

Towards a Discursive Framework of Caste-Blindness in Engineering Education: Using Discourse Analysis as a Generative Method

Mx. Nivedita Kumar, Florida International University

Nivedita (Nivi) Kumar (she/they) is a Ph.D. candidate in Engineering and Computing Education at Florida International University. Their research examines caste, privilege, and equity in transnational engineering and computing education, theorizing caste-blindness through socio-cultural and critical discourse approaches. Nivedita served as a mentor and program coordinator for the JEDI Ambassador Program, guiding undergraduate engineers in equity-focused participatory action research. As a past-UGS Writing Fellow and instructor, they supported graduate writers and inclusive pedagogy initiatives. Their scholarship and service reflect a commitment to developing as a future faculty member advancing justice-oriented, reflexive, and community-engaged approaches in engineering education.

Dr. Stephen Secules, Florida International University

Dr. Stephen Secules is Director of First-Year Engineering and Integrative Engineering at University of New Mexico. He is also an Associate Professor in the Mechanical Engineering department. His education research focuses on equity and culture in undergraduate engineering education and methodologies to bring about insight and innovation in education. He co-founded the Equity, Culture, and Social Justice Division and serves as an Associate Editor of Journal of Engineering Education.

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Introduction

This full theory/methods paper develops a discursive framework of caste-blindness in engineering education and demonstrates how discourse analysis can be used to extend theories of inequality within the field. Engineering education research has documented persistent disparities in participation, climate, and professional outcomes across social groups, for example see [1], [2], [3], [4], [5], [6], [7]. Much of this work centers marginalized experiences and structural barriers to inclusion. However, a related question remains underexamined: *how do socio-culturally privileged individuals explain inequality within engineering spaces?* This question matters because engineering culture strongly values merit, objectivity, and neutrality. When fairness is defined through competitive evaluation and equal standards, explanations grounded in merit can appear reasonable even when they leave historical hierarchy unaddressed.

Caste provides a critical case for examining this dynamic. Caste is a 3000-year-old socio-religious and cultural system of stratification rooted in South Asia that historically organized social status, occupation, marriage, and access to education and resources [8], [9], [10]. Within many Hindu philosophical traditions, caste hierarchy was justified through ideas such as *karma* and *dharma*, which linked one's birth status to moral order and prescribed duties associated with that status [10]. These logics were reinforced through practices such as endogamy (marrying within one's own caste) and occupational inheritance, producing what Ambedkar [8], [9] described as a system of graded inequality in which hierarchy becomes normalized across groups. At the extreme end of this hierarchy is the practice of untouchability, which subjected communities historically labeled as "untouchable" to segregation, exclusion from schools and temples, restricted access to water and housing, and systemic social violence. Untouchability was made illegal in 1950 with the adoption of the Constitution of India, drafted under the leadership of Dr. B.R. Ambedkar, himself a member of a caste-oppressed community [9], [11]. Yet the constitutional prohibition of untouchability did not eliminate everyday caste-based discrimination or structural inequality. Caste persists in contemporary institutions, including higher education.

In modern educational systems, caste often operates less through explicit religious justification and more through accumulated forms of social, educational, and cultural capital that align with institutional standards of merit [12], [13], [14]. Debates over caste-based reservation policies, commonly called "Reservations," in higher education illustrate this shift. Reservations are constitutionally mandated affirmative action policies intended to address the historical exclusion of caste-oppressed communities from educational and public employment institutions [12], [13]. However, public discussions frequently reframe reservations through concerns about quality, standards, and fairness. Structural redress becomes recast as a potential compromise to merit. These debates reveal how caste inequality can be reorganized within meritocratic reasoning.

Within U.S. engineering education, where South Asian students are often associated with technical excellence and academic success, caste may remain unmarked even as historical advantages align with institutional definitions of merit [15], [16], [17]. To analyze how such reasoning operates, this paper draws on scholarship on "blindness," particularly Bonilla-Silva's theory of color-blind racism [18], which identifies patterned ways of explaining inequality that appear principled while distancing present outcomes from structural responsibility. Extending

this insight, we ask: *How can discourse analysis be used to theorize caste-blind reasoning within engineering contexts?* Drawing on interview data from South Asian graduate engineering students (n=10), we demonstrate how discourse analysis enables movement from situated explanations to a discursive theory of how graded hierarchy is modernized within professional Discourses of merit, neutrality, and progress.

Blindness as a Discursive Site for Examining Inequality

Scholarship on blindness provides a framework for examining how inequality persists through patterned explanation. In Bonilla-Silva's formulation, color-blind racism operates through recurring frames that translate inequality into the language of individual effort, cultural difference, or equal treatment. These explanations allow speakers to affirm fairness while minimizing structural responsibility (for example see [19], [20], [21]). Blindness is therefore an organized mode of reasoning that aligns inequality with categories that appear morally and institutionally legitimate.

Parallel patterns have been identified in scholarship on caste. Deshpande [22], Mosse [23], and Subramanian [14] describe a contemporary orientation sometimes referred to as "castelessness," in which caste is treated as a relic of an earlier social order and as irrelevant to modern institutions. In this framing, distancing oneself from caste signals progress and modernity. Acknowledging caste in present contexts may be viewed as divisive or regressive. Rather than signaling the disappearance of caste, this orientation relocates caste outside contemporary institutional analysis. It allows individuals to participate in institutions shaped by historical stratification while presenting those institutions as neutral.

