can be the shock troops of democracy. Properly deployed, their local knowledge, wisdom, commitment, authority, even rectitude can address wicked failures of legitimacy, justice, and effectiveness in representative and bureaucratic institutions" (Fung, 2006). Cultural capital can play a massive role in many societal outcomes.

Several studies highlight the impact of cultural capital in various arenas which emphasize the need to value cultural capital for optimal societal outcomes. Bourdieu's concept of cultural capital is that it "represent[s] the immanent structure of the social world, determining what is possible for any individual to achieve". This explains missed opportunities in science education, suggesting that a more comprehensive understanding and better communication of its intrinsic value could bridge gaps between education, societal perceptions, and career opportunities (Claussen & Osborne, 2013). Similarly, the cultural heritage of rural Scottish communities, intertwined with local knowledge and histories, finds the need to balance tradition with innovation (Beel & Wallace, 2020).

Cultural considerations are also crucial in sustainable development. Research indicates that incorporating cultural elements leads to more resilient and adaptable planning. This idea is furthered by the concept of 'community cultural wealth,' which challenges traditional education models by advocating for the recognition and inclusion of the diverse strengths of marginalized communities (Yosso, 2005).

In the environmental sphere, the role of social and cultural capital is particularly pronounced. For instance, in China, the intertwining of social capital with government policies has been instrumental in helping farmers adapt to drought challenges (Chen et al., 2014). Similarly, in Bangladesh, it's evident that the intricate layers of social capital can both bolster and complicate climate adaptation strategies, underlining the need for a nuanced approach (Jordan, 2015). This importance of cultural and social frameworks extends to urban resilience as well, where the relationship between intangible heritage and urban adaptation strategies has been

explored, indicating that cultural narratives can significantly influence community preparedness and response to challenges.

In addition to this background on the importance of cultural capital, it is also important to consider legitimacy in this context. Legitimacy, the belief that political authorities are entitled to lead, has a role in influencing successful, resilient, sustainable societal development. Understanding legitimacy along with cultural capital helps to understand the need for public trust and a foundation for collaboration between different stakeholders. This ensures that cultural considerations can be effectively integrated into practices for impacts that are long lasting and sustainable. Overall, across various disciplines and geographies, valuing and integrating cultural capital, power, and legitimacy are not just advantageous but essential for future resilience, adaptation, and growth.

Meritocratic Ideology

Meritocratic ideology refers to the belief that deservingness should be based on success. There are various significant implications of how meritocracy is applied in the context of justice, need, and equity. Some suggest that equity, rather than merit, is the basis of distributive justice - how benefits and burdens are distributed (Traub & Kittel, 2020). The main dichotomy is subject to socio-political ideals, most commonly observed in liberals' focus on equality and need and conservatives' focus on merit based principles, but these beliefs are additionally linked to one's social role and position in society.

With many conflicting perspectives, there are a variety of scales used to determine distributive justice. The distributive justice principle emphasizes giving people what they deserve based on merit, while the entitlement principle of justice emphasizes individuals having a right to some resources that should not depend on merit (Traub & Kittel, 2020). The determination of what is fair and equitable can depend on societal norms or individual values (Rasinski, 1987).

Meritocracy has advantages to a certain extent. Firstly, it helps to eliminate favoritism that can come from family and social networks. Secondly, it has the potential to eliminate certain biases such as sexism, racism, etc. by only looking at merit without context to promote a level playing field (Jackson-Cole & Goldmeier, 2023). However the advantages present considerable downfalls. One of the biggest issues of meritocracy is that it often fails to address historical context, in which not every individual starts from the same place or has the same foundations, as well as current community values and social constructs. This is why justice must be evaluated within a cultural context (in this case, using vignettes to represent different racial histories). Cultural capital is a key factor in this meritocratic ideology as it has the potential to influence perceived merit of different communities.

Methods

In order to answer the question: how does awareness of cultural capital affect designer motivation, the following methods will be implemented for this exploratory study. First, vignettes need to be created using methods from Steiner et al. (2016). Vignettes are an

experimental tool in social psychology that uses a narrative structure to systematically substitute the variables in question in a way that draws participants into the context of the research question (Atzmüller & Steiner, 2010; Jeffries & Maeder, 2005). This will be a between subjects design where vignettes will be developed to systematically vary racial history as a function of temporal distance, cultural capital, intensity, and spatial scale. Temporal distance describes how long ago an event occurred, cultural capital may be represented as objective, embodied, or institutionalized (Van Praag, 2023). Intensity refers to how closely the event tends to be perceived as significant to the built environment (Gordon et al. 2023), and spatial scale refers to the level at which the event occurred (e.g. municipality, state, national, etc).

Next, the vignettes will be assessed for internal validity, content validity, external validity, and reliability using a combination of content validity indices (CVI) and expert panel interviews (St. Marie et al., 2021). CVI is a common method used to assess content validity, including clarity, relevance, and importance (Rodrigues et al., 2017). The interview questions will be designed to address matters related to internal validity, content validity, external validity, and reliability. Four experts will be asked to (1) review the initial vignettes and complete the CVI, (2) complete a qualitative interview, and (3) review revised vignettes and complete the CVI for a second time. This will allow us to improve the reliability and validity of the vignettes, as well as calculate the change in content clarity, relevance, and importance, between revisions.