Recent empirical work reinforces this point. Zare and Pathania [24], in their study of student attitudes toward caste in Indian higher education, found that upper-caste students frequently emphasized that they "do not discuss caste," (p.13) positioning themselves as modern and forward-looking. Although participants recognized caste as historically significant, they minimized its relevance to present educational outcomes. These explanations closely resemble the patterned frames identified in blindness scholarship, particularly the abstraction of fairness and the minimization of structural inequality. Collectively, this literature suggests that caste discourse, like racial discourse, can operate through structured patterns that reinterpret hierarchy as individual or historical rather than systemic.

In engineering education, these reasoning patterns intersect with institutional Discourses that define what counts as legitimate explanation. Engineering culture places strong emphasis on meritocracy, technical rationality, competition, and progress [25], [26], [27], [28]. Within such a context, appeals to standards, preparation, and competition carry professional authority. When caste inequality is interpreted through these categories, structural hierarchy can be reorganized as a matter of performance rather than power. To examine how this reorganization occurs in practice, analytic attention must be directed toward language-in-use and toward the broader Discourses that shape what becomes speakable. Discourse analysis provides the methodological tools to undertake this task.

Discourse Analysis as a Generative Analytic Approach

This study approaches caste-blindness through a view of discourse grounded in Gee's [29], [30] conceptualization of social discourse and Willig's Foucauldian discourse approach [31], where

language is a central site through which power, knowledge, and social order are produced. We understand discourse as socially organized ways of speaking and reasoning that shape how inequality is explained and rendered intelligible within institutional contexts. Following Gee [29], we distinguish between language-in-use, the situated talk through which individuals account for social phenomena, and Discourses, the broader institutional and disciplinary systems of meaning that circulate within professional communities such as engineering. Within engineering education, Discourses of merit, neutrality, and objectivity shape how participants interpret success, effort, and fairness [32], [33], [34]. These Discourses establish the boundaries of acceptable explanation in professional contexts, making certain systems of inequality, including caste, difficult to name directly even as they continue to structure access and recognition. Attending to language-in-use allows us to examine how these Discourses are taken up and enacted in everyday reasoning.

Drawing on Foucauldian discourse analysis [31], we treat power as productive operating through discursive formations that authorize certain ways of speaking while rendering others unintelligible or inappropriate. From this perspective, power becomes visible through patterns of legitimacy—who can speak, what can be said, and which explanations circulate as professionally acceptable. When applied to caste in engineering education, this approach reveals how participants constitute caste as something that can be acknowledged while remaining positioned as irrelevant to present-day outcomes. Across interviews, recurring patterns in participants' reasoning form discursive frames of caste-blindness. These frames function as socially available resources that participants use to explain inequality while remaining aligned with dominant institutional and professional values. Their significance lies in how they normalize caste inequality without requiring explicit denial. By integrating attention to language-in-use with a focus on power and Discourses, this approach illustrates how discourse analysis can be used as a generative method for theorizing systems of privilege and oppression in engineering education.

Participants, Data Collection, and Analysis

We draw from interview data collected as part of Nivedita's doctoral dissertation. The broader dissertation examines how South Asian graduate students in U.S. engineering education reason about caste, merit, and inequality. In this theory/methods paper, the data are used selectively to support theory development and to demonstrate analytic procedure. The dataset consists of semi-structured interviews with South Asian graduate students ($n = 10$) enrolled in engineering programs in the United States. Participants were recruited through graduate student and professional networks. As part of recruitment, participants completed a brief survey that gathered demographic information, including educational background, gender identity, religious affiliation, and self-identified caste location. Participants' demographics, along with their self-identified caste-location, and interview protocol can be seen in Appendices A & B respectively. This information was used to situate participants' narratives within broader social contexts and to inform analytic interpretation. Nivedita conducted all the interviews in Fall 2024, lasted approximately 60-90 minutes held via Zoom [35]. Interviews were audio-recorded and transcribed using Otter AI [36], then Nivedita manually checked them for accuracy.

Researcher Positionality

Nivedita is a South Asian, caste-privileged Brahmin doctoral researcher in engineering and computing education. This positionality shaped the design of the study and the conditions under which the interviews unfolded. In many professional and educational spaces, caste remains

difficult to name openly, particularly among caste-privileged individuals. Shared social location between the researcher and participants shaped what participants assumed, what they left unsaid, and how they articulated explanations related to merit, fairness, and inequality. Stephen is a senior scholar in engineering education research with extensive experience in qualitative and critical methodologies. Stephen contributed methodological guidance, analytic questioning, and refinement. Together, we approached the data with attention to how meaning is produced through language and how researcher positioning shapes what becomes speakable in interview contexts. Aligning with Secules & Colleagues [37], we treat positionality as an analytic condition that shaped both the production and interpretation of interview talk.