These vignettes will be used to explore research questions about the interaction effects of racial history as cultural capital, perceived earned potential, and designer motivation to engage. To test perceived merit, the dependent variable, time engaging with the community, will be operationalized by asking participants to write out a description of themselves and what they would look forward to doing to engage further with community members. Participants will also be asked about their motivation levels using questions from expectancy-value theory on a 1-5 Likert scale (Wigfield & Eccles, 2000). These vignettes will be randomly assigned to 500 participants within MTurk to have at least .95 power.

Key Findings

The research can expose significant key findings and implications for climate adaptation, mitigation, and design. There are three key findings that we expect from this research. Firstly, we expect that cultural capital, operationalized using the inclusion of racial history, increases the perceived earned potential of a community that needs climate adaptation resources. Secondly, we expect that the perceived earned potential of an out-group, low-resource community affects how designers seek to engage with that community. Thirdly, we expect that if we have data supporting the first and second hypotheses, the incorporation of cultural capital increases motivation among designers to engage outside of obligation with frontline communities and that this relationship will be mediated by perceived earned potential.

Implications

The implications include many insights to the relationship between cultural capital and designers' motivation for community design efforts in climate resilience. This research recognizes the value of cultural capital while considering the racial history of marginalized communities to understand their unique needs and strengths for designers and policymakers to consider in the future. This understanding is necessary for developing effective, just, and equitable climate adaptation strategies.

This research has the potential to reshape engineering education practices. Emphasizing the impact of cultural and social factors on design processes advocates for a more inclusive and diverse curriculum. The implementation of these considerations into engineering education can contribute to cultivating a more diverse and equitable generation of designers and engineers. A more enhanced preparation in education can allow students to tackle the complicated challenges of the built environment and environmental justice more effectively.

Beyond the academic world, the proposed public interface for communities to leverage meritocratic ideology can become a powerful tool for community empowerment. Allowing frontline communities to clearly articulate their needs and advocate for themselves within a given framework creates a sense of community driven change and organization. This community empowerment is important for the success of future climate mitigation initiatives to ensure that solutions do not only meet technical standards, but also meet the needs and priorities of the communities they are meant to serve.

Overall, the implications of this research is highly relevant in influencing climate adaptation efforts, educational programs and curriculum development in engineering, and encouraging communities to actively participate in their own mitigation efforts for their futures. These implications highlight the more general relevance and potential of this proposed study, making it an important and influential contribution to the ongoing conversation of equity and justice in the face of climate change.

References

Beel, D., & Wallace, C. (2020). Gathering together: Social capital, cultural capital and the value
of cultural heritage in a digital age. *SOCIAL & CULTURAL GEOGRAPHY*, *21*(5),
697–717. https://doi.org/10.1080/14649365.2018.1500632

Chen, H., Wang, J., & Huang, J. (2014). Policy support, social capital, and farmers' adaptation
to drought in China. *GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY
DIMENSIONS*, *24*, 193–202. https://doi.org/10.1016/j.gloenvcha.2013.11.010

Claussen, S., & Osborne, J. (2013). Bourdieu's notion of cultural capital and its implications for
the science curriculum. *SCIENCE EDUCATION*, *97*(1), 58–79.
https://doi.org/10.1002/sce.21040

Fung, A. (2006). Varieties of Participation in Complex Governance. *Public Administration
Review*, *66*, 66–75.

Jackson-Cole, D., & Goldmeier, G. (2023). Meritocracy. In *Gender Diversity, Equity, and
Inclusion in Academia* (pp. 98–107). Routledge.
https://www.taylorfrancis.com/chapters/oa-edit/10.4324/9781003363590-11/meritocracy-
dominik-jackson-cole-gabriel-goldmeier

Jordan, J. C. (2015). Swimming alone? The role of social capital in enhancing local resilience to
climate stress: a case study from Bangladesh. *Climate and Development*, *7*(2), 110–123.
https://doi.org/10.1080/17565529.2014.934771

Rasinski, K. A. (1987). What's fair is fair--or is it? Value differences underlying public views
about social justice. *Journal of Personality and Social Psychology*, *53*(1), 201–211.
https://doi.org/10.1037//0022-3514.53.1.201

Rodrigues, I. B., Adachi, J. D., Beattie, K. A., & MacDermid, J. C. (2017). Development and
validation of a new tool to measure the facilitators, barriers and preferences to exercise
in people with osteoporosis. *BMC Musculoskeletal Disorders*, *18*(1), 540.
https://doi.org/10.1186/s12891-017-1914-5

St. Marie, B., Jimmerson, A., Perkhounkova, Y., & Herr, K. (2021). Developing and Establishing Content Validity of Vignettes for Health Care Education and Research. *Western Journal of Nursing Research*, *43*(7), 677–685. https://doi.org/10.1177/0193945920969693

Traub, S., & Kittel, B. (Eds.). (2020). *Need-Based Distributive Justice: An Interdisciplinary Perspective*. Springer International Publishing. https://doi.org/10.1007/978-3-030-44121-0

Yosso *, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education*, *8*(1), 69–91. https://doi.org/10.1080/1361332052000341006