Interview Context

The interview context shaped both what participants said and how they said it. In this study, both the interviewer and participants occupied caste-privileged positions, and this shared social location was established at the outset. In many professional and academic settings, caste shapes assumptions and institutional trajectories yet is rarely discussed openly, particularly among caste-privileged individuals. Within engineering contexts that emphasize objectivity and neutrality, discussions of caste can appear professionally irrelevant. The interviews created a structured setting in which participants were invited to reflect directly on merit, fairness, and reservations. Because the interviewer shared a caste-privileged background, participants often assumed shared cultural understanding and spoke at length about standards, competition, and preparation without establishing defensive distance. This alignment made dominant-caste reasoning visible in language-in-use. Explanations that might otherwise circulate as professional common sense were articulated and justified in detail. Across interviews, participants activated five recurring discursive actions: irrelevance, substitution, individualization, cultural reframing, and moral positioning that structured how caste was interpreted. The interview, therefore, functioned as a site where institutional Discourses became observable in interaction, enabling the identification of recurring patterns that form the basis of the discursive framework developed in this paper.

Analytic Process

Nivedita conducted the primary analysis using a recursive, interpretive process drawing from Willig's Foucauldian-informed discourse analysis [31] and Gee's tools for examining language-in-use [29], [30]. Although the stages appear sequential here, Nivedita moved repeatedly between transcripts, analytic memos, and dialogic reflexivity throughout the analysis. Nivedita began by reading each transcript multiple times and listening to audio recordings to attend closely to how participants constructed explanations about caste, merit, fairness, and reservations. Nivedita focused on how participants organized their reasonings, including the contrasts they constructed, the moral vocabularies they invoked, and the assumptions they treated as self-evident. Nivedita wrote reflexive memos alongside interpretive notes, documenting moments of familiarity, tension, or recognition as analytic cues. Following Pillow [38] and Dwyer & Buckle [39], Nivedita treated them as indicators of reasoning that felt legitimate within caste-privileged and engineering contexts. Next, Nivedita compared segments across interviews in which participants explained inequality or evaluated reservations. Through cross-case comparison and memo-based tracking, Nivedita identified five recurring discursive actions—irrelevance, substitution, individualization, cultural reframing, and moral positioning. Nivedita established the analytic significance of a discursive action through cross-case comparison, memo-based tracking of recurring explanatory structures, and examination of how

those structures cohered with broader Discourses of merit and neutrality. This process aligns with Walther et al.'s [40] articulation of procedural validation in interpretive qualitative research. Throughout this process, Stephen engaged in sustained analytic dialogue with Nivedita, furthering interpretations and refining theoretical connections. Together, they examined how recurring framings aligned with broader Discourses of meritocracy, neutrality, and progress in engineering education. This movement from language-in-use to patterned framing to institutional Discourse supported the development of a discursive framework of caste-blindness.

Using Discourse Analysis to Generate Theory: A Worked Analytic Example

This section demonstrates how we use discourse analysis to generate theory about caste-blindness. We present a worked analytic example to show the analytic process step by step.

Beginning with language-in-use: what the speaker is doing in talk

We begin with language-in-use, attending to how participants explain social phenomena in interaction and how those explanations orient to an assumed listener [29], [30]. We treat interview responses as interactional work. Speakers shape their explanations in relation to what they believe the listener will recognize, accept, or find reasonable. The following excerpt comes from Rahul, a South Asian graduate student pursuing a graduate degree in Cybersecurity in a U.S. institution, responding to a question about caste-based affirmative action policies called reservations:

It is going— in as far as I know this, reservations are meant to improve the minor sections to be like, to make it equalize all the caste, all the religions, so, but it's been a very long time. Maybe it is not impacting right now, but if it goes a little further, people will lose interest because even though they're studying hard, they're not getting seats, they lose interest, and all the people without knowledge will be in good positions. It will definitely impact the development of our country, or anything, or anything, I can say so obviously, when and also, people [fly] away from [our] country because of it, they don't find good opportunities. They just want to get away from this place. They feel like government jobs are not at all for us. They feel that way, definitely, and I haven't seen anyone in my caste try for some government job. It's been some 20 years; I haven't seen anyone because they feel like it's hard; man, it's hard. You cannot. It's high competition. It's like there's nothing I can do. So, I think there's no point in doing we'll lose the best, and it will affect the development at the end when you have the best. So, for example, he had some of the best teams for cricket, so he could use them to win the World Cup. So, remove all the Top 11 and use the rest 11, someone from the State team. It's hard to win the World Cup. So, in the end, you need to compete with someone from some other world who is better than you. So, when we put aside our best and try to focus on others, so it will affect our overall development. (Rahul)

At this first stage, the focus is on what kind of explanation Rahul is offering. He presents a long, connected account that links reservation policies to motivation, quality, national development, and global competition. He speaks confidently and at length. This suggests that the explanation feels familiar and reasonable to him. The cricket example is especially important. Rahul uses it without explanation, assuming the interviewer will immediately understand the point. This tells us something about the interaction. Rahul treats the interviewer as someone who shares his

cultural knowledge and accepts competition and performance as obvious measures of fairness. The explanation is built on assumed agreement.

Examining discursive actions and the construction of legitimacy

The next analytic step examines how Rahul builds moral authority and organizes inequality in language.

First, Rahul constructs a moral contrast between people who are “studying hard” and people “without knowledge.” These categories establish a distinction between deserving and undeserving actors. Although caste remains unnamed, the contrast invokes a longer social logic in which competence and entitlement become associated with status.

Second, Rahul situates reservations as a problem located elsewhere. While studying in the United States, he frames reservations in relation to government jobs in India and describes people “flying away” from “our country.” This framing distances the issue from his present institutional location while preserving his authority to evaluate its impact.

Third, Rahul centers the frustration and loss of caste-privileged groups. He emphasizes declining standards, loss of motivation, and harm to national development. He does not engage the structural exclusion that reservations seek to address. Through this discursive action, structural inequality becomes secondary to concerns about performance.

The cricket analogy consolidates these moves. It translates a redistributive policy into a story about selecting the “best” players. This analogy shifts the focus from historical redress to competitive efficiency. By framing fairness as optimal selection, Rahul reorganizes caste inequality through meritocratic reasoning.

Situating language-in-use within broader Discourses

We then situate Rahul’s explanation within broader Discourses that organize professional reasoning in engineering education. His account draws on Discourses of meritocracy, competition, efficiency, and progress—categories widely treated as neutral and objective in engineering contexts. Within these Discourses, Rahul occupies the subject position of a rational evaluator concerned with standards and development. This position allows critique of reservations without appearing prejudiced.

From the perspective of blindness theory, Rahul’s explanation reflects a recognizable pattern. He acknowledges structural inequality in principle—reservations “were meant” to help—but positions reservation, the intervention, as harmful in the present. Discourse analysis helps clarify how this repositioning occurs through moral contrasts, cultural analogies, and appeals to common sense. It also clarifies what remains unspoken—ongoing caste privilege, institutional reproduction of advantage, and the transnational mobility of caste capital.

From Discursive Actions to Caste-Blindness

The final analytic move extends beyond this single excerpt to examine how similar discursive actions recur across interviews. Across participants, we observed repeated patterns when discussing caste, merit, and reservations. Participants positioned caste as irrelevant to contemporary professional spaces, substituted caste with class or cultural indicators,

individualized inequality through effort and mindset, culturally reframed success through discipline and preparation, and adopted moral positions that aligned with fairness and neutrality.

We identified these as recurring discursive actions through cross-case comparison and memo-based tracking. These actions structured how participants defined fairness, standards, and merit. They also shaped what remained unsaid, including caste privilege and how historically uneven access becomes legible as merit within institutions. When viewed collectively, these recurring discursive actions revealed an alignment between micro-level explanations and meso-level Discourses of engineering culture. Participants drew on widely circulating professional norms of meritocracy, competition, objectivity, and development. Through this alignment, structural inequality became reorganized as individual evaluation.

This analytic progression from language-in-use, to recurring discursive actions, to alignment with institutional Discourses, demonstrates how discourse analysis generates theory. Caste-blindness emerges as a patterned alignment between everyday reasoning and professional norms. By tracing these alignments, discourse analysis makes visible how inequality persists through legitimate and reasonable forms of talk.

Toward a Discursive Theory of Caste-Blindness in Engineering Education

At the foundation of this framework is Ambedkar's theorization of caste as graded inequality sustained through moral normalization [8], [9]. He argued that hierarchy persists because differential access to dignity and opportunity becomes experienced as ordered, justified, and coherent. In the context of this study, it means that caste does not endure only because it structures resources; it endures because it renders that structure intelligible. The data analysis reveals how that moral grammar reorganizes within engineering education. Participants repeatedly translated historically structured inequality into narratives of preparation, discipline, and competitive excellence. In doing so, they interpreted unequal starting points through evaluative standards that appeared neutral. This study extends Ambedkar's insight by showing how graded inequality adapts within professional institutions that define themselves as modern, objective, and meritocratic.

Building on this structural and moral account, Bonilla-Silva's theory of blindness [18] clarifies how patterned explanations sustain inequality while invoking fairness and neutrality. Blindness operates through recurring logics that abstract equality, minimize structural intervention, and attribute outcomes to culture or effort. The discursive actions identified in the interviews reflect similar logics. Participants acknowledged historical disadvantages while asserting that contemporary evaluation must remain performance-based and competitive. Within a field that treats objectivity, efficiency, and excellence as ethical commitments, merit-based reasoning acquires additional authority. Standards do not merely organize evaluation; they become moral goods. This study therefore demonstrates how blindness adapts within disciplinary cultures that elevate professional standards as ethical imperatives.

To understand how these structural and explanatory dynamics operate in practice, discourse analysis provides the necessary analytic mechanism. Ambedkar identifies graded inequality at the structural level. Bonilla-Silva identifies patterned explanatory logics. Discourse analysis, drawing on Gee [29], [30] and Willig [31], clarifies how these logics operate in language-in-use and align with institutional Discourses. Everyday explanations enact broader Discourses that integrate values, identities, and norms. In the interviews, participants consistently occupied the

subject position of the rational, fair evaluator. From within that position, defending standards appeared responsible, and structural critique appeared misaligned with professional expertise. This analysis contributes to critical caste scholarship by identifying the mechanism through which hierarchy reorganizes within institutional talk. It shows how professional standards acquire moral force in interaction, stabilizing inequality through ethical self-presentation.

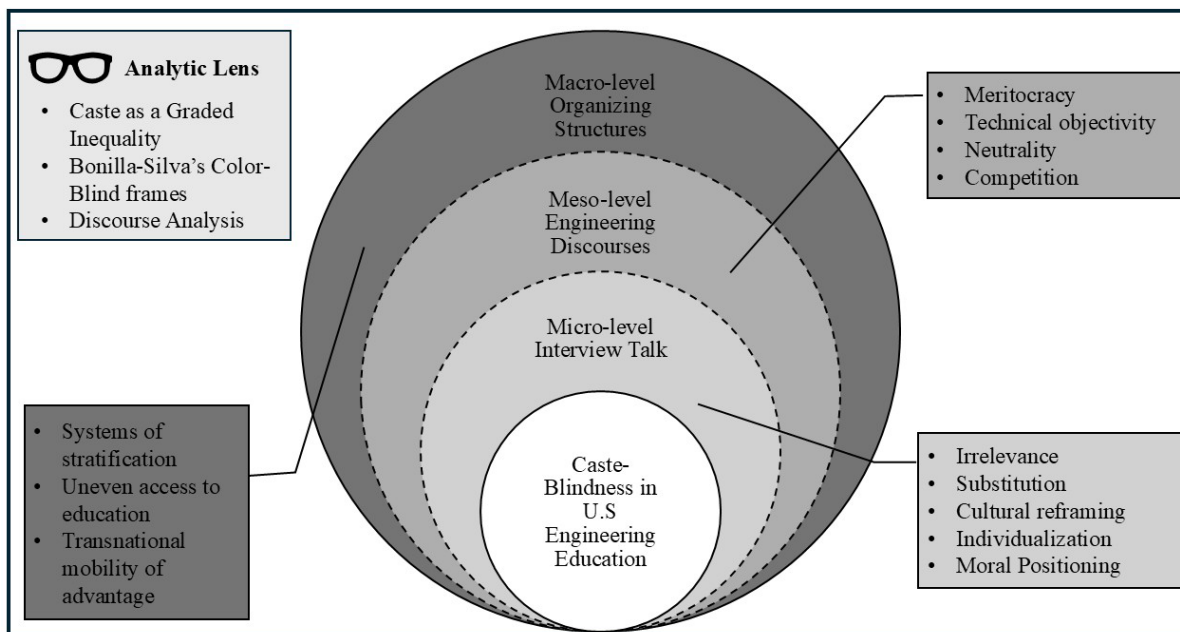


Figure 1. Discursive ecosystem of caste-blindness in U.S. engineering education.

Taken together, the convergence of graded inequality, blindness logics, and discourse analysis clarifies the role of professional common sense in engineering education. Merit, neutrality, competition, and efficiency circulate as necessary and non-negotiable principles. These principles shape how fairness is defined. When participants evaluate reservations through concerns about quality, development, or global competitiveness, they draw on these norms. Historically uneven access to educational capital becomes legible as preparation and talent. Caste does not disappear in this translation. It reorganizes through the moralization of performance. Hierarchy persists because standards reflect unequal starting points while appearing universally fair.

From this synthesis, two theoretical claims follow for engineering education research. First, professional Discourses of merit and objectivity constitute the conditions under which caste-blind reasoning becomes legitimate. These Discourses define fairness in ways that absorb structural inequality into evaluative standards. Second, caste-blindness stabilizes graded inequality by translating historically structured advantage into morally defended criteria of excellence. Without examining how professional norms participate in this translation, research risks locating inequality solely in representation or access. By tracing alignment across discursive action, institutional Discourses, and structural stratification, discourse analysis generates a theory of caste-blindness grounded in engineering culture.

Discourse Analysis as a Generative Method in Engineering Education Research

In this study, we position discourse analysis as a generative method for theorizing how systems of privilege/ oppression stabilize within professional education. In engineering education research, discourse analysis has frequently been used to examine student interaction / teamwork communication, identity development, faculty understanding of students' identity, or participation structures [20], [41], [42], [43]. These applications have demonstrated that language shapes learning environments and social belonging. However, discourse analysis has less often been mobilized to examine how professional norms themselves participate in sustaining inequality. This study addresses this gap by treating language-in-use as a site where institutional commitments to merit, neutrality, and excellence are enacted and defended. By tracing recurring discursive actions across interviews and aligning them with broader engineering Discourses, the analysis generates theoretical insight about how caste reorganizes within contemporary professional culture. In this sense, discourse analysis becomes a mechanism for theory-building.

A central methodological contribution of this study lies in expanding where researchers look when studying inequality in engineering education. Much existing engineering education scholarship focuses on documenting barriers faced by marginalized students, identity formation, identifying strategies for improving access and belonging [1], [3], [5], [6], [7], [44], [45]. That work remains essential and contributes to inclusiveness from one end. On the other hand, institutional standards of merit, excellence, and fairness often remain in the background. This study demonstrates how discourse analysis can be used to examine how these standards are talked about, defended, and defined in everyday reasoning. By analyzing how participants explain reservations, competition, preparation, and success, the study shows how caste, a structural inequality becomes translated into individual effort or performance. This shift in analytic attention encourages researchers to ask different kinds of questions: How do faculty, students, and administrators define fairness? What assumptions about preparation or talent are embedded in those definitions? Which forms of structural history remain absent from those explanations? By treating professional standards as objects of inquiry, discourse analysis can help reveal how institutional cultures participate in stabilizing inequality, even when participants articulate commitments to diversity and inclusion.

This approach also contributes to broader theoretical conversations about blindness. Bonilla-Silva's framework [18] identifies patterned explanatory logics through which inequality is acknowledged abstractly but rejected in practice. This study extends this insight by demonstrating how such logics align with the moral and ethical commitments of engineering culture. Within engineering education, appeals to objectivity, competition, and efficiency often carry ethical weight [25], [27], [28], [34]. These commitments shape what counts as responsible reasoning. When participants evaluate reservations or inequality through concerns about quality and development, they draw on principles that appear professionally necessary. Discourse analysis makes visible how these principles acquire moral authority in interaction. It shows how standards come to be defended as ethical commitments. In doing so, the study contributes to critical caste scholarship by identifying the institutional mechanism through which graded inequality modernizes within professional settings.

Finally, the framework offers a way for scholars examining race, gender, class, or disability in engineering education to extend their analyses beyond representation and experience. Discourse analysis enables researchers to examine how professional standards are defined and defended in talk across multiple settings, including classrooms, admissions discussions, policy documents, hiring conversations, or diversity initiatives. For example, scholars studying race might analyze

how faculty describe “fit,” “preparedness,” or “rigor” in admissions and/ or mentoring discussions. Scholars examining gender might attend to how explanations of confidence, leadership, or technical competence are framed in evaluation contexts. This approach directs attention to how definitions of excellence are constructed and what assumptions those definitions rely on. It helps researchers identify recurring explanations that appear neutral but consistently align with historically advantaged groups. In this way, discourse analysis provides a method for tracing how structural inequality becomes embedded within professional vocabularies of fairness and quality. The micro-meso-macro alignment developed in this study offers a template for examining how everyday reasoning connects to institutional norms and broader systems of stratification, regardless of the specific axis of inequality under study.

Through this contribution, the study invites engineering education researchers to treat professional common sense as an object of inquiry. When standards of merit and neutrality are examined as historically situated Discourses, new avenues for institutional reflection and change become possible.

Conclusion

Engineering often describes itself as committed to fairness, rigor, and excellence. These commitments, in turn, shape how institutions define preparation, evaluate students, and justify standards. This paper has argued that such commitments are not analytically neutral. When Discourses of merit, objectivity, and competition align with historically uneven access to educational capital, structural inequality can be translated into performance and preparation. In this process, caste does not need to be named explicitly in order to persist. By bringing Ambedkar’s analysis of caste as a graded inequality into conversation with color-blindness theory and discourse analysis, this study shows how hierarchy reorganizes within professional reasoning. The worked example illustrates how patterned discursive actions align with engineering norms and how standards come to carry moral weight in interaction. Caste-blindness, as conceptualized here, operates through this alignment of language, institutional values, and structural stratification. If professional standards are treated as self-evidently fair, research risks overlooking how those standards reflect unequal starting points. Examining participation and representation remains essential. Examining how excellence is defined and defended is equally necessary. Discourse analysis offers a rigorous method for doing so. Attending to how fairness is talked about, and what remains unspoken, creates space for more careful reflection on how merit and justice are understood within engineering education.

References

- [1] B. Berhane, S. Secules, and F. Onuma, “Learning while Black: Identity formation and experience for five Black men Who transferred into engineering undergraduate Programs,” *Journal of Women and Minorities in Science and Engineering*, vol. 26, no. 2, pp. 93–124, 2020, doi: 10.1615/JWomenMinorScienEng.2020024994.
- [2] S. R. Brunhaver Matusovich, H. M. ., Streveler, R. A. ., Sheppard, S. ., Carrico, C. and A. Harris, “Understanding engineering students’ professional pathways: A longitudinal mixed-methods study,” presented at the In 2016 ASEE Annual Conference & Exposition., 2016.
- [3] A. Godwin and A. Kim, “Identity-based motivation: Connections between first-year students’ engineering role identities and future-time perspectives,” *Journal of Engineering Education*, vol. 109, no. 3, pp. 362–383, 2020.

- [4] E. Blosser, “An examination of Black women’s experiences in undergraduate engineering on a primarily white campus: Considering institutional strategies for change,” *Journal of Engineering Education*, vol. 109, no. 1, pp. 52–71, 2020.
- [5] A. Haverkamp, A. Butler, N. S. Pelzl, M. K. Bothwell, D. Montfort, and Q.-L. Driskill, “Exploring transgender and gender nonconforming engineering undergraduate experiences through autoethnography,” presented at the 2019 CoNECD-The Collaborative Network for Engineering and Computing Diversity, 2019.
- [6] E. A. Cech and W. R. Rothwell, “LGBTQ Inequality in Engineering Education,” *Journal of Engineering Education*, vol. 107, no. 4, pp. 583–610, 2018, doi: 10.1002/jee.20239.
- [7] G. Lichtenstein Chen, H. L. ., Smith, K. A. and T. A. Maldonado, “Retention and persistence of women and minorities along the engineering pathway in the United States,” 2014.
- [8] B. R. Ambedkar, *Castes in India: Their mechanism, genesis, and development*. Good Press, 2020.
- [9] B. R. Ambedkar, *Annihilation of caste: The annotated critical edition*. Verso Books, 2014.
- [10] N. B. Dirks, *Castes of mind: Colonialism and the making of modern India*. Princeton University Press, 2002.
- [11] B. Ambedkar, “The untouchables,” 2008.
- [12] A. Deshpande, “Affirmative action in India,” in *Race and Inequality*, Routledge, 2017, pp. 77–90.
- [13] A. Deshpande, *The grammar of caste: Economic discrimination in contemporary India*. Oxford University Press, 2011.
- [14] A. Subramanian, *The caste of merit: Engineering education in India*. Harvard University Press, 2019.
- [15] V. Prashad, *Uncle Swami: South Asians in America Today*. New Press, The, 2012.
- [16] B. K. Thakore, *South Asians on the U.S. Screen: Just Like Everyone Else?* Lexington Books, 2016.
- [17] Y. Dutt, *Coming Out as Dalit: A Memoir of Surviving India’s Caste System (Updated Edition)*. Beacon Press, 2024.
- [18] E. Bonilla-Silva, *Racism without racists: Color-blind racism and the persistence of racial inequality in the United States*. Rowman & Littlefield Publishers, 2006.
- [19] O. R. Aragón, J. F. Dovidio, and M. J. Graham, “Colorblind and multicultural ideologies are associated with faculty adoption of inclusive teaching practices.,” *Journal of Diversity in Higher Education*, vol. 10, no. 3, p. 201, 2017.
- [20] R. T. McNeill, L. A. Leyva, and B. Marshall, “‘They’re just students. There’s no clear distinction’: A critical discourse analysis of color-evasive, gender-neutral faculty discourses in undergraduate calculus instruction,” *Journal of the Learning Sciences*, vol. 31, no. 4–5, pp. 630–672, 2022.
- [21] K. J. C. Espinoza and B. E. Rincón, “Color-evasive/conscious? A content analysis of how engineering faculty discuss race and racism in a US-based equity-focused STEM professional development program,” *Education Sciences*, vol. 13, no. 3, p. 233, 2023.
- [22] S. Deshpande, “Caste and Castelessness: Towards a Biography of the ‘General Category,’” *Economic and Political Weekly*, vol. 48, no. 15, pp. 32–39, 2013, Accessed: May 29, 2024. [Online]. Available: <https://www.jstor.org/stable/23527121>

- [23] D. Mosse, "Outside Caste? The Enclosure of Caste and Claims to Castelessness in India and the United Kingdom," *Comparative Studies in Society and History*, vol. 62, no. 1, pp. 4–34, Jan. 2020, doi: 10.1017/S0010417519000392.
- [24] B. Zare and G. J. Pathania, "'To resist, first we must see': unlearning caste privilege among university students," 2025.
- [25] E. A. Cech, "The (Mis)Framing of Social Justice: Why Ideologies of Depoliticization and Meritocracy Hinder Engineers' Ability to Think About Social Injustices," in *Engineering Education for Social Justice: Critical Explorations and Opportunities*, J. Lucena, Ed., Dordrecht: Springer Netherlands, 2013, pp. 67–84. doi: 10.1007/978-94-007-6350-0_4.
- [26] A. E. Slaton, "Meritocracy, Technocracy, Democracy: Understandings of Racial and Gender Equity in American Engineering Education," in *International Perspectives on Engineering Education: Engineering Education and Practice in Context, Volume 1*, S. H. Christensen, C. Didier, A. Jamison, M. Meganck, C. Mitcham, and B. Newberry, Eds., Cham: Springer International Publishing, 2015, pp. 171–189. doi: 10.1007/978-3-319-16169-3_8.
- [27] D. Riley, "Rigor/Us: Building Boundaries and Disciplining Diversity with Standards of Merit," *Engineering Studies*, vol. 9, no. 3, pp. 249–265, Sep. 2017, doi: 10.1080/19378629.2017.1408631.
- [28] S. Secules, "Making the Familiar Strange: An Ethnographic Scholarship of Integration Contextualizing Engineering Educational Culture as Masculine and Competitive," *Engineering Studies*, vol. 11, no. 3, pp. 196–216, Sep. 2019, doi: 10.1080/19378629.2019.1663200.
- [29] J. P. Gee, "Discourse, small d, big D," *The international encyclopedia of language and social interaction*, vol. 3, pp. 1–5, 2015.
- [30] J. P. Gee, "How to do discourse analysis," *Oxon: Routledge*, 2011.
- [31] C. Willig, "Interpretation and analysis," *The SAGE handbook of qualitative data analysis*, pp. 136–149, 2014.
- [32] N. Shah, "'Asians Are Good At Math' Is Not a Compliment: Stem Success As a Threat To Personhood," *Harvard Educational Review*, vol. 89, no. 4, pp. 661–686, Dec. 2019, doi: 10.17763/1943-5045-89.4.661.
- [33] D. A. Trytten, A. W. Lowe, and S. E. Walden, "'Asians are good at math. What an awful stereotype' The model minority stereotype's impact on Asian American engineering students," *Journal of Engineering Education*, vol. 101, no. 3, pp. 439–468, 2012.
- [34] M. Blair-Loy and E. A. Cech, *Misconceiving merit: Paradoxes of excellence and devotion in academic science and engineering*. University of Chicago Press., 2022.
- [35] "One platform to connect | Zoom." Accessed: Feb. 22, 2026. [Online]. Available: <https://www.zoom.com/>
- [36] "Otter Meeting Agent - AI Notetaker, Transcription, Insights." Accessed: Feb. 22, 2026. [Online]. Available: <https://otter.ai>
- [37] S. Secules *et al.*, "Positionality practices and dimensions of impact on equity research: A collaborative inquiry and call to the community," *Journal of Engineering Education*, vol. 110, no. 1, pp. 19–43, 2021.
- [38] W. Pillow, "Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research," *International journal of qualitative studies in education*, vol. 16, no. 2, pp. 175–196, 2003.

- [39] S. C. Dwyer and J. L. Buckle, “The Space Between: On Being an Insider-Outsider in Qualitative Research,” *International Journal of Qualitative Methods*, vol. 8, no. 1, pp. 54–63, Mar. 2009, doi: 10.1177/160940690900800105.
- [40] J. Walther, N. W. Sochacka, and N. N. Kellam, “Quality in Interpretive Engineering Education Research: Reflections on an Example Study,” *Journal of Engineering Education*, vol. 102, no. 4, pp. 626–659, 2013, doi: 10.1002/jee.20029.
- [41] E. E. Blair, R. B. Miller, M. Ong, and Y. V. Zastavker, “Undergraduate STEM Instructors’ Teacher Identities and Discourses on Student Gender Expression and Equity,” *Journal of Engineering Education*, vol. 106, no. 1, pp. 14–43, 2017, doi: 10.1002/jee.20157.
- [42] J. Castillo-Sepúlveda and D. Pasmanik, “Toward the understanding of ‘the human’ in engineering: a discourse analysis,” *European Journal of Engineering Education*, vol. 46, no. 5, pp. 765–778, Sep. 2021, doi: 10.1080/03043797.2021.1903836.
- [43] M. Magnell, “Academic staff on connections to professional practice and research in engineering education: a discourse analysis,” *European Journal of Engineering Education*, vol. 45, no. 5, pp. 780–793, Sep. 2020, doi: 10.1080/03043797.2020.1729103.
- [44] S. Bhaduri, R. Lewis, I. Sen, C. Mishra, M. Mona, and V. S. N. Bathula, “Excellence, Belonging, and the American Dream: An Auto-ethnography on Being International in Engineering,” in *2023 ASEE Annual Conference & Exposition Proceedings*, Baltimore, Maryland: ASEE Conferences, Jun. 2023, p. 43530. doi: 10.18260/1-2--43530.
- [45] B. A. Danielak, A. Gupta, and A. Elby, “Marginalized Identities of Sense-Makers: Reframing Engineering Student Retention,” *Journal of Engineering Education*, vol. 103, no. 1, pp. 8–44, 2014, doi: 10.1002/jee.20035.

Appendix A Participant Demographics

Pseudonym	US Citizenship/ Visa Status	Degree	Major	Gender	Self- Identified Caste- Identity	Year of Study
Neha	Naturalized Citizen	PhD	Computer Science	Female	Farmer (Patel)	4 th Year
Rahul	F1 Student	MS	Cybersecurity	Male	OC	1 st Year
Anand	H1 Student/ Worker	PhD	Computer Science	Male	Baid	6 th Year
Sanjay	F1 Student	PhD	Engineering Education	Male	Kshatriya- Rajput	1 st Year
Sai	F1 Student	PhD	Civil Engineering	Male	Kshatriya	5 th Year
Raj	F1 Student	PhD	Biomedical Engineering	Male	Maratha 96 Kuli	3 rd Year
Isha	Naturalized Citizen	PhD	Engineering Education	Female	Farmer (Patel)	1 st Year
Dev	F1 Student	PhD	Mechanical Engineering	Male	Leva Patel, Patidar	5 th Year
Aarti	F1 Student	PhD	Engineering Education	Female	Jaat	4 th Year

Vedanth	F1 Student	PhD	Engineering Education	Male	Brahmin	4 th Year
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Appendix B Interview Protocol

1. Journey into engineering/computing/FIU
 - a. Tell me about your journey into engineering/computing/FIU
 - b. Tell me about your journey into the US
2. Workloads and course contexts:
 - a. What does your typical work week look like?
 - i. Work-life balance.
3. Role of caste
 - a. Within society
 - b. Within education
 - c. In the US?
 - d. Within engineering
 - e. In professional settings
4. Merit/ Success in the US
 - a. What role does merit play in engineering
 - b. In Education
 - c. Role of caste in merit/education
5. Diversity and Equity
 - a. What does diversity mean to you?
 - b. What are your values regarding diversity equity inclusion?
 - c. What does caste equity mean to you?
 - d. And/or- What is the difference between caste equity and caste equality?
6. Caste in the US
 - a. Professional network/friends – upper or lower caste?
 - b. Role of caste in US politics?!
7. Please tell me a bit about yourself:
 - a. Where are you from?
 - b. Establish Identity including:
 - i. Family's religious identity and their affiliation to it
 - ii. Family's place of origin: Country/State/Town/City
 - iii. Immigration status – immigrant status or American citizen?!
 - iv. Family in the US? Or Country?
 - v. What is the name of your caste?
 - vi. Is your caste your last name?
 - vii. Which caste group does your caste fall under?
 - viii. What is your belief in caste and caste affiliation?